

Where and with whom do students learn in an online university subject?
A multiple case study analysis

Dawn Marie Gilmore
A thesis submitted in fulfillment of the requirement for the Degree of
Doctor of Philosophy (PhD)

Faculty of Health Arts and Design
Swinburne University
2017

Abstract

This thesis examines the performance of learning by online university students. It is based on data generated from four case studies of second year online university subjects: a psychology subject, two advertising subjects, and an advanced mathematics subject. I observed students in their online subjects, performed a content analysis of the discussion boards, and conducted a document analysis of the learning materials. This data was strengthened by the completion of over 120 questionnaires over each twelve-week course, 20 interviews with students, and six interviews with teachers.

My project is an application of Goffman's (1959) region behaviour from his book *Presentation of Self in Everyday Life*. Rather than focus on a single learning environment, like most studies in education, my approach conceptualises a student's learning through Goffman's (1959) dramaturgical approach for understanding human interaction. I apply and extend Goffman's theatre language to investigate where and how students learn in the front stage (classroom), the backstage online (the internet, especially Facebook), and the backstage offline (with friends, family, and colleagues). I continue the metaphor by assigning students roles based on their observed and reported performances in the front stage. Students' roles range from: stagehands, cameos, extras, and performers.

My central argument is that the learning related to a student's online subject occurs in spaces other than the learning management system, yet this is rarely considered in the literature. I approach this argument through the lens of Lave and Wenger's (1991) original work, *Situated Learning: Legitimate Peripheral Participation*, which conceptualises learning as a social process between persons and groups across time and context. Through an empirical examination of the theatre stages, my analysis of the students' data across contexts shows how the backstage online, and especially the backstage offline, are for some students the preferred learning environments to the front stage, in particular the discussion board.

Drawing from the conceptual frameworks of Goffman (1959) and Lave and Wenger (1991), as well as studies of education, I show how students resituated their roles and reconceptualised the curriculum across the stages. Overall, students learning was constrained by the teaching curriculum and the negative experiences reported in the front stage. In contrast, the backstage online and backstage offline were spaces where students could elaborate on a subject's content area. The backstage online and backstage offline were effective learning environments where students described having positive experiences. Overall, students' experiences were dependent on a subject's content, design, and audiences present in the front stage and backstages.

My contribution to the field of online learning is a participation typology that spans the three stages. I used this typology to illustrate how students enact multiple identities within one subject. Students enact multiple identities by performing subject-related tasks across the front stage, backstage online, and backstage offline. The typology also identifies a student's stage orientation within a specific subject. A student's stage orientation is the space where a student performed most of the subject related tasks. A student's stage orientation within a subject is a useful way to acknowledge how students enact control over where and with whom learning occurs in an online subject.

I declare that this thesis:

1. contains no material which has been accepted for the award to the candidate of any other degree or diploma, except where due reference is made in the text of the examinable outcome;
2. to the best of the candidate's knowledge contains no material previously published or written by another person except where due reference is made in the text of the examinable outcome; and
3. where the work is based on joint research or publications, discloses the relative contributions of the respective workers or authors.



Dawn Marie Gilmore

Chapter 1: Introduction	9
Organisation of the thesis	11
Chapter summary	14
Chapter 2: Background and conceptual framework	15
Introduction	15
Background	16
The community of inquiry model (CoI) and its limitations	18
The five-stage-model and its limitations	19
Connectivism and its limitations	22
Learning analytics and its limitations	24
The research gap and conceptual framework	26
Erving Goffman's work as a conceptual tool to fill the research gap	28
The conceptual approach to my research: Applying Erving Goffman	32
My definition of learning in this thesis	34
Research questions	37
Chapter 3: Social processes of learning	39
Introduction	39
Background: Wenger (1987) and Lave (1988)	41
Situated learning (Lave and Wenger, 1991): What social processes facilitate learning?	42
Social processes between newcomer, experts, and near peers	46
Social processes between persons during activities in a curriculum	55
Social processes between persons and multiple identities and communities of practice	58
Social processes between persons produce shared artefacts and affordances	63
Conditions for situated learning: Belonging, trust, negotiation	67
Chapter summary	71
Chapter 4: Research methods	72
Introduction	72
A word about my own front stage and backstage	73
Keeping a research journal	76
My research approach	77
Case study method	78
Research sites and participants	79
Data Collection	84
Observations of the front stage	84
Document Review of front stage artefacts	85
Learning management activity logs from the front stage	86
Content analysis of discussion boards in the front stage	86
Longitudinal questionnaires about front stage, backstage online, and backstage offline ..	88
Student and teacher interviews about front stage, backstage online, and backstage offline	89
Email interviews	91
Skype and Collaborate	92
A word about flexibility	92
Data analysis	93
Limitations of the study	94
Chapter summary	95
Chapter 5: The psychology case study	97
Introduction	97
The setting and the teaching curriculum	98
The Cast: Psychology subject participants	99
The Stages: Front stage, backstage online, backstage offline	102

Front stage: Introduction	104
The Weekly Activity Forum and the General Discussion Forum: The exception and the norm.....	133
Backstage: Participants' backstage experiences	137
Backstage online: Facebook	138
Facebook groups in the Psychology subject.....	138
Facebook Groups: Social Science Majors and Psychology Majors Only	140
Facebook Group: Individual study groups	146
Facebook friends	150
Backstage offline: Conversations with others	152
Family as classmates	152
Friends as classmates.....	154
Classmates at work.....	156
Backstage online and backstage offline: The exception.....	158
Chapter summary	160
Chapter 6: The advertising case	162
Introduction.....	162
The setting and teaching curriculum	163
The cast: The advertising cohort	164
The stages: Front stage, backstage online, backstage offline.....	167
Front stage	169
Graded and non-graded discussion boards	169
Backstage online.....	183
Backstage online group work	183
Backstage online secrets: controlling information	187
Backstage offline	193
Chapter summary	197
Chapter 7: Mathematics case study.....	200
Introduction.....	200
The Setting and teaching curriculum: Face-to-face (F2F) and online.....	201
The Cast: Mathematics subject participants	203
The front stage, backstage online, and backstage offline	206
Front stage: Introduction	207
Front stage: Discussion boards.....	208
Front stage: Lecture recordings	210
Front stage: Content resources	215
Backstage	218
Backstage online experts: The front stage teacher and the internet	218
Backstage offline	222
Backstage offline resources.....	222
The struggle to find experts in everyday life.....	226
Chapter summary	232
Chapter 8: Cross-case analysis and discussion.....	234
Introduction.....	234
Findings one and two: How teaching curricula and learning curricula constrain and enable learning	235
Finding one: Teaching curricula constrained students' learning and learning curricula enabled learning across time and space.....	235
Finding two: Students experienced learning with audiences where the outcomes of their social interactions were perceived and understood to be positive.....	238
Front stage: Discussion boards.....	241
Backstage online and backstage offline	248

Finding three: Multiple identities were enacted across the front stage, backstage online, and backstage offline	255
A tool for mapping how students enacted different identities across the three stages	257
Chapter summary	264
Chapter 9: Conclusions.....	266
Final journal excerpt	270
References	272
Appendices	297
Appendix A: Evidence of ethics clearance.....	297
Appendix B: Evidence of ethics clearance extension	298
Appendix C: Consent Information Statement	299
Appendix D: Questionnaire	302
Appendix E: Interview plan	306
Appendix F: Participants by pseudonym, grade, and front stage performance.....	307
Appendix G: List of content analysis codes for the discussion boards	308

List of Tables, Figures, and Boxes

Chapter 4 Tables

Table 4.1 The research sites	80
Table 4.2 Description of front stage roles	81
Table 4.3 Overview of the participants and the data for three case studies	82
Table 4.4 Tools selected by student and teachers for interviews	90

Chapter 4 Figures

Figure 4.1. My timeline of experiences as they relate to my thesis	73
--	-----------

Chapter 5 Tables

Table 5.1 Psychology Subject Participants by Front Stage Performance and Participation in Fortnightly Questionnaires and Interviews	99
Table 5.2 Psychology Students' Grades by Front Stage Participation	100
Table 5.3 Grades of The Students who Participated in Questionnaires and Interview	100
Table 5.4 Average Hours That 21 Participants Performed Subject Related Tasks	102
Table 5.5 Content Analysis of The Weekly Activity Forum (WAF) and General Discussion Forum (GDF)	109
Table 5.6 Students Participation in the Weekly Activity Forum Over 12-weeks	110
Table 5.7 Backstage Online Facebook Groups and Descriptions	139

Chapter 5 Figures

Figure 5.1. Screenshot from Blackboard activity user logs	104
Figure 5.2. Screenshot of the Weekly Activity Forum	105
Figure 5.3. Screenshot of the General Discussion Forum	106
Figure 5.4. Screenshot of the task from the week one Weekly Activity Forum	107

Chapter 5 Boxes

Box 5.1 Post 1 of 5: Unit Coordinator's Weekly The Activity Post	112
Box 5.2 Post 2 of 5: Performer 1's Response to the Weekly Activity Post	113
Box 5.3 Post 3 of 5: Performer 2's Response to Performer 1	114
Box 5.4 Post 4 of 5: Performer 3's Response to Performer 1	115
Box 5.5 Post 5 of 5: Performer 1's Response to Performer 3	116
Box 5.6 Post 1 of 6: Post 1 of 6: Cameo 1's Training Question	126
Box 5.7 Post 2 of 6: Ingrid's Answer to the Training Question	126

Box 5.8 Post 3 of 6: Cameo 1 Thanks Ingrid	127
Box 5.9 Post 4 of 6: Ingrid's response to Cameo	127
Box 5.10 Post 5 of 6 Teacher A's response to Cameo 1	128
Box 5.11 Post 6 of 6 Cameo 1's response to Teacher A	128
Box 5.12 Post 1 of 1 Ingrid's Apology to the Class	134
Box 5.13 Post 1 of 2 Ingrid's Question About the Assessment	148
Box 5.14 Post 2 of 2 Cameo's Answer to Ingrid's Question	148

Chapter 6 Tables

Table 6.1 Advertising Students' Grades	164
Table 6.2 Advertising Students' Front Stage Hours	166
Table 6.3 Advertising-1: Hours of Students who Participated in the Questionnaires and Interviews	167
Table 6.4 Advertising-2: Hours of Students who Participated in the Questionnaires and Interviews	167
Table 6.5 The Breakdown of Students' Front Stage Performance Roles in Advertising-1	172
Table 6.6 The Breakdown of Students' Front Stage Performance Roles in Advertising-2	172
Table 6.7 The Number of Students who Posted to Each Week Advertising-1	173
Table 6.8 The Number of Students who Posted to Each Week Advertising-2	173
Table 6.9 Content Analysis of Learning Codes for the Graded Discussion Boards in Advertising-1 and Advertising-2	176
Table 6.10 Content Analysis of the Group Work Discussion Boards in Advertising-2	184

Chapter 6 Figures

Figure 6.1 Screenshot of Advertising-1 graded discussion board tasks	169
Figure 6.2 Screenshot of Advertising-1 non-graded discussion board tasks	170
Figure 6.3 Screenshot of Advertising-2 graded and non-graded discussion boards	171
Figure 6.4 Screenshot of Advertising-1 group workspace in the front stage	183
Figure 6.5 Screenshot of Advertising-2 group workspace in the front stage	183
Figure 6.6 Donny's discussion board that explains the cross over between his work and his study	194

Chapter 6 Boxes

Box 6.1 Student A's Response to the Task	174
Box 6.2 Lynn's Response to Student A	174
Box 6.3 Student B's Response to Student A	175
Box 6.4 Discussion Board post From Group Work Discussion Boards	185

Chapter 7 Tables

Table 7.1 The Mathematics Students by Mode of Study and Grades	202
Table 7.2 Mathematics Subject Participants by Front Stage Performance and Participation in Fortnightly Questionnaires and Interviews	203
Table 7.3 Hours of Students who Participated in the Questionnaires in the Mathematics Subject	206
Table 7.4 Access and Times of Lecture Recordings in the Mathematics Subject	210
Table 7.5 Diminishing downloading patterns by students in the weekly practical materials and weekly learning materials	215
Table 7.6 Diminishing Downloading Patterns by Students in the Past Exam Resources from Week Eight Onward	216

Chapter 7 Figures

Figure 7.1 Screenshot of the mathematics subject's graded discussion boards	208
Figure 7.2 Teacher's welcome letter to the students: Discussion boards	208
Figure 7.3 Screenshot of a typical lecture recording from the Mathematics subject	210
Figure 7.4 Screenshot of a student's progress bar for accessing resources	214
Figure 7.5 Teacher's welcome letter to the students: Backstage online support	218
Figure 7.6 Teacher's welcome letter to students: Textbook	222

Chapter 8 Tables

Table 8.1 Keywords from students' interview data that compare how students described the front stage, backstage online, and backstage offline	239
Table 8.2 A participation Typology for Mapping a Student's Multiple Identities Across the Three Stages	257
Table 8.3 Ingrid's stage orientation: Front stage oriented	259
Table 8.4 Lynne's stage orientation: Backstage online oriented	260
Table 8.5 Joanne's Stage Orientation: Backstage Offline Oriented	261
Table 8.6 Mia's Stage Orientation: Backstage Offline Oriented	262

Chapter 8 Figures

Figure 8.1 An illustration to compare how students from the three case studies located their training and learning processes across the front stage and backstages	236
--	-----

Chapter 1: Introduction

Although it has been widely established that learning occurs across contexts and time (Chaiklin & Lave, 1993; Dewey, 1899; Lave & Wenger, 1991; Rogoff & Lave, 1984), few studies of formal education take this point into account (Livingstone & Sefton-Green, 2016). My central argument in this thesis is that most learning related to a student's online subject occurs in spaces other than the learning management system (LMS), yet this is rarely considered in the literature about online learning. Unlike most studies in education, I do not focus on a single learning environment or limit the analysis to the university's online learning environment. Instead I apply Goffman's (1959) region behaviour approach from his book *Presentation of Self in Everyday Life*. Specifically, I draw from Goffman's front stage and backstage region behaviour to illustrate how students present themselves and their learning in different spaces.

I apply and extend Goffman's (1959) theatre language to include the front stage (the online university classroom in the LMS), the backstage online (the internet, especially Facebook), and the backstage offline (with friends, family, and colleagues). I extend the metaphor further by assigning roles to students based on their observed and reported performances in the front stage. Students' roles ranged from least discussion board posts to the most discussion board posts, including: stagehands, cameos, extras and performers. I consolidate this overall approach by aligning my definition of learning with theorists who maintain that learning is a social process between people and groups across time and contexts (Lave & Wenger, 1991; Wenger, 1998). It should also be noted that throughout this thesis I use the term "subject" to refer to a twelve-week topic studied by university students. In some universities within particular countries this may be referred to as course, unit, or module. Through an empirical analysis of online

university students' performances of learning across the theatre stages, my research seeks to answer the following questions:

- In an online subject, where, and with whom, do university students experience learning?
- Based on the social processes present in the front stage, backstage online and backstage offline, what might make an effective learning environment for students?

In the following section I outline the structure through which each of these questions is addressed and my contribution to knowledge is made apparent. Specifically, I show how students resituated their roles and reconceptualised the curriculum across the stages. The central finding of my thesis is that the backstage online and backstage offline are the preferred learning environments for some students (i.e. the LMS). The backstage online and backstage offline at times better supported students' in resituating and reconceptualising their learning. Through my analysis I develop a participation typology that identifies how students use the front stage, backstage online, and backstage offline to enact multiple identities within the same subject. I used this typology to illustrate students' stage orientation, which is the space in which a student prefers to perform subject-related tasks within a particular subject. A student's stage orientation within a subject is a useful way to acknowledge how students enact control over where and how learning occurs in an online subject. It also gives credence to possible learning environments outside of the university LMS.

Overall, this study purposefully focuses on the social processes of students and how they perceived their learning. I only briefly explore the role of the teacher and the role of the LMS as artefact. However, both play an important role in facilitating

university learning. While they are outside of the scope of my thesis, both should be explored in future research.

Organisation of the thesis

In **Chapter two**, “Background and Conceptual Framework”, I described and critique the community of inquiry model (Anderson et al., 1999), the five-stage model (Salmon, 2002), connectivism (Siemens, 2005), and learning analytics (“1st International Conference on Learning Analytics and Knowledge 2011,” 2011). My critique of these influential approaches is that they perpetuate research and curriculum design that may not account for how students learn across time and spaces. Then I propose Goffman’s (1959) theory of backstage and front stage region behaviour as an alternative means of exploring where learning occurs in online environments. My definition of learning and the research questions that have guided this study are described at the end of this chapter.

In **Chapter three**, “Social Process of Learning”, I use Lave and Wenger’s (1991) lens of situated learning to explain how learning occurs across space and time. In this chapter, I define and explain four social processes that facilitate learning. I then use these processes to further critique studies of online learning. Through this critique, I establish my own definitions to conceptualise how students experience learning for the purpose of this thesis. I explain how I will apply those terms to add depth to the analysis of the three case studies. I define *learning* as a student’s changed understanding of the content within the subject and the ability to apply the content across contexts. I define *training* as learning to become a more competent student.

Chapter four, “Research Methods”, explains how I approached this research from a constructivist paradigm and utilised Stake’s (1995) approach to case study research. Then I recount how data was strategically generated from across the stages. In

the front stage, I used observations of activity files, document analysis, and content analysis of discussion boards. In the backstage online and backstage offline, I used fortnightly questionnaires and online interviews with teachers and students. It should be noted that throughout this thesis I include **journal excerpts** from my research journal. These excerpts offer glimpses into my own backstage throughout this research journey.

Chapter five, “The Psychology Case”, reports findings from the largest subject. I use this case to anchor my argument and explore in detail the possible places where students resituate their learning from the university subject which they study. The content analysis of discussion board posts, and students’ Blackboard activity logs, shows how students mostly use the front stage for training purposes. Those students who shared their back stage online and backstage offline experiences represented a range of participation roles and had final grades from across the spectrum of fail to high distinction. Students used the backstage online (e.g. Facebook) as a space to elaborate their learning from the subject, and backstage offline to apply and explore the content from their subject in conversations with friends, family, and colleagues.

Chapter six, “The Advertising Case”, analyses two subjects: Advertising-1 and Advertising-2. This chapter explores a setting in which students were assessed on their front stage discussion board performance. It also investigates how completing a group work assessment impacts backstage performances. In the front stage, I draw from Goffman’s (1959) concept of make-work to provide useful insights as to why conversations related to students’ learning did not evolve on the graded discussion board. In the backstage online, students used Facebook to complete their group work assessment. The students who participated in interviews represented four groups from the backstage online. I analyse their group work experiences using Goffman’s notion of backstage secret keeping to explain why this may have been an effective learning

environment for students. Backstage secret keeping is a way in which students can enact multiple identities in the same online subject; this strategy increases students' opportunities for learning. The findings from the backstage offline further supported those of the psychology case, including that students identified instances of learning with friends, family, and colleagues.

Chapter seven, "The Mathematics Case", examined a multi-modal subject with 44 face-to-face students and 19 online students. In this case study, I explore how a non-discursive (e.g. numerical) content area impacts learning and training. In all of the stages, students were dependent upon the expert-to-novice learning trajectory in order to experience their learning and training in this subject. I refer to this as "expert-dependency". The specialised content area of the subject limited students' ability to resituate and reconceptualised their knowledge in the backstage online and backstage offline.

In **Chapter eight**, "Cross-case Analysis and Discussion", I return to the research questions and the four social processes from the literature review that I argue facilitate learning. I explain how teaching curricula constrained and restricted students' learning, and how learning curricula enabled students to elaborate on a subject's content area. I show how students described negative experiences in the front stage and positive experiences in the backstages. I use this to explain why the discussion boards were underutilised by students. Then I explain why students in the discursive subjects used Facebook and students in the non-discursive subject did not. I also provide reasons why some students experienced learning with family, friends, colleagues, and occasionally clients. Lastly, I use the data from the three case studies to develop a participation typology that maps how students learn across the three stages. I use the typology to show, firstly, how students enact multiple identities while studying in an online subject,

and secondly, how students were oriented to one stage over another. I give consideration to how this typology could be used by universities to design online and blended subjects.

In **Chapter nine**, “The conclusion”, I reiterate the key argument of this thesis, which is that learning related to an online students subject mostly occurs in spaces other than the LMS. I recount the observations and findings which emerged from the three case studies and the cross-case analysis. These are that students’ learning was constrained in the front stage, while in the backstages students were able to elaborate upon the subject’s content. This thesis addresses the need to widen the scope for the learning that occurs in an online subject beyond the LMS. I end by suggesting future lines of inquiry in relation to studies of online learning and educational design.

Chapter summary

This chapter has established an overview of the background and conceptual frameworks for this thesis. The research questions have also been identified. Most importantly, I have summarised my contribution to the field. The thesis overview sets the scene for what is next to come. In the chapters that follow, I will expand upon the groundwork outlined in this chapter.

Chapter 2: Background and conceptual framework

Introduction

In this chapter, I give a brief background of how universities started delivering content online. This is to illustrate how the focus for teaching and learning online became limited to that space. I then introduce and explain the limitations of the online frameworks, models, and measurements that have emerged during the early twenty-first century. I focus specifically on the community of inquiry model, the five-stage-model, connectivism, and learning analytics because they are influential for educational technologists and designers, and because of their popularity in the field of online learning. I acknowledge that these four aspects are not the totality of online learning. We cannot point to one of the four aspects over another as the accepted foundation from which the field of online learning has emerged. This is because the theories and principles underlying online learning are the same for all learning. That is they are founded more broadly in the educational paradigms of behaviourism (e.g. Skinner, 1976), cognitivism (e.g. Bruner, 1966), and constructivism (e.g. Vygotsky, 1978). As such my review of learning and studies of online learning are located in ‘Chapter 3: Social processes of learning’.

My critique of the community of inquiry model, the five-stage-model, connectivism, and learning analytics is two-fold: (1) they promote research and course design that focuses primarily on the learning that occurs through the main course activities; and (2) this can result in an inadequate consideration of students learning. By establishing the background in this way, I eliminate the community of inquiry model, the five-stage-model, connectivism, and learning analytics as conceptual approaches for my research and suggest Goffman’s (1959) framework for region behaviour. I end this chapter with a brief explanation of how I will define learning throughout the rest of this

thesis. Again, I expand upon and situate my definition of learning in the literature in ‘Chapter 3’.

Background

Prior to learning online, those students who did not attend campus studied mostly through correspondence education using the postal service (Wedell, 1969). At the start of the 1980’s the ability to use teleconferencing software transitioned distance education into online spaces. For the first time, distance students were able to interact with each other, in large and small groups, by posting electronically to e-bulletin boards (Naidu, 1988). In 1986, Ludwig Braun described one of the first online university programs as follows:

Participating students receive a text, a set of course notes, readings, a course outline, and homework, along with an account in the NYIT teleconferencing system. The faculty person assigned to the course acts as a mentor, using the teleconferencing system to guide the students individually and as a group through the course content. Because of the asynchronous character of telecommunication, the students and the faculty mentor work together, and have group discussions, even though some are in New York and some in California, even though some get on the system from home and some from a motel room, even though some get on at 9 a.m. after working the midnight shift and others get on at 11 p.m. after the kids are in bed (Braun, 1986, p.147) .

Twenty years later and Braun’s (1986) description is indeed not all that different from the subjects that I will describe in my thesis. In Braun’s (1986) description, work and family are presented as aspects of the student’s life that bookend the act of studying. While this description continues to be the reality for many students, including the students who participated in my research, this should not define the scope for

participating in an online subject by limiting it to those interactions between the student and the university. Instead I align my research with an alternative view.

My position more closely aligns with Moore and Kearsley (1996) who defined the learning environment for distance education through the lens of a system view; that is a learning environment is made up of those interactions that occur in the “workplace, home, classroom, and learning centre” (p.9). Somewhere in the story of online education, however, the spaces that Moore and Kearsley (1996) identified as constituting a learning environment for distance education students became buried by the university’s ability to collect and analyse the data that students produced online. One possible reason for this was because in the mid 1990’s companies, like Blackboard, were improving upon the teleconferencing software from the 1980’s and selling LMS’s to universities. The LMS was an internet-based system that enabled the teacher to share instructional materials and students to submit assignments in the same online space. In addition to this, students and teachers could also use the LMS to communicate synchronously and asynchronously with one another. By 2008 more than 90% of American higher education institutions (Hawkins & Rudy, 2008), and 95% of higher education institutions in the United Kingdom were using an LMS (Jenkins, Brown, & Walker, 2005).

For many institutions, the LMS, became the classroom for students who study online. As a consequence, the scope for teaching and learning online became limited to that context. Over the last two decades several authors have explicitly tried to make sense of the learning that occurs in the online context. As a result, various theories, frameworks, and measurements have emerged. Some influential ones include the community of inquiry model (Anderson et al., 1999), the five-stage model (Salmon, 2002), connectivism (Siemens, 2005), and most recently the field of learning analytics

("1st International Conference on Learning Analytics and Knowledge 2011," 2011).

While these theories, frameworks, and measurements do not necessarily seek to explain the totality of student behaviour and experiences, their application by researchers and those who design university curricula can perpetuate a body of work which views learning through the main course activities of a university subject. Therefore I describe these examples as a way of eliminating them as possible approaches for my research.

The community of inquiry model (CoI) and its limitations

Learning in the community of inquiry model is assumed to occur through textual conversations in the online classroom, which are scaffolded by more knowledgeable peers and teachers. The community of inquiry model suggests that learning occurs in an online classroom when there is a social presence, cognitive presence, and teaching presence (Anderson et al., 1999; Garrison, Anderson, & Archer, 2010; Garrison & Anderson, 2003; Kanuka & Garrison, 2004). Social presence is the ability for those in the community to act genuinely, through asynchronous and synchronous computer-mediated-communication, in order to create meaningful relationships (Garrison & Anderson, 2003). For instance, a member might use emoticons to express her feelings, or members might encourage each other to participate and collaborate. Cognitive presence is the collaborative construction and exploration of topics (Garrison & Anderson, 2003). This is present in the community when the members exchange information, as well as connect and apply new ideas. Teaching presence is the design and facilitation of the subject (Garrison & Anderson, 2003). For example, students and teachers might share personal meanings about a topic, followed by the teacher linking the discussion back to the curriculum. These definitions of social, cognitive, and teaching presence informs how the researchers code the textual conversations in the online classroom. More recently, however, Arbaugh et al. (2008) designed a survey

instrument that asks students to self-report their experiences with each theme. This survey is designed to further probe students' social, cognitive, and teaching experiences inside the online classroom.

Some studies have shown that the community of inquiry model is useful for identifying how a teaching presence impacts student' perceptions of learning (Garrison, Cleveland-Innes, & Fung, 2010; Shea, Hayes, & Vickers, 2010). The community of inquiry model to date is somewhat limited because few studies investigate the presence of all three elements. Rourke and Kanuka's (2009) review of the community of inquiry literature found that no study, including those conducted by Garrison and colleagues, has identified clear instances of cognitive presence. Some researchers have also critiqued the model for oversimplifying online discourse to three options (i.e. social, cognitive, teaching presence) and overall "presence" reduced to merely the evidence of text (Xin, 2012). The community of inquiry model limits itself to the asynchronous networks located within the online classroom, and more recently social networking sites (see for example, Aghili, Palaniappan, Kamali, Aghabozorgi, & Sardareh, 2014). However, it does not consider how students use these spaces concurrently. It relies solely on discursive data as evidence of learning in a community, and a student's community is limited to the classroom. It also ignores that students can learn across multiple locations and through conversations that occur in spaces other than those supported by text based communication.

The five-stage-model and its limitations

Around the same times that the community of inquiry model was developing, Salmon (2002) expounded the five-stage-model. The five-stage-model claims that learning is a result of reflecting on and sharing experiences with others (Salmon, 2003). The five-stage-model is founded on the premise that when learning is facilitated by a

computer it occurs along a five stage trajectory (Salmon, 2002; Salmon, Nie, & Edirisingha, 2010).

In Salmon's five-stage-model she suggests that students move through five stages by mastering technical skills and learning to interact with classmates and teachers (Salmon, 2002, 2003, 2013). According to Salmon (2002) learning online occurs in the following order: (1) students access the system and the teacher welcomes them into the classroom (access and motivation); (2) students send and receive messages with classmates and the teacher (online socialisation); (3) students respond to activities and discuss with their classmates (information exchange); (4) students take greater control over their own learning as they feel like members of the knowledge construction community (knowledge construction); and (5) students build on ideas, applying what they have learned, and reflect (development). The five-stage-model is a result of Salmon's action-based research with distance students at the Open University, where she coded 3,000 discussion board messages over two years to inform the model and used focus groups to refine the model (Salmon, 2013). It is based on the principle of scaffolding, in that the students' previous experiences play an essential role in the moderation that a teacher provides, and that as students advance their understandings of tasks, content, and technology, they rely progressively less on the teacher.

Many researchers have raised concerns about the five-stage-model (Jones & Peachey, 2005; Lisewski & Joyce, 2003; Moule, 2007). Santy and Smith (2007) critique the model, suggesting that it assumes that the students are self-motivated, self-directed, sociable, and able to exercise independent thinking. However, the most pertinent critique on their list would be that students are sociable. The five-stage-model, like the community of inquiry model, assumes that learning occurs through the conversations that transpire between classmates and teachers. In addition, the model limits itself by

reifying and coding the five stages in an order that may stifle the practice of teaching and learning (Jones & Peachey, 2005). Accepting the model as best practice, as well as reifying the stages in a particular order, could interfere with the ability to conceptualise teaching and learning outside of the five stages. If online frameworks, like the five-stage-model, promote a dominant discourse for the design of courses and the understanding of teaching and learning, then they could run a one-size-fits-all approach (Moule, 2007). This could lead to even lower completion rates among online university students.

Most importantly, the five-stage-model fails to consider how the various ability levels of a cohort can impact the formation, and sustained presence, of the classroom learning community. For example, stage one suggests users are familiarising themselves with the technology and mostly interacting with the teacher, whereas by the fourth stage, students have mastered the use of technology for posting and responding in the discussion board, and are now constructing their own knowledge with the classroom community. To reach stage four, the students would need an accurate understanding of the content and to express their understanding or competency outwardly, such as on the class discussion board. However, because students progress through the stages independently, they may find themselves in a discussion board with few people with whom they can collaborate and construct new knowledge. Or, if lurkers (those who read discussion boards but do not post) make up the majority, then they may not be perceived as going beyond stage two. This may cause issues in forming a conversation, let alone a classroom community. Perhaps then, the model's ultimate shortcoming is that it does not imagine that the members' collective competence, or learning community, could be located in relationships found elsewhere (e.g. outside of the classroom). If a lurker has a knowledge community in another space, such as with

colleagues at work, then this could explain why they only reach stage one or two in the classroom but may be at stage four or five within the workplace. In addition to these critiques specific to the five-stage-model, like the community of inquiry model, it relies upon the content of messages from discussion boards. Because of this, neither model accounts for lurkers.

Connectivism and its limitations

In the theory of connectivism, learning is defined as the ability to distinguish between important and unimportant information in an increasingly digitally connected world. The ability to seek and filter information, and make decisions based on this process, is considered essential to the connectivism learning process (Downes, 2008; Siemens, 2005). In other words, “the capacity to know is more critical than what is actually known” (Siemens, 2008, para. 6). The theory of connectivism, and this definition of learning, was specifically developed in response to how the internet facilitates knowledge creation at an increasing and unprecedented rate. Because of this, connectivism is based on the assumptions that knowledge is stored in digital formats, that students have unlimited access to networked technologies, and that modern learning is governed by technology (Kop & Hill, 2008).

Connectivism suggests a model where an individual’s learning is distributed in and across nodes and networks—including machines (Downes, 2008; Siemens, 2005). This theory posits that all learning begins with the individual student by accessing nodes, or learning communities, which vary in size and strength based on the concentration of information and number of students in that node (Siemens, 2005). A network consists of two or more nodes. The student is responsible for making connections between themselves, the nodes, and the networks (Siemens, 2005). The theory itself tries to model what it defines; this is why it was promoted through various

forms of social media and websites instead of peer-reviewed journals. The idea essentially gained momentum quickly because of the strength of Siemen's network. However, his endeavour may have been less successful were it not for his own popularity and the popularity of those spruiking it.

In the context of online learning, Siemens (2005) suggests that controlling the learning experience must be replaced with influencing and shaping the network. A successful online learning experience is therefore dependent on one's network, the ability to nurture and grow a network, and the ability to use, or socialise within, the network. Siemens (2010) view of students who *are* connected to a network and *not* contributing is negative. He dismisses the possibility that they are learning, because he considers those students (e.g. lurkers) as being "self focused" and "self-centred," and that they are only "taking" from others. Siemens (2010) goes so far as to suggest that learning can only occur through participation and not observation:

I'm negative about LPP [learning peripheral participation or lurking] because the concept of not participating because someone is new defies what learning is all about: involved, engaged, experimenting, socializing, etc. I think we can better get our footing in new topics by sharing our development. Learning transparently=teaching (sic).

However, not all students are social or view themselves in this way. Therefore, when this theory was applied to the online classroom, students who did not view themselves as social, or able and willing to connect with others, struggled to understand learning in this way (Milligan, Littlejohn, & Margaryan, 2013).

Connectivism is not necessarily a new teaching and learning theory, but instead illustrates how collaborative technologies facilitate ideas from previously established learning theories (Calvani, 2009). For example, Siemens's (2005) notion that learning can reside in non-humans is similar to activity theory, which argues that learning is

distributed between students, activities, and tools. Similarly, Siemens's (2005) attempt to locate information in a network is similar to locating information in a community of practice (see Lave and Wenger, 1991) or a constellation of practices (see Wenger, 1998). However, his dislike for LPP is at odds with the work of these learning theories. Nonetheless, because of its popularity in social networks and the blogosphere, it has influenced the field of online learning and has the potential to continue doing so.

The greatest contribution of connectivism to the field of online learning is that it acknowledges that traditional notions of learning have been disrupted by the role of technology. This may have inspired students and teachers to innovate their practice with technologies and online social networking (Bell, 2011). In addition, the theory of connectivism has attracted the interest of information scientists to the field of education. This has resulted in more advanced tools and analysis being applied to the data of online students, such as social network analysis, and most recently tools to capture a student's LMS data, along with data from social networking sites (see Kitto, Cross, Waters, & Lupton, 2015). Essentially, it helped to establish the field of learning analytics, which I turn to next. Connectivism also has the potential to investigate how learning is negotiated, networked, and distributed across both physical and virtual spaces (Conole & Alevizou, 2010), though to date it has not been applied in physical spaces. For now the applications are mostly limited to a student's online data.

Learning analytics and its limitations

According to a definition provided from the 1st International Conference on Learning Analytics (2011), "learning analytics is the measurement, collection, analysis, and reporting of data about students and their contexts, for the purposes of understanding and optimizing learning and the environments in which it occurs." The analysis of students' online data through social network analysis, computer-assisted

discourse analysis, computer-assisted content and LMS activity logs has come to define the data that this field depends on for analytics (Greller & Drachsler, 2012; Siemens, 2013). However, the nature of the learning being researched is very unclear. In Gašević, Dawson, and Siemens's most recent review of the field, they argue that "computational aspects of learning analytics must be well integrated within the existing educational research" (2015, p. 67), yet they fail to situate the field within a definition of learning, and to link it to an established learning theory.

In some studies that apply learning analytics (for example Xing, Guo, Petakovic, & Goggins, 2015), simple conversations between students are considered to be evidence of learning. However, for this claim to be valid, the content of the posts would need to be examined, or the students would need to be asked about their experience. In another example, time and quantity are used as indicators of learning. Zimmerman (2012) found that students who spent more time interacting with content achieved higher grades than those who spent less time interacting with content. The time spent clicking on and downloading content from the LMS may reveal patterns in how students use the tool, and which of those patterns result in higher or lower grades. To substantiate these claims, it would also be necessary to know more about the students' prerequisite knowledge. Learning analytics has also used performance dashboards, which again count the hours and clicks that students make in the LMS, and compare this information with the grade recorded. This draws universities' attention to those students who are not achieving (van Barneveld, Arnold, & Campbell, 2012). However, a performance dashboard simply identifies students who are not participating in the LMS from one week to the next. Furthermore, if participation is not graded, then it is possible to earn a high grade without logging into the LMS. Researchers agree that without knowing what the student did once accessing the content, or whether the student found the information

from a conversation useful, the data from online spaces such as the LMS is limited (Romero & Ventura, 2007).

Learning analytics is more popularly applied to large data sets produced from massive open online courses (MOOCs). Tracking when users log into an LMS, for example, can assist in identifying completion and dropout rates in MOOCs (Clow, 2013). Since learning analytics is typically used to make claims about large data sets, interviews are typically not used. This is because of the amount of resources it would take to complete the data collection and the poor response rates to research requests. Despite these downfalls, the power of this data has been demonstrated on a smaller scale when it has been paired with surveys that add depth to the data (see Black, Dawson, & Priem, 2008), or with interviews that assist in telling the story (see Saadatmand & Kumpulainen, 2014). Even researchers from within the field warn that learning analytics needs to engage with mixed methodologies that have a more qualitative focus, such as interviews or longitudinal studies. If it does not, then like the five-stage-model, it could use data to support a one-size-fits-all approach to learning, as well as misleading universities into making decisions based on data mining but not on learning (Gašević, Dawson, Rogers, & Gasevic, 2016; Gašević, Dawson, & Siemens, 2015; Verbert, Duval, Klerkx, Govaerts, & Santos, 2013).

The research gap and conceptual framework

The context for the community-of-inquiry framework and the five-stage model is the online classroom. Connectivism also limits itself to the online classroom, but acknowledges that students have access to online networks, which are part of the learning process. Learning analytics not only struggles to define what it seeks to measure (i.e. learning), but is also over-reliant on LMS data. The frameworks and theories described in the previous section have come to exist and continue to be

perpetuated through students' online data, especially LMS data. Perhaps the biggest problem with relying on data from the LMS to produce frameworks about learning is that a student must log into the LMS in order to produce the data that researchers interpret as learning. However, there are several scenarios in which students may not leave a trace of data. If a student logs in during the first week of the semester and downloads all the semester's materials at once, then a researcher or teacher might conclude that the student has not participated in the subject from week two through to week twelve. If a student only communicates via telephone or email with classmates or teachers to ask questions about the subject, then researchers might think there were no questions. A learning designer could also interpret the absence of questions as meaning that the resource is well designed, while in reality, the teacher may have been bombarded with emails about poorly-written instructions, or a family member may have spent hours assisting the student to understand the task. This is unseen data, but this data is important to understanding how learning occurs in the context of an online university subject.

Research in online education is often dependent upon "what is seen" (Dennen, 2008a, 2008b) in the online learning environment. It is therefore necessary to collect data on the unseen (Beaudoin, 2002), which I argue is located in the everyday lives of students. It is often considered that students who have not produced front-stage online data may not be engaged in learning. An example that illustrates this point is the 'lurking' behaviour of some students. Those students who log in, but do not create discussion boards, are referred to as lurkers. In a community of practice, the least active members, like lurkers, remain on the periphery of the community. However, this is not an indication of inactivity. A study by Beaudoin (2002) found that lurkers in a particular course reported spending an average of 22.3 hours a week on course-driven tasks but

this was not recorded by the LMS. This evidence illustrates that lurkers *are* active and suggests that students who are inactive in one space may be more active in another space.

Wenger, McDermott, and Snyder (2002) support this claim, suggesting that participants on the periphery, like lurkers, make up the majority of a community of practice, and that they play an important role in taking information to other places and having conversations among themselves. For online students, this could occur in other offline and online contexts. One online context that has received a lot of attention since I started my research project in 2013 is Facebook. Facebook has become an extension of the university experience (Selwyn, 2009). Studies have found that students use Facebook to seek and share information related to learning how to do assessments (Gray, Annabell, & Kennedy, 2010), learning content specific to a subject (Hou, Wang, Lin, & Chang, 2015), as well as for supporting each other socially and intellectually (Cuesta, Eklund, Rydin, & Witt, 2016). However, this may not be the only online context used by students, and students' offline contexts still remain an under-investigated space. One way for conceptualising an investigation of this is through the work of Erving Goffman.

Erving Goffman's work as a conceptual tool to fill the research gap

Erving Goffman (1922 – 1982) was a social constructionist whose work maintained that the individual enacts or constructs their performance based on the situation. According to Goffman (1959), a performance is an activity that an individual does in the presence of a particular audience. An actor's performance is based on the definition of the situation. In this section, I explain Goffman's work through situated activity and outline how I will apply it to my research.

Goffman's primary interest was the performances of individuals and groups in situated activity. This is evident in his writings about behaviour in public and in mental health institutions, as well as behaviour while playing games. In his essay, *Encounters: Two Studies in the Sociology of Interactions* (1961), he defines situated activity as "a somewhat closed, self-compensating, self-terminating circuit of interdependent actions" (Goffman, 1961, p. 96). Given a situation, an actor chooses to perform in a manner expected by the social situation, or in a way that isolates himself from the situation. When an actor performs in this way, it isolates him or her from the social situation. This is referred to as "role-distancing" (Goffman, 1961). Goffman (1961) provides an example of this is in comparing the misbehaviour of teenagers, (1) riding mechanical horses on a merry-go-round, and (2) riding real horses in a field. In the context of teenagers riding on a mechanical horse, misbehaviour is acted out through using the reins to lash the horse or riding with no-hands. In contrast, during the live context misbehaviours (with a real horse) is acted out through removing branches from trees, waving said branches in the air like a flag, and attempting to feed the branches to the horse (Goffman, 1961). The act of misbehaving was situated in the affordances of the environment. A teenager could confidently lash a mechanical horse knowing that it could not possibly stand on its hind legs and then take off running. A horse on a merry-go-round is restricted to travelling in the same circle repeatedly, meaning that it is both easier and safer to misbehave. In another example from the essays, Goffman (1961) illustrates how a surgeon's verbal and physical actions are situated within the context of performing a surgery, and specifically whether or not the surgery is going successfully or not. If, for example, the surgery is going successfully, the surgeon may communicate this to his colleagues in the room by joking or stretching in a "clownish way" (Goffman, 1961, p. 124). In this context, behaving in a clownish way communicates to others that

a critical stage of the surgery is over and they are now moving on to a less critical stage. However, if the surgeon were to behave in a clownish way during the critical stage of a surgery, and the patient were to die, the implication might be that the surgery was unsuccessful because the surgeon was unprofessional – that is, behaving like a clown. While the purpose of these essays was to illustrate how actors use role-distancing to detach themselves from the role a situation requires them to play, the essays also equally illustrate how changing the setting can result in the actors changing their behaviours; this point relates to my research questions.

Goffman's most useful study of situated activity, for the overall purpose of my thesis, is his ethnography of the Shetland Hotel (Goffman, 1959) where region behaviour occurs in any place that is bound by barriers to perception. Goffman (1959) describes two regions: the front stage and the backstage. In the front stage, an actor is putting on a performance and is conscious of being observed by others. In the backstage, an actor is afforded privacy from those in the front stage. The backstage is both a space for preparation for the front stage performance, and reprieve from the front stage performance. In the context of the Shetland Hotel, there was firstly the front stage – mainly the dining room and parlour. This was the space where guests interacted with each other and hotel staff. In this space, both employees and guests behaved according to the British middle class norms, whereas in the backstage – mainly the kitchen – the employees behaved according to Shetland Islander norms. This meant that acceptable food, attire, and behaviour in the backstage would be different to that of the front stage. For example, in the backstage it was acceptable to wear a hat, hang socks over the stove to dry, spit in a cup, and keep mouldy soup in the backstage. However, in the front stage, staff maintained a polished appearance and the presence of mould was unacceptable. Goffman's (1959) overall observation was that an employee's front stage

(in the restaurant) and backstage (in the kitchen) were parts of the whole individual separated by a kitchen door. The technology of the door played an important role in supporting actors to situate their behaviour within the spaces of the hotel. Behaviours that the hotel managers did not want the hotel customers seeing, for instance, remained hidden behind the door in the backstage.

One of the main considerations in Goffman's body of work was co-presence of participants. In recent times, however, technology has come to simulate a co-presence between people. In internet studies Goffman's region behaviours have been applied to produce a fuller account of how internet users engage across the backstage and front stage spaces (see Bullingham & Vasconcelos, 2013; Hogan, 2010; Pearson, 2009; Ross, 2007; Trammell & Keshelashvili, 2005). Bullingham and Vasconcelos (2013) found that when creating an online persona the participants generally reproduced their offline selves rather than adopting a new persona. Hogan (2010), on the other hand, suggested that an online front stage only reproduces an offline self when it is mediated through synchronous communication, and that asynchronous communication allows one to present an idealised version of oneself. While these examples consider how the affordances of technology might impact region behaviours, the argument as to whether or not a user reproduces an offline identity in an online space is moot. Instead the focus should be on decorum.

A front stage is typically marked by the decorum of those present, and not by the space. Goffman (1959) illustrated this point in the Shetland Hotel. For instance, the front stage was marked by middle-class norms, and the backstage by Shetland Islander norms. However, the backstage kitchen was not totally hidden from the front stage dining area. The door, which separated the stages, could be propped open at times by wait-staff who were carrying heavy trays. This gave customers the opportunity to get a

glimpse of the kitchen, but did not suddenly turn the kitchen into a momentary front stage. Ross's (2007) study of region behaviour most aptly illustrates this point. Ross (2007) studied London cabbies-in-training who used public online message boards as a backstage to their front stage offline cabbie training. The backstage was an online community for students, created by students, with an occasional outsider passing through. The online backstage afforded cabbies a space to feel connected by using informal language and sharing resources that made learning possible, as well as an anonymity that made it possible to critique actors from the front stage (examiners, customers, colleagues). While these examples of region behaviour are mostly related to employment and online gaming, I suggest that the same might be true in the context of online learning.

The conceptual approach to my research: Applying Erving Goffman

The staging of roles as mediated by technology distinguishes how a person, or group, performs tasks in one environment compared with another environment. In the context of my research, the staging of an online student's role may be influenced by what the technology permits and supports. An LMS supports online university students' learning. It does so by allowing students and teachers to store and access learning materials, communicate on discussion boards, and submit assignments. Just as the door supported actors in playing different roles between the dining room and the hotel kitchen, the LMS supports the role of a student and how interactions are mediated. For instance, if a student knows that his or her question—when posted to the discussion board—can be seen by every other student in the front stage, this may be enough to prevent that student from posting the question. That does not mean that the question ceased to exist or went unasked. Perhaps, for example, it was asked in a backstage.

Interactions not supported by the technology are not necessarily inaction.

Onlookers, such as classmates, teachers, and researchers are only privy to the data that is recorded in an LMS. This means that classmates can see discussion board posts of themselves and others, whereas teachers and researchers can see discussion board posts, assessments submitted, and activity logs. Activity logs record data about the students' log in and log out times, clicks, downloads of learning materials, and time, date, and word counts of discussion board posts. There is no technology, yet, for which one person can see everything that a student does or everything that a student learned while studying at university. The individual student is the only actor who knows what interactions were useful or what they learned from interacting with content and others yet the emergent theories about online learning do not consider this. In this thesis, I fill this gap by applying Goffman's (1959) region behaviour in the context of online student learning. The fluidity of online and offline spaces fits appropriately with Goffman's (1959) notion of front stage and backstage. My conceptual framework applies and extends Goffman's (1959) stages to include:

Front stage online: The space where an online student gives a performance.

This space can be “seen” by the university, for example the online discussion board, and student activity logs. This data can be generated through learning analytics.

Backstage online: A space where an online student prepares for a performance using the internet but cannot be seen by the university. For example this can include websites, Facebook, and email. This data can be generated using questionnaires and interviews.

Backstage offline: A space where an online student prepares for a performance without internet connection. For example this can include a Word document, face-to-

face conversations with others, and self-talk. This data can be generated using questionnaires and interviews.

By applying Goffman's (1959) theory about front stage and backstage performances, I cast a larger net when investigating online learning to include what a student does in the front stage online, as well as the backstage online and backstage offline. This framework extends what students do beyond the LMS and is supported by face-to-face studies that found learning occurs through multiple contexts (Catalano, 2015; Chaiklin & Lave, 1993; Rogoff & Lave, 1984).

My definition of learning in this thesis

What, where, and when learning occurs for a students is difficult to pin down. One way in which universities attempt to do this is through "student evaluations of course and teaching" (SECT). This is mostly done through surveying students about learning and teaching environments, whether subjects meet the students' expectations, and if students felt that they were assessed fairly (Kinash et al., 2015). However, this strategy mostly ignores the application of content in spaces other than the university and preferences formal learning. Ito et. al (2013) addresses this gap through their definition of "connected learning", which is learning that is "socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity" (p. 4). This concept evolved, and has mostly been applied, in the context of young persons around 12 to 18 years old (Ito et. al, 2013). Connected learning addresses instances of formal and informal learning. It is a result of individual interests and social support and occurs in online and offline spaces. For example, a young person experiences connected learning when young people find peers who support their interests (e.g. playing chess with friends), the academic institution recognises and makes relevant interest-driven learning (e.g. an after school chess club), and when community institutions provide

resources for peer driven forms of learning (e.g. chess camp during school holidays). My effort to pin down learning in this thesis falls somewhere between how universities measure learning and how Ito et. al (2013) define connected learning. Like Ito et. al (2013) I am interested in learning as meaningful practice and supportive relationships (e.g. Lave and Wenger, 1991). However, I limit the experiences of learning to the content from a university subject, students' performances within that subject, and students' reported realisations of 'learning' as they recalled interacting in online and offline spaces with classmates, family, and friends. By operationalising learning in this way my approach aligns with Erstad (2013)'s "learning lives", which focuses on the students and their learning more so than school institutions and the teachers.

Further in my effort to pin down learning in the university context, I approach my research with the assumption that university students have dual roles. They are students of a content area and practitioners of "being a student". These roles are not mutually exclusive. While practising to be a student, a student is often learning to be something beyond a student. For instance, a psychology student may also be learning to become a psychologist. Several authors differentiate between the kinds of learning that occur based on a context (Cuesta et al., 2016; Lave & Wenger, 1991; Selwyn, 2009; Wenger, 1998). One way in which Wenger (1998) differentiates is by distinguishing between competency and learning. Similarly, Selwyn (2009) distinguishes between the immediate and wider university experience. In this example, the immediate university experience consists of reflecting on an examination, exchanging practical or academic information with peers, or small talk such as humour, whereas in the wider university experience students can more freely engage with the "identity politics of being a student" (Selwyn, 2009, p. 171). In other words, students enact identities for education purposes and for the purposes of coming to terms with the dominant university culture.

Likewise, in Cuesta et al.'s (2016) study of how students use Facebook, she coded data for content-related posts and comments, as well as study-related posts and comments. In order to differentiate between students' dual roles, I draw from Wenger's (1998) definitions of learning and training. Wenger (1998) describes learning as "exploring new ways of being that lie beyond one's current state" (p. 263). As my research is contextualised in a university subject, I modify this definition to mean: a student's changed understanding of the content within a subject and the ability to apply that understanding across contexts. This definition enables me to observe students' learning new ways of viewing oneself, others, or one's environment, in light of a content area, as well as changes in the way others view the student (see for example studies that view learning in this way Curnow, 2013; Johnson, Stribling, Almburg, & Vitale, 2015; Vickers & Deckert, 2013). Training, on the other hand, is "targeted at competence in a specific practice" (Wenger, 1998 p. 263). Training, or engaging in the practice of being a student, means that students navigate a trajectory of competence by completing assessments set out by the university (see for example a study that observed for competence Back, 2013). In summary, these definitions as I apply them in this thesis are as follows:

Training: Learning to be a student. This can include, but may not be limited to, completing tasks specific for a university subject such as referencing, writing genres, finding out a test-taking location, giving and receiving emotional support related to the act of studying (e.g. encouraging a classmate who failed an assignment to not give up).

Learning: A student's changed understanding of the content within the subject and the ability to apply the content across contexts. This can include learning to be something other than a student, new or changed ways of viewing oneself, one's context, and changed or new ways in which others view the student.

These definitions when applied in my research were not without concerns. Firstly, the certainty of whether learning occurred is for the individual student to decide. Learning throughout this thesis was highly personalised and because of this various descriptions of learning are presented throughout the chapters of this thesis. For example, learning for one student was the ability to reflect on the ethical issues of buying dips at the supermarket, while learning for another student was the ability to grasp the intricacies of an advanced mathematical calculation. It should also be noted that the dichotomy between learning and training was not clear-cut. At times there was overlap, and at other times I assumed the student learned based on the language they used, yet this may not equate with certainty that learning occurred. For instance, in the psychology case study (discussed in Chapter 5) students responded to the weekly activity by assuming the role of a counsellor or psychologist. This could constitute learning because the students are imagining themselves in a role other than a student (e.g. a psychologist). However, it could also be training because the student was responding to a task in the teaching curriculum. As an observer I made the assumption that when students posted on the discussion board in a way that suggested they imagined themselves as a psychologist, this fell within my definition of learning.

Research questions

I use this conceptual framework from Goffman (1959) as well as the definitions of performance and learning to answer the following questions:

- In an online subject, where and with whom, do university students experience learning?
- Based on the social processes present in the front stage, backstage online, and backstage offline, what might make an effective learning environment for students?

To explore possible answers to these questions, I conducted case study research in four second-year university subjects at two Australian universities. The subjects included three discursive subjects: psychology, advertising and ethics, advertising copyright; and one non-discursive subject: advanced level mathematics. Discursive subjects mostly required students to discuss answers using the written word, while the non-discursive subject was numbers based. The purpose of using discursive and non-discursive subjects was to observe how students' experiences changed when there was only one right answer. Central to understanding how learning occurred within each case study was the need to examine social processes for learning. I will define and explain these social processes in the next chapter.

Chapter 3: Social processes of learning

Introduction

In this chapter, I explain the lens that I will use to investigate learning throughout this thesis. First, I provide a brief background of Wenger (1987) and Lave's (1988) independent views of learning. Then in more detail I critique and draw from Lave and Wenger's (1991) original conception of situated learning, legitimate peripheral participation, and communities of practices as this is the underlying pedagogical theory that guides my research. I identify the social processes that I will use to identify learning across contexts within my study. I use these social processes to review studies in education and online learning.

My argument in this thesis is that online students experience learning related to their university subjects in spaces other than the LMS. I approach this argument from the educational paradigm of constructivism. Constructivism posits that learning is an active and social process by which the student makes sense of information and constructs meaning through their experiences (Vygotsky, 1978). Most importantly, these experiences may not be contained in a formal educational setting. This argument has been raised in various contexts throughout the past century. For instance, Dewey, (1899) argued that the role of schooling was to recognise the overlaps between the school and the life of a child. Dewey suggested that students could apply knowledge from one context to another context in order to experience an authentic level of learning. In other words, Dewey emphasised the connections between students, their social context, and resources.

Similarly, in the 1970's researchers in the fields of education, cognition, and psychology suggested that in order to find out how children developed language, it was necessary to leave the laboratory and go into children's everyday life or natural settings.

In this scenario, a child's everyday life included spaces such as the home, playgroups, and the supermarket. It was in a child's natural setting where researchers discovered children used language that they could not recall or define in a laboratory experiment (Holzman, 2009). By investigating children in multiple settings researchers discovered that they did not act the same in the laboratory as they did in their home. This highlighted the importance of the role of context in learning for children. Various studies also support that learning occurs through multiple contexts for students of all ages, including university students, employees in the workforce, and adults on apprenticeships (Catalano, 2015; Chaiklin & Lave, 1993; Lave and Wenger 1991; Rogoff & Lave, 1984).

The body of work by Wenger (1987) and Lave (1988) most notably demonstrates that learning occurs through context-based social interactions. Lave and Wenger (1991) apply the epistemological belief that learning is not contained in a conventional educational setting. Therefore, if the learning related to a student's subject occurs in the backstage online and backstage offline, then their work would be the most appropriate lens for which to investigate the phenomena. For the purpose of operationalising learning in my thesis I draw specifically from Lave and Wenger's (1991) situated learning. I do not draw from Lave and Wenger (1991) to identify communities of practice. Instead I draw specifically from the four social processes that Lave and Wenger (1991) use to observe learning:

1. Social processes between newcomer, expert, and near peers
2. Social processes between persons during activities in a curriculum
3. Social processes between participation identities and communities of practice
4. Social processes between persons that produce artefacts and affordances

I use these social processes to critique studies of learning in this chapter, as well as to observe and make sense of the learning in my data and in the presentation of my results and discussion.

Background: Wenger (1987) and Lave (1988)

Wenger (1987) specifically illustrated how learning occurred between the expert and novice. In his 1987 book *Artificial Intelligence and Tutoring Systems: Computational and Cognitive Approaches to the Communication of Knowledge*, he explored knowledge communication as a basic human interaction suggesting that knowledge was caused or supported by someone else. According to Wenger (1987) there are three requirements for an effective representation and communication of knowledge. First, there must be domain knowledge and domain experts. Domain knowledge is the content and the domain expert is the person who has knowledgeability about the content (Wenger-Trayner, Hutchinson, Kubiak, & Wenger-Trayner, 2015). Second, the domain expert must perform two key roles: (1) illustrate to novices how solutions might be reached, and; (2) have the ability to respond to an individual's knowledge level (e.g. changing the difficulty of the content or the task based upon the student's current ability and prior knowledge). Third, teachers and students must adopt an epistemological view of learning where errors, or "bugs," are viewed as opportunities for learning knowledge, as opposed to incidents of non-learning or failure to learn (see also Burton, Brown, & Fischer, 1984). Wenger's points here contradicted conventional notions of formal schooling by suggesting that failure to learn is a legitimate form of learning. In the context of learning across time and space, this could mean that students seek out classmates, family, friends, or colleagues who represent and communicate knowledge in a manner that most suite their needs.

Lave (1988) focused on the social setting and the transfer of knowledge from one setting to another. In Lave's (1988) earliest work, *Cognition in Practice: Mind, Mathematics and Culture in Everyday Life*, she criticised both anthropology and psychology for having “located relations between culture and cognition within the mind of the experiencing individual” (pp.88-87). Ultimately, Lave (1988) was dissatisfied with anthropology’s “culture in the head” and psychology’s “learning in the head” because such classifications separated an individual from the lived-in world. By exploring how people solved arithmetic problems in both the school-world and supermarket-world, she found that for many people it was easier to calculate the prices of items while shopping than complete the same arithmetic function on a math test. Observing the performance of arithmetic in a supermarket illustrated learning could occur as people interact with their social world and physical world outside of themselves. This observation of learning contradicted that of conventional education settings, where learning was measured through testing students or learning was thought to have occurred in only the classroom and not across spaces in a student’s everyday life.

Situated learning (Lave and Wenger, 1991): What social processes facilitate learning?

Both Wenger (1987) and Lave (1988) were seeking to answer the same question: What kind of social processes facilitate learning? This was the question that their book *Situated Learning: Legitimate Peripheral Participation* (Lave & Wenger, 1991) sought to answer. It did so by providing three indivisible analytical viewpoints from which to observe learning: situated learning, legitimate peripheral participation, and community of practice. Situated learning can be observed when learning takes place within a community of practitioners and in a context where it can be applied. The

situated learning process is an “engagement in changing processes of human activity” (Lave & Wenger, 1991). This changing process in human activity is a trajectory where one moves towards more intense forms of participation. In this sense, participation begins with legitimate peripheral participation. This is typically how a student studies a community’s ways of interacting, and then moves onto being a newcomer through social reproduction and production of community norms, and eventually moves on to being an expert (Lave & Wenger, 1991). This form of learning is social and occurs, or is situated within, a community of practice. A community of practice is “a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice” (Lave & Wenger, 1991). The “community” was the set of relationships and the “practice” was the way in which people participated in the community. Community of practice theory has become a conceptual tool for studying the social learning process. It suggests that a community of practice is evidence of situated learning, and that situated learning (including legitimate peripheral participation) occurs in communities of practice. In online learning literature, lurking is often used to describe legitimate peripheral participation. However, studies in online learning rarely view this as a component of social learning or as evidence of learning within the classroom community.

In order to communicate the theory of situated learning, which was quite radical at the time, Lave and Wenger (1991) had to resituate learning in alternative settings to formal education. By doing so, the reader is less distracted by schooling and instruction and can focus on relationships and participation. They accomplished this by using five ethnographies to illustrate how learning occurs, each one being a community of practice: Liberian tailors, Alcoholics Anonymous, Yucatec midwives, naval quartermasters, and supermarket butchers (Lave & Wenger, 1991). Lave was convinced

that an analysis of apprenticeship could highlight the shortcomings of learning as it was theorised in conventional education (Lave, 2008). This was because apprenticeship provided a context for learning that was dependent upon a social relationship between a novice and an expert. These apprenticeship-like settings were carefully selected in order to justify the richness of learning and to communicate with certainty the extent to which situated learning and legitimate peripheral participation occur in everyday life:

All learning and everyday life have some aspects of apprenticeship about them. This is a social phenomenon — newcomers can only become old-timers by participating in communities of practitioners. Legitimate peripheral participation is a way to speak about *relations* between newcomers and old-timers, activities, identities, artefacts, and communities of practice (Lave, 2008, p. 285).

It could be argued that Lave and Wenger (1991) attempted to use each of the ethnographies from their book to illustrate how *learning* is facilitated through the five “relations” mentioned in the quote above, though this is not made explicit in their work. The role of legitimate peripheral participation may well be a necessary process for all forms of social participation. Wenger et al. (2015) recently suggested that, in hindsight, this could be the reason for the abundance of publications that applied situated learning, legitimate peripheral participation, and community of practice while ignoring how learning occurred. Instead, researchers investigated the study of spaces, searched for communities of practice, or sought to produce a template for making communities of practice (Evans & Powell, 2007; Seddon & Postlethwaite, 2007). This defeated the purpose of their 1991 manifesto, which was to emphasise the social relationships in which learning occurs. For example, in Lave (2008)’s later reflection on the manifesto, she described how the term “community of practice” became an object that people

sought after (see for example Hlapanis & Dimitracopoulou, 2007) instead of considering how learning in already-existing groups of people occurred:

Probably the most frequent, and irritating, question from readers of *Situated Learning* has been, ‘how do I know I’ve got a community of practice?’ (especially since they do not bother to ask with equal bewilderment about what is a family or a neighbourhood, school, race, culture, gender, or society). There is, of course, no such species in the world, recently discovered, that we can now set out to capture. It is a way of looking, not a thing to look for (Lave, 2008, p. 290).

This example, and the frequency at which she is asked the questions, illustrates how the central praxis of the theory – a way to observe how learning might occur – went ignored. One possible reason for this was romantic notions that the word “community” implied “harmonious” (Corradi, Gherardi, & Verzelloni, 2010). However, Lave (2008) suggested that the theory of learning in a community is not dependent upon a view where social life is “closed, harmonious, and homogeneous, so that participants are ‘members’” (p. 288). Another possible reason was some researchers were applying the theory in a way that divided practice from learning (Gherardi, 2005). Studies that focus on practice typically investigate micro-processes such as patterns of language use within a community instead of how the patterns of language use facilitate learning.

My argument is not that the unexpected and novel applications of the theory did not contribute important findings, but rather that most studies did not fulfil Lave and Wenger’s (1991) original intentions, which was a manifesto about how learning occurs. To make learning explicit there needs to be a focus on the social processes that facilitate learning. Studies that have been successful in doing this usually illustrate learning through changed ways of participating with others or the movement or construction of knowledge through participation (Barrett, 2005; Wenger et al., 2002). To achieve this Lave (2008) suggested establishing the political, economic, historical, and institutional

context and forces at work. Wenger (1998), on the other hand, suggested that the unit of analysis is neither the individual nor the social institution but rather the informal communities of practice that form from shared enterprise over time. While Lave's (2008) focus appears to be about input, Wenger's (1998) focus is on outcome, or the result of both context and social processes. While both approaches are valid they are imprecise about the social processes in between the input and output. To overcome this, I return to the relations previously mentioned by Lave (2008), that is: "*relations* between newcomers and old-timers, activities, identities, artefacts, and communities of practice" (p.285). In sections that follow, I explore the meaning of these relations and how these relations have been explored in current studies of online learning. I purposefully refer to these relations as social processes instead of relations. By doing so, I aim to emphasise the growth and change that an individual can experience over time and through the relations as they work towards an understanding of a topic. While this is not in direct opposition to 'relations', the term 'processes' encourages the reader to imagine actions beyond static connections. In a study about online students this is important, because it encourages the reader to imagine an online student beyond a name on the computer screen.

Social processes between newcomer, experts, and near peers

The social processes between newcomer, experts, and near peers can facilitate learning without instruction. The roles of expert, novice, and near peer occur within a fluid context of ongoing participation. At any given time one person could know more about a given topic within a practice (expert) and one person could know less (novice). An expert does not need to be a teacher (Lave, 2008) and a novice does not need to have the goal of obtaining expertise (Wenger, 1998). Near peers are knowledge resources (Lave, 2008), who are similarly skilled or knowledgeable, but might have a different

perspective or slightly more knowledge than their fellow newcomer. The interchangeability of these three roles facilitates conversations between members that are more social and less didactic.

Ongoing participation in a community of practice from novice to expert enables learning to occur without instruction. Learning is initiated through observing or participating in tasks and processes associated with the craft. This is an example of legitimate peripheral participation as defined by Lave and Wenger (1991). The metaphor “to dip one’s toe into water” before being fully submerged in a body of water connotes an appropriate image of this process. If the water were an ocean, for example, a novice beach goer might first study the movement of the waves and how expert beachgoers are navigating the current, temperature, and depth (legitimate peripheral participation). The careful dipping of one’s toe is therefore the first step of experiencing the ocean in the same way. From this partial-participation one begins to understand for themselves the current, temperature, and depth – instead of merely observing the water and how others participate in beach going. In the case of Yucatec midwives, practitioners are typically born into the midwifery community of practice because the job is passed down to the novice-daughters of each expert-midwife (Jordan, 1989). In this context, as both the novice-daughter and expert-midwife age, the tasks associated with the craft are redistributed. A novice-daughter, for example, begins her training by accompanying the expert-midwife to appointments and births. This access to the community is where her learning begins. Then, as the expert-midwife ages and becomes less able to meet the physical demands of a task she redistributes the less-complex tasks to the novice-daughter, until eventually the novice-daughter assumes all of the tasks and becomes an expert.

The notion of moving from legitimate peripheral participation to partial-participation, as well as other forms of participation that increase in complexity and scope, is evidence of learning (Lave & Wenger, 1991). This transformation can manifest itself through a change in identity. The midwife, for example, might view herself as a more experienced practitioner as might the community she serves and fellow midwives. A change in identity is often accompanied with the redistribution of tasks, particularly those tasks that are more complex. The redistribution of tasks performs two important functions within the learning process. Firstly, it legitimises novice participation because the novice moves from observer to actor. This movement is evidence that the novice has learned to organise his or her own behaviour in order to perform competently in collaboration with others (Hutchins, 1993). Secondly, the redistribution of tasks communicates to both the individual and other members of the community that the novice has something to contribute to the community. An understanding of what one can contribute to, and gain from, a community of practice is necessary to sustain group learning (Wenger, 1998). Once this is achieved a novice can renegotiate how to participate.

Of course, not all learning within the learning process can be observed. When members cannot observe how or if one is learning, then this can impact how a community redistributes tasks. If the community does not redistribute tasks to those whom they cannot see, then an individual might remain a novice. This could be problematic for certain online contexts such as online discussion boards where the only evidence of participation is through posting comments. It can also be particularly problematic for lurkers. A similar argument can be made if an individual cannot see the more experienced community members. Students who cannot observe other complex forms of practice or be observed by more experienced practitioners are not afforded

access to the social processes necessary for error correction or opportunities to learn new skills. For instance, novice butchers who were forced to work in a room with only other novices were never exposed to interactions with more advanced butchers; in addition, feelings of intimidation prevented the novice from visiting the next room to interact with those butchers who were experts with more advanced skills (Marshall, 1986). In this instance, the physical layout of the learning space prohibited legitimate peripheral participation from occurring, which limited the social interactions necessary to facilitate the learning process (Lave and Wenger, 1991). That is, the physical layout of the butcher shop prevented relationships from forming between expert and novice but not near peers.

Many studies of education illustrate the shift from novice to expert (Jones, 2008; Reid, 2011). However few studies illustrate the role of near peers. During transitions between identities within a community of practice, such as legitimate peripheral participation to novice, or novice to expert, learning can be supported by near peers. Studies about near peers typically focus on processes such as peer feedback and mentorship (Bulte, Betts, Garner, & Durning, 2007; Owen & Ward-Smith, 2014; Tenenbaum, Anderson, Jett, & Yourick, 2014). The peer feedback processes studied occur mostly in professional environments where teaching is embedded in the practice. In examples of higher education Peer Assisted Study Schemes (PASS) also helped in the student learning process (Longfellow, May, Burke, & Marks-Maran, 2008). Near peer learning can be successful because the access to a variety of participation identities assures that learning process is continual.

The near peer role is essential to acknowledge because a newcomer could feel uncomfortable interacting with experts (Wenger-Trayner et al., 2015). Dennen (2014) illustrates this point in her study about an academic blogging community. In her study,

she identified the following participation identities: those who intend to blog, novice bloggers, non-bloggers, expert bloggers. In the context of blogging, the first three were initially near peers. However, non-bloggers were also experts in the context of the community's organisational knowledge and history. She found that non-bloggers, because of their expert organisational knowledge, could still offer advice and feedback to improve the blogs of newcomers. This near peer blogging relationship could enable learning without the newcomer having to approach an expert-blogger where the fear of interrupting or the competition for blog readers might exist.

While near peers can facilitate social processes for learning, a community of practice cannot only consist of near peers. Unfortunately once near peers, or similarly skilled practitioners, have exchanged and mastered each other's skills, knowledge transfer could stagnate and homogenous communities within the community of practice could form. There are both advantages and disadvantages of this. The advantage is that when learning, conflict, and diversity are minimised in one aspect of the practice, another aspects of the practice can be maximised. Wenger (1998) found this to be true of claims processors who made their job habitable by creating a social atmosphere. Their shared practice was not claims processing. Instead they were devoted to making the job a better place through interpersonal relations. This example suggests that the learning of skills and building of relationships between people can result from the social processes that occur between newcomers, experts, and near peers. Most importantly, the opportunity to make their jobs more habitable may not have existed without mastering claims processing.

Once all of the near peers share the same understanding about a practice the community runs the risk of becoming homogenous. The disadvantage of homogeneity is that it can easily be mistaken for failure to learn. McDermott (1993) for example,

suggests “if a particular kind of learning is not made socially available to us, there will be no learning to do” (pg. 277). Therefore, we should always consider what learning is made available based on the social context. In the example of novice butchers, learning to be a more advanced butcher was supported by the location of the supermarket. The location of the supermarket was often an indicator of the socioeconomic status of the clientele and what kind of meat the clientele could afford to purchase—the poorer the neighbourhood, the cheaper the meat, and the wealthier the neighbourhood, the more expensive the meat. This had two consequences on learning to be a butcher. Firstly, butchers in poorer neighbourhoods were afforded more opportunities to cut meat, but learned fewer cutting styles. This was because they cut the same cheap meat day in and day out. Butchers in wealthier neighbourhoods, were excluded from cutting meat because it was so expensive that if they made a mistake the business would lose money. While they knew about more advanced cutting styles, they could not practice cutting meat. This example illustrates how certain skills and information went unlearned based on the social context and those present. Imagine, though, if one of the butcher’s father was an expert butcher. In this instance, the son, or novice butcher, could learn additional skills and information at home. By considering the butchers front stage, the supermarket, and backstage, the home, we can consider what they learn where and with whom.

In studies of online education, social processes between newcomers experts and near peers can occur through discussion board posts that are recorded in the LMS. The lens of situated learning argues that learning does not require a teacher in the formal sense. Therefore, when one student knows more about a topic related to university or a subject’s content they become the expert, whereas during near peer interactions the students are more likely to negotiate tasks because they have a similar level of

understanding. Research that investigates novice to expert social processes might study peer teaching or peer feedback, conversely, studies that examines near peer social processes might study collaborative group projects, small group discussions, social communication, and sharing resources (Beaudoin, 2002; De Laat & Lally, 2004; Manca, Delfino, & Mazzoni, 2009; Shackelford & Maxwell, 2012; Stack, 2013; Xie, Yu, & Bradshaw, 2014). Discussion boards could situate learning through conversation between students. Some studies claim that those students who converse on discussion boards learn more than those students who do not (Stack, 2013; Wang, 2010). In a group of low achieving law students, for instance, those students who posted on the discussion board scored higher on the final exam than those who did not post on the discussion board (Stack, 2013). However, in this study students earned points for the number of posts they made to the discussion board but the researchers failed to consider how this impacted participation. The researchers did not read quotes for quality and only considered quantity – a practice which is common in studies of online learning, especially in the field of learning analytics.

I use Stack (2013) to make two separate points about the learning that might occur between novice, expert, and near peer students in online discussion boards. If one were to accept grades as evidence of learning, then Stack's (2013) findings suggest that low achieving students may have learnt from interacting with higher achieving students. If this were true, it would illustrate that the social processes between novice (low achieving student) and expert (high achieving student) supported learning. However, one cannot be sure how students supported their learning without interviewing the students. Similarly, if one were to accept that learning did occur through the discussion board then even those students who did not submit posts to the discussion board may still be learning through legitimate peripheral participation, even if their grades did not

improve. A survey or interview asking students about this would strengthen these findings and help to confirm if a student did learn from conversing with their peers on the discussion board.

The ability to learn from peers could also be context specific. Perhaps some tasks and content areas lend themselves to student-to-student interaction. For example, researchers found limited evidence that peer feedback in second language acquisition contributed to learning (Adams, Nuevo, & Egi, 2011). This could be the case when a content area is dependent upon one correct answer such as second language learning or mathematics as opposed to content areas where answers can be debated such as law, education, or psychology. In mathematics, for instance, once the correct answer is ascertained what is left to discuss? This can especially be the case in situations where the correct answer can only be found through one process. In such cases, learning could occur from practicing a problem in the backstage and comparing wrong answers to right answers. This could help students to identify errors in their problem solving process. However, in content areas like law, education, philosophy, or psychology it is possible to debate the best way to do something, or at least there might be more than one answer to a question. Studies have shown that those content areas that can be learned through open ended questioning techniques have more student-to-student interaction (Hew & Cheung, 2008; Xie et al., 2014).

While both of the previous studies (Hew & Cheung, 2008; Xie et al., 2014) identified strategies, such as peer feedback and open ended questions, for attracting students to discussion, researchers still need to consider if learning took place as a result of the discussion strategies between students. De Laat and Lally (2004) suggest that a multi-method approach over time is the best way for researchers to explore the complexities of student-to-learner interaction in discussion boards. In their study,

researchers used critical event recall interviews every three weeks over the course of 10 weeks, paired with content analysis of discussion board posts. Critical event recall produced explanations from the students explaining how they perceived and acted towards other participants (De Laat & Lally, 2004). This data helped to explain group learning processes, and how students view their individual role in that process.

In studies of online education, social processes between newcomer and expert are mostly concerned with student-to-teacher interactions. Researchers examine student-to-teacher interactions that occur in the LMS to better understand the impact that teacher feedback and moderation strategies might have on students' learning input (An, Shin, & Lim, 2009; Brace-Govan, 2003; Comer & Lenaghan, 2012). Moderation and teacher input can have an impact on the interactions that might assist learning. Too much teacher input can have consequences for students' learning. An et al. (2009) found that teachers who post frequently can stifle student-to-student interaction resulting in smaller social networks for students. Without a social network, students are less likely to form a learning community, and could become reliant on the teacher for information related to content and subject administration. On the contrary, teacher interventions can also increase opportunities for learning. In a subject where teachers trained students to contribute to the discussion board conversation, through "value-add" comments and "original examples," the front stage became more useful artefact. Original examples applied course concepts in a novel way, and in value-add comments students analysed or evaluated a course concept. The purpose of both comments was to help students to enhance and advance the class discussion. A survey, supported by examples from the discussion board, indicated that students found the content on the discussion board was more useful and meaningful than before this technique was implemented (Comer & Lenaghan, 2012). This facilitation method not only created a more useful resource for

students' learning, it also encouraged the students to work together, which could also increase opportunities for learning between novice, expert, and near peer students.

The previous studies relied on surveys and discussion board data and did not interview the students. Therefore their findings could be missing an important perspective. Including the student's voice in the data can help to clarify and overcome misrepresentations. For example, when 328 out of 527 online graduate students from 19 subjects at the same university volunteered to self-report their learning through surveys, the findings of the surveys indicated that students preferred face-to-face learning instead of learning online because they could acquire more knowledge. These findings were then enriched by a sample interview of 10 students where follow up questions and answers indicated students were unhappy or uncomfortable with the technology (Rovai & Barnum, 2007). Initially, the researchers did not consider this in their interpretations. Multiple research methods can help to fill the gaps between what is known from one perspective and what can be found out from incorporating another perspective.

Social processes between persons during activities in a curriculum

Social processes between persons occur within the curriculum of a community of practice. Wenger (2000) suggests that a community of practice is a learning partnership and that members must negotiate what they should do together in order to benefit from this partnership. This occurs within two kinds of "curriculum" of the practice: a learning curriculum and a teaching curriculum. A "learning curriculum" is a repertoire of resources from the perspective of the student (Lave, 1988). A "teaching curriculum," on the other hand, is designed for the purpose of instructing newcomers and includes structuring the resources and meaning of what is learned (Lave & Wenger, 1991). Activities experienced through each curriculum can result in learning.

The activity that occurs in a teaching curriculum is a highly structured social process, unlike the activity that occurs in the learning curriculum. The teaching curriculum structures the order of an activity and aligns the activity with the organisation's goals. This means that the order is informed by the complexity of the activity. "Less complex and less vital tasks are learned before more central aspects of the process" (Lave & Wenger, 1991, p. 96). For example, the teaching curriculum for tailors started at the end of the product, which was how to hem a cuff or sew a button (Lave, 2011). This task was less complex than designing the pattern and cutting the fabric and could be easily reversed if an error was made. The order of this activity for a newcomer also aligns with the purpose of the organisation, which is to profit from making suits. If newcomers were to begin with cutting fabric then learning from their mistakes could not be reversed because the cutting cannot be undone. As a result, moving from newcomer to expert would be too costly for the organisation and the organisation would fail to meet their goal and experts could become uninterested in newcomers, which would hinder the social processes necessary for learning through activity.

When an expert-tailor hands a newcomer a suit to be hemmed, the hemming is the teaching curriculum. However, if the suit is also an exemplar of the expert-tailor's work, then some novice tailors might use the suit as a resource for learning. This means that activities such as touching the suit and observing which stitch is used where can be considered the learning curriculum. This interaction also affords novice practitioners a "way-in" (Lave, 2011; Lave & Wenger, 1991) and Burton et al. (1984) refer to this as increasingly complex micro-worlds. Both suggest that the newcomer has to experience a period of activity where he or she attempts to produce or reproduce the craft. During this period of activity the expert is present to support the novice. The activity is co-

constructed between expert and novice. It is also personalised based on the expert's assessment of the novice's ability. Then by manipulating the equipment, the skill, and the task specifications the activity becomes an isolated, and personalised, opportunity to learn only those factors immediately relevant to a specific task within a sequence (Brown & Duguid, 1991). However, not all activities within a learning or teaching curriculum can be identified; some of the activities are tacit. In such cases the expert embodies the activity and the novice only learns through doing the activity itself.

Also worth noting is that the activity within the learning curriculum does not constrain social processes in the same ways as the teaching curriculum. The organization or teacher, for example, might map out teaching curricula and that curriculum may have to respond to a governing or certifying body. Situated within a teaching curriculum might also be a learning curriculum. For example a high school physics student learns physics from the teaching curriculum but learns how to be a physics student from the everyday interactions within the school community. Through participation in the formal curriculum, they may also learn about the glass ceiling and other societal limitations of being a female physicist. This is sometimes referred to as hidden curriculum (Bernstein, 2000) or unexpected learning (Hafferty & O'Donnell, 2014). It is common to learn multiple lessons from one experience. Cocks (2014) found that medical students who work with cadavers learned anatomy from the teaching curriculum and also learned about death and dying through the learning curriculum, which in turn made them more empathetic towards patients' lives. Similarly, math students studying to be math teachers learn about the kind of teacher they want to be become (learning curriculum) while completing subjects about the math content (teaching curriculum) (Lerman, 2002; Rosa & Lerman, 2011). The activity of doing math and observing a teacher are social processes. In fact, observing the teacher could

be a form of legitimate peripheral participation for a future community of practice for teachers.

In the context of online university subjects, students experience a teaching curriculum that mandates learning materials and assessments. However the learning curriculum may never be realised. Neither the student nor the university can easily capture this kind of learning. To date, most research that attempts to capture learning investigates the implementation of learning portfolios (Siemens, 2004) or reflective writing (O'Reilly & Milner, 2015). However these attempts are often linked to the teaching curriculum and ignore how students navigate their way through participation identities, which in Lave and Wenger's (1991) situated learning can be observed as evidence of learning. Participation identities will be discussed next.

Social processes between persons and multiple identities and communities of practice

Multiple identities are constructed through participation in various contexts (Lave & Wenger, 1991). Therefore social processes between persons and multiple identities and social processes between persons and communities of practice should be discussed in tandem. It is a well-established sociological point that we negotiate multiple identities (Stryker, 1967; Stryker & Burke, 2000). There are countless examples in our own lives where we assume partial membership in one community while taking on a more active role in other communities. For instance, a student-identity does not simply get "turned-off" (Wenger, 1998, p. 57) because the student is at work. Instead, while at work, the student-identity may be presented to others less actively than the work-identity. Similarly, an individual's identity can vary from one interaction to the next, and from one community of practice to the next.

Every curriculum is an opportunity to be a newcomer to a topic, situation, or interaction. If, like (Lave & Wenger, 1991) claim, the same person is a member in tangential and overlapping communities of practice, then we cannot expect the individual to have the same identity in each context. In addition, knowledge is constructed and reconstructed from one community to the next. This is a new point, not raised in Lave and Wenger (1991) work, which the authors later recognised as a shortcoming. The respective ethnographies only illustrated the role of the practitioner in his or her single craft community (e.g. midwife, tailor, seaman, rehabilitated alcoholic, butcher). For example, the tailor's trajectory of participation was only described in the tailor shop, yet each tailor lived in the home with his mentor-tailor's family. Lave (2011) admitted that her biggest regret was not studying tailors in contexts outside of the tailor shop. Without intending to do so, her results only demonstrated a tailor's participation in the context of tailoring and not how tailoring was an emergent identity in the family or in the larger community—both of which were contexts that Western African tailors participated in daily. As a result, her results do not demonstrate how learning was a part of life more broadly (Lave, 2011). Lave's (2011) reflections further support why I discuss these two social processes in tandem.

In Lave and Wenger (1991), viewing the isolated lives of apprenticeships also had other consequences. They assumed that there was only one trajectory of participation, and it was a path from novice towards expert in their designated craft. In other words, this trajectory assumed that every student wanted to become an expert. However, this is not the goal of every student or community member. Lerman (2002) researched university students in an abstract-algebra community of practice and found that the goals of the individual shaped his or her participation in the community and constrained the individual content knowledge learned. Those students who wanted to be

mathematics teachers were uninterested in advanced techniques and simply wanted to pass the subject to fulfil a requirement. For these students, remaining on the periphery enabled them to learn enough content to meet their goal but not master the content of the math community. Perhaps these students experience partial membership in the math community and full membership in their teaching community. Partial membership in one community does not equate to partial membership in all communities.

Wenger (1998) developed this notion more fully, and for the purpose of explaining learning, by arguing that identity within and across communities of practice is temporal, ongoing, contextual, and most importantly, on convergent and divergent trajectories. The five specific trajectories of participation that situate one's identity within and across communities of practice are:

1. Peripheral: Members who do not fully engage with the practice
2. Inbound: Newcomers who intend to fully engage with the practice
3. Insider: Member attains full participation or mastery and continues to renegotiate their identity in a way that evolves the practice
4. Boundary: Member who brokers knowledge from one community to another
5. Outbound: Leaving a community, seeing both the world and oneself in new ways (Wenger, 2008)

Community members can experience as few or as many of the trajectories depending on their impetus for participation. It is possible, for instance, to join a community as a newcomer and remain on a peripheral trajectory and then leave via the outbound trajectory without ever experiencing the insider trajectory. Wenger, White, & Smith, (2009) illustrated this using a community of practice for patients and family members with rare blood disorders who learn and support each other using an online listserv:

Newcomer: A mother and child join a listserv for patients and family with rare blood disorders. They familiarise themselves with the technology and community view.

Peripheral: They remain in the listserv for seven years. The daily emails make them feel supported and help them to understand the rare blood disorder. They read the emails everyday but never respond or produce emails.

Outbound: After seven years the mother died from the rare blood disease. The child finds himself in a new position with respect to the community. He unsubscribes from the listserv and emails the host to say thank you. The child leaves the community of practice having felt helped from the knowledge sharing that occurred.

Within the listserv community the mother and child remain at the periphery where they engage with emails but they never participate on an insider trajectory. Peripheral participants are not as passive as they seem because peripheral members have private conversations about the community elsewhere and in their own way they are learning through participation (Wenger et al., 2002). For example, knowledge learned through the listserv could help facilitate a difficult conversation with the doctor. The mother and child's identities on the listserv, in their extended family, and with doctors and nurses, contribute to the whole individual as well as his or her learning. Social processes that occur between person and communities of practice assume that a person is a member in more than one community. It also suggests that learning opportunities are increased by the opportunities to apply and gain knowledge from one context to the next. Participation across multiple contexts is the key social process.

Multiple participation identities must be considered in situated learning, and in online classrooms, in order to observe learning across space and time. To only observe in one context ignores the transformations of identity that occurs through situated participation in everyday life. Wenger (2000) describes this as a person embodying "the competence that our communities have established over time (i.e. what it takes to act and be recognized as a competent member), and our ongoing experience of the world as

a member (in the context of a given community and beyond)” (pg. 227). Most studies that investigate communities of practice in online learning only investigate spaces in the university’s LMS, particularly the discussion board (Goos & Bennison, 2007; Hou, 2015; Riverin & Stacey, 2008; Tsai, 2012). However, this gap can be addressed by adopting Wenger et al.’s (2015) view of students, which is that individuals interact in a landscape made up of multiple communities, the result being that knowledge is created along the boundaries we traverse within the landscape. Similarly, Brown (2001) argues that individuals participate in “loose networks of practice” where they can try on and experiment with their knowledge from one context to the next. Both the boundaries of communities of practice, and multi-membership in communities of practice, are learning assets because they are spaces for identity work that results in learning. When a student engages in active process between multiple communities of practices, multiple, and sometimes diverse, perspectives come together which can lead to innovation, renewal, and expansion of a community of practice (Ingram, Maye, Kirwan, Curry, & Kubinakova, 2014). For example, as online students become savvy within the online learning environment they seek ways to integrate internet applications into their personal, school, work, and volunteer environments (Haythornthwaite, 2001; Haythornthwaite, Kazmer, Robins, & Shoemaker, 2000; Haythornthwaite & Kendall, 2010). Thorpe and Edmunds (2011) used 14 case studies of part-time online students to illustrate how students enacted aspects of their schooling into their workplace. Students were able to learn skills like PowerPoint in the classroom and then apply them confidently at work. This identity shift at work, which was illustrated through the use of PowerPoint from one context to the next, is evidence of learning. However, the focus on this research was ICT skill transfer from one context to the next. Subject content and thinking that can occur during learning transfers was not explored.

I have drawn from these finding in the conceptualisation of my work by expanding the possible learning spaces for online students from the LMS, or front stage, to the backstage online and backstage offline. By acknowledging these other spaces in my research, I accept Wenger et al.'s (2002) claim that an active community of practice exists in public *and* private spaces, has “benches” or safe spaces for participants to learn through observation, and enough activities to suit everyone’s interests. Perhaps these private spaces are in student’s backstage or in another community of practice. It is even worth considering that in a context where the activities don’t suit everyone’s needs, a student’s needs may be met elsewhere, like in another community of practice or in a backstage.

All students are on multiple trajectories. In the context of higher education, students are students of a content area and practitioners of being a student, while also learning to be a student and learning to be something else. University students exist across and juggle multiple social worlds including work, family, volunteer, and peer groups (Kazmer & Haythornthwaite, 2001). Therefore we can assume that they are also juggling multiple participation identities and that learning is occurring across these spaces. When students situate a body of knowledge within communities of practice and the boundaries between them, learning is said to occur in a “landscape of practice” (Wenger-Trayner & Wenger-Trayner, 2015, p.15). In the context of online learning, a students’ landscape of practice might include the LMS but is not limited to that space.

Social processes between persons produce shared artefacts and affordances

Artefacts are physical, linguistic, and symbolic manifestations of the social interactions that constitute and reconstitute a practice over time (Lave & Wenger, 1991). Lave and Wenger (1991) also refer to artefacts as the “technology of practice” and suggest that participating in a practice requires engaging with the technologies of

everyday practice (p. 101). Artefacts are not about the “thing” produced, they are about the social process between persons that give the “thing” meaning to those in the community of practice. The artefact, or technology of a practice, may be the discourse patterns and words shared by community members (Stommel, 2008), how a community uses technology, such as the social process supported by an LMS or a wiki (Daele, 2010), or even a door (Goffman, 1959). The artefact itself serves as abstract or concrete evidence of a social process between persons. Stommel (2008) investigated an online community of practice for eating disorders and found that the online forum was an artefact that enabled newcomers to participate in the community. Newcomers were able to study the history of the community through past conversations recorded on the discussion board. This enabled the newcomers to reproduce and produce interactions such as the how to use, or not use, specific words and phrases, and where to locate and find information.

Wenger (1998) refers to the reproduction of artefacts as reification. Reification is the process of giving form to a social experience. Wenger (1998) uses the following words to describe reification as an active process: making, designing, representing, naming, encoding, describing, perceiving, interpreting, using, reusing, decoding, and recasting (p.59). In Stommel’s (2008) example, artefacts, such as the online tool and the discourse, enabled the newcomers to reify behaviours of the community and also permit rules to be reified. The use of numbers, for instance, is not permitted in the forum. If a newcomer published their weight to the forum, it was acceptable for a more experienced member, such as a forum moderator, to edit the post by replacing the numbers with an asterisk, and to interrupt the conversation by referring the newcomer to the forum rules. This conversation pattern is an example of an artefact that can be studied by a newcomer.

Artefacts can be concrete, such as those examples in the previous paragraph, and abstract. An abstract object that becomes reified in a community of practice might be a way of thinking or speaking, whereas a concrete object might be a textbook or a pin worn on a lapel, or a chip that symbolises sobriety. In Alcoholics Anonymous the chip itself does not participate in the community of practice but symbolises the social interaction of sharing stories with others in a way that transforms one's identity from drinker to non-drinker. A way of doing something can also be reified. Some studies for example illustrate how searching for information can be a reified process (Selwyn, 2010; Selwyn & Gorard, 2016; Waller, 2011). For example, Selwyn and Gorard's (2016) survey of 1,658 undergraduate students identified ways in which university students reified the research process by using Wikipedia as an introductory source. They found that 87.5% of the students used Wikipedia as an introductory source of information; this was greater than the percentage of students using the university's LMS. While the university may not instruct students to use Wikipedia, the community of students, through their collective reified research process, has made Wikipedia an important tool for this community.

Artefacts embody participation and reification that occurs in a community of practice. The production and reproduction of artefacts are evidence of learning. Studying artefacts is relevant when we seek to understand learning as a phenomenon distinct from participation. For instance, when learning mathematics, social process among teachers, peers, and others produces and reifies artefacts, which help students to think and speak mathematically. These artefacts might include diagrams, graphs, physical tools (e.g. rulers, calculators) and how to 'read' them, and methods for solving problems (Lerman, 2002, p. 107). While this process, compared to the process described in Stommel (2008), appears to be more passive; the making of the artefact for the

students to use was not a passive act. The artefact embodies the mathematics practice and those processes made by those practitioners who came before the students.

Textbooks, presentations, exercises, and examinations can reify a complex web of the history of a domain and descriptions of shared processes that are collectively valued by practitioners in the community at large (Ticknor, 2012). While a textbook exposes one to a domain's conceptual tools it does not expose one to the authentic context (Brown, Collins, & Duguid, 1989). However the interaction with the domain could provide the "way-in" to the authentic context.

The community establishes which artefacts are produced and reified on the basis of affordances of artefacts. Gibson (1986) introduced the idea of affordances as features of the environment that enable or constrain actions. In the context of a community of practice, affordances are qualities of the learning environment that contribute to or support an individual's interaction in the community (Ticknor, 2012). Immediate affordances are what the artefact lets anyone do and conventional affordances are what people in the community ascribe to the artefact (Waller, 2009). Because artefacts can either afford or constrain interactions for a community of students, those artefacts that afford interaction are more likely to be reified by the community.

In the education environment, students' preferences also shaped what processes and objects get produced and reproduced. Gourlay's (2014) study of post-graduate students found that students create artefacts that suit their needs and that students specifically produce and reify artefacts that help to cross time, coordinate processes and experience, and create time. Therefore makes sense that students select Facebook to reify communication processes with classmates because they already know how to use it, which saves them the time of needing to learn new tools, and it allows them to experience the past, present and future of the artefact, which creates time by making

information easy to locate. For instance, a study that compared students' usage of Facebook and Moodle for the purposes of education, found that: (1) students used Facebook because it afforded them access to information faster, on the go, and while simultaneously giving them the option of sharing information regarding the course with their peers, whereas (2) Moodle afforded students with course material in a non-distracting way and made them feel safer with their personal data (Petrovic, Jeremic, Cirovic, Radojicic, & Milenkovic, 2014). In this instance the constraints of one tool were complemented by the affordances of another tool. However, students "entanglements" (Gourlay, 2014, p. 142) with technology are often more complex than this and warrant further exploration. In addition, online students might be equally entangled with technology as face-to-face students.

The four social processes of learning outlined in this section, describe how learning is an active process across time and space. These processes are supported by an individual's feelings of belonging, trust and negotiation in a given context. I will discuss each of these conditions in the next section.

Conditions for situated learning: Belonging, trust, negotiation

According to situated learning, learning is a complex social process that takes place across both time and space. Wenger (1998) has found that the social processes involved in situated learning, and therefore the learning itself, are dependent upon three conditions: belonging, trust, and negotiation.

Belonging can result from legitimate peripheral participation (eg. through lurking or by observing others interact in an environment). Those that are either welcome to observe experts or have access to the experts through the environment may feel that their presence in the community is legitimised. Lave and Wenger (1991) stress

that legitimacy is the defining characteristic of learning because it connotes belonging. Once a student has a “sense of belonging,” interaction within the larger community can occur (Chavis, Hogge, & McMillan, 1996; Chavis & Pretty, 1999; Glynn, 1986; Shackelford & Maxwell, 2012). Similarly, belonging in one context also facilitates belonging in another context. For example, new migrants to a country create a sense of belonging within their homes by creating artefacts and rituals that embody their family history before establishing roots within their new community at large (Sandu, 2013). In comparison, students who study at a distance are more likely to persist with their university study when they do not feel alienated and alone (Tinto, 1993). Feelings of belonging could give students the confidence to move from one community to another or to assume a more active role within a community.

Belonging also plays an important role at work and in university. Nurses new to practice, for example, reported higher levels of learning in a workplace where they had a sense of belonging than they did when they felt alienated (Levett-Jones, Lathlean, Higgins, & McMillan, 2009). In addition, a sense of belonging also helps university students converse with classmates about difficult topics (Kernahan, Zheng, & Davis, 2014). Belonging within a community is created by knowing the members well enough to understand what others know, what they can do, and how they can contribute as well as the student knowing these things about his or her self. Therefore, sometimes belonging needs to be facilitated by the design of activities or the presence of an expert. Thomas, Herbert, and Teras (2014) used semi-structured interviews and focus groups to explore online students' sense of belonging in first year university and found that students in learning groups where classmates were actively engaged and available were able to overcome feelings of anxiety and isolation. However the subjects in which this research occurred were facilitated by teachers seeking to create a sense of belonging

through their teaching style including implementing icebreakers, collaborative assignments, and casual tone. Had the teachers not sought to establish a sense of belonging it is unclear how or if feelings of belonging would have occurred between classmates.

Participating in activities and feeling legitimised also helps to establish trust. Preece (2000), who studies online communities, suggests when there is trust between people the relationships in the community can flourish but without it the relationships wither. Trust opens the pathway for learning therefore without it students will remain on the periphery unwilling to take their participation any further into a community. To build trust in a way that facilitates learning takes time, persistence, and reinforcement (Wenger, 1988). A student needs to trust and be trusted in order to participate in a community. It is necessary to understand social processes that contribute to trust within a community of practice. For example, one study found that without trust, beginning teachers who had access to an online community of their peers sought support from those whom they trusted outside of the community instead (Moore & Chae, 2007). Entering into a community without establishing trust can make a student appear clumsy, rude, and intrusive (Burt, 2000) which could lead to social exclusion or controversy. Nam (2014) compared online students' achievements and attitudes in group work based on experiences of trust versus experiences of disagreement and found that students in groups where trust was established had more positive attitudes towards openness, sharing, acceptance, and support. These findings were based on only survey data; without interviews and observations it is difficult to establish the social processes that built and maintained that trust. Perhaps, for instance, when a student waits for ways-in to a subject or a content area their learning pathway becomes apparent to the individual student. If so, at the start of this pathway could be opportunities for a student to self-

correct. This way-in could be a way in which trust is established between novice, experts, and near peers. Once trust is established, students might feel empowered to perform increasingly difficult tasks. These possibilities need to be explored in the research in order to understand how trust impacts upon the learning process.

Negotiation usually takes place *on* boundaries of communities of practice and *within* communities of practice. The negotiation that takes place on the boundaries (or periphery) of communities is also referred to as brokering (Wenger, 1998). Boundaries are both a place for disconnection from one community or a trajectory towards the inside of another community. The boundary is often an exciting place to be because it is a place where “perspectives meet and new possibilities arise” (Wenger, 2000 p. 233). Negotiations on the boundaries help to stretch our understanding of learning because opportunities arise for interactions with others that lead to finding commonalities, conflict, and alignment of perspectives (Harteis, Rausch, & Seifried, 2014). Negotiation *within* a community, on the other hand, is often more specific because the more knowledge one has about a community the more one can contribute. Community insiders are more likely to experience learning through the interplay between artefacts, more frequent participation between regular members, as well as negotiation of meaning (Littleton & Whitelock, 2005; Mercer, 1995).

Overall, this section of the chapter has explained the social processes that facilitate learning and under what conditions. Whether a social process is present in one space, and not another space, may be a result of the belonging, trust, and negotiation between people and their environments. However, an aspect not mentioned in the studies of belonging, trust, and negotiation is the role of time and the impact that the length of the relationships within the community may have on learning. It should also be noted that studies about situated learning and communities of practice are more often

in the context of informal learning and not formal education, such as in a university subject. However, in my study I use this as a lens to examine the social processes of learning experienced and reported by online learners.

Chapter summary

In this chapter, I showed how I am drawing on Lave and Wenger's (1991) original conception of situated learning, legitimate peripheral participation, and community of practice to investigate learning. I reviewed existing studies in education and online learning through this lens. As I have illustrated in this chapter, there are several ways to observe learning as a changed way of understanding or the ability to apply one's understanding from one situation to the next. These social processes will be considered throughout the remainder of this thesis. Specifically, I will refer to the social processes between newcomers, experts, and near peers throughout each case study chapter, and then address the remaining social processes in the cross-case analysis and discussion

Chapter 4: Research methods

Excerpt from my second year research journal:

Another event, more small talk, this time other PhD students were there. Sometimes the comments people make me wonder if I chose the wrong topic. I should have done anthropology. I added two more comments to the list:

- *Your research is so much easier than mine; I actually have to go somewhere to do mine*
- *I can't imagine anyone participates in your study, online students are time poor as it is*

So which one is it?

Introduction

Reading many academic accounts of computer-mediated communication, in fact, leaves one with the impression that such interaction takes place in a kind of virtual vacuum with little connection to the material worlds of the people sitting in front of the computer screens and producing the words that analysts spend so much of their time dissecting and interpreting (Jones, 2004, p. 3).

Jones (2004) used this quote in his paper about computer-mediated communication (CMC) to advocate for the need to provide context to the text that researchers analyse. Hine (2013) used this quote to remind researchers that a human being is behind each screen, a person that can be interviewed to add depth and description to online data. This same quote could be applied to the current body of research about online students' front stage. In order to capture both a sense of the various contexts students exist, and to give students the opportunity to add depth to their front stage data, I crafted a case study design with particular methods for studying the experiences of "those sitting in front of the computer screens and producing," or in the case of lurkers, not producing front stage data.

In this chapter, I first explain my role in the research and how this influenced my analysis of the data. Then I describe the case study design and how data was generated and analysed from the front stage, backstage offline, and backstage online.

A word about my own front stage and backstage

This research is my interpretation of the data. Because my findings are limited to my own understandings and observations of the data it is necessary to acknowledge my role in this. Markham and Baym (2009) illustrate this point with the analogy from poker, “to show one’s hand.” If this research were a game of poker, then I would be showing you my hand of playing cards. I approach this research with my own assumptions and prior experiences about education, technologies that support learning, and my own set of experiences. The timeline in Figure 4.1 illustrates a summary of my experiences as they relate to my research project. I used this timeline to illustrate my relationship with my research topic.

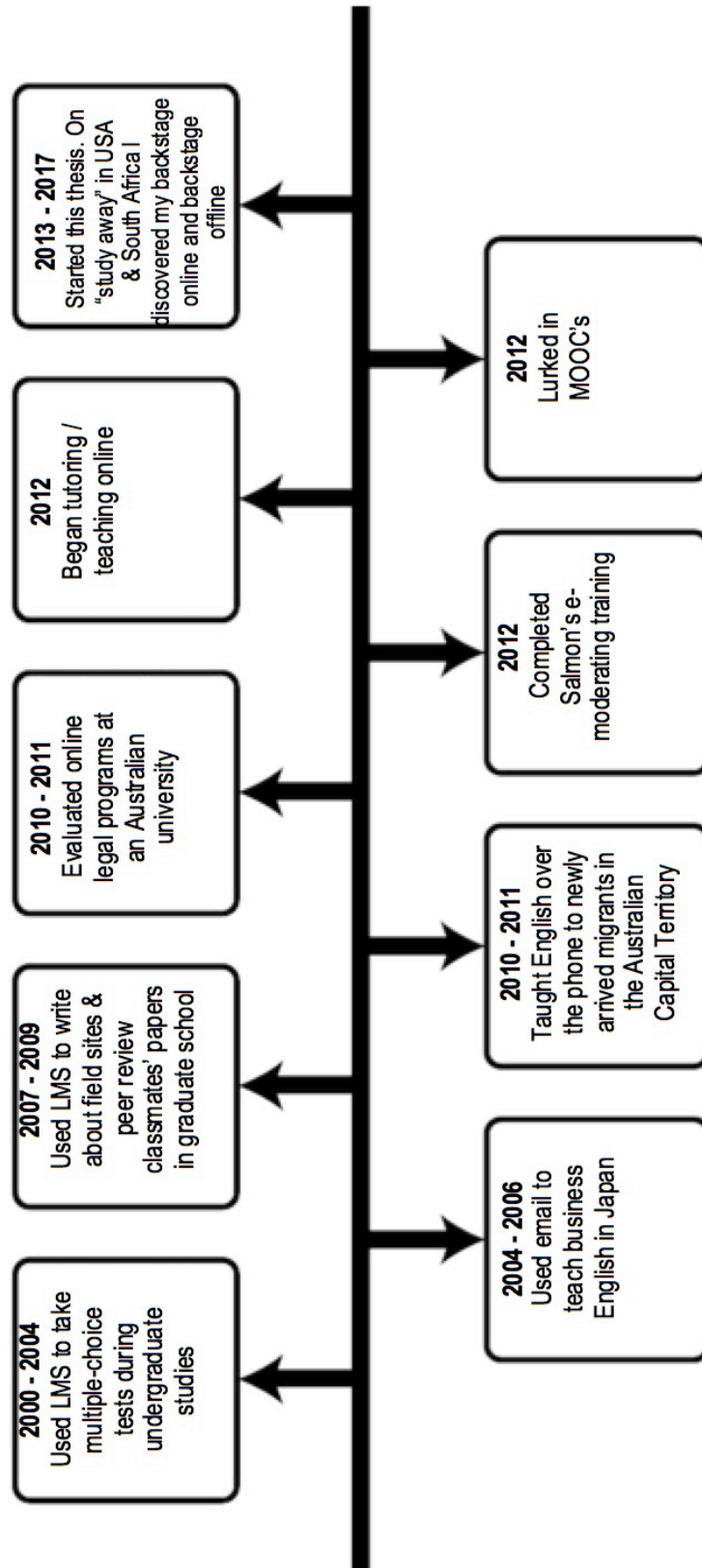


Figure 4.1. My timeline of experiences as they relate to my thesis.

The basic premise of symbolic interaction is that people act on the basis of the meaning that things have for them (Blumer, 1969; Blumer, 1967). Sometimes this meaning can be taken for granted or pushed aside. However, when we are conscious of the meaning of something, then the meaning is flexible, in that it can be used and revised because our interpretations change through our social processes or interactions with others (Blumer, 1969). When I initially conceptualised the idea for my research, I was living in Melbourne, and I imagined I would be for the duration of my studies. By the time I commenced my studies, I was living overseas and essentially became an online student. For whatever reason, this was not obvious to me at first. I remember the day I discovered this, and also realised that I was both a co-actor and observer in my own research. This is represented on my timeline by the year 2013-2014. I will briefly explain this story because it is useful for illustrating how my own experiences influence my interpretations of the data.

During an interview a student had just finished describing how she used a local face-to-face university to find out about events and programs related to her study, when I exclaimed, "I do that too!" The student (interviewee) wanted to know why I was visiting universities other than my own. I explained how I was studying away from my home university. It was during my explanation that I realised I had a backstage online and a backstage offline (and that this thesis would be my front stage). From that point forward, the interview data never looked the same as before. As I read, and re-read transcripts, I couldn't help but make constant associations from my participants' experiences as online students, to my own. I became sympathetic to my participants and even more curious about their stories.

In qualitative research this dilemma is unavoidable. It could be argued that because of this, my data is biased. Through my role as the researcher and an online

student, I came to better understand my own experiences and the experiences of others. Blumer (1969) argues that we need to get into the social world of those we study and to be familiar with what is taking place in the sphere of life we choose to research. I would also argue that by becoming aware of my own experiences, I became more analytical and asked more questions of the data. Because of my own experiences, which in some cases had similarities to the students I was researching, I was conscious of not wanting to take the meaning for granted. Interpretation of the action is based on how those we study define the situation (Denzin, 1989). Therefore, if I ever had a follow up question or was unsure about an interview comment, I would email the student with the question or ask them to interpret or clarify the meaning for me.

Keeping a research journal

During my research I kept a journal to assist in the rigour of my interpretations and to be reflexive. Journaling helped me to be more aware of my own cultural assumptions and understandings. It was also useful for tracking the development of my craftsmanship as a researcher in this project. I used questions to both journal and challenge my own interpretations and conclusions about the data. Markham and Baym (2009) confirm that these are all valid reasons for keeping a research journal.

Throughout this thesis I have included **Journal Excerpts** from my research journal. I used three journals to keep track of my progress and to observe how my ideas about my topic changed over time. I never imagined that I would share this with anyone. In the end, I made the decision to include selected excerpts, because I believe they track my growth as student, a teacher, and a researcher. At times people's understanding and reactions to my own research project made me question myself and feel insecure, in other instances I experienced bursts of enthusiasm which sustained my engagement with the topic and the sense-making process. These journal excerpts

illustrate my journey in a way that a doctoral thesis rarely communicates with the reader. It is through these excerpts that I offer glimpses of my backstage to the reader. I hope that readers of my thesis can relate to these quotes and that by sharing my backstage with you, the reader, your own practice might be influenced in some way. My findings were further given legitimacy through my carefully constructed methodology and selection of tools, which will be discussed in more detail next.

My research approach

The purpose of qualitative research, and my thesis, was to understand an aspect of what is going on in the social world (Waller, Farquharson, & Dempsey, 2016). I situate my research in the qualitative paradigm but I drew slightly from quantitative tools too. For instance, I performed a content analysis of the discussion boards. However, even when I used a quantitative tool I did so with the purpose of exploring the social phenomena of learning—my intent was never to measure or test a hypothesis. The process of using mixed methods to implement Goffman's (1959) framework in my case studies was ideal because no single method can illustrate both the back stage and front stage. My purpose for using mixed methods was to construct as complete of a picture as I could about the phenomena because the current literature mostly constructs only the front stage. In other words, "the whole is greater than the sum of its parts" (Greene & Caracelli, 1997, p. 13). By using-mixed methods, themes and patterns from the front stage and back stage data were compared to identify performances that occur within each stage respectively and those performances that straddle both stages.

Education and social research are commonly approached from the constructivist paradigm, which advocates that knowledge, or what is known, is constructed and not discovered (Lincoln & Guba, 2013). When the constructivist paradigm is applied to case study research, it encourages providing the reader with enough raw materials and

thick narrative descriptions so that the reader can also make his or her own generalizations (Stake, 1995). My goal of this research aligns with the constructivist paradigm as I want to “give voice to people’s experiences and understandings,” particularly to university students whose learning outside of the LMS were largely ignored by the literature (Waller et al., 2016, p. 22). I feel that I was successful in doing this, because after presenting the findings of my thesis at a teaching and learning conference two students from the audience approached me to say “thank you.” They reported that after two days of attending presentations about “student learning,” my research was only presentation that they felt had accurately represented what it was like to be a student.

Case study method

Case studies are widely used across the social sciences and education disciplines. Merriam and Merriam (1998) and Stake (1995) align with the constructivist paradigm, which suggests that there are multiple versions of knowledge. Merriam and Merriam (1998) define a case as “a thing, a single entity, a unit around which there are boundaries” (p. 27). Stake (1995), more specifically, suggests that a case is an integrated system with working parts that is researched in a purposive manner, and is contained within a boundary. As my project involved a multiple case study approach I had to craft tools that were both flexible enough and consistent enough to make comparisons and generalise across three distinct cases. To attain this, I had to balance the reproducibility of how I went about my study with individual nuances of each case.

Case study design is a decision about what it is that will be studied (Stake, 1995). In my research, I sought to study where and with whom learning occurs in an online subject. This informs the tools that I used to collect data. Case study design also requires boundaries (Merriam & Merriam, 1998; Stake, 1995). Merriam and Merriam,

(1998) advocate that the researcher is responsible for naming the case by specifying the phenomena of interest and its boundaries. I have already drawn a boundary in what I choose to call learning, the spaces where I think learning can occur (online and offline), and the final boundary is the subject in which students are enrolled. For multiple case study research, the research needs to be similar in some ways but each case is a specific entity (Stake, 2006). In my project, each case is an online university subject, and data was generated from four subjects. However, the approach for collecting data varied slightly because of the participation rates, the availability of participants, and the design of the subject.

Research sites and participants

In order to select subjects for my case studies, I read the online course catalogues of Australian universities, made note of second year online subjects, and emailed the contact person listed on the website. I selected undergraduate subjects because there were more undergraduate subjects available; this increased my chances for getting viable participants. I strategically selected second year subjects so that students would be reasonably familiar with their online study routines and the technology. It was my goal to study both discursive and non-discursive subjects. By discursive I mean subjects that rely on words (e.g. assessments were based on textual work), and by non-discursive I mean subjects that rely on numbers (e.g. assessments were based on completing computational work). Of course these are not the only features that make the subjects distinct from one another. A detailed description of each subject is at the beginning of each case study chapter. I pursued discursive and non-discursive subjects for two reasons. Firstly, numbers-based subjects are underrepresented in the literature. Secondly, I wanted to understand how the social processes for learning in discursive and non-discursive subjects might be different. In

total, I contacted 40 unit coordinators, teachers, or heads of schools and 12 responded (8 declined and 4 accepted). I would like to say that I selected my case studies more strategically, but finding unit coordinators willing to participate was challenging. The reasons people gave for declining included: student privacy, my ability to access the subject as an outsider, being new to the role, or having just redesigned the subject.

In the end, four unit coordinators agreed to participate in my study. A detailed description of each subject will be presented in the chapters that follow. By studying four distinct subjects I achieved variation in the curriculum content, subject matter, students' knowledge and understandings, and pedagogic tradition. This allows the researcher to obtain information about the significance of various circumstances (Flyvbjerg, 2006). For instance, I was able to explore how students constructed their learning under various conditions such as a large class size, graded discussion board participation, and a subject's content (e.g. non-discursive). It should be noted that the mathematics subject was distinctly different from the others in that online students were enrolled in the same online classroom as the face-to-face students. Table 4.1 shows an overview of each subject. The four subjects were bound into three case studies the psychology case, the advertising case, and the mathematics case. Each case represents a body chapter within my thesis. The structure of the case study chapters are organised and presented slightly differently. While the same method was applied to each subject, the individual subjects had different approaches and therefore different themes were extracted from the data generated.

Table 4.1

The Research Sites

	Case One Subject One: Psychology	Case Two Subject Two: Advertising-1	Case Two Subject Three: Advertising-2	Case Three Subject Four: Mathematics
Subject matter	Psychological methods for counselling patients	Ethical considerations for advertising	Copyright strategies for advertising	Advanced mathematics modelling
Total students	126	10	25	64 (19 online, 44 face-to-face)
Total teachers	5	1	2	1
Learning materials	Online lecture notes, online discussion tasks, readings, weekly video of a client, collaborate sessions	Online lecture notes, online discussion tasks, readings	Online lecture notes, online discussion tasks, readings	Practice problems, worked solution PDFs and videos, lecture recordings, and *F2F practicals
Assessments	Reflective journal (10%) Quizzes (10%) Essay (35%) Final exam (multiple choice and essay (45%))	Discussion board posts (2 x tutorial exercises 10%) Essay (20%) Open book test (30%) Group work research report (40%)	Discussion board posts (5 x tasks and discussions 10%) Tutorial exercises x 2 (20%) Creative Brief (25%) Group project Campaign project (45%)	Summative assessment 1 (10%) Summative assessment 2 (10%) Summative assessment 3 (15%) Final assessment (60%) *F2F students attendance hurdle for practical classes

Source. Front stage observations and document analysis

Note. The advertising subjects were bound into one case study which makes Case Two

Note. A detailed description of each subject will be presented in chapters 5, 6, & 7

Once I had access to the subjects, I invited students to participate in fortnightly questionnaires and interviews. During the first week of each subject, I individually emailed every student an invitation to participate in questionnaires and interviews for my research. I outlined what would be required and included a brief YouTube video to

introduce myself. The recruitment of participants closed at the end of week two when the first questionnaire was emailed to participants. Each student that consented to participate was emailed a personal 90 second welcome video where I introduced myself, showed my office, and I outlined the expectations for participating in the research.

At the end of the semester, I designated every student into a classification based on their participation patterns in the front stage: performers, extras, cameos, and stagehands. This helped to create a metaphor that captured what students were doing across the three stages. Table 4.2 provides a description of each of the roles. It should be noted that my purpose in allocating each student a theatre role is not to reify a cast of student performers or a hierarchy of participation. Instead, I present a novel way for imagining students across time and space. These classifications, which again are based on a students' front stage participation, help to illustrate how a student's performance changed in the backstage online and backstage offline contexts.

Table 4.2

Description of Front Stage Roles

Front stage role	Description of the front stage performance patterns
Performer	Posted weekly, or more, to front stage discussion boards
Extras	Occasionally posted to the front stage discussion board, participation was consistent at the start and tapered off
Cameos	Made brief appearances in the front stage discussion board. This was typically to introduce themselves or ask one question about one assessment
Stagehands	Never posted to the front stage discussion board

The students enrolled in the subject, and their teachers, provided data for observations and discussion board posts. The students that participated in the questionnaires and interviews provided data that helped me to explore student participation within each subject. I cannot consider those students who participated in

the questionnaires and interviews to be representative of the cohort in their subject, as I do not have demographic data on those who did not participate in the questionnaires and interviews. However, I can explore the possibilities that existed within the cohort. Those who participated in the questionnaires and interviews may have been different to those who did not. Overall, the students who participated in the questionnaires and interview were mostly female, a mix of part-time and full-time enrolments, and ranged in age from 17 to 73 years old. They were also from a variety of locations around Australia, including major cities like Melbourne, and remote areas like far north Queensland. Table 4.3 illustrates the number of students enrolled in the subject, the number of students who participated in the questionnaires, interviews, or both, and the discussion board posts.

Table 4.3

Overview of the Participants and the Data for Three Case Studies

Students enrolled in the subjects	Fortnightly questionnaires only	Interview only	Fortnightly questionnaires & interviews	Teacher interviews	Discussion board posts
Psychology					
126	7	0	14	3	1430
Advertising					
35	0	0	3	2	421
Mathematics					
63	2	2	1	1	6
Total					
224	9	2	18	6	1857

Importantly, when I refer to the students in the data I use a pseudonym followed by their age, enrolment status, mark earned, and their category of participation. For example, Yvette 35.FT.HD.Cameo, refers to Yvette, a student who is 35 years of age, enrolled full-time (FT), earned a High Distinction (HD), and was a cameo in the front

stage. This information helps to provide background details specific to each individual student. The grades for each students are listed from HD (High Distinction, 80-100), D (Distinction, 70-79), C (Credit, 60-69), P (Pass, 50-59), NP (Non Pass, 49 and below), to NA (the student requested not to share). A list of the students can be found in the appendix.

Data Collection

All data collection procedures were conducted in accordance with the university human ethics guidelines of the university where each subject was conducted. For online interviews and questionnaires, an informed consent notice was given to each participant. The participants completed this online. The teachers gave their consent for interviews through email. All of the interview participants were given the option to receive a copy of their interview data but every participant declined. The identities of participants were protected at all times. Identifying information was removed from the data. Each student and teacher was assigned a pseudonym. As an observer in an online space I followed Markham & Buchanan's (2012) guidelines put forth in *eEthical Decision-Making and Internet Research: Recommendations from the AoIR Ethics Working Committee (Version 2.0)*. For example, I minimised risk to participants by making my presence known, not downloading students' data without their permission, and having the contact details of university support services on hand should a student feel they were put at-risk during the research process.

Observations of the front stage

In case study research, observations enable the researcher to develop a greater understanding of the case (Stake, 1995). I was enrolled in each subject as an observer. This enabled me to take in the scene of each individual subject that my participants were enrolled. Before the start date of the semester, I familiarised myself with each

subject making memos about what I saw. I downloaded documents for the subject and took screen shots of webpages that I found important and stored them in NVivo. I also took a screen shot of the 12-week schedule and hung it in my workspace so that I knew what students were doing each week.

In the first week of each subject, the unit coordinator announced that I would be observing in the subject and encouraged students to participate in the questionnaires and interviews. During the twelve-week semester, I followed the weekly activities and skimmed the learning materials. I knew what students were being asked to do and when, including reading the weekly learning materials, activities, and assessments. I observed students' responses to the weekly activities and conversations that occurred in the discussion boards. If the teacher sent a group email to the class, I also received the email. My observations of the front stage contributed to my understanding of the data generated from the backstages.

Document Review of front stage artefacts

Documents of all types can help the researcher uncover meaning, develop understanding, and discover insights to the research problem” (Merriam & Merriam, 1998, p. 133). In addition, documents can provide useful and specific details that can help to triangulate information with other sources of data and increase the validity (Stake, 1995). The documents selected for review included the welcome materials from teachers, learning materials, weekly tasks, assessment briefs, and the universities' websites. Although the documents were a front stage artefact, they also helped to provide insight about what students did in the backstage. For example, in the Math Teacher's welcome letter he outlined exactly how students should use their textbook in the backstage offline, and students reiterated this process during their interview.

Learning management activity logs from the front stage

The LMS included a tool that ran reports on students' front stage. It captured every click in the LMS. A micro-analysis of these logs can reveal reading and posting patterns of the students (Wise, Perera, Hsiao, Speer, & Marbouti, 2012) and interaction with content (Zimmerman, 2012). I observed this space throughout the semester. When the discussion board was inactive, the activity files showed which resources students were clicking on and downloading.

At the end of the semester, I downloaded each student's activity file that participated in the questionnaires and interviews. This data helped to situate which students were present in the front stage online. This data gave an indication of how active or passive a student was within the online classroom (login hours, discussion board posts, clicks, downloads). These files are limited when used in isolation because the log times and clicks do not account for multi-tasking online and offline at the time of the recorded activity. However, I was able to compare the times recorded in the activity logs with the study times students reported in the questionnaires. It is also impossible to know how the student engaged with the content they clicked. Therefore this data was enhanced by the interviews and questionnaires. The LMS data also helped to generate typologies, like who was a stagehand or cameo, to merge similar data and look for patterns (Greene, 1993).

Content analysis of discussion boards in the front stage

I applied Krippendorff's (2004) broad definition of content analysis as a "research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (p.18). Content analysis is a flexible methodology that applies specialised procedures to allow for replication (White & Marsh, 2006). In my application of content analysis, I was not in search of an objective

truth. My decision to use content analysis was purely strategic. I researched four classes throughout 2014 and 2015. The time between coding the first case's discussion board and the second case's discussion board was nearly 18 months. Therefore, I felt that I needed a consistent approach documented and way to test my consistency in order to generalise from one case to the next.

The discussion board data helped to illustrate what students were doing in the front stage online. In some of the subjects, the discussion board produced a large amount of textual data. By observing in the subjects over the twelve-week semester, I was able to see how the conversations were constructed and evolved over the semester and this informed my coding process. Every post from each discussion board was a unit for analysis. There were 256 possible codes for each post. The reason for the large number is because every code existed within one of four possible interactions, for example the code "question about assessment" exists as (1) Student to student question about assessment (2) Student to teacher question about assessment (3) Teacher to student question about interaction and (4) Broadcasting question about assessment. The 256 codes were sorted into 9 general themes that summarize and describe the content (teaching and learning, answers, questions, housekeeping, gratitude, support, small talk, greetings, praise). A copy of the full code list is in the appendix.

To address both the large amounts of discussion board data and the consistency across subjects, I created a codebook and a spread sheet to keep track of this information. For each subject, I tested both the stability and reproducibility of my coding using Cohen's Kappa (see Kvalseth, 1989). For stability, I coded two discussion boards, in each subject, multiple times. I coded the week one and week two discussion boards in the psychology and advertising subjects two times each and got consistent

results. The mathematics subject only had 6 posts that were straightforward so I did not test this for stability or reproducibility.

For reproducibility, I asked a fellow graduate student to apply my codes to two discussion boards from each subject. My fellow graduate student selected two discussion boards at random and applied the codes from the code definitions. The results for reproducibility were strong. In the first instance, the result was .676, which is a “reasonably good overall agreement” (Kvalseth, 1989, p. 226) or a “substantial strength” of agreement (Landis & Koch, 1977, p. 165). The common causes of coder disagreement in the first instance were (1) differentiating between the language used to describe “liking” another student’s post and “praising” another student’s post and (2) differentiating between “agree + why” and “agree + add information”. However these are both sub-codes within the “teaching and learning” code. While these discrepancies lowered the strength, the overall codes were correctly coded within the parent code.

In the second instance for reproducibility, the result was .613, which is a “reasonably good overall agreement” (Kvalseth, 1989, p. 226) or a “substantial strength” of agreement (Landis & Koch, 1977, p. 165). The common cause of coder disagreement in the second instance was differentiating between codes for “asking a question about content” and “challenging”. The second coder coded “student-to-student” questions about theories from the weekly activity as “challenging” instead of “asking a question about content”. The codes were described in the code definitions to prevent further discrepancies.

Longitudinal questionnaires about front stage, backstage online, and backstage offline

I designed a longitudinal questionnaire as a tool to collect data about students’ subject related tasks and study habits over the twelve-week semester. Each fortnight

students were asked to recall where they went to seek and share information related to the subject, who they interacted with, and for how long they did each of these actions in the front stage, backstage online, and backstage offline. Students were also asked to report on their feelings of connectedness to a community that fortnight and what activities from that fortnight made them feel engaged with the subject.

After pilot testing this survey, I emailed it to the students every fortnight during the twelve-week semester. This helped me to understand how students' behaviours changed throughout the semester, and it illustrated what students were doing when they were not engaged with the front stage. However, because the questionnaire asked participants to recount their experience it may not be a reflection of what they actually did. Despite this weakness, other studies have found consistency and validity in self-reporting questionnaires (Masood, Ahmed, Choi, & Gutierrez-Osuna, 2012). Also, by emailing the students on a fortnightly basis I was in regular communication with participants, which enabled me to establish rapport.

Student and teacher interviews about front stage, backstage online, and backstage offline

The last method of data collection in each case study was an interview with each student and teacher. The interviews added depth to students' front stage online, backstage online, and backstage offline experiences. Baym (1995) argues that researchers must interview participants in order to access their point of view and that, without doing so, the researchers' claims about online phenomena are unsubstantiated. Based on my critiques of the online discussion boards from earlier in this chapter, I consider the interview the most important data because it can enhance what the university cannot see and this is one gap that I am trying to address in my research.

My study used in-depth semi-structured interviews in order to learn about the students' point of view and backstage. I used an interview guide with a set of themes which I used to ask questions, my approach was flexible and I used the data I had from the front stage and questionnaires to inform my questions. By retaining flexibility for individualization and exploration, I was able to have what Waller et al. (2016) and Haraway (1991) refer to as a “non-innocent” conversation with students, which in the constructivist paradigm means having a two-way conversation about themes identified by the researcher.

The students and the teachers were given the option to interview using Collaborate (an online conferencing tool from the students' LMS), Skype, live chat, telephone, email, or face-to-face. The students and teachers were encouraged to select a mode of communication that was convenient and most comfortable for their situation. It is common practice to give participants the option to select a tool from multiple options (James & Busher, 2009; Salmons, 2012; Waldron, 2012). Online tools can be used to reach participants of large or geographically dispersed participants (Aborisade, 2013; Waldron, 2012). My participants were online students distributed across Australia, which makes the use of online interviewing even more appropriate. Table 4.4 shows the breakdown of their tool selection. Tool selection can help to make participants feel “involved” in studies regardless of location, while still feeling that they are participating on their own terms, and in a setting that is as natural as possible (Hine, 2013; Svensson, Samuelsson, Hellström, & Nolbris, 2013). Offering more than one tool for an online interview also takes into account both the comfort and competence of users' online abilities (Kleinman, 2004).

Table 4.4

Tools Selected by Student and Teachers for Interviews

Interview tool	Student interviews	Teacher interviews
Video chat	10	0
Email	9	4
Text Chat	0	0
Face-to-face	1	2
Total	20	6

Email interviews

Email was the most popular interview tool selected by the teachers and students. Bampton and Cowton (2002) suggest splitting email into multiple parts for email interviews. That is, rather than one lengthy email full of questions, create a back and forth dialogue one question at a time to ensure the questions and answers remain semi-structured and responsive. This also helps to avoid terse or short responses during the interview process (Hine 2013). However, a researcher has to be sensitive to the participants' "lifeworld" (Kivits, 2005 p.41). My research participants were students, and because they were completing the interviews during their final exam period, I gave them the option of multiple emails or all the questions in one email. Both of these options allowed me to send follow-up emails probing for more detail and clarification. The second option suited those who needed to work offline, had poor internet connections, or reported having their university sites blocked from their workplace.

During email interviews, I also balanced the role of information seeker with interpersonal communication. I did so by following the advice of Kivits (2005), which suggests writing phrases of reassurance, expressions of being there, and continued encouragement. This is important to maintain because it can act as a replacement for active listening and keep participants motivated. I think I achieved a balance of information seeking and interpersonal communication, because several students sent

thank you emails expressing that the experience was cathartic, and some students followed up weeks later in a celebratory email that shared their final grade.

Skype and Collaborate

Collaborate and Skype are conferencing tools, which allow for video and voice communication. Collaborate was the tool in the LMS. Some students preferred to use this because they were already familiar with it. It is the same tool they use to attend online tutorials. Skype and Collaborate interviews may offer a different context and performance for participants. For example, answers may be less considered. However I overcame this by emailing students beforehand about what to expect. This provided context for the students and like email interviews, this provided more time and space for participants to consider their response and discouraged off-the-top-of-the-head answers. Although spontaneity is a strength of real time interviews (Davis, Bolding, Hart, Sherr, & Elford, 2004; James & Busher, 2009), the co-presence of more than one speaker can interrupt communication. Regardless of the advantages and disadvantages of time and spontaneity, James and Busher (2006, p. 27) remind researchers that a “carefully considered response is just as credible as a spontaneous one”.

I copied and pasted the email interviews into a word document and removed all of the students’ identifying information. I transcribed the Skype and Collaborate interviews. These documents were added to the case study database in NVivo. I read through each interview making memos, and then read and re-read the interviews thematically coding chunks of text. I sorted each code into a theme.

A word about flexibility

Lastly, case study research is a flexible design, which allows the researcher to make major changes to the design even after data collection, has commenced (Stake, 1995). There were several occasions where I had to be flexible with the design of my

study from case to case and as a whole. Towards the end of my research project, I felt that my data was incomplete without input from the teacher of each subject. This was not included in the original design of my case study. Therefore, I had to amend my ethics application and ask teachers if they were interested and willing in being interviewed. Flexibility was also key to collecting interview data. Online interviews are often completed in the time and space of the participant, and the participant's commitments such as work, family, study, sickness etc. (perhaps revealing even more about the participant's backstage). At the last minute, on several occasions, participants had to switch from their original choice, like telephone, to email. One participant, for instance, wanted to have a Skype interview. However, the timing was during her final exams and her children's school holidays, so one email with all of the questions suited her personal situation best.

Data analysis

Stake (1995) advocates that researchers needs to find forms of analysis that work best for him or her, and that this is achieved through experience and reflection. However, analysis should still be done systematically. All data was stored, coded, and classified in NVivo. I analysed the data throughout applying Stake's (1995, p. 53) five steps for data analysis in case study research:

1. Review raw data under various interpretations
2. Search for patterns of data
3. Seek linkages between program, activities, and outcomes
4. Draw tentative conclusions, organize according to issues, organize final report
5. Review data gather new data, deliberately seek disconfirmation of findings

Over the course of the four subjects I was able to hone and reflect on my data analysis. To ensure the trustworthiness of my data analysis, I used triangulation between

my observations, document analysis, interviews, questionnaires, and data from the LMS (discussion boards and activity logs). Triangulation was a way of crosschecking the relevance and significance of the perspectives in the data (Simons, 2009). I triangulated data within single case studies and also across all three case studies. As data was generated from each additional subject, I made comparisons for common characteristics and situational uniqueness (Stake, 2006). Data source triangulation was most useful when I integrated the data from the third case study, the mathematics case. This was because it provided me with the opportunity to see if what I observed and reported in the psychology and advertising subjects had the same meaning under different circumstances. This helped me to think more critically about the role of a subject's content area and tasks. I also participated in member checks; specifically, I emailed my interpretations and questions about data to specific participants asking for comment or confirmation, and consulted with teachers about my observations and interpretations. When triangulation or my interpretations conflicted, I looked for possible reasons for the conflict and used this information to add depth to my understanding and interpretation of the data. There were several instances where my interpretations were changed based on a conversation with an interviewee. I address one of these instances in the section about the audience in chapter 7.

Limitations of the study

My data collection strategy, although thorough, was not without limitations. The three cases were strengthened by my ability to observe the subject week by week as the students experienced it. However, accessing the students' point of view proved to be challenging. Therefore, my interview participants were not representative of their cohort nor did they represent a statistically significant number of students. My data is limited to the perspectives of those students who opted to self enrol in the fortnightly

questionnaires and interviews. My primary focus was the students' experience and I focused only briefly on the role of the teachers in these subjects. In the future, further studies should include a broader range of subjects and individuals. In addition, my study did not even begin to consider themes of social and economic status and how this could impact the backstage of university students. As an empirical project, I acknowledge how the personal experiences of those involved were the basic source of knowledge, but we cannot ignore the fact that those whom students surround themselves with can contribute to the quality of their subject-related interactions, as well as university related interactions. Finally, my study does not follow the students within these subjects fully. For example, I did not set out to collect data on a students' work, family, and personal life – therefore I cannot comment on how students' online and offline study behaviours compared to their online and offline non-study behaviours. Nonetheless, the experiences that I use in this research, illustrate a more complete picture than that of past studies. This was what I set out to do in constructing the methodology for my study.

Chapter summary

The purpose of my research methods was completeness. In this thesis, my goal is to fill the gap about students' learning experiences, which was created by only collecting and analysing online data, mostly from the LMS. In this chapter, I described how I planned and used the case study design to collect data from students' front stage, backstage online, and backstage offline. I crafted tools to assure that data was generated from each stage where students might experience learning. In the front stage I used document analysis, observations, LMS activity logs and a content analysis of the discussion board data. In the backstage online and backstage offline, I used fortnightly questionnaires so that students could report where, with whom, and for how long they

completed subject related tasks. I also interviewed students about their experiences of learning in each stage. By having multiple streams of data across the context, I tell a more complete story about how and where students experience learning in an online subject. In this chapter, only a brief background about each subject and the participants was provided. However, in the chapters that follow I will expand upon the details of each subject, the participants, and outline the findings from my data collection.

Chapter 5: The psychology case study

Excerpt from my second year research journal:

When I was an online tutor I remember the first time a student e-mailed me to say “...on Facebook, a student told me that the references are not part of the word count. Is that true?” I was like, “Ah-hah. So that’s where they are, I found them!” I never thought to ask myself why they left in the first place.

Introduction

The psychology case study was the largest of the four classes that I researched for my thesis. It had the most students enrolled in the subject and the most students who volunteered to complete questionnaires and interviews. I use this case study to set the scene for identifying the possible places where and possible people with whom online students might study. In the psychology case study students resituated their roles across the three stages as follows:

Front stage: Few students posted regularly to the front stage. The content of the front stage was mostly about training and these conversations occurred between the student and the teacher. I make links to past studies about online learning and draw from characteristics of situated learning to explain why the front stage may not have been an effective learning environment, and was replaced by the backstage online for interactions with classmates.

Backstage online: The most common space that students reported participating in backstage online was Facebook. Almost every participant described using Facebook chat, Facebook groups, and Facebook friends to support their learning and training. I make links to past studies about university students’ use of Facebook and draw from characteristics of situated learning and Goffman’s (1959) region behaviour to explain why the front stage may not have been an effective learning environment.

Backstage offline: Students reported that social processes between their family, friends, and colleagues were what mostly supported their learning and training. This was a novel finding that I will explain in more detail in Chapter 8.

This distinction between the roles and relationships in the backstage online, backstage offline, and front stage is necessary to illustrate because one of my key findings, and the argument in this chapter, is that the backstages, particularly the backstage offline, is an effective learning environment for online students. Until now, little attention has been given to this as a learning space. In the sections that follow, I will briefly describe the Psychology subject, including the setting and cast, and then I will analyse where and how students learned in the front stage and backstage.

The setting and the teaching curriculum

This subject was delivered using the Blackboard Learning Management System. The purpose of the teaching curriculum was to provide a theoretical introduction to counselling psychology. Over the 12-weeks, readings and discussion board activities were available for students. These resources were designed to give students the opportunities to develop their knowledge and application of counselling theories and therapeutic processes (Unit course guide). Central to this experience was a weekly video of a patient, David, and a counsellor. David had eleven weeks of counselling. Each week the counsellor applied the theory and practice from the subject's learning materials.

There were four assessments in the teaching curriculum, including two writing assessments, fortnightly multiple-choice quizzes, and a final exam consisting of multiple choice questions and essays. Participation in the discussion boards was not graded, but the syllabus stated that students were expected to contribute to the discussion board forums on a regular basis. Three total contact hours were prescribed

for the subject, which included two hours per week completing the learning materials, and one hour per week participating in a synchronous Collaborate tutorial (or watching the recording of those who participated). According to the teaching curriculum, by the end of the subject students who “successfully completed the unit” would have: demonstrated how the theoretical approaches to counselling link to practice, differentiated between the applications of the counselling approaches, and understood and thought critically about how ethical issues and research related to the practice of counselling.

The Cast: Psychology subject participants

One unit coordinator and four tutors taught this subject. The teaching team was responsible for monitoring the discussion board forums, marking students’ assessments, and running the weekly Collaborate sessions. The teaching team was also available through email. Teachers mostly interacted with students through the discussion board, email, and assessment feedback. As a team the discussion was monitored daily and students’ posts were replied to daily. Teacher K and Teacher D described their role as both supportive and instructional:

My role was that of online tutor, to take tutes and be the online contact person for a group of students, [and] to mark assignments. Students view me as [the] contact person for questions about content or practical requirements. (Teacher K)

I see my role as part teacher, mentor, facilitator and encourager. I think students see me in these roles but at times expect more like personal tuition. (Teacher D)

There were 126 students in the Psychology subject. Table 5.1 shows the breakdown of performers, extras, cameos, and stagehands in the Psychology subject. As

you can see, 44 of the 126 students were stagehands, and therefore never posted to the discussion board, and only 13 were performers. Most of the students rarely, if ever, posted to the discussion board. Table 5.1 also provides a breakdown of how many students participated in questionnaires and interviews. A total of 14 students participated in both interviews and fortnightly questionnaires, and a total of 7 students participated in the fortnightly questionnaires only.

Table 5.1

Psychology Subject Participants by Front Stage Performance and Participation in Fortnightly Questionnaires and Interviews

Front stage performance	Students in the subject	Participants in fortnightly questionnaires	Participants in fortnightly questionnaires and interviews
Stagehand	44	4	3
Cameo	45	2	4
Extra	23	1	3
Performer	13	0	4
Total	126	7	14

Source. Front stage observations

Overall, the students' marks ranged from not passing to high distinction. Table 5.2 illustrates the breakdown of students' marks by front stage participation. There was not a significant link between front stage participation and the grade that students earned, which strengthens the argument that studies should consider backstage online and backstage offline as effective learning environments for some students.

Table 5.2

Psychology Students' Grades by Front Stage Participation

Role	High distinction	Distinctions	Credit	Pass	Non pass	Total
Performer	1	9	3	0	1	14
Extra	4	10	5	3	1	23
Cameo	4	11	12	10	8	45
Stagehand	3	8	19	8	6	44
Total	12	38	39	21	16	126

Source. Front stage observations

Table 5.3

Grades of the Students who Participated in the Questionnaires and Interview

Mark	Total number of students	Enrolled in questionnaire and/or interviews
High Distinction	12	3
Distinction	38	6
Credit	39	2
Pass	21	6
Non-pass	16	4
Total	126	21

Source. Front stage observations

The students who participated in the questionnaires and interviews represented a range of front stage performances (see Table 5.1), and a range of grades (see Table 5.3). They are not a representative sample of the students enrolled in the subject. Although I cannot generalise about the entire Psychology cohort based on their responses, I can explore the possibilities that existed within the cohort. The students that participated in the questionnaires and interviews provided data that helped me to explore student participation in this subject. For instance, throughout the interviews participants made various references as to why they were studying psychology, and why they were

studying psychology online. Reasons for both the course of study and the mode of study were highly individualised. A few students wanted to help others while some students were fulfilling a lifelong dream, or as one student described it, “completing a bucket list.” The reasons for studying psychology online included, but were not limited to, having a disability that prevented them from getting to a face-to-face campus, living in locations that were over 200 kilometres from the closest university, and needing to earn a wage while studying.

In this section, I briefly described the subject and the participants. In the next section, I will describe and analyse the stages where learning and training occurred.

The Stages: Front stage, backstage online, backstage offline

As explained in chapter 1, students’ interactions in the front stage can be seen by the university, whereas the backstage online and backstage offline are spaces where interactions cannot be seen by the university. Table 5.4 shows the average hours students used to complete subject related tasks during the twelve-week semester. Regardless of the students’ level of participation, they spent more time doing subject-related tasks in the backstage than the front stage. In fact, the total average hours in the front stage accounts for less than 30% of the total study hours. This is important because it illustrates how little the university knows about where and with whom online students perform subject related tasks, and experience learning. It also shows that outside of the front stage, or online classroom, a stagehand could be just as active as a performer.

Table 5.4

Average Hours that 21 Participants Performed Subject-Related Tasks

Role	Average hours in front stage	Average hours backstage online	Average hours backstage offline	Total Average hours
Stagehands	10	27	37	74
Cameos	9	17	37	63
Extras	28	59	55	142
Performers	75	34	36	145
Total	122	137	165	424

Source. The average front stage hours were sourced from the 21 participants' Blackboard activity logs. The 21 participants' reported the backstage hours when they completed the fortnightly questionnaires

Note. n=21

Although time is not a measure of learning, it does help to identify spaces where students might learn in an online subject. As Table 5.4 shows, in the Psychology subject students spent the most amount of time in the backstage offline, followed by the backstage online, and the least amount of time in the front stage. Within these spaces students mostly reported and described the backstage online as Facebook, and the backstage offline as conversations with others. These were not the only spaces or ways of interacting in each stage. For example, it would be incorrect to assume that if a student reported studying for ten hours backstage online that they spent ten hours on Facebook. Instead the ten hours would also include time spent surfing the internet, watching YouTube videos, using the library, online reading etc.

As previously mentioned, the discussion board, Facebook, and conversations with others were the most common spaces present in the data. However, students utilised each of these spaces differently for the distinct purposes of learning and training. In this subject, students were learning the content of psychology and completing tasks to gain a better understanding of the practice of psychology. Students

identified their learning through interacting with others and by noticing changed ways of thinking or being, which related to the subject's content. Overall, more learning occurred in the backstage online through Facebook and the backstage offline through face-to-face conversations with others than in the front stage.

While there was also some evidence of learning in the front stage this space was primarily used for training. In this subject, students were training to become more competent students. They did this by asking questions about the mechanics of assessment and supporting each other through the assessments, including the completion and outcome of assessments (e.g. success and failures). In the sections that follow, I will use quotes from performers, extras, cameos, and stagehands to illustrate how students used the front stage (discussion board), backstage online (Facebook), and backstage offline (conversations with others) for the purposes of learning and training.

Front stage: Introduction

The front stage is the space that the university can see because it is digitally captured by the LMS. In the Psychology subject the front stage consisted of the discussion board, Collaborate sessions, and Blackboard activity files. The Collaborate sessions will not be analysed, because they were poorly attended and riddled with both scheduling and technical issues. Instead, my analysis will focus on the discussion board and the activity files. I will use data from a content analysis of the discussion board, as well as teacher and student interviews, to illustrate how students used the front stage for learning and training.

Front stage: Discussion boards

The discussion boards were the most popular space that all of the Psychology students visited in the front stage. Figure 5.1 illustrates how over the twelve-week subject the discussion boards received more clicks than any other space in the LMS.

Students also confirmed their popularity in questionnaires and interviews. In the questionnaires every student also reported using the discussion board fortnightly to seek information about the subject, even those students who never posted.

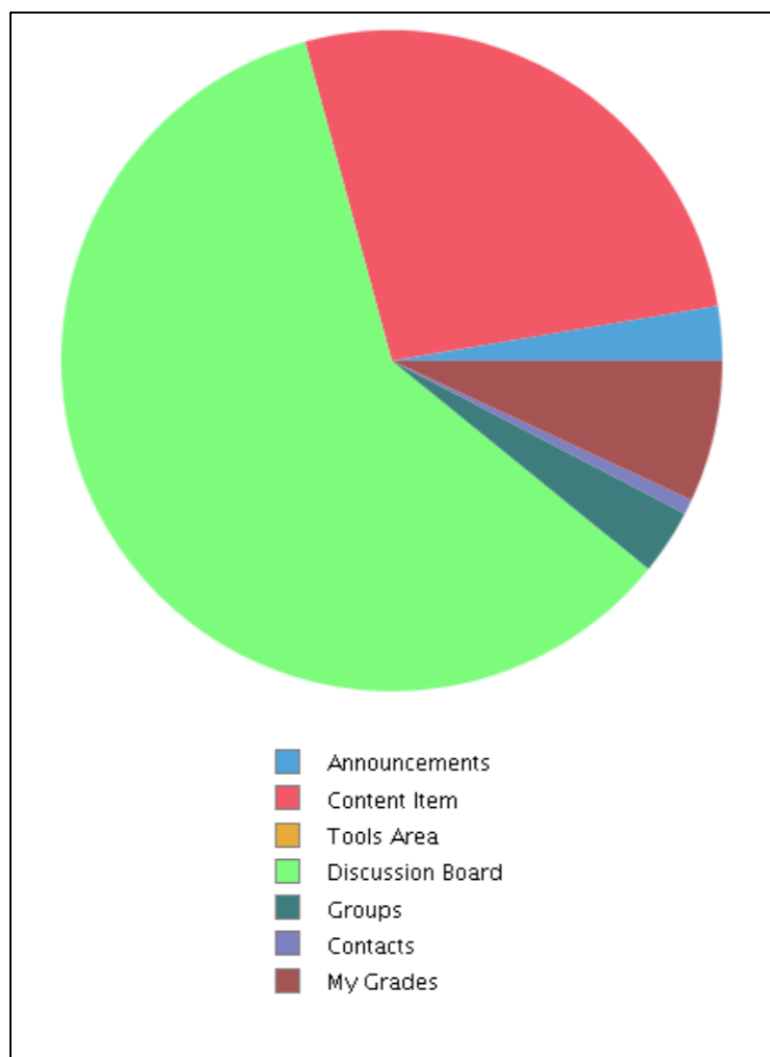


Figure 5.1. Screenshot from Blackboard activity user logs. This illustrates the summary of students' clicks during the twelve-week semester.

Source. Blackboard summary of user data

Note. Blackboard did not generate numbers for this figure

There were two discussion boards in this subject. I will first show a figure of each discussion board and then describe each one in turn. Figure 5.2 is the Weekly Activity Forum and Figure 5.3 is the General Discussion Forum. Each figure shows the forum names, descriptions, total posts, and total participants. The total participants from

both discussion boards only include those who posted. Therefore, it includes the tutors, unit coordinator, performers, extras, and cameos. It does not include stagehands who may have still participated by reading the discussion board. Figure 5.2 also illustrates how the total posts and total participants decreased over the twelve-week semester. I will return to this point later.

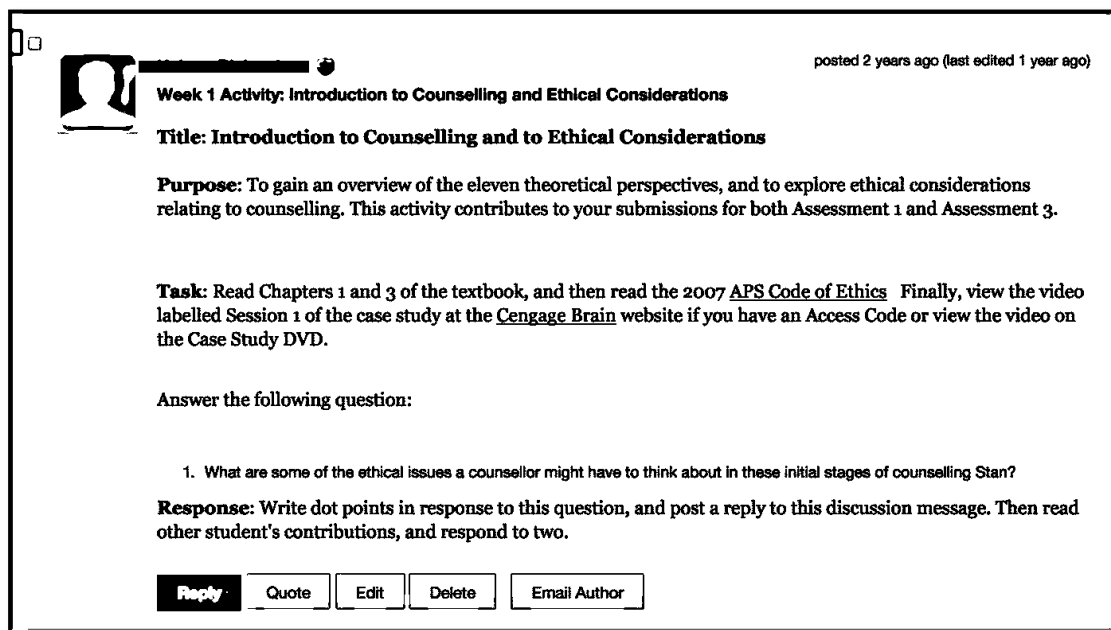
<input type="checkbox"/> Forum	Description	Total Posts	Unread Posts	Total Participants
<input type="checkbox"/> Discussion Group Week 1 Activity	Title: Introduction to Counselling and to Ethical Considerations Use this forum to post your responses for this activity only.	79	0	41
<input type="checkbox"/> Week 2 Activity	Title: Psychoanalytic Perspective Use this forum to post your responses for this activity only.	53	0	27
<input type="checkbox"/> Week 3 Activity	Title: Adlerian Perspective Use this forum to post your responses for this activity only.	47	0	26
<input type="checkbox"/> Week 4 Activity	Title: Existential Perspective Use this forum to post your responses for this activity only.	31	0	16
<input type="checkbox"/> Week 5 Activity	Title: Person-Centred Perspective Use this forum to post your responses for this activity only.	37	0	15
<input type="checkbox"/> Week 6 Activity	Title: Gestalt Perspective Use this forum to post your responses for this activity only.	26	0	15
<input type="checkbox"/> Week 7 Activity	Title: Cognitive Behaviour Perspective Use this forum to post your responses for this activity only.	16	0	11
<input type="checkbox"/> Week 8 Activity	Title: Reality Perspective Use this forum to post your responses for this activity only.	13	0	7
<input type="checkbox"/> Week 9 Activity	Title: Feminist Perspective Use this forum to post your responses for this activity only.	13	0	8
<input type="checkbox"/> Week 10 Activity	Title: Postmodern Approaches Use this forum to post your responses for this activity only.	11	0	8
<input type="checkbox"/> Week 11 Activity	Title: Family Systems Perspective Use this forum to post your responses for this activity only.	7	0	5
<input type="checkbox"/> Week 12 Activity	Title: Integrative Approach Use this forum to post your responses for this activity only.	4	0	2

Figure 5.2. Screenshot of the Weekly Activity Forum
Source. Front stage observations

Forum	Description	Total Posts	Unread Posts	Total Participants
Greetings	Say hello to your fellow students and your tutors here.	115	0	43
Student Lounge	This is your space - treat it with respect.	30	0	11
General Discussions	Post questions here related to any queries or comments you might have about the course generally	312	0	34
Housekeeping	Your tutors will post announcements or housekeeping messages here. Please do not add threads or reply here.	10	0	5
Reflective Journal Questions	Post questions here about the Reflective Journal	263	0	35
Essay Questions	Ask questions about the essay here	210	0	26
Exam Questions	Ask your questions about the exam here.	90	0	18
Library Questions Only	██████████: our online librarian will monitor this forum.	4	0	3
↑ IT Questions Only	<p>This forum is for unit-specific technical queries only (i.e., issues relating to accessing of lecture slides and materials, Collaborate, Turnitin, etc.) ██████████ will monitor this forum.</p> <ul style="list-style-type: none"> For non unit-specific technical questions (e.g., email/SIMS accounts, resetting passwords, etc.), you should contact ██████████ Persistent issues relating specifically to Blackboard can be addressed directly to B ██████████ You can also click on the "Help and Tools" tab on the left for solutions to common technical issues (e.g., email, Blackboard, Collaborate, Turnitin, etc.) before posting here. 	59	0	15

Figure 5.3. Screenshot of the General Discussion Forum
Source. Front stage observations

Each discussion board had a different purpose. The purpose of the Weekly Activity Forum was to encourage students to think about the weekly content and discuss it with classmates and tutors. Each of the twelve-weeks in the semester had one forum that contained a task for students to complete. In each weekly task, students were instructed to post one response to a task and respond to classmates' posts. Figure 5.4 shows the week one task that students were instructed to complete.¹



posted 2 years ago (last edited 1 year ago)

Week 1 Activity: Introduction to Counselling and Ethical Considerations

Title: Introduction to Counselling and to Ethical Considerations

Purpose: To gain an overview of the eleven theoretical perspectives, and to explore ethical considerations relating to counselling. This activity contributes to your submissions for both Assessment 1 and Assessment 3.

Task: Read Chapters 1 and 3 of the textbook, and then read the 2007 [APS Code of Ethics](#). Finally, view the video labelled Session 1 of the case study at the [Cengage Brain](#) website if you have an Access Code or view the video on the Case Study DVD.

Answer the following question:

1. What are some of the ethical issues a counsellor might have to think about in these initial stages of counselling Stan?

Response: Write dot points in response to this question, and post a reply to this discussion message. Then read other student's contributions, and respond to two.

Reply Quote Edit Delete Email Author

Figure 5.4. Screenshot of the task from the week one Weekly Activity Forum
Source. Front stage observations

In contrast to the purpose of the Weekly Activity Forum, which was to promote conversations about the subject's content, the purpose of the General Discussion Forum was to ask questions about assessments, converse with classmates, and discuss any topic related to the course. The General Discussion Forum was organised into nine sub-forums for interacting with classmates and tutors. The first seven discussion boards included: general discussion, student lounge, questions for each assessment, housekeeping, and greetings. The final two forums were for library and technical conversations. The librarian and an IT staff member respectively monitored these two forums.

The tutors, unit coordinator, performers, extras, and cameos produced a total of 1,430 discussion board posts. Of the total posts, 337 were to the Weekly Activity Forum and 1,093 were to the General Discussion Forum. Table 5.5 shows the results of the content analysis from the psychology subject. Each learning code and training code

represents how I observed learning or training occur in discussion board conversations.

I will illustrate this with examples from each discussion board in the next section.

The content analysis of both forums in Table 5.5 helps to illustrate where learning and training occurred in both forums. The Weekly Activity Forum, which was designed for the purpose of learning, was the space where most learning occurred. This was because the discussion board tasks asked students to respond to the weekly counselling scenarios between a client and a psychologist, and to converse with other students as if they were practitioners of psychology. For instance the learning code ‘response to the weekly activity’ in Table 5.5 is always a student’s response to a client-psychologists scenario. However, because so few students used the space it was an underutilised learning space.

As you can see in Table 5.5 the discussion board codes were mostly training (68%) and usually occurred amongst students and teachers in the General Discussion Forum. In other words, students mostly asked questions about how to become a better student or questions “targeted at competence in a practice” (Wenger, 1998, p. 263) where the practice is being a student. This included how to reference a book or where to go for the final examination. However, it is not limited to this. For instance, the training code ‘emotional support seeking’ was related to feelings about being a student (not a future psychologist). The results of the content analysis of the discussion boards suggests that overall, students might view the discussion board as training space where they can interact with others, tutors in particular, about how to become a more competent student. I will further these two arguments by analysing the Weekly Activity Forum and General Discussion Forum in turn.

Table 5.5

Content Analysis of the Weekly Activity Forum (WAF) and General Discussion Forum (GDF)

Learning Codes	Learner-to-Learner		Learner-to-Teacher		Teacher-to-Learner		Broadcast		Total
	GDF	WAF	GDF	WAF	GDF	WAF	GDF	WAF	
Weekly Activity post	0	0	0	0	0	12	0	0	12
Response to the weekly activity	0	0	0	0	0	0	0	140	140
Agreed with content	3	47	1	1	1	3	0	2	58
Debated content	0	29	2	0	0	2	10	0	43
Shared information to illustrate/explain content	0	1	2	1	0	4	10	3	21
Shared personal story to illustrate/explain content	22	18	3	1	1	3	1	4	53
Added to current knowledge or understanding of the content	14	6	2	9	0	0	1	0	32
Question about content	0	5	1	0	0	0	3	3	12
Answer about content	2	8	3	0	6	0	0	2	21
Total	41	114	14	12	8	24	25	154	392

Training Codes	Learner-to-Learner		Learner-to-Teacher		Teacher-to-Learner		Broadcast		Total
	GDF	WAF	GDF	WAF	GDF	WAF	GDF	WAF	
Question about the administration of the course	17	0	37	2	7	1	47	2	113
Answers about the administration of the course	51	0	9	0	90	1	12	0	163
Questions about how to reference	3	0	14	0	0	0	82	0	99
Answers about how to reference	22	0	0	0	101	0	0	0	123
Questions about the mechanics of an assessment	1	0	6	0	0	0	27	0	34
Answers about the mechanics of an assessment	9	0	1	0	39	0	0	0	49
Emotional support seeking	11	0	4	0	0	0	5	0	20
Emotional support provided	35	0	1	0	15	0	0	0	51
Praise and encouragement	10	9	9	0	21	18	3	0	70
Relationship management	111	0	87	0	69	0	49	0	316
Total	270	9	168	2	342	20	225	2	1038

Source. Content analysis

Weekly Activity Forum

The Weekly Activity Forum was an underutilised space for learning. Overall 45 out of the 126 students posted to the Weekly Activity Forum. One teacher described participation in the Weekly Activity Forum as diminishing over time.

The engagement with the different activities/forums tends to drop off over the course of the [semester]... Teacher A

The drop off of student participation was previously illustrated and confirmed through the activity files of students. Table 10 below illustrates how 37 students participated in week one. Despite 8 additional students joining the conversation in subsequent weeks, the participation still lessened as the semester progressed and by week 12 only one student remained. In other words, in weeks one through six we saw the appearance of several cameos and extras but in weeks seven through twelve only performers remained. Situated learning is an increase in complexity and scope of one's participation within a group (Lave & Wenger, 1991). However this finding illustrates a decrease in complexity and scope in participation in the front stage. When there is a decrease in the front stage, students might experience an increase in participation with groups elsewhere such as in the backstage.

Table 5.6

Students Participation in the Weekly Activity Forum Over 12-weeks

Weekly Activity Forum	1	2	3	4	5	6	7	8	9	10	11	12
Total Students	37	23	23	14	12	11	9	6	6	6	4	1

Source. Front stage observations

Note 1. The "total students" in Table 5.6 is lower than "total participants" in Figure 4.2, because this table shows only students. n = 126

Note 2. Student participation in Table 5.6 refers to discussion board posts and does not include those students who participated by reading the discussion board posts.

The Weekly Activity Forum was designed for students to be a space for learning by responding to tasks and interacting with classmates. Although the weekly activities were not graded, the students were still expected to complete each week's activity by posting their answer and responding to classmates' posts. However, Table 5.6 demonstrates how very few students did this. Nevertheless, those performers, extras, and possibly cameos who posted to the Weekly Activity Forum typically engaged in a conversation about learning. All except 33 posts to the Weekly Activity Forum were coded for learning. This raises questions about how many students do we need to post to a discussion board for learning to occur? And also, what are the consequences if every student participated? I will explore possible answers to these questions as I analyse and explain example discussion board posts from the Weekly Activity Forum.

In the example that I will outline, the weekly activity forum facilitated the social processes between near peers. The interaction, shown in post 1 to post 5, occurred in the Weekly Activity Forum in week eight. The interaction is a total of 5 posts. By week eight, there were only six students posting to the weekly activity forum and three of them took part in this conversation. As a whole, this conversation illustrates how three near peers (all performers) explore what it might be like for trained counsellors to have a conversation about the best technique or treatment for a patient. These four performers did not participate in interviews or questionnaires and therefore have not been allocated names. However, they did consent to the use of their discussion board posts.

The scene is set by the Unit Coordinator's weekly activity post (see Box 5.1). Before the students completed this activity, it was expected that they would have viewed a video about a client (David) who needs counselling. The questions in the task set the scene by offering students a starting point for a conversation about how to treat the client from the video.

Box 5.1

Post 1 of 5: Unit Coordinator's Weekly Activity Post

Post 1 of 5 Learning Code: Teacher to student weekly activity post Post submitted by: Unit Coordinator
<p>Week 8 Activity: Reality Perspective Title: Reality Perspective</p> <p>Purpose: To explore the application of this theory. To demonstrate how the different theoretical approaches underpin the practice of counselling. This activity contributes to Assessment 1 and Assessment 3.</p> <p>Task: Read Chapter 11 of your textbook, and then view the video file labelled Session 9 of the case study from Cengage Brain if you have an access code or view the video from the Case Study DVD.</p> <p>Answer the following questions: How would the Reality Perspective view a client who wants the therapist to "fix" a problem such as depression? How is the Reality perspective different from the Existential Perspective? How is it similar?</p> <p>Response: Write dot points in response to these questions, and post a reply to this discussion message. Then read other student's contributions, and respond to two.</p>

The conversation between students begins with **Performer 1** responding to the weekly task. In her broadcast, she describes and thinks out loud about the different approaches that might be best for the patient in question (see Box 5.2). However, she does not decide on a final decision about the best way to treat this client. This is a decision she will arrive in post 5, after the conversation with her peers. Sharing a response to an activity is the first step for social learning to occur in this space because without responses to the weekly activity a conversation cannot occur.

Box 5.2

Post 2 of 5: Performer 1's Response to the Weekly Activity Post

Post 2 of 5 Learning Code: Broadcast response to weekly activity Post submitted by: Performer 1 Reply to post 1
<p>RE: Week 8 Activity: Reality Perspective</p> <p>1. From the Reality Perspective, a client who wishes a therapist to 'fix' a problem like depression is suffering on account basic needs not being met. The client's behaviours are not conducive to meeting their needs, and possibly contribute to their feeling depressed. A Reality therapist would suggest that this client is not 'depressed', but 'depressing', that is, they are choosing behaviours that contribute to feeling depressed, and not choosing behaviours that address the needs or wants they would like to be met.</p> <p>A Reality therapist would, after fostering a therapeutic alliance in a supportive environment, help the client to identify what their wants/needs are. Then explore how their present behaviours hinder the meeting of needs and/or contribute to feeling depressed.</p> <p>2. Both the Existential approach (EP) and the Reality Therapy approach (RT) focus on cultivating an awareness of freedom of choice and responsibility in the client. Both perspectives also view negative states like loneliness, depression and alienation as a result of failing to develop ties to others/ or in the EP, nature. Both perspectives encourage choice and draw attention to ways the client may be avoiding personal responsibility. They also both regard a satisfying therapist/client relationship as foundational to successful therapy outcomes.</p> <p>These perspectives differ in their approach to therapeutic process: RT is more problem-oriented, while EP is discovery-oriented. EP might maintain that insight alone can lead to change, while RT insists that active behavioural adjustment is required- insight alone is not sufficient for change to occur. EP is much more philosophical than RT, and cites an awareness of finitude and the nonbeing of death as a motivation for change, which is absent in RT. EP also stresses the importance of finding meaning/purpose in life, specific to the individual, while for RT satisfying basic needs and wants are the focus of being. These perspective also have quite different takes on the nature of anxiety: EP views anxiety as inherent in the human condition, though it differentiates between normal and dysfunctional anxiety (the forme based on rational beliefs, the latter on irrational); RT views anxiety as a state brought about by choosing behaviours that a) do not lead to sufficient meeting of needs and b) contribute to the state of feeling anxious.</p>

Performer 1's broadcast attracts the attention of four other students. The posts that follow are student-to-student interactions and resemble a conversation between counsellors. In post 3 of 5, **Performer 2** praises her classmate and claims that she has not considered this application of information previously. This post illustrates that **Performer 2** may be exploring new ways of thinking about the concepts, a way in

which she had never previously considered, which coincides with my definition of learning. Therefore **Performer 2** may have learned from **Performer 1** sharing her perspective on the Weekly Activity Forum.

Box 5.3

Post 3 of 5: Performer 2's Response to Performer 1

Post 3 of 5 Learning Code: Student to Student added to current knowledge or understanding of the content Post submitted by: Performer 2 Reply to post 2
<p>RE: Week 8 Activity: Reality Perspective</p> <p>Hi Performer 1,</p> <p>I think you have in great detail explored the similarities and the difference between the two therapies. I do find the difference between depressing rather than depressed quiet interesting. I can't say that I had thought of it from that perspective before.</p> <p>Performer 2</p>

Box 5.4

Post 4 of 5: Performer 3's Response to Performer 1

Post 4 of 5 Learning Code: Student to Student debated content Post submitted by: Performer 3 Reply to post 2
<p>RE: Week 8 Activity: Reality Perspective</p> <p>Hello Performer 1,</p> <p>I like both the answers you have given to this activity. The differing views of anxiety is an interesting point. Given that Existential thought is very focused on all types of anxiety felt by the human condition, we probably will not find another perspective, which is so focused on this. How did you feel about this perspective's focus on the now and the future, rather than past events? I felt a bit uncomfortable by it. I believe that most of us have some unresolved issues in our past, because we don't necessarily spend our time trying to resolve issues on our own as they happen. By the time a person seeks out a therapist, either on their own accord or by compliance to another, they might have a number of unresolved issues that are affecting them in the here and now, and undoubtedly in the future, too. If we look at the case with David, playing basketball with a team might help him fulfil his physical and social needs, but what happens when his insecurities creep in and he hears his father's voice telling him that he is no good? What about when his anxiety affects his ability to socialise with his teammates?</p> <p>Performer 3</p>

The next student, **Performer 3**, also responds to **Performer 1** (see Box 5.4).

She debates the treatments by asking follow up questions, sharing her beliefs, and then invites **Performer 1** to consider other possible consequences and considerations about the patient's situation. Posts of this nature are necessary to facilitate social learning because they help to introduce other ways of conceiving content and ideas. This negotiation of meaning also helps students to explore what others know, and what they, as a student, can offer. When debates in learning are successful they can result in shared meaning. Students can benefit from an environment where shared meaning exists because it establishes a shared history and leads to trust. These characteristics (knowing what others know, what a student can offer, and shared histories) establish a climate of

trust which is necessary for social learning to occur (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006; Wenger, 1998).

Performer 1 returns to the conversation with a response that illustrates that she has considered the ideas of **Performer 3** (see Box 5.5). She suggests that her ultimate decision would be to let the client pick the kind of therapy and summarises her rationale, which considers the content from the previous posts. This demonstrates that her ideas in her initial post (see post 1 of 5) have developed from the conversation that took place with her classmates.

Box 5.5

Post 5 of 5: Performer 1's Response to Performer 3

Post 5 of 5 Learning Code: Student to Student debated content Post submitted by Performer 1 Reply to post 4
<p>RE: Week 8 Activity: Reality Perspective</p> <p>Hi Performer 3,</p> <p>That's a good point about the now/then focus. I personally think it should be at the clients discretion whether they feel it helps to address past issues. Many people coming from an unsupportive home environment may have never received validation for their own feelings, and because of this may not be able to express their emotions in the present, or even be aware of what their emotions are.</p> <p>I also see the value in focusing on the present/future, particularly in regard to behavioural type therapies, because the focus is on what can be controlled rather than lamenting what cannot. Some people may feel their troubles with the past are not valid though, which could contribute to negative self-appraisals e.g. "I'm such a fool that I cant stop thinking about this".</p> <p>In the particular example you give. David playing basketball but being preyed upon by unhelpful thoughts- I think this could help David learn to accept his thoughts/feelings, and not let them dictate his behaviour. The more he learns he can control his behaviour, and not let it be controlled by intrusive thoughts/feelings, the greater confidence/ self-efficacy he can develop.</p> <p>I think the severity of such intrusive thoughts could indicate whether it is necessary to resolve past issues, usually by talking about them and readdressing appraisals of them; and allowing emotional disclosures to lessen the intensity of pain experienced in relation to memories.</p>

The reality perspective would probably say that by indulging in rumination of painful memories, you are behaving in a depressing way. Though experience shows that when people are not able to have emotional reactions in a safe/secure environment, and emotions are suppressed, that they can produce themselves in extreme and erratic ways at inconvenient times (e.g. breaking down into a crying episode when you drop a bottle of milk in the grocery store/ or aggression toward grocery store clerks).

In David's case, I figure he has probably spent plenty of time reliving past memories, and still hears his father's negative voice. He can learn to challenge these memory replays/feelings cognitively (as in CBT or DBT), or by engaging in behaviours that he has chosen to serve his needs, regardless of how he feels. I think the point in reality therapy is like you can't control your feelings, but you can control your behaviours, so focus on that and you create a strong base from which to endure difficult feelings.

In this example, two performers' current ideas may have developed through conversation. This conversation thread is one of a few examples of how learning occurred socially in the Weekly Activity Forum. The three performers explored the therapy treatments for a client through considering new ideas and debating the treatments for this client. The students were exploring ways of being a counsellor that are beyond their current role as a student. Similar conversations like this occur between counsellors or psychologists in practice all of the time (see for example Troisi, Leder, Stiegler-Balfour, Fleck, & Good, 2015). Situated learning is more of a social process than a mental process (Lave & Wenger, 1991). If a requirement of the psychology practice is to be able to discuss a course of treatment with a colleague, then this example illustrates a cultural practice that is less about how the students absorb knowledge and more about how the students become psychologists. Conversations that evolved to this stage in the weekly discussion board were rare. These sorts of conversations were reported by students to have occurred more frequently in the backstage online and backstage offline.

When considering possible reasons why students may, or may not, post to the discussion board we should consider the context, specifically the standards of the setting. According to Goffman (1959) a front stage performance by an actor can be seen as an effort to maintain and embody certain standards. The standards to perform in this

conversation were to have viewed the video about the client, had an understanding of the previous week's topic on existentialism, and had an understanding of this week's learning materials about reality therapy. Mostly, however, the students would have needed to feel comfortable learning in public, which is a point not considered in studies of online learning. Learning by posting to the Weekly Activity Forum is a public and semi-permanent performance. This conversation occurred, and was recorded, between 3 students while as many as 122 other students and 6 staff possibly watched. Essentially, learning publically in the Weekly Activity Forum is like learning in a fish bowl in that few people interact in the glass bowl while many others watch from the other side of the glass, only in the context of the discussion board a post endures unlike real time conversations. This distinction, between what the student did with the content and where is important. If a student feels uncomfortable learning in public and they mind making semi-permanent contributions, then their learning becomes invisible to the university. However, this does not equate to the student failing to meet the standards of the context. Instead, it could be an indication that the student made a choice to resituate those standards into a backstage performance.

Rovai (2000) suggests that this sort of lurking in online classrooms threatens the sense of community between classmates. However the same could be said if not posting is the norm. If a large group of people observing a small group of people perform is the norm in an online learning environment such as the front stage, then online studies need to consider what implications this has on the way in which information is controlled, how students behave, and how online courses are designed. For instance, expectations of students should be reconfigured to accept legitimate peripheral participation as social process that facilitates learning. In this instance, stagehands, cameos, and extras who read this interaction on the discussion board may have benefited or even learned

vicariously through the Performers, i.e. legitimate peripheral participation, without contributing to the conversation. If they had contributed, or if 122 other students also posted to the conversation, this would be equal to every member of the cast storming the theatre stage during a play's most important scene. It is imaginable that this would also threaten the sense of community. Not only would it be disruptive, because the audience would not know where to focus their attention, but also, not every member of a theatre cast wants to be on stage performing.

In the theatre industry some participants experience stage fright that prevents performance in front of others. Theatre-actors also might not accept the lead roles in more than one production at the same time because they would not have the time to rehearse the lines for both. Finally, some theatre-actors want to be in the theatre industry but not on the stage (like a stagehand). In the online classroom a student might not post to the front stage for similar reasons. Specifically, the reasons that emerged in the interview data from the psychology subject included feelings of having nothing to contribute, feeling uncomfortable, and feeling time poor. These three reasons explain why the Weekly Activity Forum may have been an underutilised place for learning. I will use quotes from students to illustrate these three points.

Having nothing to contribute and feeling uncomfortable

Some students described feeling that they either had nothing to add to the conversation or that a classmate had already posted their idea. This could be because in the Weekly Activity Forum 126 students were asked to complete the same task in the same space. Saskia (23.FT.P.Stagehand), for example, never contributed to the Weekly Activity Forum because she could only log into the discussion board three times a week during the hours of 11 pm to 3 am. Saskia described feeling that by the time she logged

in to the discussion board, the question was either answered or the conversation was over.

Usually, when I do go on the discussion board, everyone else has given their answers and I feel like I have nothing to add. I make an effort for a couple of days, but it's frustrating to know that either someone else has answered with a similar answer or that by the time anyone sees my answer, they've probably already moved onto the next topic. (Saskia 23.FT.P.Stagehand)

The front stage frustrates Saskia. Instead of using the Weekly Activity Forum to learn through reading others' interactions, Saskia chose to "work things out for herself." Perhaps if Saskia was able to log in earlier, or more frequently, she may have contributed to the discussion board conversation or continued using the Weekly Activity Forum for learning. However, this was not the case for other students who never or rarely posted. Most students that I interviewed felt uncomfortable posting to a weekly activity because they were scared or uncomfortable about how others, especially those whom they felt little or no connection with, might view them.

I am not comfortable posting on discussion board. I think there is the fear of making an idiot of myself. But that is only part of it. I do feel disconnected there. (Kara 59.FT.D.Stagehand)

In addition, to not posting to a weekly activity, most of the students also felt uncomfortable replying to another student or commenting on a classmates' post. This was because they feared judgment by others, confrontation with others, or because they lacked the confidence in the content area. Maddy (NA.PT.NP.Cameo), who never posted to the Weekly Activity Forum, was an example of one of these students.

I feel this is because I fear being judged or posting something that could offend fellow students. I am not comfortable critiquing or commenting on other people's posts, in fear of unintentionally upsetting or offending

fellow students. I have read posts in the past where fellow students have actively engaged in critical debates, I do not feel confident to do this and often question my knowledge of a topic. (Maddy NA.PT.NP.Cameo)

Studies of why online students use discussion boards confirm that students do not post if they have nothing new to add to conversation or if they decide that the conversation has been exhausted (Hewitt, 2005; Cheung, Hew Ng, 2008). However, if students felt uncomfortable posting then this suggest that the space lacked a sense of belonging, which is a condition Wenger (1998) argues is necessary for situated learning. This finding suggests that even if a student *did* have something to contribute, their feelings of uncomfortableness would have prevented them from posting.

Started posting to the discussion board and then stopped: Intimidation and time

Other students participated in the Weekly Activity Forum and then stopped.

Two main reasons emerged in the data for this: intimidation and time. I will explain the reason for intimidation first. The weekly activities, more often than not, instructed students to craft their response “in dot point form” (see image 2). Some students did this and then became intimidated by classmates who wrote in paragraphs constructed with technical language or jargon, and enough detail to apply content from past subjects. Not only did some students feel “shown up” by “know-it-all” classmates, they also questioned their own ability to express themselves in writing. One student describes how her feelings of intimidation led her to stop posting:

I get slightly intimidated by the way people write ...you’ve probably noticed that I’ve hardly written anything at all on the discussion board...and that’s why. Total and utter intimidation. By the way people have written and what they write, so I just sort of went “well, yeah, better not write anything” ...I mightn’t have all the big encyclopaedia words to throw at them. (Julia 40.PT.NP.Extra)

Julia's quote illustrates a shift in her participation trajectory. As an extra she began by posting regularly to the discussion board. In other words, she was on the inbound trajectory, which Wenger (1998) suggests meant she intended to fully engage with the practice. However a negative experience meant that she shifted away from the core practice and moved out to the peripheral trajectory, where members who do not fully engage with the practice situate their learning (Wenger 1998). Typically, a shift in one's participation trajectory is evidence of learning (Wenger 1991 and Wenger 1998). However some psychology students' trajectories shifted because of feelings of intimidation and negative perceptions of classmates. For this reason, it is important for online students to have a backstage where they can resituate their learning otherwise they may not experience learning.

Time was another consideration that students reported negotiating when they decided to stop posting to the Weekly Activity Forum. Some students, like Eileen (30.PT.HD.Performer) and Joanne (45.FT.D.Cameo), juggled studying with full-time work and other commitments. Eileen, for example, was also a dancer, therefore when she took more than one class she opted not to participate on the discussion board. Since the discussion board was not graded, Eileen only completed the weekly activities. She did so by posting her response to the task. She did not log in again to check if others replied to her post and she did not read classmates' posts. This allowed her to maintain her full-time job, dance, and study.

...when I am doing two subjects or more I don't tend to go on the discussion boards unless it is mandated because there is so much to do and I have to work and have other interests as well so I do what I need to for each subject... (Eileen 30.PT.HD.Performer)

Joanne, on the other hand had a family to support. She negotiated whether she had time for the discussion board activities on a weekly basis by mapping out her routine study tasks and pending assessments. If she had time, which was never the case, she would post to the discussion board.

I think it was just the essays were still six weeks away...I think from memory I did the research already and mentally scratched down the essay. So I think I just mentally felt that I had the time that week and then so I took part in the discussion board. After that the routine of the [online tests] and keeping up with the text book reading, keeping up with the essays, it just the load got heavier and I just had to drop [the discussion board]. (Joanne 45.FT.D.Cameo)

Despite having to “drop” the discussion board from her study routine for this class, Joanne still participated in the discussion board in her other subject because her participation there *was* graded. However, during week three Joanne made her second cameo appearance in the Psychology subject (Joanne’s first appearance was in week one when she introduced herself to her classmates in the General Discussion Forum). Unfortunately, this post was done in error because she accidentally logged in and posted to *this* subject instead of the subject where participation was graded.

Eileen and Joanne illustrate a distinction within the social processes between persons during activities in a curriculum. In their front stage performance, they took a task-orientated approach to completing the subject instead of a relational approach. This distinction is important because they reported that they continued to read the course material, they both reported doing additional readings, and they completed their assessments. Similarly, in Fung’s (2004) study of online graduate students he found that students defined “lack of time” as a preference to read content instead of post to the

discussion board. In both instances, time was constructed in tandem with the preference of a task. For Eileen and Joanne, this task-oriented approach in the front stage ensured that students completed the teaching curriculum from the front stage. In both of the instances of Eileen and Joanne, the students were posting messages for the sake of posting. It is possible that maybe their posts helped others with the Psychology content. Their interactions may have even helped themselves to stay up to date with the syllabus. However they did not report this and they did not describe learning from interaction in the Weekly Activity Forum. When a student takes a task-oriented approach to the front stage they might still apply a relational approach in a backstage. Eileen, who posted nearly every to the discussion board, described her front stage performance as “cursory” and her posting patterns to the discussion board as only “post[ing] when asked to.” Yet, she applied the subject’s content to work tasks and her relationship with her boyfriend. While she reported that this made her feel more connected, her description also illustrates that this was also where she was learning.

I did contribute to the discussion board, but again just cursory. I felt more connected to others was when it came up in conversation at work or outside study...I haven't been talking to my classmates and I found that I could apply things from psych generally to work situations...I felt like I only went [to the discussion board] to post when asked to, and then left. But I found the subject matter very interesting and different from other subjects. It was something that could easily be applied to my life, and to myself, and people around me. For example, my boyfriend gets anxiety to a high degree sometimes, and I found that I was talking like a counsellor to him [laughter] using more gentle phrases and making observations. (Eileen 30.PT.HD.Performer)

In this section, I illustrated how learning occurred in the Weekly Activity Forum. I also described how few students used this space and analysed possible reasons

for this. Overall the Weekly Activity Forum was a space for situated learning but the diminishing participation made it an underutilised learning space.

General Discussion Forum

The General Discussion Forum was utilised for training, or to become more competent students. In fact, training was overall the dominant theme of the discussion board. This was illustrated in the content analysis (see Table 5.5) where nearly every (97%) post in the General Discussion Forum was related to training and not about learning the practice of psychology. Of the 126 students in the Psychology subject 82 students posted to the General Discussion Forum one time or more. This was nearly twice the number of students than the weekly activity forum. The tutors and students created a total of 1093 posts. This was almost three times the amount of posts present on the weekly activity forum. One teacher described student participation in the General Discussion Forum as fragmented into three main groups for the purpose of discussing ideas, general support, and clarifying assessment expectations.

There was not a sense of the whole cohort, I could not generalise. There appeared to be subgroups who used the online interaction for discussion of ideas and support of each other and for clarifying expectations etc. a few used it to air complaints. Many did not appear to interact much at all.
(Teacher K)

The conversation illustrates a typical conversation about training (see Box 5.6). As Teacher K has suggested this conversation illustrates both students supporting each other and clarifying expectations. The student, **Cameo 1**, sets the scene for the conversation by broadcasting a question on the General Discussion Forum. In this question she asks if she has interpreted the essay requirements correctly. Her broadcast attracts the attention of one student (Ingrid 74.FT.D.Performer) and one tutor (Teacher A).

Box 5.6

Post 1 of 6: Cameo 1's Training Question

Post 1 of 6 Training Code: Broadcasting question about the mechanics of the assessment Post submitted by: Cameo 1
<p>Subject: To David or not to David</p> <p>Hi, just checking on my interpretation of.... "Limitations of using such an approach in counselling someone like David". Are we to include David as a hypothetical client in this essay and use his background details in the discussion of limitations and advantages, (but not the video evidence) or use a fictional client, or none at all?</p> <p>Cheers, Cameo 1</p>

Ingrid is the first to respond to **Cameo 1** (see Box 5.7). She does so, by offering her own understanding of the essay assignment and copies and pastes content from the assessment brief to add credibility to her response. After this **Cameo 1** and **Ingrid** exchange gratitude and **Teacher A** appears on the scene.

Box 5.7

Post 2 of 6: Ingrid's Answer to the Training Question

Post 2 of 6 Training Code: Student to student answer to mechanics of assessment question Post submitted by: Ingrid (74.FT.D.Performer) Reply to post 1
<p>RE: to David or not to David</p> <p>My understanding - and I know I have read it somewhere - is that David, if used at all, is absolutely minimum usage.</p> <p>The following is copied from the essay requirements:</p> <p>Counselling someone like David? (Do not use the videos as your evidence, but you may take brief examples from them if you wish to illustrate a point).</p> <p>I think 'brief' is the key word here.</p> <p>Cheers - Ingrid</p>

Box 5.8

Post 3 of 6: Cameo 1 Thanks Ingrid

Post 3 of 6 Training Code: Student to student relationship management (gratitude: thank you) Post submitted by: Cameo 1 Reply to post 2
RE: to David or not to David Brilliant, thanks Ingrid. Think I was just confusing myself again! Cheers, Cameo 1

Box 5.9

Post 4 of 6: Ingrid's response to Cameo 1

Post 4 of 6 Training Code: Student to student relationship management (gratitude: you're welcome) Post submitted by: Ingrid (74.FT.D.Performer) Reply to post 3
RE: to David or not to David I know where you're coming from! Just too easy to do, isn't it.

Once **Teacher A** arrives on the scene she provides insights to the essay that only a teacher could provide, she is the expert-trainer in this situation. She deconstructs the meaning behind the essay question, suggests how to conceptualise the question, and provides advice and insights as to how marks could be allocated to the essay responses. Some of this advice is pertinent to the task at hand, which could help Cameo 1 to become a more competent student in this subject, and some of this advice is about writing academic essays in general, which could help Cameo 1 to become a more competent student in every subject of her degree. After this **Cameo 1** thanks **Teacher A**.

Box 5.10

Post 5 of 6 Teacher A's response to Cameo 1

Post 5 of 6 Training Code: Teacher to student answer to the mechanics of assessment question Post submitted by: Teacher A Reply to post 1
<p>RE: to David or not to David</p> <p>Hi Cameo 1, yes this question comes up every semester so I'm happy to respond to this as it is important students understand the essay question. The essay question is worded in a way to get you to think about some of the presenting issues someone could come to counselling for (and some of these issues are shown in the Case of David). So don't think so much about David but the issues someone might seek counselling for and direct your essay research and response to answering the question of how you can make a case for an integrated response (combined CBT and Person Centred) for the treatment of this issue/s. If you refer to David it really should only be in a very brief way to illustrate a theoretical point you are making. Remember this is a theoretical essay and therefore we expect a rigorously argued essay that is supported by the empirical literature. David is an actor playing the part of a client and so I can only emphasise this point, do not use David as evidence or you (I mean more generally not you specifically) run the risk of being marked down for not answering the essay question correctly. I'm sure this will be discussed in depth in the tutorials over the next few weeks but if you have any further questions please post again as it is vital that the limited way reference to the case of David can be made in the essay is understood. But I'm pleased you asked the question, as I'm sure many other students have the same query in their minds. Kind regards, Teacher A</p>

Box 5.11

Post 6 of 6 Cameo 1's response to Teacher A

Post 6 of 6 Training Code: Student to teacher relationship management (gratitude: thank you) Post submitted by: Cameo 1 Reply to post 5
<p>RE: to David or not to David</p> <p>Thanks Teacher A, I think that was where I was getting stuck....I didn't really want to use him, but just wanted to clarify!</p> <p>Cheers, Cameo 1</p>

This conversation is one of many examples of how training occurred socially in the General Discussion Forum. In this example, two students explored the essay instructions and a teacher stepped in to confirm an answer and offer advice that could lead to all students to becoming more competent in essay writing. These sorts of conversation in the General Discussion Forum were typical in the Psychology subject.

This was because most students had a shared understanding that the purpose of the General Discussion Forum was not for learning about content. The students I interviewed described using the General Discussion Forum for support, clarification about the mechanics of the subject, and the tutor presence.

Support, clarification, and tutor presence

Students described two ways of feeling support which included being supported and supporting others. Fran (55.FT.C.Performer) and Briana (35.PT.P.Extra) were both frequent users of the General Discussion Forum for support. In the quote below, Briana describes how her classmates helped her through disappointing assessment result. While Briana received support from the General Discussion Forum, Fran frequently offered technical advice to classmates and told them where to find information. In Fran's quote, she describes how helping other students and reading their posts made her feel connected.

I found that the general discussion board was a great place to exchange dialogue with students. When I did not do so well in the first essay I found someone else had discussed their situation as well in not doing so good. A few other [posted] as well and vented their situation. In the end we referred to the [General Discussion Forum] as a lifeboat, someone was saying "move over and pass me a hot chocolate" and we humoured ourselves around bleak circumstances. These exchanges created humour and showed that there were class members exchanging information online, but yet no different than we would if we were in a room. (Briana 35.PT.P.Extra)

Mainly on the general discussion board where I found that I could help other people and was helped by other people. I also found a connection through reading the interactions between the students. (Fran 55.FT.C.Performer)

In addition to receiving and providing support, the General Discussion Forum was also described as a useful resource for finding clarification on assessments or other course-related information. Many students described this space as the first place they checked for information.

If there were specific things I would look on the DB to see if anyone else had asked, they usually did. (Kara 59.FT.D.Stagehand)

Firstly I checked the discussion board. Most of the time someone else had already asked the question. If no-one had asked I would start a thread with the question I needed answering. If all failed I would email my tutor. (Fran 55.FT.C.Performer)

If it was complex I emailed a tutor otherwise I put a question on the discussion board. (Suzy 30s.PT.D.Cameo)

The tutor's presence and critical mass of their classmates might be why students checked this place. For instance, because 82 students posted in the General Discussion Forum, their question or the information they sought was for the most part already there if they took the time to find it. In addition, the information was more credible because the answers, more often than not, came from the tutors. The content analysis showed that about half of the posts in the General Discussion Forum were between teachers and students. The tutor presence was an important factor that made this space a trustworthy resource for students. The content analysis of the discussion board showed the tutor who would mark their work was also providing advice about the assessment. Therefore, aligning the student's perspective with the tutor's perspective could result in higher competence, which is related to training. Leonie (52.PT.D.Performer) and Ingrid (74.FT.D.Performer) described this in the quotes below. Specifically, Leonie and Ingrid described the discussion board as "correct", "useful", and because of the tutor's presence it was also "interactive".

I used to use social media but found that you can get some incorrect advice that way and that tutors prefer you to monitor [the discussion boards]. So, I stick with the discussion board space to make sure people behave themselves and also provide correct information. (Leonie 52.PT.D.Performer)

I firmly believe that the discussion board is by far the most useful resource at our disposal - but only when it is interactive with tutors as it has been here, Thank you so much, tutors - I never get sick of saying that when it is so true. (Ingrid 74.FT.D.Performer)

Worth noting is that the performers' views of the discussion board were more positive than the stagehands'. This makes sense because the performers were also the students creating the discussion board. The positive comments about the discussion board were also coded for training (not learning). This was because students viewed posts related to training as correct and useful since the teacher had a greater presence in the training context. The other positive comments, also related to training, were about feeling emotionally supported during and after assessments.

The next quotes illustrated that when tutors were not fast enough, or if tutors overlooked a post, credibility of the General Discussion Forum diminished. This was because posts from classmates, who swooped in when tutors were not fast enough, were often incorrect or off-topic.

So, if you had an assessment sometimes people would be writing stuff on the discussion boards but they'd be getting the assessment wrong, and then I would be freaking out going "oh my god, I've done it completely wrong", and then three days later the tutor would get on and she'd be like "oh no, you've actually...you've got the assessment wrong" and then I had it right in the first place. (Yvette 35.FT.HD.Cameo)

Another reason was because students could go somewhere faster to find information, such as backstage online (e.g. Facebook). Kara, for instance, described Facebook a being more “immediate” than the discussion board.

I have posted things [in past subjects] and waited days for a response and sometimes no response Facebook tends to be more immediate. (Kara 59.FT.D.Stagehand)

In the General Discussion Forum, the students were seeking information for the practice of being a student. They wanted to know how to reference information or how to complete a genre of writing. In this sense, the General Discussion Forum did not support the learning of psychology but may have supported the practice of being a student. This made it a space for training.

The Weekly Activity Forum and the General Discussion Forum: The exception and the norm

Overall, few students posted to the discussion boards, yet the Blackboard activity files from the students in the subject, and the students’ questionnaires and interview data showed that students were regularly checking the discussion board. The tutors and the 13 performers were primarily responsible for creating the information in the front stage. In this section, I will briefly discuss the exception and the norm across both discussion boards.

One student was the exception in the discussion boards and took the lead role in the front stage. This student was Ingrid, a 72 year old, full-time, psychology student. She posted fifteen times more than the average student, which made her responsible for 15% (214 posts) of the 1,430 posts in the front stage. She was, in most cases, the first person to respond to a classmate’s post. In her posts, she used her imagination to suggest what she would do as counsellor, she supported classmates who used the front stage for venting, and she brokered information from one discussion board forum to the

next in order to answer classmates' questions. Ingrid also frequently disagreed with her classmates about content and with her tutors about her marks. Ingrid's Blackboard activity files showed she was logged into the discussion board for most of her day. She uses the phrase "friendly place" to describe her feelings of connectedness and sense of belonging in the front stage. Her continuous involvement in the front stage also made her feel "part of something."

This [front stage] is my friendly place, where I feel part of something, not all alone at my desk, looking out at the horrible gray walls of the house next door. I think I have gained as much from various discussion boards as from all my other reading... (Ingrid 72.FT.D.Permer)

In studies of Facebook posts, Bowman (2014, p. 3) referred to students with these traits as "super-users" because they respond to students even when they don't know the answer. The quick and plentiful responses from super-users, like Ingrid, can help students feel less isolated, and if they provide the correct information they can also reduce the workload for tutors. However, performers like Ingrid are not a solution for sustaining information and support in the front stage, because they can also frustrate and deter their classmates from the discussion board. In this instance, several students emailed the Unit Coordinator to complain about Ingrid's incessant posting to the discussion boards. Box 5.12 illustrates this point.

Box 5.12

Post 1 of 1 Ingrid's Apology to the Class

Post 1 of 1 Training Code: Broadcast relationship management Post submitted by: Ingrid (72.FT.D.Permer) Reply to post 5
<p>...</p> <p>I have heard from [the Unit Coordinator], and apparently some of my entries on the Discussion Board have offended some, and I would like to sincerely apologise for that. I did try to draw Helene's attention to the fact that I have also tried to always acknowledge how appreciative I have been overall towards the tutors in this - and other - units with [this university].</p> <p>...</p>

One possible reason for Ingrid's performance in the front stage was that she did not have a social backstage online or a backstage offline. In her questionnaires, she only reported using her backstage online to access the university library or Google Scholar, and her backstage offline to complete assignments.

While the example of Ingrid was the exception, the many examples of the stagehands appeared to be the norm in this subject, and perhaps online learning in general. Just as not everyone involved in theatre wants to be in the production, not every student wants a role in the discussion board. While Performers assumed posting roles in the discussion board, it should also be noted that some students do not want to post to discussion board forums in *this* subject or *any other* subject. For students who felt this way, interacting in the front stage was excessive or unnecessary participation. This is because some students simply want to study by themselves at their own pace. In the examples below, Yvette wanted to be left on her own and Maddy enjoyed the solitude of online study. Therefore, if and when they posted it was usually to ask questions about an assessment.

I know, sometimes I feel like...engaging with...the other people in the subject, I...sometimes I find it a little bit irritating. Like sometimes I just

want to be left on my own. (Yvette 35.FT.HD.Cameo)

I am not one to post threads on discussion boards, or troll the discussion boards to respond to fellow students posts. I like the solitude of studying online. I also do not enjoy mandatory posts that come with some units. (Maddy NA.PT.NP.Cameo)

Other students found ways to combine their learning with their everyday activities. If they wanted to interact with anyone about the subject they could do so elsewhere. By combining study with other everyday interactions students can, for instance, work full-time and study or study full-time and have a family.

I work in a call centre and talk to about 50-60 people a day at minimum so I don't want to talk to more when I get home I also like studying at my pace... (Eileen 30.PT.HD.Performer)

I study with my sister face-to-face mostly but sometimes on the phone...I check in on the discussion board regularly but am generally happy to work things out for myself rather than read the banter of other online students who sometimes confuse me when they are not sure what to do. (Suzy 30s.PT.D.Cameo)

Some students wanted to be left alone to study for various reasons, particularly when they did not trust their classmates, as highlighted in Suzy's quote. In Suzy's situation she may have gone into the front stage regularly in order to check information from the teachers. However, Suzy completed her subject-related tasks with her sister, which was a relationship where trust may have already been established. This might be a reason why students go backstage. More specific examples of how and why students preferred the backstage online and backstage offline will be explored in depth throughout the next section, which focuses on students' backstage experiences.

The purpose of describing the front stage was to (1) illustrate how few students posted to the front stage (3) to suggest why front stage social processes related to

learning were scarce, (2) to explain how the front stage was a context mostly used to facilitate social processes related to training and (4) to hypothesise that an absence of learning in the front stage could suggest that students might be learning in the backstage.

Most studies of online students stop their investigation at this point. The studies end here at the front stage. Researching only the front stage is perpetuated by online learning theories that are dependent upon front stage data as indicators of learning. In the next section, I will build upon this body of research by illustrating how the same students from the front stage created, contested, and reconfigured their identities and relationships in the backstage online and backstage offline. This is important, because as I will demonstrate, a students' learning is not limited to the front stage.

Backstage: Participants' backstage experiences

The backstage consists of those places that students learn outside of the LMS. This can include both online spaces and face-to-face spaces. The backstage online is any space that is outside of the LMS but uses the internet, such as Facebook. The backstage offline is any space that does not require the internet, such as face-to-face conversations with family, friends, and colleagues. In this section, I will describe how students in the Psychology subject used the backstage online and the backstage offline for learning. If you recall from Table 5.4, students reported spending most of their average total time (71%) in the backstage. The backstage, unlike the front stage, embodies aspects of the students' everyday life: work, family, friends, Facebook.

All of the students who participated in questionnaires and interviews reported learning in the backstage regardless of how frequently they participated in the front stage. Overall, there were two general themes for students learning in the backstage, which included students using Facebook (backstage online) and face-to-face

conversations with others (backstage offline). In one instance this included the telephone. Suzy (30s.PT.D.Cameo) was studying the Psychology subject with her twin sister whom she would occasionally telephone. I will use quotes from interviews to illustrate how students learned and occasionally trained in these spaces.

Backstage online: Facebook

The most common space that the 21 participants reported participating in backstage online was Facebook. Almost every participant described using two important Facebook functions in their learning experience: Facebook Groups and Facebook messaging. Facebook groups are dedicated spaces where group members can share updates, share documents, and message only those in the group (Facebook Help Center, 2015). Facebook groups are public or closed.¹ Facebook messaging, on the other hand, is similar to a live chat or email tool. Messages are delivered directly and instantly to other Facebook friends, multiple Facebook friends, or a Facebook group. In this section I will describe the Facebook groups that the Psychology students used including their Facebook friends.

Facebook groups in the Psychology subject

By using Facebook to complement one's studies students constructed multiple identities related to a subject's content. When students belong to more than one community, they can complement spaces where they experience a lack of mutual engagement with communities where they experience mutual engagement (Wenger, 1998). For instance, a front stage cameo or stagehand might be a performer in a Facebook community. This increases opportunities for learning. Facebook has become a

¹ In a *public* Facebook group anyone with a Facebook account can: (1) join, (2) be added by a current group member, or (3) be invited to join by a current group member. Anyone with a Facebook profile can join a public Facebook group. In a *closed* Facebook group, on the other hand, anyone with a Facebook account can: (1) ask to join or (2) be invited to join by an already existing group member. Private Facebook groups have an "owner" or "admin" who must approve requests to join.

common backstage for university students (Selwyn, 2009). In one previous study, students reported being a member of five or six university-related Facebook groups—including groups for primary school alumni, political affiliations, hobbies, sharing opinions on current topics, having academic conversations, and sharing learning materials (Bosch, 2009). This was also the case for many of the psychology students in my study.

During interviews I learned that participants used Facebook groups (for study purposes) that were both related and unrelated to the university. There were at least three Facebook groups related to the university used by some students in this Psychology subject. Students also used Facebook groups unrelated to the university to support their study. Some of these groups were social-specific about training and others were content-specific about learning. One participant, a cameo, was currently a member of: the Social Science Majors group, the Psychology Majors Only group, a Facebook group for every subject she enrolled in (past and present), and a Facebook group unrelated to the university about mental health counselling. In addition to these groups, she has Facebook friends whom she met through her university study. As a result of participating in Facebook groups some students also made Facebook friends who also supported their learning. All of the Facebook groups and friends have been summarised in Table 5.7. Students reported that their teachers were not part of these Facebook groups.

Table 5.7

Backstage Online Facebook Groups and Descriptions

Facebook Groups	Purpose
Social Science Majors (Closed)	A student group for all majors in the social science faculty at this university only. For learning and training
Psychology Majors Only (Closed)	A student group for psychology majors that enrolled at this university in the same year. For learning and training
Individual study groups related to specific subjects (Closed)	A small student group organized to study together for a specific subject or complete tasks together. For learning and training
Social Facebook groups unrelated to the university (Public)	A public support group for any tertiary student at any institution for example: UNI Coffee Shop. For training
Content Facebook groups or groups unrelated to the university (Public)	A public Facebook group for people interested in learning about content of their choice for example: The Glasser Institute. For learning
Facebook Friends from this university	Some students made one-to-one friendships and shared study and social or personal information like family photos. For learning and training

Source. Interview data

My analysis will focus on the Facebook groups related to the university, which are the first three groups listed in the table, and Facebook Friends. This section will use interview quotes to describe how students used the Facebook groups related to the university: Social Science Majors, Psychology Majors, and the Individual Study Groups. Then I will describe how participation in Facebook groups led to Facebook friends that also assisted students' learning and training.

Facebook Groups: Social Science Majors and Psychology Majors Only

Most students reported being members in both the Social Science Majors and Psychology Majors groups. These were both large Facebook groups. The Social Science Majors group was the largest of the groups, with over 600 members, and the Psychology Majors group had over 130 members. Students described how participation in larger Facebook groups facilitated students to connect with smaller groups and one-

to-one Facebook friends. Once students have forged these sorts of connections Facebook becomes a backstage for doing university (Selwyn 2007, 2009). The Facebook Group environment facilitated the social processes that facilitate situated learning. Students described a novice to old-timer trajectory of participation, group members created a repertoire of shared resources, and Facebook supported social processes between persons and multiple communities. In this section, I will explain how students joined groups and how these groups shared knowledge and resources.

As students enrolled in the school of Social Sciences they were invited to this Facebook group. Most of the students recalled being invited into the Social Science Majors Facebook group at the start of their degree. The Social Science Majors group was often the first Facebook group that students joined. The Social Science Majors group had the most members, and was described by students as the most active group. It provided both learning and training opportunities similar to that in the front stage for example, students “let off steam over marks” in the General Discussion Forum also. Briana (35.PT.P.Extra) also described using the Social Science Majors group to find other Facebook groups. For example, an owner of a new group might create a post inviting students to join a group for a specific subject. Or if there was a group project she joined a smaller Facebook group for members of the group project. Most students who were using Facebook groups were in both the Social Science Majors group and the Psychology Majors Only group. These groups were successful because of time as well as shared knowledge and resources.

Kara recalled being invited to that group during her first semester via a front stage discussion board post. She joined the group, but did not interact much at first. As a lurker in the Facebook group, Kara became acquainted with members from the Social Science Majors group because their names frequently appeared in her everyday

Facebook feed. After six months of lurking she began posting to the community because she felt more connected there than she did in the discussion board.

I didn't really interact much at first. It is probably more after 6 months as the same names keep cropping up. We post a bit of everything [related to psychology] and sometimes just letting off steam over marks. (Kara 59.FT.D.Stagehand)

The process that Kara described above is a typical first step in situated learning. Lave and Wenger (1991) suggests that all learning begins with legitimate peripheral participation before students feel confident enough to participate as a newcomer, near peer, or expert. Why did Kara's participation trajectory change in the backstage online, on Facebook, but not in the front stage?

It took Kara six months in a Facebook group to shift from the peripheral participation trajectory to the inbound participation trajectory. This raises an important point about time and participation trajectories. Kara remained a stagehand in the front stage where she only had twelve-weeks with a cohort of students. Time may have afforded Kara feelings of connectedness, which may have enabled her trajectory shift in the Facebook group. This suggests that the length of a university subject within a course may not be enough time for some students to establish a sense of trust, belonging, and the ability to negotiate their role and interactions with others – all features which Wenger (1998) argues are conditions that facilitate situated learning.

Students in the Social Science Majors and Psychology Majors groups enjoyed the benefit of accessing shared knowledge and resources. Some of the students in these groups were enrolled in different subjects and some were enrolled in the same subjects. Each subject, however, was on a similar assessment timeline, which makes this a good space to get advice from old-timers or students who have already taken a subject. One advantage of participating in Facebook groups with newcomers and old-timers to a

variety of subjects was that answers to questions were more immediate. This was not afforded in the front stage.

[Facebook] tends to be more immediate. [My learning occurs] probably more through the FB groups...I have made a few friends that have been going through the same units. I don't feel particularly connected to the online group [in the discussion board] as such. (Kara 59.FT.D.Stagehand)

I do use the discussion board if I recognise names. In my first five or six units I was active on the discussion board, Collaborate and the like, but often I found I was humiliated on there by tutors and peers. And I now look but don't often respond unless I am comfortable... My first step was [the] Discussion Board and I had to wait because responses are slow. Facebook was the second step. [But I preferred] the Facebook group because the responses were quicker and also more personal. (Briana 35.PT.P.Extra)

In these quotes, Briana and Kara mentioned feeling connected and more personal in the Facebook groups than the discussion boards. This could suggest that the speed of the response made students feel Facebook was a more affable learning environment than the discussion board. The immediacy of replies on Facebook may have prevented students from second guessing themselves and confirmed for the student that their voice had been heard by others. This could certainly be the case with Facebook Messenger which tells users who viewed their message and when. This feeling may not have been created in the discussion boards because a tutor or classmate may never comment on a student's post. Also, a teacher's presence may assume expertise and this could stifle student-to-student communication.

Another advantage of the two Facebook groups was that experienced members of the community already vetted the resources that they shared. In the front stage the only experienced members were the tutors. However in the back stage experienced

members were other students. The students I interviewed described how they used the two Facebook groups to study the weekly activities. For instance, the students loosely posted content and comments related to weekly activities from the front stage (Weekly Activity Forum). For the Psychology subject Facebook groups, this meant that sometimes the posts were about sharing a resource or asking a question related to that week's counselling technique. By doing this, students transferred elements from the front stage to the backstage online. This was particularly useful for students who never used the discussion board, like Kara. Kara was a member of both the Social Science Majors and the Psychology Majors Only groups. For Kara, Facebook met her learning needs by providing her with both classmates and resources. The Psychology Majors Only group, for example, shared relevant resources that helped her learn about the weekly counselling theories.

...that is one of the great things about the Facebook groups the sharing of links to extra material that sometimes help understand a subject or concept [from that week]... (Kara 59.FT.D.Stagehand)

The students I interviewed also commented how the resources, like the videos, were credible because, for example, the videos were from universities or featured experts from the field. Some students reported watching as many as six extra videos a week because they appeared in their Facebook feeds. When the students used videos from classmates they had the added benefit of knowing that someone studying the same subject had vetted the video and deemed it useful. The presence of audience members with mixed abilities not only supports situated learning (Lave and Wenger 1991; Wenger, 1998), but it could have also made information in the backstage online faster and just as credible as the front stage.

...there are quite a few really good YouTube channels that have ex professors and teachers and they are really good they explain things

without treating the audience like a brainless dolt. Usually videos from Facebook were always good because another classmate already used it...
(Kara 59.FT.D.Stagehand)

Students did not share videos or resources in the front stage. However, there were discussion board posts where students referred to a video or a resource. For example, "I watched a YouTube video about...and it said..." but students did not post the link to the discussion board. The students preferred to post the videos and have conversations about the content on Facebook instead of the discussion board. In several studies students reported that Facebook posts that grew into discussions were beneficial to their learning (DiVall & Kirwin, 2012), particularly when the responses came from a more knowledgeable other (Ru-Chu, 2013). The psychology students also felt this way, and added that it was easier to have a discussion because the environment was less structured than the front stage. Julia, despite feeling that her vocabulary was not advanced enough to participate in the Weekly Activity Forum, did participate in Facebook groups. This provided her, and possibly other students, the opportunities to do the same activities from the discussion board in a space they felt better suited their communication style.

Facebook was good actually, because you could post bits and pieces and whatever. It felt less formal than the discussion board. Even though we were probably talking about the same thing, but to me personally, it felt less structured. Less academic, is probably the word I am looking for.
(Julia 40.PT.NP.Extra)

Students were able to help students in the backstage because the large Facebook groups had expert-students who had already completed the subject, near peers who were on the same academic calendar, and most importantly, the presence of teachers did not interfere with the control of information. Rambe (2012) found that when teachers and students make up a university Facebook group, students view content-related posts as

the teacher's domain. As a result, students avoided commenting on posts even if they knew the right answer. If students view certain posts as a teacher's domain then this constrains how information is shared. Furthermore, if a teacher was present it could reproduce the decorum of the front stage, and the backstage online could also become a space where the norm is not to post.

Facebook Group: Individual study groups

Individual study groups formed on an *ad hoc* basis. This section will explore examples of individual study groups created using the Facebook Group function. These study groups were also closed groups run by students. The purpose of a small group was to study for weekly tasks and specific subject assessments. Like the previous but larger groups, students still shared resources and engaged in discussions about weekly topics and study advice related to the Psychology subject. However, unlike the more perpetual nature of ongoing groups, these task-specific groups might stop functioning when the subject ends or the project ends.

Kara and Briana both described using Facebook to support their study in a prior Statistics subject. They both (separately) used a statistics Facebook groups to organise a small study group that met weekly over live chat to complete the weekly activities in that subject. The statistical subject was a prerequisite subject for the Psychology subject. Some of the students that I interviewed participated in various statistic Facebook groups. I use this past experience in the statistics Facebook group help to illustrate Facebook's enduring presence within the degree.

...one unit a few of us formed a study group where we met on line through Facebook weekly. It was a stats unit and some of us were struggling... it did help... It was a little more relaxed I am not comfortable posting on the discussion board... (Kara 59.FT.D.Stagehand)

Kara and Briana did not have an individual study group for the Psychology subject because they felt that the content was not as difficult. Kathy and her study group, on the other hand, did feel that they needed a formal group. Kathy was the leader for a small group of students who were unhappy about the subject. Studying over Facebook allowed them to continue studying with classmates despite feeling let down and hurt by tutors. Kathy (23.FT.P.Extra) described tutor feedback on assessments as “harsh”. She was also asked by tutors to move discussion board posts from one thread to another thread on three separate occasions. Sometimes these comments appeared in the middle of a conversation. She felt this was disruptive to her learning because after the request was made the conversation came to an abrupt end. She eventually stopped posting in the front stage altogether. By week four, her discussion board participation ceased but her Facebook participation increased. In this instance, Kathy took control of her learning, which meant she left the front stage to learn with a Facebook group.

As a result of becoming more involved on Facebook, Kathy began corresponding with a group of students from the Psychology Majors Only Facebook group that were upset about technology problems and assessment feedback. The group of students created an individual Facebook group for the Psychology subject. Goffman (1959) suggests that actors who go backstage are afforded opportunities to derogate from the front stage and that the discussion in the backstage can often turn towards problems of staging. Kathy described this as being the starting point for her backstage relationships but the discussion eventually evolved into learning opportunities. In their Facebook group, these students worked through weekly activities together and studied for the final exam together. Kathy preferred this space instead of the discussion board. For Kathy, the discussion board was an unhelpful place where she reported being unable to talk, whereas with her Facebook group she could talk and share resources.

We couldn't even just talk on the discussion boards or anything, so we'd talk on Facebook. Um, we're having difficulties even getting feedback from our tutors this semester. And we've...there's been a lot of complaints. Like, people on Facebook talking about how...[tutors] weren't being helped this semester. Like, I'm pretty, um, independent with my, like, online learning, but some people need more direction with it. Like, [other students said] "this semester, with that subject, there was not much direction", um yeah.

Um, just I liked talking on Facebook more than the discussion board. I was able to learn from my classmates in that way. Yes, um, they also sent videos out on Facebook, like examples, like YouTube videos of different counselling methods. I really want to do my school this year maybe at campus...to get more one-on-one. (Kathy 23.FT.P.Extra)

Kathy's group was not the only individual study group in this subject. Students who I did not interview also mentioned their Facebook study groups in discussion board posts. This is an important aspect to explore because the examples up until this point have only illustrated how students have transferred information and activities from the front stage to the backstage, with a focus on learning. The reality is more of a two-way street, with students also bringing information from the backstage to the front stage. This is illustrated in Box 5.13 and Box 5.14. In this discussion board conversation **Cameo 2** solved a technical problem for **Ingrid** (who does not use social media). **Cameo 2** answered Ingrid's question by sharing information that she had learned with her Facebook group, or in the student's words her "handy dandy Facebook group." This illustrates how aspects of training also occurred in the backstage.

Box 5.13

Post 1 of 2 Ingrid's Question About the Assessment

Post 1 of 2 Training code: Broadcast question about mechanics of assessment Submitted by: Ingrid (72.FT.D.Permer)
<p>Subject line: Online test broken</p> <p>We were told that we could have multiple attempts at the online test, and that the highest mark would be the one selected. However, yesterday when I did the test I had a score of 18, but today I thought I would try again after some more reading. However, I only got 15 right that time, and that is the mark that has remained. I have this awful sinking feeling that if I try again I will get even fewer right (overthinking perhaps?) and the lowest score will be the one recorded. Ingrid</p>

Box 5.14

Post 2 of 2 Cameo's Answer to Ingrid's Question

Post 2 of 2 Training Code: Student to student answer to the mechanics of assessment question Post submitted by: Cameo 2 Reply to post 1
<p>RE: I have worked out the solution</p> <p>Hey guys... with the help of my handy dandy Facebook group... I have learnt that if you view submission and click on the 15 (from the results section) it will then load your feedback so that you can assess the incorrect answers and have another go. I know have 20/20 YAY good luck.... Cameo 2</p>

This section illustrated how Facebook groups facilitated individual study groups in instances where the content was difficult or students felt marginalised. It also illustrated how despite the front stage being explicitly designed as a learning space for students some students still preferred to create their own space. They did so by applying information from the discussion board to the Facebook groups and taking information from the Facebook groups to the discussion board.

Facebook friends

As a result of Facebook group participation, a number of students made new Facebook friends. Students described using Facebook to form one-to-one friendships to assist with study. For example, when Julia worked with another student who had similar interests she friended² him or her. This allowed them to stay in contact even when they were not enrolled in the same subject. Students described using Facebook friends from this university to talk about study and personal topics like family or holidays. Some students even used the Facebook private message feature to discuss content with each other when they are not enrolled in the same subject.

The students I interviewed commented that there was always enough overlap in the subjects to bounce ideas off classmates from another subject. Briana, for instance, explained that she had a collection of Facebook friends from previous subjects that chatted regularly using Facebook's private messaging feature. She has been a friend with these students for years and although they are enrolled in different subjects they remained in regular contact.

Fortunately I have established online relationships with people throughout this degree and they aren't necessarily in my current unit but may have completed and are often happy to discuss things via Facebook through inbox and also through Facebook on the main group for [Social Science Majors and Psychology Majors Only]. (Briana 35.PT.P.Extra)

This example from Briana illustrates how students who remain in contact through Facebook can continue to build upon and reinforce prior learning. A student who has completed a subject that another student has not is presented with an opportunity to be a situational-expert by teaching others about what they learned. This

² Friend or friended means to add a person to a list of friends or contacts on Facebook. This verb was added to the Oxford English Dictionary in 2015.

is particularly helpful for students who do not feel comfortable asking a tutor for clarification in the front stage or via email.

Students not only get to teach each other, they also work together with Facebook friends. Julia described how she used the message feature of Facebook to brainstorm about psychology.

I became friends with two ladies [from a previous subject]. One's in Townsville and Cairns. We'd brainstorm forever. We actually made friends with the big collaborative community and believe it or not, Facebook. We message through Facebook. Actually one day I talked [to the one friend] for three and a half hours. So that works better...in my personal situation. (Julia 40.PT.NP.Extra)

For Julia, these friends prevented her from having to go through cycles of self-doubt. For example, before participating in the front stage she literally had to convince herself to post and would worry about what others might think of her posts. However this was not the case when she used Facebook.

I'd sit there [in front of the discussion board or live Collaborate class] and go, "Well should you write that? What if it's wrong? What are they going to say? Sure. Oh, but maybe...do I take the risk? Oh what are these people going to think about me?" And this constantly is going on, and in the end, okay, I take the risk and I write something down: "See it wasn't that bad, see you were right anyway, so what were you worried about?" (Julia 40.PT.NP.Extra)

Of course, not all students become Facebook friends. But those who did had yet another resource to assist them in their learning or training for this subject and possibly other subjects too.

In this section, I have explored how some online students used Facebook for subject-related tasks and why. I described the different Facebook groups that students used in this subject. This is not exhaustive because there may have been even more

students using Facebook. Most importantly, Facebook was a space for students who were not core members of the discussion board. This is important because it provided an additional learning space that helped to keep students engaged with both classmates and content. In the next section I will explore how students used offline spaces such as conversations with others to learn.

Backstage offline: Conversations with others

Conversations with others are face-to-face interactions between two or more people without the use of technology. Performers, extras, cameos, and stagehands participants reported learning through conversations with others. In fact, it was the most reported interaction among the psychology students who completed the questionnaires and interviews. Despite this finding, few studies investigate how family and work life are a learning asset to online students, and instead focus on how students manage competing priorities (Haythornthwaite & Kazmer, 2002; Haythornthwaite & Kendall, 2010). This section of the chapter addresses this gap in the literature by describing how students described their learning in the backstage offline. As one participant noted, “Psychology in general is a content area that is easy to apply to everyday life or talk about with others, as opposed to a subject like Physics.” During interviews I learned about 8 different “classmate” relationships in the backstage offline. I organised these into three types: family as classmates, friends as classmates, and classmates at work. The sections that follow will describe how online students experienced social learning with offline classmates who were typically unrelated to the subject.

Family as classmates

During the interviews participants described how conversations with family members contributed to their learning in the Psychology subject. Family members played two important roles for students. That is they were either study buddies or

sounding boards. Study buddies studied together and worked through concepts from the unit to reach a deeper level of understanding. Interestingly, two participants were studying the same Psychology degree as a family member. Kara studies with her son, who has not taken this subject yet but they live in the same house, and Suzy studies with her twin sister, they always enrol in the same subjects. Therefore they work together on a weekly basis both face-to-face and over the phone. Suzy describes what it is like having her twin as a classmate:

I work with my sister face-to-face mostly but sometimes on the phone. One benefit is the comfort of knowing someone else will understand if you have a question about the unit. We help each other to understand concepts. Although we are twins we do not think exactly alike so it is good to get somebody else's viewpoint. (Suzy 30s.PT.D.Cameo)

Sounding boards, on the other hand, are family members who are willing to talk about the content from the subject, listen to students vent about grades or discussion board conversations, offer their understanding of an assessment task, and proofread students' work for assessments. The downfall is that sounding boards usually lack the content knowledge, and more importantly interest in the subject, to critique or push a students' learning. Fran, Leonie, and Julia describe what it can be like using a family member as a sounding board while they were learning:

I talk to my children about what I am learning [but they don't always talk back]. (Fran 55.FT.C.Performer)

So I asked my husband to read things through and guess what, everything I write is marvellous! (Leonie 52.PT.D.Performer)

I was so excited 'cause I just watched about it and read about it and everything. So I bombarded my poor seventeen year-old daughter with all this information and she's like "right, and I care for what reason, Mum?" (Julia 40.PT.NP.Extra)

Despite the lack of interest from family or lack of content knowledge, students still benefited from voicing what they had just read, watched, or written with others because they said it helped to consolidate their learning. The benefit of having family to use as a study buddy or sounding board is that, unlike the discussion board, access to their responses is immediate and they also provide an environment where the student does not feel judged for their word choices, ideas, or mistakes.

This section highlighted the role that family can play in the backstage offline. I will return to the notion of family, and why students may have chosen to learn with them, in the cross-case analysis. In this next section I will explore the role of friends.

Friends as classmates

Friends provided another environment where students could share ideas without fear of judgement. Overall friends were more interactive than family. They were better at having conversations about the content that could promote debate, illustrate other points of view, and notice changes in the students thinking or behaviour.

For some students who were balancing family, work, and study they caught up with friends regularly and catching up about study always featured in the conversation. Three students in particular credited their friendship groups as being the place where they got to speak about their study the most. For Saskia, a stay at home Mum, who only logged into the front stage a total of two hours during the 12-weeks, and studied between the hours of 11 p.m. to 3 a.m., her friendship group was her only opportunity to have a “classmate”. Even though each of her friends is studying in a different course at different universities, Saskia describes how they each contribute to the conversation:

We compare the stuff that we learn (one is doing medical science, and the other something technological and relating to design). We can get into, let’s say, people’s understanding of advertisements. One of my friends will mention the sensory input which is activated based on

colours used, another might mention the colours used as being intended to trigger emotions, I would add the psychological basis for the reaction, how someone from a stable family would react compared to someone acting as a trigger for others... (Saskia 23.FT.P.Stagehand)

Given Saskia's situation friends provided her with an opportunity to apply what she had learned to an unpredictable topic, essentially it is impromptu learning. Friends played an important role by acting as face-to-face classmates where students cannot access online classmates from the subject. They also help students to identify their own learning. Several students reported that they knew they were learning from the subject when they subconsciously used the information around friends because their friends would comment or ask how they knew the information. In these instances friends were like reflections, or mirrors, of a student's learning. They made students conscious of their own learnings. Yvette describes how her boyfriend was the first person to notice she had changed from studying:

My boyfriend says now [since I've been studying] that I've just got an answer for everything. So... 'cause he'll say something and I'll be like... we were watching that TV... a TV series, Hannibal... it's quite psychologically... and there was like a character and she couldn't see faces, and he was like "how can someone not see faces?" And I'm like it's called prosopagnosia. And he's like "Oh, you've got an answer for everything now, don't you?" (Yvette 35.FT.HD.Cameo)

Implicit in this quote is that Yvette was unconsciously applying her learning from the subject to the television show that she was watching. However, it was Yvette's boyfriend's comment that made her conscious of her own learning. Without his comment, she may have continued watching the show deprived of making her learning explicit.

This section explained how conversations with friends enabled students to learn and identify learning. While their role was slightly different than family, they were still another resource. Most importantly, they were another audience with whom students had a positive experience. I will return to this point for analysis in Chapter 8. In the next section I will explore how colleagues and clients also helped students to learn.

Classmates at work

During interviews participants described regularly learning at work with customers and colleagues. Some students had colleagues who were studying at university, other students reported that they could also discuss the content, or practice the counselling techniques, with both colleagues and customers. Students found when colleagues became interested in the content they asked questions and wanted to talk about it on a regular basis. This gave students the opportunity to become an expert on the topic by teaching newcomers to the content. It also challenged their understandings because they were in situations where they had to field unexpected questions. In the quotes below each student describes how colleagues provide them with opportunities for learning.

[I engaged with others about the content in this subject at] work because others are studying currently could empathize about studying and working full time. (Briana 35.PT.P.Extra)

I don't need to use the discussion board I can talk about it all day, and with different people, and different things come up, so yeah, so...yeah, I don't feel like I'm missing out on anything because I am with so many people all the time anyway, through the day...when I'm at work. You would be surprised by how of what I study comes up at work...I have a couple of [regular] clients who are psychologists as well. (Yvette 35.FT.HD.Cameo)

At work we always study customer feedback and strategies to increase customer satisfaction, including trying to increase satisfaction scores. one of my team members mentioned that we should talk about being satisfied etc in the call - using words that are on the survey customers receive. I told them it was called priming etc and there were other times too that I was talking to or educating my workmates about psych stuff. (Eileen 30.PT.HD.Performer)

The work environment also afforded participants the opportunity to apply the theory from the subject. In the examples below three participants describe how client interactions also supported their study. Below Joanne explains how she applies what she learned from the Psychology subject to a train customer. Then in the second quote Yvette describes how she applied a concept from class to clients from the hair salon.

Where the course gets personal I get passionate. I have been able to use ideas from the course already. A local person where I work got off the train and was angry about the timetable. From what I learned in this subject I knew exactly what I needed to do, which was just...listen. I knew that person centric theory was what was needed. And this shows me how what I am studying works in the real world. I get very excited when I can use my study to support people, like my girlfriend and people at work. (Joanne 45.FT.D.Cameo)

I always use reaction formation when dealing with pain in the arse clients at work. I like to kill them with kindness...it makes me smile on the inside. (Yvette 35.FT.HD.Cameo)

I often spoke to [my client], I am his carer and he is also studying [online at the same university]... He encouraged me to apply to study. Originally I applied to do a Bachelor of Arts with my major in writing. Clark applied to do a Bachelor of Behavioural Studies. When I saw what Wayne was studying I switched to do the [Psychology degree]. Wayne actual changed to [internet Studies]. Now we help each other to understand things. (Fran 55.FT.C.Performer)

These quotes illustrate how “classmates” surrounded students almost everyday in their workspaces. Most of these students had low front stage hours and rarely if ever posted to the discussion board. However because they could talk about the content with colleagues and customers regularly they were not missing out on the interactions in the front stage. If students felt fulfilled by these interactions then it could explain why their backstage offline was the preferred learning environment than the front stage.

Backstage online and backstage offline: The exception

There was one student in particular who epitomised learning backstage offline and that was Joanne. Joanne’s front stage hours from the LMS activity logs were a total of 9 hours over 12-weeks, and some weeks she did not even log in to the LMS. This stands in stark contrast to her backstage online hours (30) and backstage offline hours (80) reported for the 12-weeks. Of the 119 total reported hours of Joanne’s subject-related activity, she spent less than 8% of them in the front stage.

Joanne has a girlfriend who studied and now works in social work which provided her a classmate with whom she could demonstrate counselling techniques and have conversations about content. Both of these interactions help Joanne to achieve a better understanding of the subject content. Joanne was a shift worker, therefore, like Saskia she could only log into the front stage in the middle of the night. Joanne considered herself fortunate for having a knowledgeable girlfriend who could play the role of classmate:

I am very fortunate that while my girlfriend has not done any university studies she has done...social work, which has a large overlap with psychology. So while she does not necessarily pick up on the theory...she knows what I am talking about and in fact she has done cognitive behavioural therapy techniques on me at home when I have

been getting stressed out about something...she says "sit down I am going to do some CBC work with you to help you work out whatever this current issue is." So she is good at doing the practical end of it and as a result I can have a conversation with her about it...it has helped my understanding. (Joanne 45.FT.D.Cameo)

Joanne also regularly applied content to situations with customers at work.

Joanne was a shift worker with an unreliable internet connection. In the quote below she explains how backstage offline was her only option to study and how the university did not know about the efforts she made to do so:

I had been a [train] driver for 10 years, and as you would expect driving takes a lot of focus and that would have made something like study impossible. But as a train guard my work involves once the train is stopped at the station rather than the time between stations. So when we stop at a station, I open the doors I check the announcements are being made, I am checking customers board safely, I close the doors, and I give the driver a signal which says yeah it's okay to leave. Uhh, in between [train stops] I have 2 to 3 minutes and sometimes 8, 9 or 10 minutes, and that is the time that I put into reading writing, basically doing the course work. I am doing 2 to 10 minutes at a time, basically I close the door, bell the driver, and I will have my iPad or book out in the crew cab and I will continue where I left off. So basically with research, I look for the articles, I download them...I have had to at least download the articles so that I can put them on my iPad so I can take them to work to read otherwise, I couldn't do it. Even with Wi-Fi connection, which I could do with a phone, there are so many dead spots on a railway line that it just would not be practical. That is what I have had to do, download. I put the work into a file so that I can go straight to it without having to go into the library. They [my teachers] probably won't notice that's what I do, I find what I need download even the unit outline so that I can read it offline. And my tutors have no way of knowing that is how I am doing it. (Joanne 45.FT.D.Cameo)

In Joanne's quote she points out that the university would not be privy to how she manages her study, yet she was quite successful in this subject. For Joanne she brokered information from the front stage to the backstage offline through conversations with her girlfriend and by applying content to work. She was able to apply her studies to situations at work because she imagined herself as future practitioner in the counselling community. Students like Joanne are missing from the online learning frameworks such as the five-stage model, community of inquiry, and learning analytics. Yet, with more stagehands than performers in the data of online studies we have few backstage offline stories like the ones told by the students in this section of my thesis.

Chapter summary

This chapter used a case study of an online psychology subject to specifically examine the front stage and backstage spaces and identify evidence of students' learning. I used the case to present the possibilities for where and with whom students may learn because this case had the most data. Overall, I argued that a students' learning of a university subject occurs in spaces other than the LMS. This chapter started to provide insights for this may be the situation. The front stage was mostly used for training purposes, because of the teachers' presence it had the legitimacy that students needed to feel confident that they were going about being a students correctly. In addition, for an isolated student, the front stage was imperative for feeling connected to the subject.

The backstage online, specifically Facebook, was a space for learning with classmates. On Facebook students had access to peers who were novice, near peers, and experts. The diverse cohort on Facebook created opportunities for conversations about learning and sharing materials. The decorum of this space also suited students who needed an informal environment in order to feel comfortable discussing their learning.

For students who felt constrained in the front stage because of a negative experience, shame, or embarrassment, which could have even been from a previous subject, they successfully resituated the subject's content in the backstage online.

The backstage offline was a space for learning with family, friends, and colleagues through face-to-face conversations. Specifically, family, friends, colleagues, and occasionally clients, acted as sounding boards to bounce ideas around, study buddies to encourage being a student and also run ideas past, and mirrors to point out when a students had learned. These face-to-face interactions were important for online students and are not captured in the current frameworks. It could be that these offline relationships provided an alternative communication medium or that students chose to study with their family, friends, and colleagues because they felt a sense of belonging with them that was not felt on the discussion board.

Overall, I discussed these findings as they might relate to situated learning theory and previous studies. I will continue to explore these possibilities in each case study that follows and return to this discussion in the cross-case analysis. The next chapter will explore similar themes, but different findings, in an advertising context where front stage participation was graded.

Chapter 6: The advertising case

Introduction

The psychology case study illustrated how students resituated and reconfigured their learning from the front stage, where few students posted to the discussion board, to the backstage online and backstage offline, where students spent the majority of their time performing social processes related to training and learning. In contrast, this advertising case study explores what happens when students are assessed on their front stage discussion board performance, as well as how completing a group work assessment impacts backstage performances. The distinction between the roles and relationships in the backstage online, backstage offline, and front stage are as important in the advertising case as the psychology case. In the advertising case study, students resituated their roles across the three stages as follows:

Front stage: Despite students being assessed for responding to both discussion board tasks and classmates' discussion board posts, conversations between students did not evolve in the front stage. Data from interviews suggested that being marked on front stage participation created a disingenuous learning environment, where students posted to the discussion board for the sake of earning marks. The main theoretical premise that I draw upon to explain why the front stage may not have been an effective learning environment is Goffman's (1959) notions of make-work.

Backstage online: Students used Facebook to complete a group work assessment. Interview data about group work showed that backstage online conversations between students supported their learning and training. I use Goffman's (1959) notion of backstage secret keeping among teams to explain why this may have been an effective learning environment for students. Mainly, secret keeping during

group work allowed students to enact multiple identities across the stages, particularly because the university scripted the students' front stage performance.

Backstage offline: Like the psychology subject, students continued to rely on their friends and family to experience instances of learning. Students who worked in the advertising profession were also able to experience and identify instances of learning at work. This provided evidence to further support that the backstage offline is a legitimate learning environment.

Overall, the advertising case illustrated that even when students were forced to use the front stage, conversations about their learning did not develop there and instead were more prevalent in the backstages. This case study further supports the findings of the previous case study, despite the different content area and the design of front stage and backstage assessments. I use the advertising case to provide additional evidence for the argument that the backstage, particularly the backstage offline, is an effective learning environment for online students. In the sections that follow I will describe Advertising-1 and Advertising-2. Then I will explain how students used the front stage, backstage online, and backstage offline to support their learning and training.

The setting and teaching curriculum

Like the psychology subject, the advertising subjects were also delivered using the Blackboard LMS. All of the business students at this university complete the same five core subjects. In addition to this, they complete the subjects required to fulfil their selected major. Advertising is one of six majors in which business students can select. Advertising students complete eight additional mandatory subjects required for their major. This included Advertising-1 and Advertising-2. Although Advertising-1 is the prerequisite for Advertising-2, students are permitted to enrol in the subjects

concurrently. Both subjects had graded discussion boards and a graded group work assessment.

Advertising-1 was designed to teach students about the ethical, legal, and cultural frameworks of advertising campaigns. In addition to the assessments and learning materials, the teaching curriculum had 12-weekly topics ranging from introducing the bodies that oversee the advertising industry to the ethical, cultural, and legal implications of influencing consumer behaviours locally and globally.

Advertising-2's teaching curriculum was designed to teach students how to persuasively communicate and plan advertising. The weekly themes explored creativity, writing, and how it relates to effective advertising.

The cast: The advertising cohort

Between the two subjects there was a total of 35 students: Advertising-1 had 10 students and Advertising-2 had 25 students. Three students were enrolled in both of the subjects concurrently. During teacher interviews it was confirmed that these cohort sizes were typical because of the course structure and time of year. The students were from various cities around Australia and abroad, including London (UK) and Seattle (USA). Table 6.1 illustrates the breakdown of the students based on their grades. I could not breakdown the grades by front stage performances, as done in the psychology chapter, because graded participation made nearly everyone a performer. I will address this in more detail later in the chapter.

Table 6.1

Advertising Students' Grades

Grade	Advertising-1	Advertising- 2
High distinction	2	5
Distinction	4	15
Credit	1	5
Pass	2	0
Non pass	1	0
Total	10	25

Source. Front stage observations

The interview data throughout this chapter represent the experiences of students who described themselves as self-motivated, high achieving, and working full-time. The three students who participated in the fortnightly questionnaires and online interviews were Barry, who studied the subjects concurrently, Lynn, who studied Advertising-2 and had already completed Advertising-1 during a previous semester, and Kerry, who studied Advertising-1 this semester. Each of the three students were only a few subjects away from graduation. During the time of this research each student was enrolled part-time but this was not always the case. Their university enrolment throughout their entire degree fluctuated from full-time to part-time depending on which required subjects were on offer each semester.

Barry, Kerry, and Lynn had all previously studied at on campus universities. Barry had a bachelor degree in music. Lynn and Kerry both transferred from a face-to-face university to an online university. Lynn did so because she wanted to advance her career while studying, and Kerry did not like her first degree in accounting so she left university for the workforce. However, Kerry spent a lot money on the courses so she returned to study online before her recognition for prior learning expired. Lynn also described how she was relieved to study online after having an unfortunate group work

experience with on campus classmates who did not share her ambitions. All three students agreed that if it were not for online study they would be unable to pursue their degree while advancing their careers.

...it's such a fantastic opportunity, to study online, because I would have never had the chance to go back and study on campus. But. Um, you have to be so dedicated and so self motivating. A big part of what I felt got me through was the ability to motivate myself. (Barry 26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

Nah, I would not have [returned to study if it were not online]. I don't think I would have. It was too much to think about. Like having to work full time and then travel to a uni for evening classes, nah. It is too much. I can handle coming home and studying in my own house and at my own pace. But if I had to drive to a university at certain times and sit there. I would be like nah, I can't do this. I think the online option is definitely the reason I have gone back to study. (Kerry 31.PT.HD.Stagehand.ADV1)

The ability to work full-time and the ability to work on my career at the same time as finishing off my degree...Before [my job] I was interested studying marketing [but] on the job learning about marketing [made me realise] I am not as interested in that as I thought. So, doing subjects about marketing was so unrealistic to what it actually is... I'm not exactly [working in advertising] at the moment, [but] I am involved with enriching my companies website, so I am involved in the marketing and content of the website...I work for [XYZ], so you know we can [work in an environment like marketing to see if we like it], the door is open to try lots of things, which is pretty cool. (Lynn 23.PT.D.Performer.ADV2)

For these three students, online study enabled them to continue working full-time, which was important for Barry and Lynn because they were both already employed in the sector. Although Barry, Lynn, and Kerry were not necessarily representative of their cohort, their teachers confirmed that it is typical to have “keen”

students from a variety of educational and advertising-related employment backgrounds.

The stages: Front stage, backstage online, backstage offline

In Tables 6.2 to 6.4 is the breakdown of how the students managed their time between the front stage, backstage online, and backstage offline. Table 6.2 illustrates the range and average hours of all students in the front stage. The front stage hours in Advertising-2 were nearly twice that of Advertising-1, which could be for various reasons including that there were twice as many students in Advertising-2.

Table 6.2

Advertising Students' Front Stage Hours

Subject	Range of front stage hours of all students enrolled in subject	Average front stage hours of all students enrolled in subject
Advertising-1	4 to 25	19
Advertising-2	3 to 174	36

Source. Blackboard activity files

Note. In Advertising-1 n=10

Note. In Advertising-2 n=25

Table 6.3 and table 6.4 show the total study hours reported by the three students who participated in interviews and questionnaires. Table 6.3 shows that Barry spent a total of 38 hours, and Kerry spent a total of 80 hours, in front stage, backstage online, and backstage offline. The participants for Advertising-1 did not come close to the 120 hours suggested in the syllabus, unless the backstage hours were notably higher than those reported in the questionnaires. Meanwhile, in Advertising-2 Barry exceeded the 36 hours suggested in the syllabus, while Kerry reported 36 hours, which is align with the suggested study time listed in the syllabus.

Table 6.3

Advertising-1: Hours of Students who Participated in the Questionnaires and Interviews

Advertising-1	Barry	Kerry
Front stage hours	25	17
Backstage online hours	11	36
Backstage offline hours	2	27
Total hours	38	80

Source. Front stage hours were from Blackboard activity files and backstage data was reported in fortnightly questionnaires

Table 6.4

Advertising-2: Hours of Students who Participated in the Questionnaires and Interviews

Advertising-2	Barry	Lynn
Front stage hours	48	6
Backstage online hours	22	21
Backstage offline hours	3	9
Total hours	73	36

Source. Front stage hours were from Blackboard activity files and backstage data was reported in fortnightly questionnaires

These times are just a sample of how a few students managed their time completing subject related tasks across the front stage, backstage online, and backstage offline. Though these times are a sample of how motivated, high achieving students who work full-time managed their study, it is still worth noting that participants' backstage online hours were notably higher than the backstage offline hours. One reason for this might be that every student participated in online group work—this will be discussed in greater detail in the backstage online section of this chapter. Students' front stage hours were also mostly higher than backstage offline hours. A few reasons for this included that the learning resources were in the front stage and the presence of

front stage assessments, such as online quizzes, online tests, and graded discussion board tasks.

Front stage

As previously mentioned, the tasks in the front stage included reading the learning materials, making contributions to the discussion board, and completing an online test. This section will focus on how students' conversations did not develop on the discussion board, and interestingly, how the graded discussion boards still had a decrease in participation over the twelve-week semester. I will discuss how students may have used the discussion board for the sake of earning points, which resulted in make-work processes. During make-work processes performers give-off the impression that one is working hard to produce the requirements of the establishment (Goffman, 1959). Make-work in the context of this subject was performing to the requirements of the university, such as posting to the discussion board in order to earn a grade.

Graded and non-graded discussion boards

Advertising-1 and Advertising-2 had both graded and non-graded discussion boards. Advertising-1 had twelve non-graded discussion boards and two graded discussion boards. Non-graded discussion boards were a space where students could participate in a weekly conversation that responded to a task. In Advertising-1 the two graded discussion board were "tutorial exercises" where students had to respond to a task and a classmate's post. The tutor did not post to any of the discussion boards in Advertising-1. Figure 6.1 and Figure 6.2 show a glimpse of the graded discussion boards and non-graded discussion boards in Advertising-1.

<input type="checkbox"/> Tutorial Exercise Two <i>Forum is no longer available. Available until: Friday, 10 July 2015 17:00:00 o'clock AEST.</i>	<p>Background: Outdoor Advertising has its share of critics with numerous consumer groups suggesting that OOH is in fact a visual menace. In 2002 the Victorian State Government completed a review of The Portrayal of Women in Outdoor Advertising (OOH). The Portrayal of Women Advisory Committee came up with a number of recommendations some relating to OOH and some relating to the portrayal of women in general.</p> <p>Task: Part A. Consider a recent Advertising campaign in Australia that features female models/actors in its creative execution. Then look around your local environment (or online if you are based in a regional small community) for examples of OOH from this campaign. Part B. Look back at the 2002 recommendations from The Portrayal of Women Advisory Committee and consider what has changed from then to now. Share your research and your reflection in the discussions tab. Part C. Respond to <u>at least one</u> of your colleague's comments in the discussions tab.</p> <p>Guidelines:</p> <ul style="list-style-type: none"> 100-300 words (guide only) 	20 0 9
<input type="checkbox"/> Tutorial Exercise One <i>Forum is no longer available. Available until: Wednesday, 17 June 2015 17:00:00 o'clock AEST.</i>	<p>Background:</p> <div style="background-color: black; height: 40px; width: 100%;"></div> <p>the national anthem weekdays at 8am. George had heard that a radio station in the Brisbane</p>	20 0 8

Figure 6.1 Screenshot of Advertising-1 graded discussion board tasks. The discussion boards are presented in three columns. The first column starting from the left is the name of the discussion board forum; the second column is the description of the discussion board task. The next three columns count the number of posts (e.g. 20), number of unread posts (e.g. 0), and number of people who posted to that discussion board (e.g. 9).

Source. Front stage observations

<input type="checkbox"/> Weekly Discussion 1	<p>This week's material focuses on general considerations on ethics and the law. Discuss briefly the difference between ethics and the law. Do you work in an environment where you deal with ethical and practical issues on a daily basis (please don't mention the company - that might be ethically delicate!)? How so? Do you believe that we need stronger ethical oversight in the workplace? Or is the focus on ethics too strong in our contemporary business environment?</p>	5	0	5
<input type="checkbox"/> Weekly Discussion 2	<p>This session deals with Codes of Practice primarily as they relate to advertising in Australia. Share with us some recent advertising that you have seen, read or heard in Australia (or from your home country, if that is the case) that you feel has perhaps come close to breaching the codes set forth in the Trade Practices Act.</p>	4	0	4
<input type="checkbox"/> Weekly Discussion 3	<p>Internet piracy is particularly prevalent in poorer and developing countries. The WIPO (World Intellectual Property Organization) have within recent years put in place technological safeguards to prevent such piracy on the Internet. Some would argue that these Internet IP rights are unfairly biased against poorer and developing countries, and that the people in these countries without the aid of piracy would not be able to engage in the efforts of 'human creativity' (WIPO). Do you agree? Do you believe that special provisions should be established to give equal access to creative works for all (regardless of how that access is obtained)?</p>	2	0	2

Figure 6.2 Screenshot of Advertising-1 non-graded discussion board tasks. The discussion boards are presented in three columns. The first column starting from the left is the name of the discussion board forum for each week; the second column is the description of the discussion board task. The next three columns count the number of posts (e.g. 5), number of unread posts (e.g. 0), and number of people who posted to that discussion board (e.g. 5).

Source. Front stage observations

In Advertising-2 students had one discussion board for general queries and comments that was monitored by a tutor. There were also five graded discussion boards where, like in Advertising-1, students had to respond to a task and a classmate's post.

Figure 6.3 illustrate a few of the graded and non-graded discussion boards from Advertising-2.

<input type="checkbox"/>	General queries, comments etc	Use this forum to ask questions or make comments that would be relevant to other students.	106	0	16
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">non-graded discussion board</div> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">graded discussion boards</div> </div>					
<input type="checkbox"/>	Task 1: Introduction	<p>Click this link: http://www.testmycreativity.com/ and complete the creativity test. Allow at least 15 minutes so you have time to answer all the questions.</p> <p>Now introduce yourself to your fellow students and me by telling us what you're studying; share the score for the test and based on the metrics outlined on the result page tell us which you think is your strength and which is your weakness.</p> <p>Find another student with a similar score and compare your strengths and weaknesses by discussing what skills you could contribute to the creative process.</p>	53	0	24
<input type="checkbox"/>	Task 2: Audience research	<p>Understanding the target audience is fundamental to producing effective advertising so it's useful to conduct research to understand our prospective audience. We can also apply any of several models that help advertisers better understand consumers such as the Consumer Decision Process and the FCB grid. According to the Hierarchy of Effects consumers move from awareness through various stages to purchase so if the target audience is aware of your product you may need to establish if they like, prefer or are convinced about the brand in order to develop effective advertising.</p> <p>Ask at least 5 people you know whether they've heard of the Apple iPhone, then try to establish their affective relationship with the brand, i.e do they like, prefer or are convinced? Does their attitude towards the brand affect their purchase decision?</p> <p>Now ask the same questions about the HTC Desire smartphone? How different are the responses.</p> <p>Share your research via this forum and comment on at least 1 other post</p>	53	0	22
<input type="checkbox"/>	Discussion 4: Creativity in Advertising	<p>It's always exciting to receive a brief and start thinking creatively about how best to meet the client's requirements. However, even the best ideas may not impress them so it's important that you know how to justify your approach - particularly regarding creativity in advertising.</p> <p>This week's article "<i>Recall and Persuasion - Does creative advertising matter?</i>" proposes that creative advertising will result in higher levels of unaided recall of both brand and ad execution features than for control commercials. Read through the article carefully particularly Study One and the hypotheses being tested (H1, H2, H3 and H4 - page 49-50).</p>	32	0	17

Figure 6.3 Screenshot of Advertising-2 graded and non-graded discussion boards. The first column starting from the left is the name of the discussion board forum for each week; the second column is the description of the discussion board task. The next three columns count the number of posts (e.g. 106), number of unread posts (e.g. 0), and number of people who posted to that discussion board (e.g. 16). Source. Front stage observations

The graded discussion boards showed how the students' front stage performances changed from one context to the next. Table 6.5 and Table 6.6 show how that in Advertising-1 and Advertising-2 the students reconfigured their roles from one discussion board to the next, in order to earn marks for their grade.

Table 6.5

The Breakdown of Students' Front Stage Performance Roles in Advertising-1

Front stage performance	Non-graded discussion board	Graded discussion board
Performer	0	8
Extra	5	1
Cameo	1	0
Stagehand	4	1
Total students	10	10

Source. Front stage observations and Blackboard Performance Dashboard

Table 6.6

The Breakdown of Students' Front Stage Performance Roles in Advertising-2

Role	One non-graded discussion board	Five graded discussion boards
Performer	2	10
Extra	7	8
Cameo	5	5
Stagehand	11	2
Total students	25	25

Source. Front stage observations and Blackboard Performance Dashboard

Also worth noting, is that in both subjects week six marked the end of posting to the front stage as illustrated in Advertising-1 (see Table 6.7), and a point of decrease in participation for students who posted to the front stage as shown in Advertising-2 (see Table 6.8). This is important because it shows how graded discussion boards do not create a continuous performance, nor does it make every student a performer. In Advertising-2, for instance, students stopped posting to the front stage even when it was to earn marks for their grade. Table 6.7 shows how 23 students completed the first graded discussion board activity, but this number decreased steadily as the semester progressed and by the final graded discussion board activity only 16 students posted.

Table 6.7

The Number of Students who Posted to Each Week Advertising-1

Week	1	2*	3	4	5	6*	7	8	9	10	11	12
No of students	5	8	2	2	2	9	0	0	0	0	0	0

Source. Front stage observations (n=10)

Note. *Indicates graded discussion board activity

Table 6.8

The Number of Students who Posted to Each Week Advertising-2

Week	1*	2*	3	4*	5	6*	7	8	9*	10	11	12
No of students	23	21	0	17	0	16	0	0	16	0	0	0

Source. Front stage observations (n=25)

Note. *Indicates graded discussion board activity

The purpose of the graded discussion boards was to promote conversations between students. However, in both Advertising-1 and Advertising-2 the content analysis of the discussion board showed that rarely, if ever, did conversations evolve in this space. Some posts did not receive a reply from any classmates, and some posts received as many as three replies. The posts that did receive replies showed the following pattern:

1. Student A responded to the task
2. One student responds to Student A
3. A second student responds to the Student A
4. A third student responds to Student A

This posting pattern is in line with previous research by Hew and Chung (2006), which showed that students focus on the question and task instead of extending discussions. In both subjects, students mostly agreed with classmates in a short post

instead of extending the discussion. The discussion board posts in Box 6.1, 6.2, and 6.3 illustrate a typical conversation on the graded discussion boards. The previously described posting pattern is shown here, as well as two examples of how students agreed with their classmate's post.

Box 6.1

Student A's Response to the Task

Post 1 of 3 Learning Code: Respond to task Post submitted by: Student A, ADV2
<p>The term aided recall refers to when a consumer remembers a brand based on receiving a hint, such as category or a characteristic. Unaided recall is where the consumer remembers the brand not having received a hint to assist them in retrieving information from their memory.</p> <p>Low involvement products such as grocery items do not warrant much research from the consumer. This is due to the minimal risk associated with the purchase. Given the minimal attention and effort that consumers pay to low involvement items, unaided recall is a better measure. For example, when going to the supermarket they already have their preferred brands in mind and will purchase them habitually.</p> <p>In contrast, high involvement products such as computers carry significantly more risk, both monetary and socially. As such, consumers expend much more time and effort researching various products. Thus aided recall is appropriate here, as it mirrors the real life research and memory recall situation. For example, when shopping for a new tablet, the category 'tablet computers' acts as the hint to recalling all associated brands (Apple, Samsung, Microsoft etc.).</p>

Box 6.2

Lynn's Response to Student A

Post 2 of 3 Learning Code: Agree with classmate's post and add information or reason Post submitted by: Lynn, ADV2
<p>Hi Student A,</p> <p>I really enjoyed reading your piece and particularly your comment about risk and its involvement in the purchasing process. I definitely agree with you in terms of recall and its relationship to high and low involvement purchases. I am interested to know what you mean by the 'social risk' of a high involvement purchase?</p> <p>Thanks!</p>

Box 6.3

Student B's Response to Student A

Post 3 of 3 Learning Code: Agree with classmate's post and add information or reason Post submitted by: Student B, ADV2
<p>Hi Student A,</p> <p>Great job on using relevant examples to justify your comments. I think you have done really well in establishing a clear picture in the readers mind to persuade them into your thought process.</p> <p>I do agree with both the examples you have provided as the higher the risk involved, often equates to a higher level of information needed (usually through the help of a trained & experienced professional).</p> <p>Well done Student A.</p> <p>Thanks</p> <p>Student B</p>

The content analysis of the graded discussion boards in Advertising-1 and Advertising-2 supported this finding (see Table 6.9). In both subjects, the content analysis showed that nearly half of all of the posts were responses to tasks and agreement with a classmate's post. In Advertising-1 47% of the posts were a response to the task and 31% of the posts were agreement with a classmate's post. Similarly, in Advertising-2 56% of the posts were a response to a task and 25% of the posts were agreement with a classmate's post.

Table 6.9

Content Analysis of Learning Codes for the Graded Discussion Boards in Advertising-1 and Advertising-2

Learning code in marked discussion board	ADV1	ADV2
Respond to task	17 (47%)	94 (56%)
Compare answers with classmate's post	4 (11%)	11 (7%)
Agree with classmate's post and add information or reason	11 (31%)	43 (25%)
Debated content in a classmate's post	2 (6%)	5 (3%)
Shared information to further illustrate/explain a classmate's post	0 (0%)	5 (3%)
Shared personal story to further illustrate/explain a classmate's post	0 (0%)	9 (5%)
Other	2 (6%)	2 (1%)
Total	36 (100%)	169 (100%)

Source. Content analysis of discussion boards

One way to explain this front stage performance of the advertising students is through the performance of “make-work” (Goffman, 1959). In the workplace, make-work is used to maintain appearances and can be performed by looking busy. For example, in a data entry job when the manager walks through the office, the employees might minimise their internet browsing screen and maximise their excel spread sheet. The employee may have met the day's quota, but the impression they give-off is that they are busy with the role of entering data. Behaving in this manner will prevent the establishment from allocating them more work or assuming they do not have enough work. In the presence of others, performers accentuate and suppress impressions in order to foster their desired performance for the given audience (Goffman, 1959). Make-work in an education setting might be slightly different than the workplace. Make-work was a response to the teaching curriculum. Specifically, in the advertising subjects make-work was performed by performing the least amount of work required to earn the

grade for posting to the discussion board. While the goal of the graded discussion board was to force students into conversations about the content, the students were not evaluated on the quality of these conversations. They were evaluated for simply creating a certain amount of discussion board posts. Barry described the discussion boards as being task-orientated. In his quote, he suggests that students may only post there because they have been “asked to” for a university performance.

...I think probably the way the discussion board is set up, it is a little bit task orientated instead of relationship orientated so you kinda go on there to post what you have been asked to post and then if you respond, it is because you have been asked to respond. Not necessarily, you know, it's never, “this is who I am and this is what motivates me.” You know, it's not, “we are the same and we can connect.” It is more about, “this is what I've been asked to do for uni” So, yeah. (Barry 26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

In Barry's description he reduces the discussion board to two transactions: posting when asked to by the university, and responding when asked to by the university. The performance of these transactions was the only way to earn marks for the graded discussion boards. There were no shortcuts for completing the requirement, nor were there rewards for doing more than the requirement. Lynn also described the make-work process on the graded discussion board. In her quote below, she suggested that students post to the discussion board for “the sake of it” in order to earn marks and possibly not for the sake of learning content.

Because I have done subjects with other universities and I have found that subjects that require discussions, as in “here is a task and put a post and respond to someone else.” If its worth any marks, you find people fill it out for the sake of it, you find it's often not meaningful and a lot of the time it just something copied and pasted off Google because they want to tick the box to get the points, and it actually does not spark

meaningful conversations in most cases. Look I understand the point of the discussion board and to get people talking and that kind of thing again, um, and to have that interaction that you might not get as an online student but I think that adding any points to it to go to your score doesn't mean that people will spend time and effort putting in a meaningful comment. Um and I found that yeah, a lot of time someone just comments and says yup good points I totally agree with you, and yeah, it is not an interesting debate or getting into the nitty gritty of the subject or anything. (Lynn 23.PT.D.Performer.ADV2)

Lynn's comments point out how the graded conversations between students did "not spark meaningful conversations" because students do not "debate" or "get into the nitty gritty of the subject." Again, this suggests that in the graded discussion boards the students performed to the minimum requirements of the university and then stopped. Further to this point, when a classmates' question went unanswered the students did not demand that their classmates return to the discussion board, or question where they were and why they have not responded. The students also did not debate information or comment on incorrect information. If they did, this could have resulted in more work for classmates and themselves. Instead, there appeared to be a shared understanding between students that once the act of responding to the discussion board task and replying to a classmate's post was completed the performance was over. By doing so, students showed their assessors (e.g. the tutor) that they have engaged in the requirement.

In contrast, some students may have benefitted from the make-work process. This is because replying to a classmate's discussion board post required students to read what their classmates' had written. While some students may have simply responded to the first post that they clicked, other students evaluated and critiqued their classmates' posts and their own answers. Kerry describes this process in her quote below. In her

quote, she describes a process of finding students who put in as much effort as she did, and finding those whom she felt did better than her. She uses those who did better than her to find new ideas and to improve her own work. Because of these perceived benefits, Kerry feels that graded discussion boards are necessary for students to engage.

I am just not going to read what this person writes. And then others where I am like that's a really good point and I am probably going to steal some of those ideas. I read what others have written and this helps me to gauge the level of expectation and how good the responses are.

I found that clearly some students are just answering the weekly questions to get their marks [so I don't respond to them]. Then I found people who were more engaged with it were really having discussions [so I try to respond to them].

I think in this current subject, the ethics one, there were weeks when not a single person responded to that [unmarked] discussion board. And it's like if it's not compulsory people just won't do it and I found that sometimes when you go, um, it's just so much extra work to have to do this thing [the discussion board] when I am working full-time and everything else, but at the same time I go, "well I am participating in this class and other people are going to as well, and I need to put in just as much effort as everyone else." So, I don't know. I think it sounds awful but forcing people to do it makes people more engaged. I don't know it sounds weird, but. (Kerry 31.PT.HD.Stagehand.ADV1)

Despite the benefits that Kerry received from the graded discussion board she also echoes Lynn's points from a previous quote. In Lynn's post she sympathises with the purpose of the graded discussion board, which was to promote conversation between students, but questions whether the posts are original and created out of genuine interest. Kerry, on the other hand, is frustrated that if students were not forced to post there might be a complete absence of information on the discussion board. These

concerns raise possible dilemmas for students about the quality of their own work, the quality of others' work, and the absence of work or information in general.

Graded discussion boards raise issues of reliability of others' information as well as a students' own information. For example, students may not believe that they did a good job when praised by another novice student instead of an expert teacher. Students may also be unable to judge if the follow up questions asked by students are for the sake of "scoring points" or wanting answers. In addition, students who post incorrect answers may go uncorrected. All of these possibilities may be exacerbated by the absence of a teacher's expert presence. In Advertising-1 the teacher did not post to the discussion board, likewise in Advertising-2 the teacher was only present on the 'general questions, comments, etc.' discussion board. The graded discussion boards paired without an expert teacher presence can result in students having to sort through posts for correct information which, like a Google search result, can be time consuming and *still* incorrect. This is particularly problematic for those students who rely on discussion boards to reframe the learning materials.

The front stage, nonetheless, did force students to engage with content in some way. However, this may not have been recorded in the front stage. For instance, the content analysis showed that students did not post disagreement or opposing viewpoints, but that is not indicative of an absence of conflict over information. Instead, this could suggest that when students were either incorrect, had an opposing viewpoint, or disagreed with another student, classmates simply did not post or avoided this conversation. Similarly, the content on the discussion board may have also provoked students in ways that cannot be observed in the front stage data. Kerry, Lynn, and Barry confirmed that this was part of their experience. These students found themselves

backstage online (using the internet) to follow up on information that they disagreed with, found interesting, or needed more clarification about.

Kerry often researched ideas that classmates wrote about on the discussion board. Similarly, Lynn read posts on the discussion board and would crave more credible information, because the personal opinions and examples made up by classmates were not as valuable as the university library.

Using the discussion board as well. I will read what people say and I have a question about this or that. And I am like, hmm, well let me see what I can find about that. Yeah, I sort of use a mixture. (Kerry 31.PT.HD.Stagehand.ADV1)

Um, generally, reading about things. I guess we are in the age where we just Google it and see where we end up, definitely use the internet to get further information and read up. I also find that because I work at a computer all day, I find that if there is something that I am interested in I'll open a spare time and although I might not look at it until later, I do. In terms of videos there is not really any site in particular, when I am looking for something that is credible I actually go to the library, yeah. (Lynn 23.PT.D.Performer.ADV2)

These two quotes show how students took the content from front stage into the backstage online, including using internet websites and the university library website. While the graded discussion board mostly resulted in a performance of make-work, it also may have created opportunities for social processes that sometimes resulted in individual learning.

The front stage data showed how students used the graded discussion board posts for a university performance of make-work. It also showed how even graded discussion boards do not force all students to engage with the space in a way that can be seen by the university. While students did not like the graded discussion board, there were examples in their interview data that suggested it might have facilitated individual

learning, as well as resituating their learning into the backstage online. Another assessment that impacted how students resituated their learning was group work. In the next section, I will explore the role of group work in the backstage online.

Backstage online

Students mostly interacted with their group mates backstage online through Facebook, and by doing so became more engaged with the subject than the front stage data illustrated. In this section, I will explain how students used the backstage online (mainly Facebook) to personalise their learning experience and also to facilitate their group learning process. Most importantly, the discrepant roles that students played during group work illustrated how the actors reconfigured their roles from one stage to the next. Barry, Kerry, and Lynn represented four out of the nine total groups in Advertising-1 and Advertising-2. All of the group members within the four groups that Kerry, Lynn, and Barry worked with earned marks of Distinction or higher. Their data could therefore represent the experiences of high performing students.

Backstage online group work

All groups in the advertising subjects were allocated a group working space within Blackboard. In Advertising-1, students were allocated to groups at the start of the semester and then given the group task at the start of week six. In Advertising-2, students self-enrolled into groups in week three and then the teacher allocated any student not enrolled to a group in week four. Figure 6.4 and Figure 6.5 show the spaces provided for students in each subject. The tools within each space (file exchange, send email, group tasks, and discussion board) were meant to facilitate communication between members through email, uploading of documents, and for the students in Advertising-2, each group had their own discussion board. However, data showed that

students personalised their learning experience during group work by selecting a workspace other than Blackboard.



Figure 6.4 Screenshot of Advertising-1 group workspace in the front stage
Source. Front stage observations

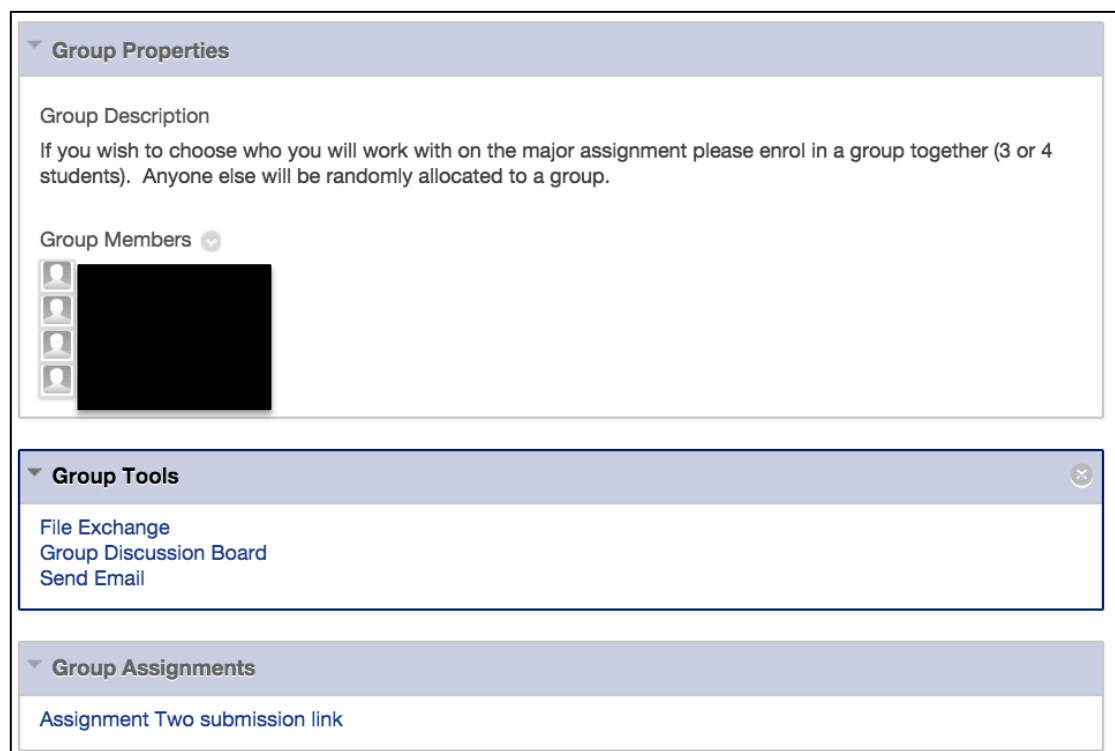


Figure 6.5 Screenshot of Advertising-2 group workspace in the front stage
Source. Front stage observations

Despite having an allocated front stage workspace to facilitate group work, all of the students from both of the subjects used email and Facebook for group work tasks. In Advertising-2 each group was allocated a private discussion board for their group work. However, each of the six groups only used the discussion board to initially set up the group and then move the group out of the front stage. The content analysis illustrated this point. For instance, there were 73 discussion board posts in the group work discussion forums, and more than half of these posts were about students organising to leave the front stage (see Table 6.10).

Table 6.10

Content analysis of the group work discussion boards in Advertising-2

Training code	Advertising-2
Group work: task negotiation	33
Group work: moving out of the front stage	40
Total	73

Source. Front stage content analysis

Note. These were the only two training codes present in this space

Students moved out of the group work discussion board and used their private email accounts or a Facebook group, and occasionally, both. According to the posts in the group work discussion forums, students overwhelmingly preferred Facebook. Overall, students on the group discussion boards suggested a total of five other tools (Padlet, Doodle, Skype, Google hangout, and email). However, the students never selected one of those tools over Facebook. Students were confident they could access Facebook and because Facebook is part of their everyday life the students did not have to learn a new tool. Some students, for instance, were blocked from using certain websites at work, but could always access Facebook from their phones. Facebook was

also, according to Barry, a space where students felt “more comfortable” than the discussion board.

It is just that it [Facebook] is already there, people are already using it [Facebook] and the discussion board doesn't solve any problems that Facebook doesn't so you just use the tool that you are more comfortable with. (Barry 26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

Students mostly used the discussion board while they were finding each other on Facebook, which for students with common names was problematic. Once the Facebook group was formed the group work discussion board communication ended. Students' discussion board posts, also suggested that Facebook was practical and versatile. It was ideal for sharing documents, group chats, unlimited access to each other, and activity notifications. One student described this as “easy access to communicate with each other all the time as well as being able to receive notifications of activity which doesn't really occur [on the discussion board]” (see Box 6.4).

Box 6.4

Discussion Board post From Group Work Discussion Boards

<p>Group work discussion board post 1 Training Code: Moving out of the front stage Post submitted by: Student H, ADV2</p>
<p>As I've had a couple of spare minutes to look through everything and not 100% that I'll be able to attend the group catch up when it happens, I've jotted down some ideas and notes about the brief which includes some of the stuff we need to/should include in the advertisements, as well as some ideas for the commercial, etc. and have uploaded the document in the file exchange here.</p> <p>I think it might be beneficial if we start a Facebook chat or group (assuming everyone has Facebook) so we can have easy access to communicate with each other all the time as well as being able to receive notifications of activity which doesn't really occur here [on the discussion board]. Is everyone happy with that? I'm fairly sure you can start chats without adding people on Facebook if people aren't comfortable with being 'friends' with everyone.</p>

Lynn and Kerry also agreed that Facebook was a better place for group work than the discussion board. Their reasons echo those found in the discussion board post.

I guess the instant chat is good, and probably just the fact that everyone is on Facebook all of the time. You know you get notifications to your phone, um, it's always open either when I am on my computer or when I am on my phone so I guess it is just that idea that you can be contacted all of the time. It's always. You know you still have it in the back of your mind, you'll be notified if anyone posts anything. I do on occasion use the discussion board on blackboard, um, but I find it really frustrating because there is no way to know if anyone has replied to you, so, you are just checking back and it is time consuming to log in and everything. Whereas you are on Facebook anyway so it just easier for everyone. (Lynn 23.PT.D.Performer.ADV2)

The other subject that I was completing along side of this one, we also had a group assignment and we used email as well as Facebook chat. One of the girls said, "I am always logged in just use my Facebook chat thing." And from then on sharing files, information, and updates, everything was pretty much through Facebook, and in the rare case where we had a massive file it was through email. But pretty much it was here's where I am, here's what I am thinking, what do think of that? It was just through Facebook chat. (Kerry 31.PT.HD.Stagehand.ADV1)

To sum up these quotes, students preferred Facebook because of the ubiquitous access to their classmates, which was made more accessible by notifications to phones, computers, and familiarity with the social network and the tools that support it. Most importantly, these preferences enabled students to control information.

Backstage online secrets: controlling information

Other than the technological advantages and personalisation of using Facebook, students also benefited because the group work that occurred through Facebook afforded students with control over information. Facebook facilitated students' control of information through secret-keeping performances from the front stage audience. According to Goffman (1959) working in backstage teams allows for actors to play

discrepant roles that control information through strategic secrets, inside secrets, and dark secrets. There were also instances where secret keeping reinforced the presence of the teaching curriculum and the learning curriculum as defined by Lave (2008).

Strategic secrets are those secrets about the team's intentions that are concealed from the front stage audience in an effort to keep the front audience from adapting, for example, an army's strategy against their opposition (Goffman 1959). In this case, the front stage audience was marking students' front stage performance for posting a response to tasks and a response to classmates' posts. However, Lynn described this as posting for the sake of posting, whereas in the backstage online her group met weekly for the sake of completing the group work assessment and this transpired into opportunities for learning content and learning how to manage a team.

Lynn's group met on Facebook chat each Monday evening and then remained in contact throughout the week. Unlike the front stage, Lynn felt that the weekly conversations backstage online helped her to learn new ideas and added to her current understanding of the content. Lynn reported that during their group meetings the conversations about their individual learning, or in this case their task for the group work research paper, was a chance to share what they learned with others and get feedback that could lead to "better quality work."

Particularly in this subject I find it really good, we have lots of organised group chats and we would all come online on a Monday and just talk about what we have been doing and it had been really good because you had worked on whatever part you were writing or researching yourself and then just to have a chat about it sometimes um, kinda just opens up new ideas and adds to things and I think results in a much better quality of work. (Lynn 23.PT.D.Performer.ADV2)

This example also illustrates the difference between the teaching curriculum and the learning curriculum, where the learning curriculum was the strategic secret. By

keeping the usefulness of these meetings a secret students are not forced by the front stage audience to meet regularly. If they were, this could turn the backstage online into another space for make-work. Make-work was a result of the front stage audience wanting students to discuss the content, but Lynn felt that the group work naturally produced discussion about the content.

It [the backstage online] was definitely more engaging for the group task and that definitely promoted more frequent communication between students. (Lynn 23.PT.D.Performer.ADV2)

Kerry also suggested that it was through the group work experience that she was able to experience learning.

I guess it would be just that I think it is valuable subject, there is no way I could have learned as much as I have if everything was just individual work. There is just no way I would have learned as much as I have. And in real life you are going to have to work in teams. (Kerry 31.PT.HD.Stagehand.ADV1)

These quotes reinforced two points. First, graded discussions between students may not have facilitated the social processes that support learning. Second, non-graded discussions in the backstage online, which were a result of working on a graded team project, did facilitate social processes that support learning. Students were neither required to have nor graded upon backstage online discussions. However, having these discussions and not sharing this with the front stage audience was a way of controlling information. This example illustrates how information control was afforded in the backstage online.

Working in groups also created “inside secrets” between students. Inside secrets functionally exclude people because information is simply “none of somebody’s business” (Goffman 1959 p. 142). Inside secrets also mark individuals as group members through the shared bond of knowing something, or doing something together

that others do not, and by doing so these secrets give objective and intellectual content to subjectively felt social distance (Goffman 1959). In other words, students feel closer to those with whom they share information and experiences, and distant from those with whom they do not. Kerry's quote illustrated this point. During group work Kerry described feeling connected with the group mate with whom she regularly shared information and "isolated" from the inactive group mate.

So I had three members, so I was working with two other people, and one was very responsive. We were emailing constantly back and forth if we had questions about other assignments we were contacting each other about, discussing things, asking each other what we thought. There was a quiz we had to do so we talked about that together and some of the other activities in the subject. So it just went beyond the bare minimum of we have to do this assignment together so let's just do that. But then the other group member who knows? It makes me feel most connected and then most isolated when you don't get that response from people. (Kerry 31.PT.HD.Stagehand.ADV1)

To some extent, students may have felt that the backstage online group processes were exclusionary to the front stage audience, in particular, the teacher. This was the case for information related to students' learning of content, and also training related information. Once group work started, the interviewees reported that they hid information from their teacher; such as who in the group was not producing work and what information the individual and group did not know. This was evident because the teacher became a last resort for information-seeking processes. This meant that students did not use the front stage for asking questions about training. In Barry's quote below, he explained how his backstage online group mates and his backstage offline colleague were his first two points of contact for content-related questions. Barry's tutor, on the other hand, was only considered a point of contact for training-related questions.

I would probably just contact the people I was studying with, the girl from Facebook and the girl from work. Just kind of say this is my understanding does that sound right to you or am I completely crazy? And then we would be able to validate each others perceptions. Umm probably [only contacted the tutor] if I was not sure about the format or the specific requirements of an assignment. You know when you are working on an assignment and you just aren't sure if you are actually submitting the right thing... (Barry
26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

Lynn, Kerry, and Barry mentioned that group work created relationships with classmates whom they could contact about questions for content and assessments. This could explain why students rarely asked questions on the front stage discussion board, or to the teacher, reinforcing unknown information as an insider secret from the front stage audience.

The third type of secret, dark secrets, are what's known about a team and concealed from the front stage audience to the extent that team members may never openly admit to knowing the information (Goffman 1959). Nonresponsive partners were a "dark secret" in the backstage online. Even in the high performing groups, the interviewees each reported that there was one less responsive, or nonresponsive, group member. This information was not shared with the front stage audience. All of the interviewees shared stories about nonresponsive group members and how they learned how to manage them without telling the teacher because the act of working together was worth marks.

Nonresponsive group members either did not show up until close to the due date or only submitted their work and did not participate in the group work conversations that took place during weeks four through 12 of the semester. The students reported that the nonresponsive group members always "came good." In other words, they completed

their task for the group work assessment. In Barry and Kerry's quotes below they describe the communication delay between the responsive and nonresponsive group members. In Barry's case, the student responded throughout the group work but did not participate in the group work process, whereas in Kerry's case the non-responsive student appeared close to the due date to complete only her task.

In the end he came good. But he wasn't very proactive with communicating either it was very much like we would send him all this information about the things we discussion and then three days later it was like he would come back with half asked responded and not really much contribution or work.(Barry 26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

We contacted this other girl. We both sent her so many emails and just got nothing. Even emailed the tutor to see if she was still enrolled in the subject because we are not getting anything out of her. Then like two weeks before it was due we got an email that read like "hey we should probably get started on this it's due soon." And we were like hello, we've been working on it like 4 weeks now, thanks for chipping in and motivating us. So yeah, she came good in the end. Once she contacted us and we were like here you can do this and that and she did. She did everything she said she would do, so it was okay but it's just tough. (Kerry 31.PT.HD.Stagehand.ADV1)

Through dark secrets, or in this case dealing with nonresponsive group mates, students learned about how to work with others. Learning to work with others to complete a task is a skill necessary for the advertising sector, which is a profession that commonly works in teams. Another specific skill in this regard was negotiation. Lynn and Barry acknowledged that they were learning important skills through group work, which included negotiating information with others. Lynn described this as "learning to come together and come to agreement."

I think personally when it comes to the more creative subjects that it is

important to learn to work with other people and to learn that creative subjects can be a little subjective and you might be on one path and someone else can be on another path and it's kinda learning to come together and negotiate and come to agreement. (Lynn 23.PT.D.Performer.ADV2)

Barry, on the other hand, described negotiating information as a changed way of thinking about a process because one person from beginning to end cannot complete group work:

[Group work] just changes the way that you kind of have to consider the assessment because *you* can't just work on it from start to finish. (Barry 26.PT.HD.Performer.ADV1.HD.Stagehand.ADV2)

By keeping secrets from the front stage audience, some students were able to control and bond over shared information and experiences. Goffman's discrepant roles help to illustrate how students reconfigured their roles for graded assessments in the front stage and backstage online differently. In the front stage, students posted for the sake of posting and earning marks, and under these conditions conversations did not evolve. In the backstage online, students were indirectly earning marks for working together to produce a group work assessment and under these conditions conversations about learning and training did evolve. In this case, the teaching curriculum and learning curriculum may have been constricted and elaborated on based upon the audience for whom the students were performing, or the presence and absence of teachers.

Backstage offline

As previously stated, all three students interviewed in this case study agreed that if it were not for online study, then they would be unable to pursue their degree while advancing their careers. The teachers of Advertising-1 and Advertising-2 also

confirmed that most of the students already worked in the sector or closely related sector. One teacher even joked that she often gets students with even more work experience than herself. Therefore, it may not have been uncommon for the students' workplace to be a backstage offline space to apply subject-related content. In this context, it was the students' ability to transfer information from work to university or from university to work. Both of these abilities provide additional support for the backstage offline being an effective learning environment for students. Lynn, for example, reported making real-world connections from the subject to her work. Lynn works on the web presence an Australian retailer. At her job she has access to marketing, advertising, and copyrighting departments, which are all topics related to her course of study. Reading course content gave Lynn insights about the processes, which made both work and study more interesting for her.

...I am involved with enriching for my companies website, so I am involved in the marketing and content of the website. So it is something that I am interested in but not necessarily directly related to what I do. But um, copyrighting is something I am involved with, well not involved with my job directly but it is something that I am definitely interested in, yeah...Um, in my job yes [I apply what I am learning from university], but that is probably the only example. I guess it would also depend on the subject. I found that [content about] copywriting was really interesting because I deal with a copywriting team on a daily basis and it gave me a real insight into what they do every day and I found that really relevant. But in general sometimes yes sometimes no. (Lynn 23.PT.D.Performer.ADV2)

Lynn's ability to make connections between the subject and her work life was important because these connections might increase a students' engagement with the content of a subject. Barry's workplace also provided him with an environment directly related to the advertising subjects. In fact, there was so much overlap that he did not

report these hours in his fortnightly questionnaires because it was part of his unconscious daily routine. When Barry completed the weekly discussion board task for week one, he explained in his post how his job and study directly impact one another:

...I work in the industry at the moment - client side for an Australian insurance company, which is lots of fun. So much of what I study is directly relevant, and vice versa. Part of my job is to brief in and advise on advertising campaigns, as well as providing feedback to agencies, and obtaining feedback from company lawyers and other internal company departments that have a view on whether the messages we're going out with are accurate, compliant, legal, ethical, and all that jazz, so I'm very close to the subject in this instance....

Figure 6.6 Donny's discussion board that explains the cross over between his work and his study.

Source. Front stage discussion board post

Not only does the subject content overlap with Barry's work, but his classmates also overlapped. One teacher, during her interview, confirmed that this was common and that she often had students who were both colleagues and classmates. In Barry's case, he had three colleagues at his work enrolled at the same university. All three student-colleagues studied business, and one of the three directly studied the same subjects as Barry and is on his team at work.

I actually work with someone who is doing the exact same thing as me and we took a few subjects at the same time together. It was so handy, we communicated about it quite regularly and even when we are not in the subjects we will still talk about it, umm, and definitely talk to my colleagues about my studies about the content and um, you know just the processes. (Barry 26.PT.HD.Extra.ADV1)

Interviewer: Did that help you to feel more engaged with this subject?

Yeah, yeah it did, because I suppose what it is, is you start to feel isolated, and if you do [feel isolated] it is definitely disengaging. So it is nice to have a reminder that someone else is in the same boat and to have your feelings validated or whatever frustration or success you are having. You know. (Barry 26.PT.HD.Extra.ADV1)

In the quote above, Barry described features in his colleagues that were not present in the front stage: validation and support for feelings of frustration and success. Validation was missing from the front stage because the teachers did not provide feedback on students' answers. Support for feelings of frustration and success were also absent from the front stage because the discussion boards were task-oriented instead of relationship-oriented. Lynn and Barry's workplace proved to be a backstage offline space for learning or applying subject content, in addition, Barry's workplace also supported his training.

Kerry's backstage offline served a different purpose to Lynn and Barry. As she progressed through the twelve-week semester her learning trajectory became apparent to herself. Kerry was starting to catch herself learning in everyday situations. In one example, she caught herself learning in the supermarket where she used to be able to pick out a dip without thinking. Now, Kerry considers the advertising campaign of the dip and if it was ethical. In another example, Kerry explained how she experienced learning through conversations with friends and colleagues. The quote below showed how Kerry was viewing her contexts differently in that she was able to provide expert-advice to a colleague. This was evident when she came to the conclusion that: "...this is it. I have learned. Here is what I've learned over the past few years." In the last lines of the quote, Kerry also described how her understanding of marketing has changed from her first university experience to her current university experience.

I feel like just sort of general situations, you just have a better understanding of them. You know a friend of mine just started his own business. And a girl I work with her husband makes his own jewellery and they used to live in New York and now they are in Sydney and he sort of had his own business in New York and clientele and what not. And now he has moved to Sydney and is starting from scratch and everything. She was talking to me, in general, and I was like oh well

what are his objectives? And what are his this and that? And together we were sitting down and coming up with a business plan, and coming up with ways to fix his website, and social media this and that, and looking at magazines and what not. And I was thinking this is it. I have learned. Here is what I've learned over the past few years. And she was like, "no this is good, actually that is a good point, or oh I hadn't really thought of that." So I just feel like the stuff that I am learning is interesting and I am becoming more and more aware of how it all fits into day-to-day life. And this all very different to my understanding of what marketing was when I started uni before, after just leaving high school, and I had in my head that this is what marketing is. And now I see how aspects of business and normal life is just incorporated. And I feel like my learning is just being able to be applied all around me, even if it is just in my opinion... (Kerry 31.PT.HD.Extra.ADV1)

Both Kerry's changed understanding of the content and her ability to apply the content to real-life experiences were evidence of her learning.

The quotes from Lynn, Kerry, and Barry in this section illustrated how important their work identity was to their university learning. For Barry and Lynn, they were able to first hand understand what aspects of the industry were reified from study to practice. For Kerry, she was able to rehearse the identity of an expert to give advice to a colleague. These experiences would not be possible in the front stage of an online classroom.

Chapter summary

In the advertising subjects the students earned marks for performing in the front stage and backstage online. This may have cultivated a student's presence in these spaces. However, the performances of in each setting were marked differently. In the front stage, the graded performance led to make-work, where students responded to tasks and classmates for the sake of earning points. The university scripted this ritual

when the teaching curriculum instructed students exactly how to post. This annoyed students in the front stage because, in addition to learning new material, they also had to sort through information and evaluate if their classmates were correct. The most important finding was that students felt others were mostly posting to the front stage in order to earn marks. Because of this, students questioned the genuineness of the information on the front stage.

In the back stage online, students also earned marks for interacting through completing a group project. The purpose of the group work in the backstage online was to complete an assessment task. While some students chose not to engage in this space, other students found a classmate with whom they could share information. Students were not graded for the social processes with classmates in the backstage offline, yet they still reported using the backstage offline for social processes related to their learning and training. I examined this through Goffman's (1959) analogy of secret keeping. By keeping secrets from the front stage the students were able to enact multiple identities and control their participation in the backstage online. Secret keeping from teachers also helped students to present a united and successful performance, which they demonstrate in their assessment submission.

Like the psychology students, the advertising students also interacted with friends and colleagues. Those students who worked in an environment related to the subject, like Lynn and Barry, and those who did not, like Kerry, were all able to apply subject-related content in the workplace. They were able to move the content from work to the subject and from the subject to work. In this context, backstage offline experts might replace those in the front stage, especially when those experts in the backstage can help students to meet their employment goals. Or when those in the backstage have more real-world experiences than their classmates and teachers. Teachers in this case

study were absent from conversations related to the subject matter on the discussion board, therefore the work environment was an asset to students who were employed in an environment related to the student's content area.

Overall, I discussed these findings and how they may have been impacted by the graded decorum of the front stage and backstage online. This case study further illustrated how students' backstage data told a more complete story about their learning experience in the subject. The next chapter will explore similar themes in the context of a mathematics subject.

Chapter 7: Mathematics case study

Introduction

The current literature for online learning and situated learning abounds with examples from discursive subjects. The previous two case studies explored discursive subjects in the sense that tasks and assessments were completed through writing words as opposed to numbers. Despite how the advertising and psychology cases support similar findings, it is possible that these findings cannot be extrapolated to all subjects or all students, in particular those subjects that require that students perform in a setting where there is only one right answer. Therefore, my final case study explores how the front stage, backstage online, and backstage offline social process are impacted when a subject's content is non-discursive (e.g. numerical). In the mathematics case study students resituated their roles across the three stages as follows:

Front stage: Students used the front stage to access online resources from the LMS, which were created by the teacher and his colleagues, as well as to watch videos of their teacher solving problems.

Backstage online: Students interacted with the expert-teacher when needed, by email and phone, and sought expert online resources that embodied the teacher's craft and teaching style.

Backstage offline: Unlike the other case studies, the textbook was an important offline resource. The backstage offline data also showed how that as the final examination neared the students withdrew from the front stage and resituated their tasks backstage offline. Also unlike the previous case studies, students struggled to find ways to engage in the backstages because the advanced subject matter limited their ability to find experts among their family, friends, and colleagues. Students also struggled to make everyday applications of the content. Backstage offline was limited to

conversations with family and friends about their general university experience (e.g. training).

Similarly to the psychology and advertising case studies, the front stage was a learning environment that did not facilitate conversations between students and teachers. Again, the backstage were effective learning environments as reported by the interviewees. However, those reasons were different to the previous case studies. For example, students in the mathematics case study used the backstage online to find additional resources in order to practice their skills, whereas the backstage offline was mostly a space for conversations with others related to training. In the mathematics case study, I argue that learning was a social process between the novice-student and the expert-teacher in which the students picked up the habits and practices of the expert. This finding is most consistent with Lave and Wenger's (1991) original description of situated learning, which considered only the one participation trajectory: novice to expert. In the sections that follow, I will describe the mathematics subject and explain how students used the front stage, backstage online, and backstage offline to support their learning and training.

The Setting and teaching curriculum: Face-to-face (F2F) and online

The mathematics subject was from a Science and Engineering faculty at an Australian university. It was delivered online through a university-made LMS and face-to-face at a city campus. The purpose of the teaching curriculum was to instruct students on techniques for modelling various processes including motion in space, optimization of business and economics, and forces in physics. The students were considered successful in this subject if they could: apply multivariate calculus to model these processes, analyse and manipulate these process using three-dimensional spaces,

and model changes within these processes using differential equations. The only way in which students could demonstrate this was by solving discipline specific problems from the teaching curriculum.

Students were enrolled in the subject by two modes: F2F and online. The enrolment mode guided how students completed their contact hours. The contact hours were made up of practical classes, lectures, and the online learning materials in the LMS. The practical was a F2F interactive session where students completed problems before class and reviewed the answers together with the teacher. During the practical, students were encouraged to ask questions and interact with the teacher. The F2F lecture, on the other hand, was a class where the teacher stood in front of the class and modeled how to solve problems. The lectures were recorded and uploaded to the LMS for all students.

Overall, the similarities between the F2F and the online mode far outweighed the differences. For instance, the same teacher taught all of the students and they were all enrolled in the same online space, which was the LMS created by the university. In addition, all of the students had access to the same online resources, which included a discussion board, learning materials, and lecture recordings. The learning materials included lecture notes, past exams with solutions, additional exercises with solutions, worked examples in video form, and the problems and solutions to the F2F practicals. Lastly, all students were assessed the same and earned their grade by completing three summative assessments and one final examination. All of the assessments required the students to submit their handwritten solutions to problems. One point of difference worth noting is the contact hours for F2F and online students. The contact hours prescribed for the F2F students were two one-hour F2F lectures per week and one two-hour practical each week. The online students in the subject were expected to complete

four-hours of online learning materials per week. Online students did not have access to the F2F practical classes but did have access to the problems and worked out answers in the LMS. Next, I will briefly describe the mathematics students and those who participated in the questionnaires and interviews.

The Cast: Mathematics subject participants

There were 63 students enrolled in the mathematics subject, 44 of those students were F2F mode and 19 were online mode. The students were mostly stagehands; only one student was a cameo because she posted one question to the discussion board. Table 7.1 illustrates of how the mode of study was not a detriment to either online or F2F students. What is interesting in this data is that the online students' marks were just as high, and in some instances even higher, than the F2F students.

Table 7.1

The Mathematics Students by Mode of Study and Grades

Grades	Grades by mode of study	
	F2F	Online
High Distinction	7	4
Distinction	12	5
Credit	3	3
Pass	6	1
No Pass	16	6
Total	44	19

Source: email interview with the teacher

All of the students were observed in the front stage. A total of five students participated in questionnaires and interviews: Two online students completed fortnightly questionnaires, one F2F student participated in an interview, one online student participated in an interview, and one online student participated in both

fortnightly questionnaires and an interview (see Table 7.2). The students who participated in the questionnaires and interviews provided insights that helped me to explore student participation in this subject. They are not a representative sample of the students enrolled in the subject. I cannot generalise about the entire mathematics cohort based on their responses but I can explore the possibilities that existed within the cohort.

Table 7.2

Mathematics Subject Participants by Front Stage Performance and Participation in Fortnightly Questionnaires and Interviews

Front stage performance role	Number of students		Participants in fortnightly questionnaires only		Participants in interview only		Participants in fortnightly questionnaires and interviews	
	F2F	Online	F2F	Online	F2F	Online	F2F	Online
Stagehand	45	18	0	2	1	1	0	1
Cameo	0	1	0	0	0	0	0	0
Total	45	19	0	2	1	1	0	1

Source. Front stage activity logs

The three students who participated in the interviews were Cindy (PT.30.Online), Mia (PT.20.Online.F2F), Sally (FT.18.HD.F2F). Cindy and Mia preferred not to share their grades. These three students made various references as to why they were studying advanced mathematics and why they were studying online or F2F. Cindy was already a full-time secondary school teacher, therefore online study made it possible for her to study outside of regular working hours and meet her career goal of teaching high-level maths. Another student, Mia, studied online because the F2F mode for this specific subject was not offered at her location, which was outside of a major city. In general, the teacher reported that the online cohort was typically

“different to school leavers”. He inferred that they were older and had different learning patterns:

The online students are often mature age students with quite different learning pattern to school leavers. [The students who attend F2F classes were] quiet and respectful, students [who] came to learn and ask questions. (Mathematics Teacher)

Sally, on the other hand, studied F2F mode and was typical of a school leaver. She came to university straight after high school, was enrolled full-time, and had a part-time job. All three students described a similar feeling of enjoyment about learning advanced level math. As one student explained:

I keep going because I enjoy it and I want to keep learning about it. I don't know how to explain it, just...just the feeling that I know something other people don't [know]. It feels. It feels kind of nice.
(Mia.PT.20.Online)

This shared intrinsic motivation may have played a role in sustaining the students' engagement of the content. For example, in communities of practice passion has been identified as a characteristic that sustains engagement (Wenger et al 2002).

One interesting aspect of the data that emerged while comparing the responses from the interviewees was that Cindy and Mia never missed class, yet Sally sometimes missed class for work. In other words, the online interviewees watched every recording and the F2F students missed both class and the recording. This is interesting because universities often describe online students as “mature age” and therefore “time poor” (see for example O'Neill, Singh, & O'Donoghue, 2004). However, this data shows the opposite of that assumption.

The front stage, backstage online, and backstage offline

In this section, I will describe how students performed in the front stage, backstage online, and backstage offline. Despite the multimodal enrolments, the focus of the front stage for this case study will remain the LMS and not the F2F classroom for several reasons. Some of these reasons were that in the F2F classroom the students did not leave a digital trace, attendance was also not always taken, and the lectures were recorded for students to access digitally. In addition, by keeping the front stage as the LMS I hope to make comparisons between the mathematics case study and the psychology and advertising case studies. Finally, and most importantly, I found that the observed differences between the F2F and online modes were minimal and the teacher confirmed this. This point will be discussed throughout this chapter.

The interactions that occurred within each of the three stages illustrated how students learned within the mathematics subject and with whom. The most salient interaction in each stage was the expert-to-novice interactions. Because of the advanced nature of the mathematics subject, students needed access to experts and expert-resources in order to support their learning. I use the term expert-resources to describe content-resources that were produced by expert mathematicians. For instance, the teacher and his colleagues, who each have a Ph.D. in the content area, produced the learning materials and additional resources provided to students in the LMS.

Unlike the psychology and advertising subject, where students reported spending more time backstage, the mathematics students may have spent more time in the front stage. The sample of hours recorded by the LMS in the front stage, versus the sample of hours reported by students in the questionnaires from the backstages, illustrated this point (see table 7.3).

Table 7.3

Hours of Students who Participated in the Questionnaires in the Mathematics Subject

Front stage participation role	Average front stage hours	Average backstage online hours	Average backstage offline hours	Total Average hours
Stagehands	67	51	39	157
Total	67	51	39	157

Source. Average hours in front stage are from the activity files, average hours backstage online and backstage offline are from fortnightly questionnaires

Note. In the average backstage online hours and average backstage offline hours n=3

The nature of the content, and who was able to produce or speak to such content, may have limited students learning opportunities across the three stages. Evidence about where students spent their time performing subject-related tasks and who, if anyone, was available in the backstages to interact with for content-related tasks will be explored in the front stage, backstage online, and backstage offline. Specifically, the role of the expert will be explored in more detail throughout each stage. In the front stage, I will explain how students interacted with the expert and expert-resources. Then, in backstage online, I will describe how the front stage expert was present and how students sought their own expert-resources for learning. Finally, I will explore possible reasons students spent the fewest hours backstage offline including how few backstage offline experts existed in students' everyday life.

Front stage: Introduction

The interactions in the front stage of the mathematics subject were primarily student-to-content. The teacher and his colleagues produced content resources, which were expert-resources from which the students could learn. Students reported spending most of their subject related tasks in the front stage. One possible reason that the mathematics students spent more time in the front stage than the backstages was

because of how the mathematics content was learned. In this subject, the content was learned through expert-to-novice interactions. Interviewees reported learning in this subject by watching and doing. Therefore, the role of the expert was to model patterns and solutions for solving problems and to make expert-resources for the students to watch and then do on their own. By contrast, in the Advertising and Psychology subjects, teachers, classmates, friends, family, and colleagues played the role of the expert, for training and learning.

The activity logs illustrated how many students accessed the expert-resources and for how long. As with all of the subjects, the activity logs are limited because we cannot know, for example, if students printed out copies for classmates, if students were engaging with the expert-resources, and how the access to and time spent relates to learning. However, in this case study there were discernable patterns within the data that illustrated the student-to-content interaction that occurred over the 12-weeks. What is most surprising is that the students performing these interactions were a mix of online and F2F students and there were no marked differences between the two modalities. This section will describe the front stage, including how students *did not* utilise the discussion board, and *did* use the lecture recordings and learning materials. Throughout this section, I will illustrate the role of the front stage expert and how students interacted with expert-resources for learning.

Front stage: Discussion boards

The discussion board was not a useful learning or training resource in this subject, because it did not support social processes between the expert and student. All of the students had access to two discussion boards: the “Student Discussion” and the “Questions for the Unit Chair” (see Figure 7.1). All of the students were encouraged to

make use of the discussion boards for this subject to interact with students and the teacher.

Topic	Threads	Posts
Student Discussion ▼ This Student Forum allows you to get to know fellow students and to discuss unit content and support each other in your learning. <i>Please note: This is an educational forum and as such proper etiquette should be followed.</i>	3	5
Questions for the Unit Chair ▼ Please use this topic to post questions related to all matters regarding the admin and teaching of this unit to the Unit Chair. The answers to these questions may help fellow students.	1	1

Figure 7.1 Screenshot of the mathematics subject's graded discussion boards
Source. Front stage observations

The teacher suggested using the Student Discussion to get to know other students, form study groups, and ask questions to each other. The other discussion board was for interaction with the teacher. However, because he only monitored the discussion board weekly he advised students that it was best to raise questions via email or in class (see Figure 7.2).

...

There is a student forum on [the LMS] "Discussions". This is very useful for communications between the students. You may form a study group online, chat with other students, and ask them questions – sometimes another student's explanation is better than mine. I will monitor this forum but not daily, so if you have a question to me, it is best to raise it in the class or to send an email directly to me. I will answer common questions posted on [the LMS], but this will be done on a weekly basis.

...

Figure 7.2 Teacher's welcome letter to the students: Discussion boards
Source. Document analysis of the front stage learning materials

According to questionnaires, students checked the discussion boards weekly but they never used them. There were only a total of six discussion board posts during the twelve-week semester. All six posts were related to training: Four of those posts were teacher-to-student (two welcome posts, one announcement about my research, and one answer to a student's question). The two other training posts were student-to-teacher (one post to ask a question about when assignments would be marked and one post thanking the teacher for his response).

As only one student ever posted to the discussion board, I turned to the interviewees to explore why this was the case. In all instances, the three students reported that they assumed no one was reading the discussion board, and they also did not want to be the first person to post. These reasons were why they believed the discussion board was not fully utilised in this subject. The quote below illustrated both of these reasons:

The discussion board was not used in this subject. I've used it a few times but not often because so few people post on it that I just assume no one is really looking at it. It's probably just the group mentality sort of thing. I don't want to be singled out, when...when, I am not too sure what I am doing. Stupid questions and all that...(Mia.PT.20.Online)

All three case studies have illustrated students' apathy towards using, and not using, the discussion board. This is an important issue that I will return to Chapter 8.

Front stage: Lecture recordings

The lecture recordings were important because they facilitated a learning process that F2F and online students found to be a crucial step in the learning process, that is watching the expert solve the problem first. The lecture recordings captured the teacher modelling how to solve problems (see Figure 7.3). Since the lectures were

automatically recorded and uploaded to the LMS, the teacher did not take attendance.

The recordings were automatically uploaded to the LMS as a learning resource.

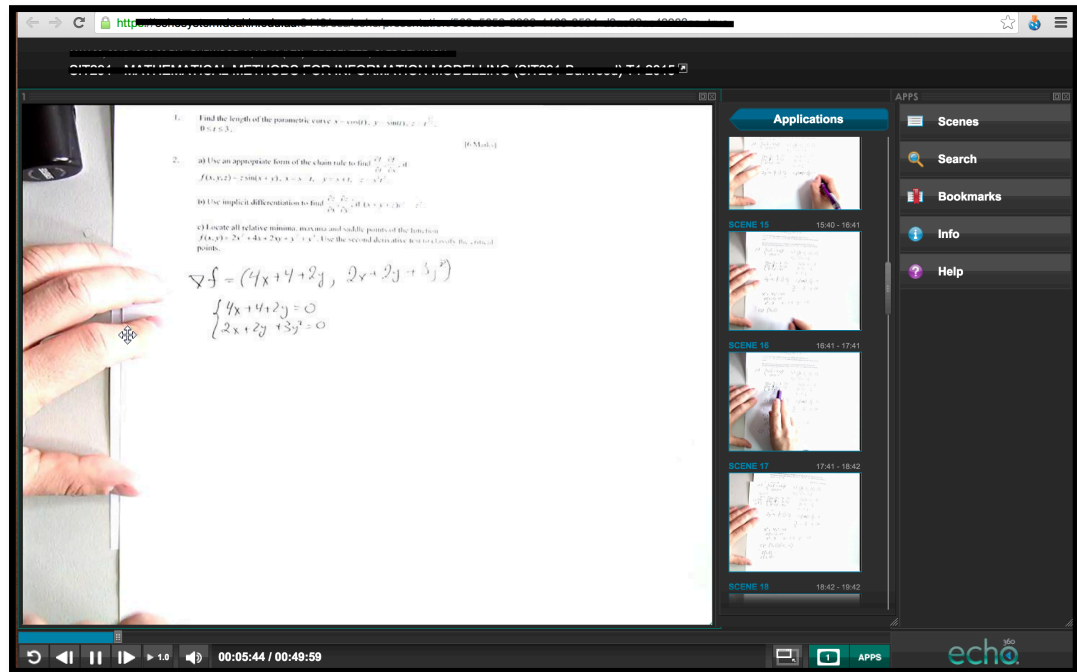


Figure 7.3 Screenshot of a typical lecture recording from the Mathematics subject Source. Front stage observations

According to the LMS activity logs 39 out of the 63 students accessed the recorded lectures. Over the 12-week semester each student, on average, spent 8 hours and 16 minutes viewing lecture recordings (see Table 7.4). Unfortunately, a weekly breakdown of which recordings were accessed was unavailable in the activity files, so whether there was a drop-off rate cannot be ascertained.

Table 7.4

Access and Times of Lecture Recordings by Mathematics Students

Module	Number of possible users accessing module	Number of users who accessed module	Average time spent in module per user (hh:mm:ss)
Lecture recordings	63	39	08:16:30

Source: Front stage activity files

Although not every student in the subject clicked on the lecture recordings, the students whom I interviewed agreed unanimously that watching the teacher solve the problems was the most efficient way to learn how to solve the problems themselves. Cindy and Mia, both online students, watched every video and paused the video to think, ask questions to themselves, and copy down processes.

For this unit I have to sit there and watch it word for word what he was saying and I'd have to go back and watch it again at certain, like certain points of it again to try and understand, or pause, and it's like "okay, what's he trying to say? Okay that's what he's saying. Now I understand". Because I found the content more challenging that I had to actually watch the videos, so that's sort of how I understood the materials (Cindy PT.30.Online)

[I have to] see them go through the examples and um, I work that way. My brain has to follow the things and then I copy that and that's how I get through the working out and everything like that. So without that, it is a bit harder for me to get that stuff out right. (Mia PT.20.Online.F2F)

Sally, the F2F student echoed that watching the expert solve the problem first was a key step in learning to solve the math problems on her own. Even Sally, who studied F2F, watched the teacher solve problems in class and practicals before solving the problems on her own.

My pattern was to attend lectures, then [practicals] and once that is finished, using what I've learnt for that week, I do the corresponding assignment question... I mainly learnt from asking why I didn't get the same answer at the lecturer [when I watched the Professor do it]. 'Why didn't this work?', 'is there another way I could do this?' ...and like one time I was doing one of the double integral questions and was struggling. Thinking 'why is this so complicated?' It was simply changing it to a different coordinate system and solving that. (Sally FT.18.HD.F2F)

While Sally attended live classes (lectures and practicals) to watch the expert solve problems, Cindy and Mia watched him solve problems through recordings (lectures only). This could explain why not every student clicked on the lecture recordings. It also emphasises how the students, regardless of their modality, felt they needed to watch the expert solve problems in order to solve problems themselves. This finding raises another important point for analysis. That is, F2F students were afforded more opportunities to watch the expert solve problems than the online students. If students need to watch the expert solve problems, then online students may have been disadvantaged in this subject.

As previously mentioned, the F2F lecture was recorded but the practical classes were not recorded. However, watching the teacher solve the problem was so important to Cindy and Mia that they both independently emailed (backstage online) the teacher and asked for his permission to attend the F2F practical sessions. The teacher welcomed both students to the F2F practical sessions. Cindy and Mia reported that the practicals benefitted their learning.

Like the one [F2F practical] I did attend [the teacher] was going through questions and sort of explaining them and giving me time to understand it, and that was one thing that they didn't record which I wish they had have. (Cindy PT.30.Online)

In [F2F practicals] you've got chance to ask the questions, and try and do it beforehand and then see how they do and compare. You kinda just see where you've gone wrong, if you have, then kinda ask a question if there is anything you have concerns about. (Mia PT.20.Online.F2F)

The students benefitted from the practicals because the teacher showed the class how to solve the problems, he allowed for time to think and make comparisons between the students' work and his work, and he responded to questions and concerns. The F2F practical also complemented the lecture, which also may have disadvantaged online

students. A quote from Mia supported this claim. In her quote, she described being frustrated about missing out on watching the F2F practicals:

And they would always go [in the lecture recording] ‘we’re not going to do this one because we did this one in the [practical]’ and you just go NOOOO, no please go through it, I didn’t see that. (Mia PT.20.Online)

Interestingly, Mia did have access to the practical questions and annotated answers, but “seeing” the teacher solve the problem was her preference, and the preference of the other interviewees.

If watching the teacher solve problems was a crucial step in the learning process, then by not recording the practical class the online students had fewer learning opportunities. However, reifying the practical class into a resource, like a video, could also jeopardise participation and negatively impact the F2F students too. If we view the classroom through the lens of community of practice theory then every community of practice, or in this case class of students, has a core group of students who work together to make the experience for those students who rarely, if ever, participate. The practical was designed to be more engaging than the lecture by offering a more interactive experience between the expert and the students. If by recording the practical, less of those core students attend, then less interaction might occur. For example, if the practical was recorded then fewer students might attend and the teacher could have fewer questions to work through. This could decrease the learning opportunities for the whole group. If this were to happen, the F2F experience would be less of a learning resource for F2F students and the recording would also be less of a learning resource for online students. The impact that this could have on students is important to consider. When resources are not available to the entire cohort, some students might be marginalised. In this subject the teacher addressed this dilemma by making himself

present and available backstage online. This will be examined more closely in the backstage online section below.

Front stage: Content resources

The content resources included annotated lecture notes, .PDFs of the practical problems, annotated answers to the practical problem (which became available at the end of each week), as well as past exams questions and solutions. There were three findings that emerged from this data. First, there were no discernable download patterns to differentiate the online and F2F students. Second, students' downloading patterns decreased over the twelve-week semester, and third, not every student accessed the content resources.

The activity logs and students' progress bars recorded the total resources available and how many each student accessed. In other words, the LMS tracked, and displayed to each student, his or her student-to-content interactions. In Figure 7.4, the student accessed 92 of the 164 expert-resources available. Through an analysis of these logs, there were no discernable patterns to differentiate the student-to-content interactions of F2F and online students. For example, the students who accessed the most online materials was a F2F student, and some online students *only* ever accessed the past exam materials.

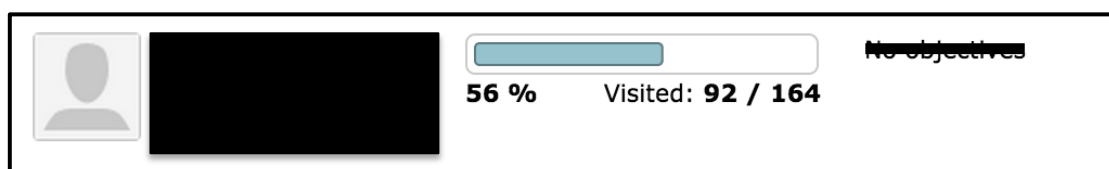


Figure 7.4 Screenshot of a student's progress bar for accessing resources
Source. Front stage activity files

Overall, the downloading of content resources lessened as the twelve-week semester progressed. Table 7.5 shows how fewer students accessed the content

resources over time. From week one to week 12 fewer students downloaded the weekly practical questions, practical answers, and annotated lecture notes. However, the diminishing downloads did not indicate that students left the front stage permanently. For instance, the release of past exam resources coincided with the last few weeks of the semester. As Table 7.6 indicates, a majority of the students (at least 72%) accessed these materials in the last five weeks of the semester. This means that as downloads decreased in the weekly learning materials, some students returned from week eight onward to download practice exams.

Table 7.5

Diminishing Downloading Patterns by Students in the Weekly Practical Materials and Weekly Learning Materials

Week	1	2	3	4	5	6	7	8	9	10	11
Students who accessed weekly practical questions	55	54	46	45	46	43	42	39	35	34	34
Students who accessed weekly practical answers	50	48	44	45	43	44	37	30	31	32	23
Students who accessed weekly annotated lecture notes	56	53	37	35	39	43	34	30	27	34	NA

Source. Front stage activity files

Note: n=64

Note: There were no weekly learning materials for week 12.

Although students returned to the front stage to download practice exams, the downloading of practice exams also lessened over time (see Table 7.6). However, this could suggest that students did not need the continued practice, which could be interpreted as an indication of mastery of the content.

Table 7.6

Diminishing Downloading Patterns by Students in the Past Exam Resources from Week Eight Onward

Week	8	9	10	11	12
Past exam questions	46	44	43	37	37
Past exams solutions	46	45	42	32	29

Source. Front stage activity files

Note: n=64

Note: Each exam was one file. Exams could not be downloaded all at once.

There are several possible explanations for the downloading patterns illustrated in Figure 7.4, Table 7.5, and Table 7.6. In the present case study, it is again possible that not every student accessed the front stage resources, or stopped accessing the front stage resources, because they had backstage online and backstage offline resources that met their needs. Based on the results of the previous case studies and the mixed modalities, this is the most obvious explanation.

Overall, this section about the front stage described how students rarely interacted with other students in the front stage because their main interactions were with the expert and expert-resources. Together these results provide important insights into the learning that occurred in the mathematics subject. The role of the front stage expert was to transform his craft into resources for students: expert-resources. The discussion board did not support the expert sources. Instead the front stage expert (i.e. the teacher) supported students by providing annotated examples of how he solved problems and he solved problems live in front of the students and this was recorded and made available to all students. The expert-resources illustrated how the teacher reified his craft to be accessed by students anytime and anywhere. It also provided students with two modalities, written form and video, to learn by watching and doing. In the next

section, I will provide insights into how students used the backstage online to support their learning in this subject.

Backstage

In the previous section, I described the role the expert played in the front stage for learning. In this section, I will explain how the role of learning and training are divided in the backstage. In the backstage online, students had access to the teacher through email and also found experts on their own to learn from by using, search engines. In the backstage offline, I will show what resources students used such as the textbook, practise exams, and other offline university resources. Then, I will show how in the backstage offline learning experts were difficult to find.

Backstage online experts: The front stage teacher and the internet

There were two ways that the teacher implemented his expert-presence in the backstage online. He made himself available through the use of email and he transferred information from the backstage online to the front stage. As previously noted, online students did not have access to the practical sessions because they were not recorded. However, online students were allowed to attend the F2F practical sessions and some students did so. This option was not advertised in the course documents. I learned about it through the interviews with the students. For these students, their location and schedule afforded them with this opportunity. However, just as not every online student was afforded this opportunity, some F2F students were also constrained from attending lectures and practicals. The teacher was aware that not all online or F2F students could attend every class and practical, therefore the teacher made his materials available in the front stage, as illustrated in points A to C in Figure 7.5, and he made himself available backstage online, as communicated to students in point D (see Figure 7.5).

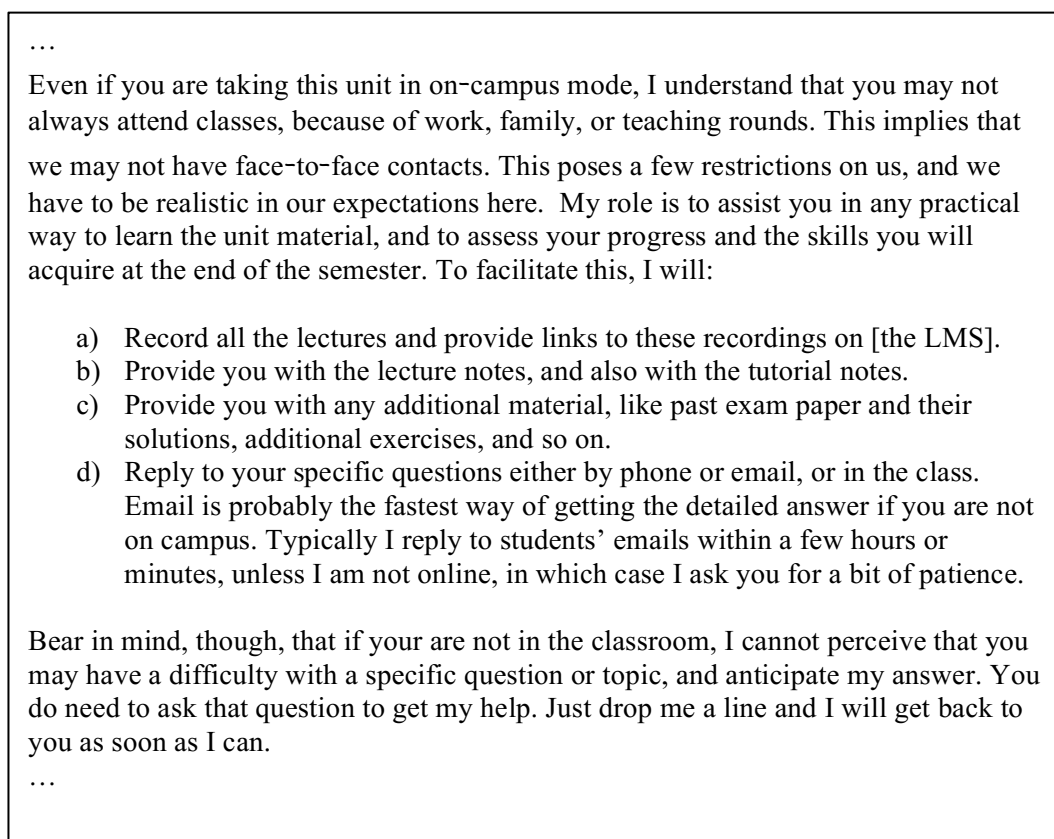


Figure 7.5 Teacher's welcome letter to the students: Backstage online support
Source: Front stage document analysis

The teacher confirmed in his interview that he was in contact with most students by email. In the questionnaires students also reported contacting him by email on a weekly basis. Knowing the expert was present backstage online made Mia and Cindy feel more confident about their learning; specifically they reported that the teacher made them feel "comfortable" and responded "straight away."

Um, I always knew with [this teacher] that I could ask him anything. But with me, I am just not great with talking to my lecturers to start with. But then also over email, I don't feel comfortable doing it, even though I always knew [this teacher] would feel comfortable answering whatever my question was. (Mia PT.20.Online)

The good thing was that [this teacher] was really helpful. There wasn't a huge amount of contact with him, but when I did contact him for

whatever reason he would reply straight away... he was...he was really good. He's really good. So I...I felt confident that if I needed help from him he would be able to help me. (Cindy PT.30.Online)

The second way in which the teacher made himself available backstage online was by transferring information from the backstage online to the front stage. He would address questions about content and administration to all students during the recorded lecture. This helped to create equal access to the resources for online and F2F students. For example, Cindy recalled a time when the teacher immediately applied her feedback from the backstage online to the front stage:

The first few weeks I noticed that the lecture video would finish and he would have kept talking so he'd be in the middle of an example and the lecture recording would keep go...like it would stop halfway through the example. So I actually emailed him and said "look I'm really sorry but I can't see what you're doing after the lecture video finishes, so can you either extend your recordings or finish earlier" and straight away the next week you could see him in the lecture and he was like, "oh, okay I notice we only have thirty seconds left and we have to end because the online students see". (Cindy PT.30.Online)

In Cindy's quote she described a teacher who was open to student feedback. By applying her feedback "straight away" he demonstrated that he could meet the student's needs in a way that created an equitable environment for online and F2F students. This could have made the online students, in particular, feel more connected to the subject and the expert. Overall, all three of the interviewees felt confident in the teacher's ability to meet their needs regardless of their study mode.

Even when the teacher was not present in the backstage, students still had access to other experts. The questionnaires and interviews showed that students were seeking backstage online experts unrelated to the subject. They used the university library,

content communities, and search engines to find these experts. Backstage online experts helped students to supplement their learning. Cindy, Mia, and Sally described how the internet helped them to fill gaps in their knowledge and correct their understanding.

So I would often find myself just Googling “oh, what is the trigonometric identity” or... whatever it might be, I would just Google things. Or if I didn’t understand something he taught, I would just go through online and have a look. (Cindy PT.30.Online)

... I would go just Google [things I struggled to understand]... I’d kinda read ones that sounded like what [the teacher] talked about and had shown [during class]... Um, I’d start off with webpages and read that and if I was still struggling I would use YouTube. Often they were pretty helpful as well. (Mia PT.20.Online.F2F)

To correct my understanding I searched up similar problems on the internet and the textbook. I asked a question of my tutor once. (Sally FT.18.HD.F2F)

The first quote above illustrates how students could simply ask random questions to a search engine in order to get answers. The other two quotes illustrate how even when the students were not engaging with the expert from this subject, they were looking for resources similar to what he provided in the front stage. This means that while searching the internet the students selected resources that were “similar” problems and “sounded like” the teacher. In other words, they were transferring their experience from the front stage to the backstage online in order to become a more competent student who uses credible sources to study. This allowed students to apply the same learning process to all of the material. It is also another way in which the expert-presence endured backstage online.

Backstage offline

The backstage offline showed two important findings. The first finding was that students reported spending the least amount of time backstage offline. The second finding was that some students did not even log in to the front stage, yet successfully completed the subject. In this section, I will describe how the backstage offline resources such as the textbook, practice exams, and other offline university supported students' learning. This is an important point of analysis because it offers an explanation for why some students did not access front stage content resources, and why downloading resources lessens as the semester progresses. Then, I will focus on backstage offline relationships, and how the mathematics content may have limited who students could learn and train with in their everyday lives.

Backstage offline resources

The textbook was a backstage offline resource that supported offline interactions. Not only were students advised to purchase the textbook, but the teacher also advised specifically how to use the textbook during the lecture and in the welcome letter to students.

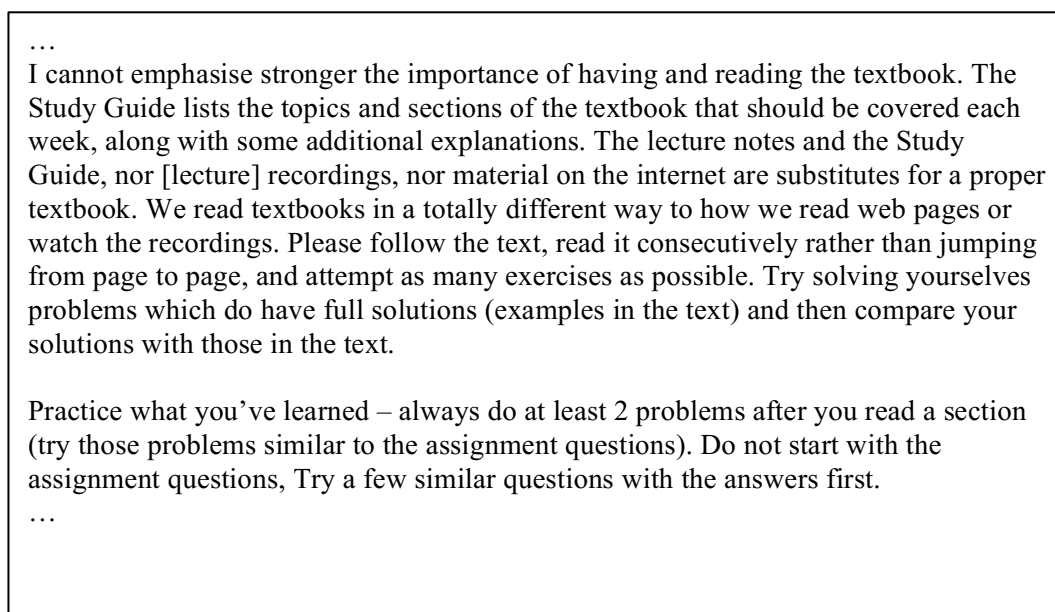


Figure 7.6 Teacher's welcome letter to students: Textbook

Source: Front stage document analysis

In the teacher's welcome letter to students, he states how he prefers students prioritise using the textbook to the front stage resources and backstage online resources. Specifically, he requests that students follow a five-step process:

1. Follow the text in a consecutive order
2. Attempt as many possible exercises as possible
3. Try solving problems on your own
4. Compare your answers with the solutions
5. Do at least two problems after you read each section

Per the teacher's request, students were advised to read the book consecutively and then solve at least two problems from the text before trying the problems from the learning materials. Therefore, if a student did not move on to access the expert-resources from the LMS, then the textbook may have met their needs. Perhaps solving the problems in the textbook was enough for some students to master the material. While this could have been the case for some of the students enrolled in the subject,

particularly the ones with little to no online data, the students that I interviewed each described a different strategy for using the textbook, but used the textbook nonetheless.

Sally used the textbook as her main resource:

The main [resource] I can remember [using was] the prescribed textbook. [But] To correct my understanding I searched up similar problems on the internet and the textbook. I [also] learned more from the textbook than the [lecture] recordings... (Sally FT.18.HD.F2F)

Mia only used the textbook if she did not understand the teacher in the recorded lecture:

The book was where I always went if I struggled to understand [the teacher]. Then if the book didn't really help me much, which it usually did because [the book] was pretty good, but I would go just Google it... Okay so in terms of mapping it out, it would go [the teacher], book, webpages text, webpages video. [But] I really just looked at the book and that was it. (Mia PT.20.Online)

Cindy used the textbook to source additional practice problems once she confirmed her maths were correct.

Well the textbook questions I found were okay to do a prescribed amount of questions and then check if you're right. But there was no working out. There was nothing. It was just an answer. And I'm like "well, how is that going to help me?" Because I don't have like any sort of pattern to follow...well not pattern but like any example to follow on how to do this myself...I mean I kind of understood what I was doing which was fortunate. You know but if I was someone who wasn't as strong with my maths I would find that really challenging. (Cindy PT.30.Online)

Of the three descriptions, Sally used the textbook in a way that most aligned with the advice from the teacher because she prioritised it over the other resources available in the subject. These descriptions illustrate how individualised the learning process can be, even when there is only one answer available. Each student prioritised

the steps in their learning processes differently. For Sally, her priority was the textbook, for Mia it was watching the expert, and for Cindy it was finding a pattern. These learning strategies show where students resituated their learning across the different stages, which in turn lessened the availability of online data that the university had available, and was able to collect, about the mathematics students. This is an important point to consider when making claims about students based on their LMS data.

Experiences of students in the backstage offline illustrate a fuller student lifecycle than simply relying upon front stage data. For instance, the front stage data suggests that student engagement tapers off as the semester progresses. However, the students could be experiencing the opposite. As the end of the semester approached students reported completing more subject-related tasks in the backstage offline. In other words, students were still performing despite what their front stage data would seem to indicate. The interview data supported this point. In the quote below, Cindy explained how she prepared for the final examination using the backstage online learning materials. This quote shows that as the examination date got closer she performed less tasks online and more tasks offline. This distinction is important because her absence of front stage data was not an indication of disengagement.

I actually went through all of the practice exams that he gave me, except for the one that they had as a full practice exam. So, like he gave us the 2014 [examination] online [in the LMS] so he went through that on his video [lecture recording], so I went through that “with” him. Then I went through [the practice exams] from 2013 down to 2010 [offline], each of the questions at the same time. So anything that was similar I would do all at the same time and make notes, like a summary page. And I did that with each of the [weekly] topics, like I made summary pages for each of the [weekly] topics. And then I went through and did that practice exam [again]. (Cindy PT.30.Online)

The university also offered more offline support as examinations neared. In another example, Mia described how she attended a F2F review session. In this example, the online student drove to the F2F campus to participate in this event.

Down here one of the lectures did an [F2F] exam revision as well. So during that I found some people from other classes that I have done and I didn't realise they were doing this subject so I caught with them and I was able to ask them what they were having trouble with and doing well. I really got to talk about the subject then. But it was only like a two-hour thing. And seeing those examples that he did [F2F] that were different than the examples I was given really helped a lot as well. (Mia PT.20.Online)

Both of these students completed these tasks offline in the weeks at the end of the semester, which also saw the biggest decline in students' front stage activity logs.

The struggle to find experts in everyday life

In the backstage offline the students were limited with whom they could interact with about the content. This made backstage offline conversations more of a space for training instead of learning. This was because the mathematics subject was at an advanced level and few people in their everyday life studied it to the point where they could recall it on the spot, or have a meaningful conversation about it. Mia's father, for example, was a math teacher, but the math was more advanced than his everyday usage. This limited him to suggestions about how to solve problems or spotting errors at the start of a problem where the calculations were more basic. Mia's brother completed the same math subject years ago but in order to help he needed to reteach himself because it had been so long. Therefore, this interrupted the flow of her work and prolonged moving on to the next step of a problem. Mia's family had the capacity to interact with her about learning, even if in a limited sense.

My older brother was a maths major but I don't think he did this subject and my dad is a math teacher as well. So they were able to help some but not much because this was a bit higher to their experience. Um, just kinda with my basic calculus, I'll be like, I am not getting this question right are you able to go through it. And he would be able to find where I went wrong. Because he has a basic understand of what I am meant to do. Like before I would say are you able to help me with this concept and he would go away and study a bit and then come back and help. Mia (PT.20.Online)

Mia was the exception for having offline interactions about learning. For the most part, students did not report conversing with others and when they did it was about training. Cindy's husband, for example, was an engineer and also completed similar advanced math subjects but he too would have needed to reteach himself and did not have the time. This limited him to expressing empathy for Cindy instead of answers.

My husband is an engineer. So and he's done the highest level maths that he could possibly do at uni. So I asked him for help, however it's been a very long time since he's done that so he'd give me some bits and pieces, like he'd be like "oh I remember this" Cindy (PT.30.Online)

Mia and Cindy's quotes illustrated how the content matter, even for those who were familiar with it, could not be easily recalled. This reinforces the importance of the expert-novice relationship from the front stage and backstage online. The teacher, for some students, may have been the only other person in their life with whom they could speak about the content area. If this is the case, then students are dependent upon the expert for learning the content area.

Even Cindy, who worked in a secondary school teaching mathematics, had other content-colleagues but those colleagues did not have the expertise to discuss the content. In regards to training, Cindy could ask for advice about how to tackle a

problem or how to manage her time. Cindy found a support network for training in her workplace because her colleagues were also studying online.

It's nice knowing that I'm not the only one studying. Like we'd often be like "oh, are you...have you got an assignment due?" Or "oh, do you have an exam coming up?" So things would kind of be the same sort of timing for us, which was good. Cindy (PT.30.Online)

The limited access to offline experts meant that students had to turn to their teacher and classmates for the purposes of learning. In this subject students chose to constrain themselves mostly to the expert. Students did not include their classmates in their learning for the mathematics subject. The questionnaire data showed that students did not report feeling connected to any community of students in this subject or elsewhere (offline or online). Instead students reported most engaged when listening to recordings and reading and writing about the content. This adds support to my claim that learning in this subject mainly occurred between expert and novice.

It's not really a group kind of subject to learn. You don't need to work with others to do well, such as in other units where you may have to work with partners and groups...I was not part of any kind of study group for the subject. I prefer studying on my own, and knowing my personality I'm the kind to try to distract others at times. I had a friend in class and occasionally the two of us discuss a question or two in the break during the two-hour [practical]. Like I said I really prefer studying solo. My main connection was to myself, and I don't really tend to socialise during class because I can get distracted enough as it is. I hardly connected with anyone else, other than my friend. I wasn't unfriendly, I just didn't go seeking anyone out. Sally (FT.18.HD.F2F)

Although Sally was uninterested in working with others, the Mia and Cindy would have been open to interacting with a community of classmates. The quotes below demonstrated how the math subject lacked a social environment.

I didn't really ask anyone [at school] at the start so towards the end when I did need someone I had no one to ask... It was partly me not trying but, like um, no one else kind of asked me either. Mia (PT.20.Online)

These were times where for example I found an assignment question difficult or I was a little bit unsure with a particular topic...I'd go look at the online forum and there was nothing...So I thought well...[my classmates] are competing against me so well, why would they help me? And...because there's only certain ways to answer questions, if they try help me, is that plagiarism? ... If there was any sort of online community, just for example like a Facebook community or something I definitely would have joined. It would have been good to know how other people were doing in this subject. Cindy (PT.30.Online)

When students do not make social connections with classmates, it could in turn have an impact on whom they can depend for support with learning and training. Neither the students nor teacher were aware of online nor offline student-groups used for the purpose of learning or training. Although the teacher did suggest that groups possibly formed for completing the assignments, this was not confirmed in the questionnaires and interview. This may have been a missed opportunity for students and the teacher. While it may have afforded the teacher with control over learning and training information, it may have both isolated some students and created the expert-dependence. If students experience expert-dependence and the only acknowledged expert in the environment is the teacher, then this could explain the lack of student interaction.

Although Mia did not interact with classmates from this subject, she identified the value of interacting with classmates from other subjects about the mathematics

subject. She reported that she benefited from “bouncing ideas off” of students from her F2F Chemistry subject, which she was also enrolled during this time. Mia benefited from conversations with others.

I would have a conversation with people, like from Chemistry, and they weren't really helpful. But it helped me to talk about it. It's nice to talk about it. Because that is how I figure stuff out in my head. Yeah, like even just having to explain or tell them what I had to do helps me to reinforce my knowledge. And stuff like that. We just kinda have casual conversations about our other subjects that we don't share. Just what's going on with those, and it's really, really helpful. Mia
(PT.20.Online.F2F)

Mia reported that her classmates “weren't really helpful” because they were not enrolled in the mathematics subject. However, she also makes mention to how her weekly F2F interactions benefited her. For instance, speaking with others helped her to “reinforce” her knowledge. Students who benefit from explaining information to others may need access to social settings.

The abstract concepts in the Mathematics subject made it difficult for students to have conversations with others about the content. The mathematics content also made it difficult to imagine ways of applying the subject to everyday life. This may have limited the students' ability to identify their learning in the subject. In the previous case studies, for instance, it was typically during backstage offline interactions where students realised that they had learned the subject's content. In the interview data, it emerged that the students struggled to imagine the content outside of the university context. In addition, the only role in which students could imagine using the content was the role of a university student.

I find [the content] overall interesting. I think that one thing that I struggled with is where this fits into the real world... and towards the

end when he was explaining it, it made a little bit of sense, but it was just too removed from what we were doing, like I just couldn't understand how this would ever be used in real life. (Cindy.PT.30.Online)

I don't know [where I can apply this content] just mainly at school. It builds upon itself. I have not had to use this sort of stuff in everyday life. I guess, if you keep going on with your subject you find, for example, last year a subject I took was a prerequisite for this subject, and so you find that this has built on a lot of the stuff that you should already know. And I guess, that's how I mainly find out that I learnt stuff. I guess also, how easy I found the exam was an example of how much I learnt, you could say. And then next semester I have a subject that this was a prerequisite for, so I guess I'll see then. (Mia.PT.20.Online)

Obviously, grades are the most prominent outcome. What else I got from [this subject] was that it brought me closer to my chosen major. And I believe it's a building block for my next maths unit. [Each subject builds] foundations to understand mathematics more. And I've learnt another way to manipulate maths. That's what I find fun, taking complex problems and being able to reduce them to simple answers. (Sally.FT.18.HD.F2F)

The quotes above illustrated how knowledge within the math subject was contained to the university setting. Even though the teacher made explicit links to real-life situations in the resources³, and through telling stories during lectures, students could not imagine the knowledge beyond the university context. In both Mia and Sally's quotes, they described learning the content as "building blocks" and "build[ing] upon itself" to get to the next university subject. Learning for these students was the ability to get to the next subject and to find out what you already know and add then add to it. In this sense, learning and training in this subject are so closely intertwined that learning

³ Throughout the learning materials were links to stories about how people from the real-world applied aspects from the subject. For example there was a news story from a software company. One student also described how the teacher showed videos about math to help illustrate real-world connection.

cannot occur without training and training cannot occur without learning. In other words, the act of solving a problem is training but students had to solve the problem in order to experience learning. Even if every problem that a student solved could equally relate to an assessment as it could to a real-world situation, the students could only imagine it in the context of a university assessment.

In this section, I explained how, according to the interview data, offline interactions about the mathematics subject were difficult to experience because of the subject's content. I also suggested that training, which does not require a content-expert, rarely occurred backstage online and backstage offline because the students may have been experiencing expert-dependence. Expert-dependence could be a result of two characteristics: the nature of the content area and expert availability such as being present in more than one of the stages (front stage, backstage online, backstage offline).

Chapter summary

The goal of this chapter was to explore how students learned and with whom in a non-discursive subject, such as advanced mathematics. This chapter has used the case of the mathematics subject to describe how students learn from an expert and expert-resources. Students in this subject were instructed to use the textbook, which instructed and modelled how to solve problems, and also learned by watching the teacher who instructed and modelled how to solve problems. The social processes in which students engaged in the mathematics subject were difficult to ascertain based on the front stage data. If it were not for the data generated about the backstage online and backstage offline my understanding of how students were learning the content would have remained very limited.

In this case study, I have introduced the concept of expert-dependence. Students in the mathematics subject may have been dependent on an expert-novice relationship

to learn how to solve the mathematics problems. Students' performances were limited by the advanced content, which made them dependent on the expert, and expert resources, for learning. This relationship was controlled and supported by the teacher. Students were supported through recorded videos, email availability, and the option to attend face-to-face practicals. Their learning was dependent upon the expert showing the novice students how to solve the math problems, and more importantly, the reification of this procedure. However, other than to provide annotated answers to problems, the practicals were not reified. The students identified this as a gap in the shared resources. Instead of making this expert-resource (the practical) available to every student, for instance by recording the practical class, the teacher made himself available backstage online by email. The teacher's backstage availability made the students feel supported and more confident about their learning. At times this support may have given students more independence. Consequently, it may have also reinforced the students' dependency on the expert instead of others such as their classmates.

Another important distinction that resulted from the data in this case study was how learning and training were a co-dependent process. This may have been because of the advanced level of the content area. It may have also been another factor that restricted students' abilities to resituate their learning across the stages. The advanced content also limited the everyday conversations with others to conversations about the university training experience. I will return to this point in the next chapter. In the next chapter, I will compare the psychology, advertising, and mathematics cases to explore and consider the factors influencing the effectiveness of front stage, backstage online, and backstage offline as places for learning.

Chapter 8: Cross-case analysis and discussion

Excerpt from my third year research journal:

I remember when my first semester teaching online. When all of the students stopped posting to the discussion board, the university made us feel responsible for not being engaging enough. We were told to share more stories about ourselves. I did that. Then, in the student feedback survey, a student wrote that I only cared about myself. I was angry with the university and the student.

Introduction

In this chapter, I return to the research questions that guided this work:

- In an online subject, where and with whom, do university students experience learning?
- Based on the social processes present in the front stage, backstage online, and backstage offline, what might make an effective learning environment for students?

These questions and Goffman's (1959) theory guided each case study as well as the cross-case analysis. Goffman's (1959) theory advocates that one must not analyse the cause of human interactions, but instead should analyse the context in which those interactions occur. This can be done by considering how elements of human interaction are dependent upon time, setting, and audience (Goffman, 1959). These themes, in particular setting and audience, were useful in making sense of the cross-case analysis of the psychology, advertising, and advanced mathematics case studies. In the cross-case analysis, I also return to the social processes from 'Chapter 3' that I used to define situated learning and community of practice:

5. Social processes between newcomer, expert, and near peers
6. Social processes between persons during activities in a curriculum
7. Social processes between participation identities and communities of practice

8. Social processes between persons that produce artefacts and affordances

The brief answers to the research questions are threefold: (1) Students experienced learning when they could resituate content and they mostly resituated content into the backstage. (2) With whom students experienced learning was related to students' perceptions and understandings of their social interactions with teachers, classmates, family, friends, colleagues, and clients. Students often described learning in instances where students perceived these interactions to be positive (e.g. familiar, comfortable, convenient). (3) Lastly, to consider where (setting) and with whom (audience) students experience learning in an online subject, online studies and research frameworks about learning must acknowledge that students enact control over where and with whom they study for a subject. This can result in students enacting multiple identities across settings within the front stage, backstage online, and backstage offline.

Findings one and two: How teaching curricula and learning curricula constrain and enable learning

In the sections that follow, I will expand upon the answers to the research questions and make reference to Lave and Wenger's (1991) social processes throughout. First, I briefly explain my findings associated with the curriculum and the audience. Then I expand upon these findings using examples from the front stage, backstage online, and backstage offline.

Finding one: Teaching curricula constrained students' learning and learning curricula enabled learning across time and space

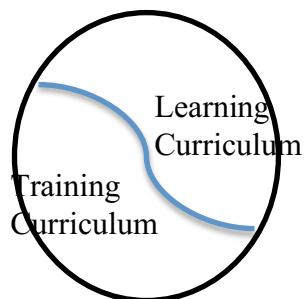
By differentiating between curricula, the front stage and backstages, and locating where students experienced training and learning, findings emerged about why the front stage may not be a space that supports learning. This is an important contribution because the current frameworks and theories for online learning, as

described in Chapter 2, appear to be mostly dependent upon data related to training. However, training was mostly in response to a teaching curriculum. Therefore, valuable insights related to learning, and how it transforms a student's identity and worldview, are largely ignored when we accept and apply these online theories and frameworks.

Lave (2008) differentiates between a teaching curriculum, which is designed for the purpose of instructing newcomers, and a learning curriculum, which is a repertoire of resources determined by the student. Both curricula exist within and are informed by the political, economical, historical, and institutional contexts. Lave (2008) suggests that all situated learning occurs within these contexts. The teaching and learning curricula experienced by university students are not an exception to this. For instance, at a macro-level the teaching curricula at universities respond to global and economic trends, as well as the demands of professional organisations that require graduates of programs to have evidence of specific skills and attributes. At a subject level, teaching curricula operate within the bureaucratic and administrative demands which are embedded into a subject's learning outcomes, weekly activities, and the assessments. My findings exist within this larger context. However, the scope of my research and therefore the focus of my analysis are the students' experiences at the subject level.

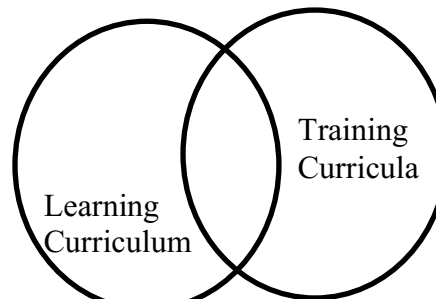
I found teaching curricula and learning curricula were enacted by university structures, students, and teachers across the three case studies. In Lave (2008), her initial understanding of teaching curricula and learning curricula were only in the context relevant to the content. This was mostly true for the mathematics subject. However, in the advertising and psychology subjects the teaching and learning curricula pervaded various aspects of students' lives. Figure 8.1 depicts how the teaching curriculum and learning curriculum were situated across the front stage and backstages in each of the case studies.

Mathematics Subject



Front stage &
Backstages

Advertising and Psychology Subjects



Backstages Front stage

Figure 8.1 An illustration to compare how students from the three case studies located their training and learning processes across the front stage and backstages

The primary difference illustrated in Figure 8.1 is that in the mathematics subject (i.e. non-discursive) students' training and learning were co-dependent regardless of the stage. In the advertising and psychology subjects (i.e. discursive) the teaching curriculum is mostly in the front stage and learning curricula are mostly in the backstages. This finding could be related to the discursive and non-discursive content of each subject. It could also be associated with assessments.

The assessments in the teaching curriculum influenced which stages the students used. In the advertising case, students were forced to use the front stage and backstage online because they were tied to assessments (i.e. the graded discussion board and group work). In the psychology subject all of the assessments were individual and participation in the front stage was not graded. This may have given students more freedom to resituate their learning in the backstage online and backstage offline (e.g. Facebook, work, with friends). The mathematics subject, on the other hand, was very different to both of these in that the learning curriculum almost always coincided with

training curriculum. Every action the students were required to do was preparation for the assessment. Also, the successful learning of each action determined whether the students could progress in the subject and then the degree. This impacted both the ability of students to recognise their learning and identify real-world application of their learning. Furthermore, mathematics students earned their marks only by showing the “workings out” of their solutions to problems. Students performed this teaching-curriculum-task using pencil and paper and uploaded it to the LMS. Students from the subject referred to the teaching curriculum as “building blocks” to get to the next level. Solving problems from the teaching curriculum was the only way to know if they had learned. However, using the backstage offline and backstage online to find and then solve additional problems or to watch additional videos could be a student’s learning curriculum. Overall, this finding supports the claim that the teaching curriculum restricted and constrained students learning and that the learning curriculum allowed students to elaborate upon their learning. I will expand on this claim later in this chapter.

Finding two: Students experienced learning with audiences where the outcomes of their social interactions were perceived and understood to be positive

The audiences from the three case studies included teachers and classmates from their current subject, classmates from past subjects, friends, family, colleagues, and clients. The interview data in each case study helped to explain why students preferred one environment to another environment. Aspects that made the backstage a more effective learning environment for some students, and whom students engaged with about topics related to their learning and training, were often a result of student preferences (e.g. familiarity, comfort, and convenience. However, these examples are not an exhaustive list). The interview data added depth to front stage observations and

the content analysis of the discussion boards. I illustrate this point in Table 8.1 by comparing the words students used to describe their experiences in each stage. Overall, column one shows that students' perceptions and understandings of their experiences in the front stage were overwhelmingly negative. In column two, the backstage online, and in column three, the backstage offline, students' perceptions and understandings of their experiences were described as positive experiences. Students' perceptions and understandings of their experiences can help to explain what made the backstages their preferred learning environment.

Table 8.1

Keywords from students' interview data used to compare the stages

	Front stage	Backstage online	Backstage offline
Psychology	<ul style="list-style-type: none"> • Frustration • Uncomfortable • Scared • Fear • Judgement • Not confident enough • Let down • Hurt • Confusing • Irritating • Harsh • Unenjoyable • Long wait times • No response • Off-topic • Stilted conversations • Correct* • Useful* • Help others* • Happy space* 	<ul style="list-style-type: none"> • Immediate • Connected • Personal • Sharing • Materials that help • Less formal, less structured, less academic • Already established online relationships • Brainstorming • Able to learn from my classmates • Great 	<ul style="list-style-type: none"> • Fortunate • Compare stuff • Comfort of knowing someone will understand • Help each other understand • Somebody else's view point • She knows what I am talking about • Others can empathise • Regular interaction • Educating my workmates • Able to use ideas from the course
Advertising	<ul style="list-style-type: none"> • Task orientated instead of relationship orientated • Assessment driven • Unhelpful • Uninteresting • Time consuming • For the sake of it • Copied and pasted off Google • Tick the box to get the points • Isolating • Less likely to check it • Helps me to gauge the level of expectation* 	<ul style="list-style-type: none"> • Get further information • Always accessible*** • Ongoing friendships • Already there (e.g. on Facebook) • Instant • Everyone is on Facebook • Immediate feedback • Constant • Come together • Negotiate • Engaging • Asking for hints • Venting, • Talking about assignments • Handy • Provides a context for content • Unresponsive teammate** 	<ul style="list-style-type: none"> • Validation • Insightful • Interesting • Regular communication • Aware of how it all fits into day-to-day life • Went back to study based on work • Handy • She actually was like a classmate • Engaging • Self learning
Mathematics	<ul style="list-style-type: none"> • Communication delay • Nothing making me learn • Difficult to work out what is going on • Zoned out • Easy to put off • Don't want to be singled out • Don't want to be the first to post 	<ul style="list-style-type: none"> • Really helpful teacher (e.g. email) • Resources on internet similar to the teacher's resources • Access to similar problems • Uncomfortable emailing teacher** 	<ul style="list-style-type: none"> • Got to talk • Easy to correct information • A chance to understand mistakes • Bounce ideas off of others • I am more focused • Teacher is more helpful

Source. Interview data

Note: *Indicates perceptions and understandings that were positive where all other were negative

Note: **Indicates perceptions and understandings that were negative where all other comments were positive

Following on from Figure 8.1 and Table 8.1, I will discuss each stage in turn. By doing so, I will discuss in more detail the findings from the teaching curriculum, learning curriculum, and audience. In the section about the front stage, I draw from findings from discussion boards. In the section about the backstage online, I draw from findings about Facebook. Lastly, in the section about the backstage offline, I draw from findings associated with friends, family, colleagues, and clients.

Front stage: Discussion boards

Teaching curricula constrained students' learning in the front stage and may have resulted in students not utilising the discussion boards. Students also controlled their learning by self-segregating themselves from the front stage to the backstages. In this section, I will explain these two points using the themes of course design, teacher presence, and the students' performance of not posting to the discussion board. I also acknowledge the possibilities that the norms of the LMS usage in each subject, the norms of all subjects that a student experienced prior to their current subject, and the publicness of the interactions within a given space, impact discussion board usage or lack thereof.

Course design

The discussion board was the university classroom for the online students. When an environment, like a classroom, is well-defined those present may find restriction and constraint (Goffman, 1959). One way in which the teaching curriculum was well-defined was by the course design such as the discussion board activities. The discussion board activities suggested how students should use that space. If the students had

followed these suggestions, then the discussion board could have been a useful learning artefact for students. For instance, in the mathematics subject the teacher suggested using the discussion board to interact with classmates. However, one reason the students did not do this was because they preferred interacting with the expert and expert resources. In the advertising case study, where the discussion board was designed to be assessment-driven, students responded by performing make-work. Similarly, in the psychology subject activities were designed for students to respond to classmates' posts, but this rarely happened. These points illustrate how an artefact defined and designed for one purpose may not necessarily support the community of users for which it was designed. The psychology subject further illustrated this point. For instance, discussion board activities were designed for students to respond in dot-points. However, some students opted to respond in lengthy essay-like paragraphs. This made some students, like Julia, feel inadequate and it constrained her ability to participate in the discussion board. For students who felt like Julia, the discussion board did not meet their needs and they possibly stopped using it. Studies have shown that university students create and use artefacts that support their needs (Gourlay, 2014; Petrovic et al., 2014; Thorpe & Edmunds, 2011; Daele, 2010). This suggests that when the discussion board did not support the needs of the students in the case studies, they did not use it.

Teacher's presence

In addition to the course design of each subject, the teaching curriculum was also enacted by the teacher's presence on the discussion boards. The teaching curriculum, as the teachers enacted it in the front stages of the three case studies, rarely supported the needs of the students. Research has shown that online university programs can use discussion boards to enact a sense of belonging through frequent teacher-to-student interactions (Thomas et al., 2014). However, research also shows that

when teachers post too frequently to discussion boards they stifle student-to-student interactions (An et al. 2009). The tension between these two outcomes from the literature suggests that regular teacher-to-student interactions create a sense of belonging for students, but limit students' interactions with classmates. This tension was also present in the three case studies. For instance, in Table 8.1 column one, the teacher's presence on the discussion boards accounted for the positive descriptions. Specifically, students found information from tutors to be "correct" and "useful", and some students were able to use the front stage to "gauge the level of expectations" of the teachers who would be marking their assessments. However, these descriptions were associated with students' training and not the students' sense of belonging. This is problematic for the social processes that support learning, because if students lack a sense of belonging they may only use the front stage for training purposes.

While a teacher's presence enabled students' training in the front stage they mostly constrained students' learning in this space. One way in which the teachers constrained students' learning in the front stage was by not posting on the discussion board. In the advertising case study teachers did not respond to students' discussion board tasks. In the mathematics case study, the teacher preferred email. In contrast, the psychology teachers posted more frequently in the front stage. Yet, this did not always result in learning nor did it facilitate a sense of community on the discussion board. When an environment lacks these characteristics, the social processes that facilitate situated learning might not be fostered. Kathy, from the psychology case, demonstrated this point in her story. Kathy was asked by a teacher to move information from one discussion board thread to another. This request interrupted and ended a discussion board conversation related to Kathy's learning. For Kathy, this interaction resulted in her resituating her learning from the front stage to the backstage online. In the backstage

online Kathy could discuss uninterruptedly the content with her classmates on Facebook. When students similar to Kathy found a community of students outside of the discussion board who fulfilled their needs, they stopped posting to the discussion board and spent less time in the front stage. Relatedly, once students' needs were met in another stage they may choose not to utilise the front stage in future subjects.

Not posting to the discussion board

It was more common across the three case studies for students not to post to the discussion board or to stop posting to the discussion board. If students learn in backstage spaces and with people who suit their needs, then the large number of stagehands in the front stage of each subject should be expected. Wenger et al., (2002) advises that in the context of a community of practice only about 10-15% of all members participate regularly. The same could be true of a university classroom. The front stage discussion board data from this study supports this. While Wenger et al. (2002) identify members' passion about the content area as a key indicator of regular participation, lacking in the literature are reasons to explain the other 85-90% of members who sometimes or never participate. Table 8.1 provides the context for possible reasons. As Table 8.1 illustrates, students described the front stage in an overwhelmingly negative manner. The negative descriptions included classmates' posts being "off-topic", classmates in the front stage "ticking the boxes to get points", and that there was nothing in the front stage "mak[ing] me learn". I will expand on these reasons using explanations from students' past experiences from other subjects and their present experience in a subject.

Students' past discussion board experiences can also inform how they use the discussion board in their current subject. In Table 8.1 this was marked with words such as "uncomfortable" and not wanting to be "singled-out". Once students had a negative

experience in a discussion board, all future discussion board posts may be associated with risk-taking. In order to post in the discussion board again, a student would have to overcome fear and judgement or risk having another negative experience. Risk-taking is a point not considered in Lave and Wenger's (1991) situated learning or Wenger's (1998) community of practice theory. Briana, from the psychology subject, shared a story that best illustrates this point. During her first five or six units she considered herself a performer to the discussion board. However, now Briana only posts to students with whom she has a relationship. This is because classmates and tutors in the past made her feel uncomfortable. If Briana wanted to re-enter the front stage, she would have to overcome these feelings and risk experiencing these feelings again. Instead she avoids this risk by using the backstage online and backstage offline to support her learning. Briana's learning curriculum encompasses five Facebook groups and several Facebook friends. She also has an "educated group of friends" who help her to prepare emotionally at the start of the semester. Because of these backstages it is unnecessary for Briana to risk re-entering the front stage. Risk-taking could also explain why students in the mathematics subject "didn't want to be the first to post" or "feel singled out".

Another reason for students' negative perceptions and understandings of the front stage is that the discussion board in a students' present subject lacks a shared history. A shared history is achieved over time through sustained engagement. To experience some form of significant learning, or transformed way of being, shared histories of learning must be present. Without this students lack the trust necessary for entering a learning pathway (Nam, 2014; Preece, 2000; Wenger, 1998). Wenger (1998) suggests the only time this is an exception is when people come together as a result of an intense experience such as a natural disaster. The students in each case study were

enrolled in a twelve-week subject with students whom they mostly did not know. Therefore, there was neither a shared history nor sustained engagement. Further to this point, when engagement was not sustained in the case studies, like in the non-graded discussion boards of all three case studies, students did not trust that their classmates were reading the discussion board. This played a role in informing students' choices not to post or to stop posting to the discussion board. Descriptions associated with a shared history were absent from the front stage descriptions of all three case studies (see Table 8.1 column one). However, they were present in the backstage online descriptions of the psychology and advertising cases (e.g. "already established relationships" and "ongoing friendships") (see Table 8.1 column two). This evidence supports the claim that a shared history is important to students' learning, which is why the front stage did not support students' learning experiences as well as the backstage.

Students who identified that the discussion board did not support their learning responded by self-segregating into the backstage online or backstage offline. By doing so, they often found a space that better suited their needs. When students self-segregated they also enacted control over their learning. The content of the psychology and advertising subjects made it easier for students in those subjects to segregate themselves from the teaching curriculum. The advanced content of the mathematics subject restricted students' opportunities to segregate themselves from the university context. This was because their learning experiences were mostly dependent upon the teaching curriculum and some students were also dependent upon the expert-teacher. Being dependent on the teacher attracted the students to those settings where he was present and constrained their learning to those spaces. However, the mathematics students could segregate themselves from the front stage if they were not dependent on the teacher for their learning. For instance, those students who were able to learn how to solve

problems from the textbook did not need to log into the front stage to download learning resources or watch the lecturer's recorded videos.

The examples of course design, teacher's presence, and not posting to the discussion board, along with the negative descriptions of the front stage, offer evidence to explain why students controlled their learning by self-segregating themselves into the backstages. The backstages were where students' perceptions and understandings were described in a more positive way. This was illustrated specifically in column two of Table 8.1, which captures the views about working with classmates on Facebook, and column three, which captures the overall tone of why students were able to learn with family, friends, colleagues, and clients. In Table 8.1, students' keywords used to describe the backstage online and backstage offline notably illustrate aspects associated with situated learning. These aspects include the ability to negotiate other points of view, apply content from one community to another community, and sustained engagement (Lave & Wenger, 1991; Wenger, 1998). This further supports my argument throughout the case study chapters. The front stage, in comparison to the backstages, was less of a learning environment that supported learning and more of a learning environment that supported training, specifically when a teacher was posting more frequently in this space.

In summary, the teaching curriculum constrained students' learning and the students in the three case studies exercised control over whom they interacted with and where. Two ways in which cameos, extras, and stagehands exercised control in the front stage were to leave or observe. Students chose to leave or observe in the front stage because their learning and training needs could be met elsewhere such as the backstage online or backstage offline. These stages will be discussed next.

Backstage online and backstage offline

Students identified learning curricula in the backstages that enabled them to resituate their learning from the front stage into the backstages. This was how students learned across time and space. When students became segregated from the front stage, their front stage data might be interpreted as them being absent from the subject. Being able to absent oneself from an environment, or stage, gives actors the control to escape, or buffer themselves, from institutional demands (Goffman, 1959). This includes those demands prescribed by the teaching curriculum through the discussion board activities. In instances where students went backstage they were enacting control over their learning. Students across the three case studies found opportunities for elaboration of the content in the backstage online and backstage offline. Because these spaces, and the people in these spaces, facilitated social processes that helped students to identify their learning, they became part of an individual's learning curriculum.

Students' learning curricula, because they were a repertoire of a students' resources, were visible in the data when students reported where and with whom they performed subject-related tasks in the questionnaires and interviews. This filled a gap in the literature by explaining what students did for their study when they were not logged into the LMS. In the front stage, discussion board posts coded for learning were largely absent from all three case studies. One reason for this could be that while the front stage was well defined by the university, the backstage online and backstage offline were not. When an environment is malleable those present may find elaboration (Bernstein, 2000). When students are able to elaborate on the content they might experience opportunities to resituate the curriculum from one context to the next. The backstage, for the most part, was only constrained by students' inability to resituate the curriculum into that space.

The ability to resituate the curriculum was dependent upon the content area, the students' perceptions and understandings of their experiences within their backstages, and personal choices. Mia, from the mathematics subject for example, was more likely to have conversations about the content at home because her father and brother were familiar with the content. In other words, her backstage offline audience were mathematicians. Because of this, she chose to ask them for help instead of the teacher, as emailing the teacher made her feel uncomfortable. Similarly, Donny, from the advertising subject, worked in the advertising sector. It therefore made sense that he would turn to experts in the workplace about the content and classmates from the university about training (i.e. assessments). Most notable from the psychology subject was how the students supported their learning using Facebook. These are just three examples of where students elaborated on their learning across the stages. Most importantly, these three examples are students who reported more time spent in the backstages than the front stage. Higher levels of learning are often reported in spaces where students feel a sense of belonging (Levett-Jones, Lathlean, Higgins, & McMillan, 2009). A sense of belonging is a condition for situated learning and it was more prevalent in the backstages than the front stage. A sense of belonging also facilitates students' ability to talk about difficult topics (Kernahan, Zheng, & Davis, 2014). Class discussions were a requirement of both the advertising and psychology subjects. Table 8.1 shows that students were able to discuss topics more so in the backstages than in the front stage. Even mathematics students reported how they needed to talk about difficult content with others backstage. If students felt a stronger sense of belonging in the backstages, then this could explain why they chose to have interactions related to their online subject in that space.

In the next sub-sections, I continue to expand upon finding one and finding two with a specific focus on the backstage online and the backstage offline. First, I explain why the psychology and advertising students used Facebook to support their learning and why the mathematics students did not. Then, I suggest possible reasons for why the backstage offline was a preferred learning environment for students. This discussion highlights how the subject's content and resources available in a students' everyday life inform where students learn and with whom.

Backstage online: Facebook

While many studies have investigated how students use Facebook in relation to their university study (Bosch, 2009; Cuesta et al., 2016; Selwyn, 2009), my analysis in this section focuses on analysing students' use of Facebook through Lave and Wenger's (1991) social processes. Initially, I interpreted the overwhelming presence of stagehands in the front stages of all three case studies as a rejection of the LMS and the acceptance of Facebook. Selwyn (2010, 2012) criticises academic work, particularly in the field of educational technology, for generally failing to consider the social nature of technology. My initial claim failed to consider the social nature of technology. Investigating learning through the lens of situated learning and community of practice theory promotes the focus on social processes between those present (the social) without losing sight of the technology (the technical). Wenger (1998) contends that the technology of a practice is reified into an artefact because it supports the social processes of the members. This explains why the advertising and psychology students used Facebook to support their learning and why the mathematics students did not.

In the psychology and advertising subjects, the absence of students' social processes on the discussion board, and presence of students' social processes on Facebook, is what gave Facebook meaning in the backstage online. While Facebook

was not responsible for students learning, it did provide an alternative space to the LMS that afforded different social processes between students. Table 8.1 shows that students' descriptions of their perceptions and understandings of their experiences in the backstage online were overwhelmingly positive, which is a stark contrast to that of the front stage. The psychology and advertising students' use of Facebook (the technical) was perpetuated because of their perceptions and understandings of the social interactions in that space (the social). Most importantly, the descriptions from Table 8.1, column two, align with aspects of situated learning which were not present on the discussion board (i.e. negotiation, sharing, able to learn from classmates).

Facebook also had conventional affordances that the students ascribed to its usage. The data in both the psychology and advertising case studies showed that students benefited from or enjoyed Facebook because it was faster or more responsive and offered a constant connection between students and their peers. Take the psychology case study for instance. Students preferred Facebook because it was "immediate" and faulted the LMS for "long wait times". There are several reasons why the backstage audience was faster or more responsive than the front stage. One reason is that the large Facebook groups had more experienced peers. This meant students who had already completed the subject could respond to current students and reference their previous experience in the subject. The presence of audience members with mixed abilities not only supports learning (Wenger, 1998), but it could have also made information in the backstage online faster or more responsive but also just as credible as the front stage.

The mathematics students who completed questionnaires and interviews never used Facebook to support their learning or training experiences. This was because the technology did not support the social processes most important to the mathematics

students. In the mathematics row of Table 8.1, the students' descriptions of the backstage online are teacher-focused. The backstage online was preferred by the mathematics students for reasons such as, they could "access similar problems" on the internet or they had a "really helpful teacher" available via email. These descriptions mostly reflect the novice to expert trajectory, which Facebook could not support because the expert was not on Facebook. This is an important distinction to consider because it highlights how the students, even in a non-discursive subject, situated their learning based on relationships not technology.

In comparison to the students studying psychology and advertising, the mathematics students were dependent upon the social processes between expert and novice. Most important to students was watching the expert solve the problem. Lerman (2002) asserts that methods for solving problems are an artefact in the teaching and learning of mathematics. This was the case for the mathematics students. The students in this case study were dependent upon the expert to learn the methods for how to solve the mathematics problems. Therefore, the mathematics students reified the spaces where this social process occurred, and the tools that captured this social process. This included the use of lecture recordings, finding videos that personified their teacher, and occasionally email. If the expert had been on Facebook posting videos of himself solving problems, the students would most likely have joined this space because the social process they sought would have been there.

The students' positive perceptions and understandings of their experiences in the backstage online were one reason why the backstage online was the preferred learning environment for students. This section explained the interplay between students and their relationships with each other and the expert (the whom), and the environments that students used or created to situate and resituate these relationships (the where). This is

central to understanding what made the backstage online a more successful learning environment than the front stage.

Backstage offline: Friends, family, colleagues, clients

Backstage offline audiences were mostly friends, family, colleagues, and occasionally clients. The audience in the backstage offline helps to fill a gap present in the other two stages, which is real-time face-to-face communication. Studies have reported that some students feel a lack social presence and disengagement with the text environment in online classrooms (Bayne, Gallagher, & Lamb, 2014; Gunawardena & Zittle, 1997). If students disengage with those present in a textual environment, like the LMS and Facebook, then choosing the backstage offline can help to alleviate this burden by offering students a face-to-face environment for their learning. The benefit of having family, friends, and colleagues to use as a study buddy or sounding board is that, unlike the discussion board and Facebook, access to the audience's responses is immediate. For mathematics students, this made it "easier to correct information" (see Table 8.1, column three). As illustrated in the three case studies, the backstage offline afforded students opportunities to consolidate their learning in a non-text environment. In a non-text environment, students' words are not recorded in a way that can be analysed and evaluated by others. For the psychology and advertising students the backstage offline was a space to apply and discuss what they had learned with others (see Table 8.1, column three). This was because the people with whom they were speaking interacted in a manner that the student did not feel judged for word choices, ideas, or mistakes present in their writing. This implies that there was a greater sense of trust between the students and the backstage offline audience than there was between students and the front stage audience.

The descriptions of the backstage offline from Table 8.1 further indicates how important relationships were to students learning. Relationships between students and their family, and relationships between students and their colleagues were particularly important. Few studies of online learning consider the family as a resource, and few studies of situated learning consider the family a community of practice. Even Lave (2008) was bemused by the fact that those interested in detecting communities of practice do not consider the family as a possibility. It seems logical that students might choose to learn with family members given that the family is widely accepted as a person's first socialising agency within society (Anderson, 1983; Bernstein, 2000; Dewey, 1899).

Colleagues provide a similar context as family and friends. According to Goffman (1959), colleagues share a "community of fate" (p. 160). This is because colleagues put on the same daily performance at work that results in speaking the same social language. When the shared language was related to a student's field of study, this benefitted the students. Barry, from the advertising case study, illustrated this point. When the social language between university and work were different, students could apply content from the university content to the work context. Eileen and Joanne illustrated this point in the psychology case study. Relaxation also becomes possible among colleagues. This is because the performance an actor needs to put on in the front stage is unnecessary with colleagues as they are not part of the audience (Goffman, 1959). This point could also be applied to family and friends because, like colleagues, they are also not part of the front stage audience. For the students, their family and colleagues were not typically a part of their front stage university audience. However, when colleagues and family were a part of students' university audience, the students

reported perceived positive experiences. These reasons also help to explain why the backstage offline was a preferred learning environment for some students.

These points may not be true of all work environments, particularly competitive work environments, just as not all family and friends make good classmates. The point I wish to make about family, friends, and colleagues is not that these relationships are the same for every student, but that for some students these relationships existed, and they perceived these relationships in relation to their learning favorably. For those students, the choice to study with their family, friends and colleagues was a way to elaborate on their learning and training. This learning space should not be ignored by online leaning theories.

Overall, students reported learning more when they were in an environment where the experiences were perceived and understood to be positive. Students' preferred environments where classmates and university friends on Facebook, as well as family, friends, colleagues, and clients could support their learning processes. Since students reported that people in their backstage offline "were actually like a classmate" and were able to describe ways in which the backstage audiences supported their learning, then perhaps universities may need to consider what makes an effective classmate. And in the context of an online subject, how can universities cultivate and support relationships between effective classmates? This is an important question for future research.

Finding three: Multiple identities were enacted across the front stage, backstage online, and backstage offline

Throughout this thesis I portrayed students as actors in a play. By using theatre terminology I was able to illustrate how university students perform differently across

setting, time, and audience. In this section, I will focus on the setting, specifically how students enacted multiple identities from one setting to the next.

The illustrations I provided in the findings of each case study show a marked difference between the way online students present themselves in the front stage, backstage online, and backstage offline. This helps to explain the problem of low participation in online discussion boards that many online programs experience. All of the students in my study crafted a personalised learning experience using the various stages. As discussed in the literature review social processes between persons and identities enable students to have more than one identity (Lave & Wenger, 1991). By applying Goffman's (1959) region behaviour to both the conceptualisation of learning and the design of my study, instead of just a single stage like most studies, the students, and myself as the researcher, were able to identify social process between persons and identities across contexts.

My findings showed that students constructed multiple identities across the stages. This finding is inline with the literature (Dennen, 2014; Lave, 2008, 2011; Lave & Wenger, 1991; Wenger, 1998). However, my novel contribution is a participation typology that illustrates how students enacted their identities across the three stages. I will use this typology to show how students moved their learning and training experiences between the front stage, backstage online, and backstage offline. Mapping a students' identity across the three stages is useful for understanding the whole students' experience in a subject. This notion contributes to the field of online studies because it situates where students prefer to perform subject related tasks when they are not logged into the LMS. In this section, I will explain how I used the data from the three case studies to design the typology, and then I will apply the mapping process to students from the case studies.

A tool for mapping how students enacted different identities across the three stages

Students' interviews, questionnaires, as well as discussion board posts reported and illustrated tasks that students performed within each stage. I arranged these tasks from least complex to most complex in Table 8.2. In the far left column are the possible roles that students played. The three columns on the right show the stage orientation and the tasks performed within each stage. I have ranked these tasks in order of complexity. My intent is not to define every task or action that a performer did in each stage and in what order. This is not my intent because the findings from the previous sections in this chapter showed that where, and with whom, students learned and trained was related to the teaching and learning curricula, and was an individual's choice based on his or her personal experiences.

Also in Table 8.2, you will notice how I have applied the theatre roles to the backstage. I will briefly explain my rationale for this. Throughout the case study chapters, I ascribed theatre roles to students in order to illustrate their front stage performance. For instance, a stagehand never posted to the discussion board. However, for the purpose of describing how students constructed multiple identities across the three stages, I apply the theatre roles in the same way that Wenger (1998) used participation trajectories to situate one's identity in and across communities of practice. That is, I ascribed the same theatre roles from the front stage to the backstage in order to emphasise how students performed differently across the stages (see Table 8.2). For instance, a student might be a stagehand in the front stage while simultaneously acting as a performer in the backstage online.

Table 8.2

A participation Typology for Mapping a Student's Multiple Identities Across the Three Stages

← Stagehand	← Cameo	← Extra	← Performer	Front stage oriented	Backstage online oriented	Backstage offline oriented
				Uses front stage as a resource	Searches/Reads from online sources/Downloads online sources for offline access	Imagines being a member of a future profession
				Asks questions	Brokers information between the backstage online and the backstage offline	Uses offline resources (e.g. books)
				Communicates with only staff/tutor	Uses email/social networks as a resource	Unsure how content relates to everyday interactions
				Responds to activities on the discussion board	Uses email/social networks to ask questions	Starting to see their context differently
				Answers peers questions	Uses email/social networks to share resources	Notices changed ways of thinking
				Responds to peers/tutors with praise and gratitude	Uses email/social networks to answer questions	Converses with family and friends about content or university experience
				Brokers information from one discussion board/forum to the next	Brokers information between the front stage and the backstage online	Applies content to relationships at home, work, or social situations
				Adds new information to posts and activities	Leads a group of peers/starts up a group on an online social network	Teaches colleagues, family or friends about content
				Teaches others on the discussion board	Teachers others via email or social network	Becomes a member of the profession and may assume a new stage orientation
				Disagrees with others on the discussion board		

Source: This template was informed by the front stage observations, questionnaire data, and interview data from the three case studies

The purpose of mapping a student's identity in this chapter is to illustrate how a student resituates a subject's content across multiple contexts. Even when students prefer, for example, a backstage, they still enact aspects of the curriculum in other stages. I have selected four students from the case studies to illustrate this point. The

students that I selected not only illustrate how multiple identities played out across the stages, but they also demonstrate how students were oriented to one particular stage to the others. I refer to this as a students' stage orientation; this is a preference about where students prefer to perform their subject-related tasks. Students became orientated towards one stage over another based on their personal circumstances and preferences, which were often informed by perceptions of familiarity, comfort, and convenience.

In the pages that follow I have mapped and name the stage orientation for Ingrid, Lynn, Joanne, and Mia. I will not rehash the students' experiences because I have already provided a thick description of this throughout the case study chapters. Ingrid, from the psychology subject, was front stage oriented (see Table 8.3). Lynn, from the advertising case study, was backstage online oriented (see Table 8.4). Joanne, was also from the psychology case study, she was backstage offline oriented (see Table 8.5). Mia, from the mathematics case study, was also backstage offline oriented (see Table 8.6). Mia's identities across the stages look inactive because of the nature of the mathematics subject. In fact, all three students from the mathematics subject had a similar table. This made it more difficult to understand which stage Mia preferred. I returned to her interview data to confirm that she was backstage offline oriented (e.g. in Mia's interview she explained: I don't like online stuff...I just prefer the face-to-face sort of thing.).

Table 8.3

Ingrid's Stage Orientation: Front Stage Oriented

←Stagehand	←←Cameo	←←←Extra	←←←←Performer	Front stage oriented	Backstage online oriented	Backstage offline oriented
				Uses front stage as a resource	Searches/Reads from online sources/Downloads online sources for offline access	Imagines being a member of a future profession
				Asks questions		Uses offline resources (e.g. books)
				Communicates with only staff/tutor	Brokers information between the backstage online and the backstage offline	Unsure how content relates to everyday interactions
				Responds to activities on the discussion board	Uses email/social networks as a resource	Starting to see their context differently
				Answers peers questions	Uses email/social networks to ask questions	Notices changed ways of thinking
				Responds to peers/tutors with praise and gratitude	Uses email/social networks to share resources	Converses with family and friends about content or university experience
				Brokers information from one discussion board/forum to the next	Brokers information between the front stage and the backstage online	Applies content to relationships at home, work, or social situations
				Adds new information to posts and activities	Leads a group of peers/starts up a group on an online social network	Teaches colleagues, family or friends about content
				Teaches others on the discussion board	Teaches others via email or social network	Becomes a member of the profession and may assume a new stage orientation
				Disagrees with others on the discussion board		

Source: Front stage observations, questionnaire data, and interview data related to Ingrid

Note: The bold indicates tasks that the student performed in each stage, whereas the grey out text indicates tasks the student did not perform in each stage.

Table 8.4

Lynne's Stage Orientation: Backstage Online Oriented

←Stagehand	←←Cameo	←←←Extra	←←←←Performer	Front stage oriented	Backstage online oriented	Backstage offline oriented
				Uses front stage as a resource	Searches/Reads from online sources/Downloads online sources for offline access	Imagines being a member of a future profession
				Asks questions		Uses offline resources (e.g. books)
				Communicates with only staff/tutor	Brokers information between the backstage online and the backstage offline	Unsure how content relates to everyday interactions
				*Responds to activities on the discussion board	Uses email/social networks as a resource	Starting to see their context differently
				*Answers peers questions	Uses email/social networks to ask questions	Notices changed ways of thinking
				*Responds to peers/tutors with praise and gratitude	Uses email/social networks to share resources	Converses with family and friends about content or university experience
				*Brokers information from one discussion board/forum to the next	Uses email/social networks to answer questions	Applies content to relationships at home, work, or social situations
				*Adds new information to posts and activities	Leads a group of peers/starts up a group on an online social network	Teaches colleagues, family or friends about content
				*Teaches others on the discussion board	Teachers others via email or social network	Becomes a member of the profession and may assume a new stage orientation
				*Disagrees with others on the discussion board		

Source: Front stage observations, questionnaire data, and interview data related to Lynn

Note: The * in the front stage oriented column indicates that the student earn marks for performing those tasks.

Note: The bold indicates tasks that the student performed in each stage, whereas the grey out text indicates tasks the student did not perform in each stage.

Table 8.5

Joanne's Stage Orientation: Backstage Offline Oriented

← Stagehand	← ← Cameo	← ← Extra	← ← Performer	Front stage oriented	Backstage online oriented	Backstage offline oriented
				Uses front stage as a resource	Searches/Reads from online sources/Downloads online sources for offline access	Imagines being a member of a future profession
				Asks questions		Uses offline resources (e.g. books)
				Communicates with only staff/tutor	Brokers information between the backstage online and the backstage offline	Unsure how content relates to everyday interactions
				Responds to activities on the discussion board	Uses email/social networks as a resource	Starting to see their context differently
				Answers peers questions	Uses email/social networks to ask questions	Notices changed ways of thinking
				Responds to peers/tutors with praise and gratitude	Uses email/social networks to share resources	Converses with family and friends about content or university experience
				Brokers information from one discussion board/forum to the next	Uses email/social networks to answer questions	Applies content to relationships at home, work, or social situations
				Adds new information to posts and activities	Brokers information between the front stage and the backstage online	Teaches colleagues, family or friends about content
				Teaches others on the discussion board	Leads a group of peers/starts up a group on an online social network	
				Disagrees with others on the discussion board	Teachers others via email or social network	Becomes a member of the profession and may assume a new stage orientation

Source: Front stage observations, questionnaire data, and interview data related to Joanne

Note: The bold indicates tasks that the student performed in each stage, whereas the grey out text indicates tasks the student did not perform in each stage.

Table 8.6

Mia's Stage Orientation: Backstage Offline Oriented

←Stagehand	←←Cameo	←←←Extra	←←←←Performer	Front stage oriented	Backstage online oriented	Backstage offline oriented
				Uses front stage as a resource	Searches/Reads from online sources/Downloads online sources for offline access	Imagines being a member of a future profession
				Asks questions		Uses offline resources (e.g. books)
				Communicates with only staff/tutor	Brokers information between the backstage online and the backstage offline	Unsure how content relates to everyday interactions
				Responds to activities on the discussion board	Uses email/social networks as a resource	Starting to see their context differently
				Answers peers questions	Uses email/social networks to ask questions	Notices changed ways of thinking
				Responds to peers/tutors with praise and gratitude	Uses email/social networks to share resources	Converses with family and friends about content or university experience
				Brokers information from one discussion board/forum to the next	Uses email/social networks to answer questions	Applies content to relationships at home, work, or social situations
				Adds new information to posts and activities	Brokers information between the front stage and the backstage online	Teaches colleagues, family or friends about content
				Teaches others on the discussion board	Leads a group of peers/starts up a group on an online social network	Becomes a member of the profession and may assume a new stage orientation
				Disagrees with others on the discussion board	Teachers others via email or social network	

Source: Front stage observations, questionnaire data, and interview data related to Mia

Note: The bold indicates tasks that the student performed in each stage, whereas the grey out text indicates tasks the student did not perform in each stage.

The Tables illustrated a mix of participation patterns across multiple spaces.

Students managed their individual learning through enacting multiple identities.

Crossing boundaries exposes students to different forms of engagement that potentially

enhances learning (Wenger, 1998). This argument supports the claim that the student naturally balances learning through individual and social identities by applying what one has learned in one context to another context. Dewey (1899) uses the example of the school and the home: a student can utilize learning from the home to the school and apply things learned at school to the home. If we accept this line of reasoning then we may also need to accept that the act of learning has not changed despite the introduction of new technologies, but the spaces for learning have multiplied.

Overall, few students posted to the discussion boards. The discussion boards from all three cases were dominated by stagehands. However, by illustrating students' multiple identities we can explain where online students were performing tasks related to their learning. The nuanced Tables that illustrated the experiences of Ingrid, Lynn, Joanne, and Mia in the front stage, alongside their backstage online, and their backstage offline remind us that not all students learn the same way, or live in circumstances that afford front stage connectedness. Similarly, it is unreasonable to expect that all students want a backstage online presence to support their learning, or that all subject matters afford this. While some students support their learning through offline relationships it would also be detrimental to believe that all students could use offline relationships to support their learning. Nonetheless, this tool could be used by learning designers to create activities that span the three stages or by researchers to think critically about what data is ignored in studies of online learning. New teachers to online education might also benefit from understanding why their students are not in the front stage, as it is not an indication of an ineffective teacher.

Chapter summary

Lave and Wenger's (1991) situated learning and community of practice lens complemented Goffman's (1959) theory of region behaviour by revealing how online

students, in all three case studies, learned across space and time. This analytical approach revealed useful insights to where and with whom students experience learning and training in an online subject. Through this cross-case analysis I showed how the teaching curriculum constrained and restricted students learning but dually created training resources for students. Learning curricula, on the other hand were mostly visible in students' backstages, because this is where students perceived that they could elaborate on the content from a subject. In the final section of this chapter, I developed a participation typology to illustrate how students performed multiple identities across the stages. This tool could help universities to imagine online students outside of the LMS. Overall, this analysis tells a story about the students' experiences that, if told through the current frameworks of online learning, would not have been possible.

Chapter 9: Conclusions

My central argument in this thesis was that the learning related to a student's online subject occurs in spaces other than the LMS, yet this is rarely considered in the literature about online learning. The purpose of this research was to explore where and with whom students might be experiencing learning related to their university subjects outside of the LMS. Once I located where students were spending their time and what social processes in which they were engaging, I was able to explore what made those spaces effective learning environments for students.

My study embraced Goffman's (1959) dramaturgical approach for understanding human interaction and created a useful theatre metaphor for learning. I use the analogies of stages in a place to show how students experienced learning in an online subject. This included the front stage, which was the university LMS, the backstage online including Facebook, and the backstage offline, which compromised family, friends, and colleagues. I also ascribed students roles based on their front stage performance, which were across a spectrum of least to most discussion board posts: stagehand, cameo, extra, and performer. I defined *learning* as a student's changed understanding of the content within the subject and the ability to apply the content across contexts, and defined *training* as learning to become a more competent student. I also addressed the difficulties of pinning down a concept such as learning in a study such as this.

Overall, my research methods were successful in meeting my goal, which was to tell a more complete story about how learning occurs in online subjects. I was able to collect data from the front stage, backstage online and backstage offline of four second-year online university subjects: a psychology subject, two advertising subjects, and an advanced mathematics subject. The social processes that guided the analysis throughout

the case studies and cross-case analysis were the social processes between newcomer, expert, and near peers; the social processes between persons during activities in a curriculum; the social processes between persons and multiple identities and communities of practice; and the social processes between persons that produce artefacts and affordances.

I used the psychology case study, in chapter 5, to explore the possibilities for where and with whom students resituated and elaborated upon the content from the subject. I found that students rarely used the front stage to interact with their classmates. The front stage was mostly a stage for training and it was legitimised by the teacher's presence. Meanwhile, backstage online, students used Facebook for training and learning process with classmates from other subjects and their current subject. In the backstage offline, students engaged with friends, family, and colleagues as study buddies, sounding boards, and mirrors through which their learning was identified and reflected back them. These real world experiences made important contributions to students' learning of the content area.

In chapter 6, the advertising case study, I investigated the same themes as the psychology case study, only in this context the students' participation in the front stage was graded, and in the backstage students completed a group work assessment. The front stage teaching curriculum constrained students learning because it was scripted by the university. The students were instructed when to post, how to post, and how to respond to classmates. In the backstage online, students also completed a graded assessment task. However, by enacting Goffman's (1959) secret keeping, the students were able to control their learning experience and elaborate upon the content in the subject. For those students who were employed in a job related to the subject, they were able to acquire and apply knowledge in a two-directional manner. On the one hand they

were able to apply content from the subject in their workplace, and on the other hand they were similarly able to draw from their work experiences to understand the subject's content. This was also true of students in the psychology subject, whereas the content in the mathematics subject was too abstract for students to imagine in real-world contexts.

In the mathematics case study, chapter 7, I continued my investigation of the themes, only this time in the context of an advanced non-discursive subject. As the mathematics subject illustrated students were dependent upon the novice-expert trajectory in order to experience learning. The students were reliant upon the expert and expert resources in order to watch how to solve problems before solving the problems themselves. This may not be ideal for the student, because she or he becomes limited to learning during times of the expert's availability, or the teacher, may engage in an unsustainable work model. In addition, the advanced subject matter constrained who students could learn with whereas training interactions, such as how to study for a test or complain about university, could still occur backstage with non-content experts.

The three case studies illustrated common themes across the front stage, backstage online, and backstage offline. The overall findings that emerged from my cross-case analysis showed that:

(1) Teaching curricula constrained learning and enacted mostly training processes, while learning curricula enabled students to elaborate upon the content in a subject and enacted mostly learning processes. The advanced mathematics subject, showed how training and learning were co-dependent processes because students experienced learning through solving problems and increasing the difficulty at which they practice mathematics. This constrained students' learning and training to stages where an expert teacher is present. The teaching curricula of the psychology and advertising subjects constrained learning through the course design.

(2) The three stages existed because of the social processes between the students and the audience members within each respective stage. In the interview data students mostly described their perceptions and understandings of the front stage using negative words and phrases and the backstage online and backstage offline using positive words and phrases. Importantly, students reported experiencing learning in spaces that were associated with the positive perceptions and understandings. The psychology and advertising students preferred classmates on Facebook and spaces with family, friends, colleagues, and occasionally clients. The mathematics students preferred watching the expert and expert resources solve problems. Based on this finding, if the students' experiences in the backstages, or with the expert, were to become negative like the front stage then they might prefer or chose to resituate their learning elsewhere again.

(3) Students enact multiple identities within a subject. They do so by completing subject-related tasks across the front stage, backstage online, and backstage offline. A student who is a stagehand in the front stage might be a performer in the backstage offline. This negotiation of multiple identities is evidence that students are resituating and reconceptualising content across time, space, and audiences. With this finding, I was able to create an evidence-based participation typology that can be used to map a student's experience in a subject and identify their stage orientation in a subject. By understanding a students' stage orientation we can locate where and with whom a students prefers to perform subject-related tasks and with whom they chose to learn. This contribution highlights the shortcomings of the current field of online learning, which mostly focuses on what students do in the LMS.

Further research is needed in order to understand how these findings might be used to increase students' presence in university spaces. Although I question if this is necessary, I equally acknowledge that the administrative and bureaucratic demands of

universities require this. Therefore, if students mostly enjoyed learning with classmates from other subjects, friends, family, and colleagues, then researchers need to explore what makes a good classmate.

Overall, practices of universities could be improved by changing the way that the higher education sector imagines online students. While a space like an LMS may be the hub or conduit for online learning, it has progressed little since the 1980's and it does not capture how students experience learning across time and space. Universities should consider a gestalt shift, where the LMS is just one community within a student's landscape of practice, both online and offline. As universities continue to design for online and blended course deliveries, this transition into online spaces should be done for the whole student experience, not just the online student experience. The participation typology from Chapter 8 can help with this. I believe, particularly in Australia, that we are starting to see this emerge with new trends and policies about graduate employability, in particular work integrated learning curricula. Moving forward, I hope this trend continues and that the field on education does not lose sight of the studies from the past, which can be used to inform emerging theories. I mention this in closing because the online frameworks that I critiqued in this study failed to do so.

Final journal excerpt

Excerpt from my third year research journal:

I never knew any of my students while I was teaching online. It's true. I knew my colleagues though, and they thought our students were lazy and absent. The only students I ever knew were the students who participated in this study. When I think back about the negative perception that my colleagues had about our online students, and the negative comments people made about online students over the last three years after I told them about my research project, it breaks my heart. It breaks my heart to think that any of the students who participated in my study could be described as lazy or absent... they were anything but. I think I can say that they were anything but lazy or absent because I think I knew these students. And, I think some of them felt as though they knew me.

- *Ingrid wrote to tell me that her husband was discharged from the hospital.*
- *Kerry sent an email when she graduated to share that she went to walk around her "real" campus.*
- *Sally texted (excitedly) to report her final mark for the semester, it was n HD.*
- *Donny followed up on email to share that he felt his interview was "cathartic" and a good way to end his degree.*

I never knew any of my students, but I think I knew these students. I wonder how well university teachers and administrators know their students. I wonder if knowing them better would change our understanding of their learning environment.

References

1st international conference on learning analytics and knowledge 2011. (2011).

Retrieved from <https://tekri.athabasca.ca/analytics/>

Aborisade, O. P. (2013). Data collection and new technology. *International Journal of Emerging Technologies in Learning (iJET)*, 8(2).

<https://doi.org/10.3991/ijet.v8i2.2157>

Adams, R., Nuevo, A. M., & Egi, T. (2011). Explicit and implicit feedback, modified output, and SLA: Does explicit and implicit feedback promote learning and learner-learner interactions? *The Modern Language Journal*, 95, 42–63.

<https://doi.org/10.1111/j.1540-4781.2011.01242.x>

Aghili, M., Palaniappan, A., Kamali, K., Aghabozorgi, S., & Sardareh, S. (2014).

Unifying informal and formal learning environments: Educational use of social network sites through implementing community of inquiry framework.

International Journal of E-Education, E-Business, E-Management and E-Learning, 4(3), 191–196.

An, H., Shin, S., & Lim, K. (2009). The effects of different instructor facilitation approaches on students' interactions during asynchronous online discussions.

Computers & Education, 53(3), 749–760.

<https://doi.org/10.1016/j.compedu.2009.04.015>

Anderson, B. R. O. (1983). *Imagined communities: Reflections on the origin and spread of nationalism*. London, England: Verso.

Anderson, T., Archer, W., Garrison, D., & Rourke, L. (1999). Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education*, 14(2), 50–71.

Arbaugh, J., Cleveland-Innes, M., Diaz, S., Garrison, D., Ice, P., Richardson, J., & Swan, K. (2008). Developing a community of inquiry instrument: Testing a

- measure of the community of inquiry framework using a multi-institutional sample. *The Internet and Higher Education*, 11(3-4), 133–136.
- Back, M. (2013). “La Orquesta”: Symbolic performance in a multilingual community of practice. *The Modern Language Journal*, 97(2), 383–396.
<https://doi.org/10.1111/j.1540-4781.2013.12009.x>
- Bampton, R., & Cowton, C. J. (2002). The e-interview. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 3(2). Retrieved from
<http://www.qualitative-research.net/index.php/fqs/article/viewArticle/848>
- Barrett, A. M. (2005). *Organizational learning and communities of practice in a high-tech manufacturing firm*. Lewiston, NY: Edwin Mellen Press.
- Baym, N.K. (1995). The emergence of community in computer mediated communication. In S.G. Jones (Ed.), *Cybersociety computer mediated communication and community* (pp. 138–163). Thousand Oaks, CA: SAGE Publications.
- Bayne, S., Gallagher, M. S., & Lamb, J. (2014). Being “at” university: the social topologies of distance students. *Higher Education*, 67(5), 569–583.
<https://doi.org/10.1007/s10734-013-9662-4>
- Beaudoin, M. F. (2002). Learning or lurking?: Tracking the “invisible” online student. *The Internet and Higher Education*, 5(2), 147–155.
- Bell, F. (2011). Connectivism: Its place in theory-informed research and innovation in technology-enabled learning. *International Review of Research in Open and Distance Learning*, 12(3), 98–118.
- Bernstein, B. B. (2000). *Pedagogy, symbolic control, and identity: Theory, research, critique*. Lanham, MD: Rowman & Littlefield Publishers. Retrieved from

<http://ezproxy.deakin.edu.au/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat00097a&AN=deakin.b1923208&site=eds-live&scope=site>

Black, E. W., Dawson, K., & Priem, J. (2008). Data for free: Using LMS activity logs to measure community in online courses. *The Internet and Higher Education*, 11(2), 65–70. <https://doi.org/10.1016/j.ihteduc.2008.03.002>

Blumer, H. (1967). Society as symbolic interaction. In J. G. Manis & B. N. Meltzer (Eds.), *Symbolic interaction* (pp. 139–148). Boston, MA: Allyn & Bacon, Inc.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Berkeley, CA: University of California Press.

Bosch, T. E. (2009). Using online social networking for teaching and learning: Facebook use at the University of Cape Town. *Communicatio*, 35(2), 185–200. <https://doi.org/10.1080/02500160903250648>

Brace-Govan, J. (2003). A method to track discussion forum activity: The Moderators' assessment matrix. *The Internet and Higher Education*, 6(4), 303–325. <https://doi.org/10.1016/j.ihteduc.2003.08.003>

Braun, L. (1986). The computer in the home — Boon or boondoggle? *Education and Computing*, 2(1-2), 145–151.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 27(9), 32–42.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40–57.

Brown, R. E. (2001). The process of community-building in distance learning classes. *Journal of Asynchronous Learning Networks*, 5(2), 18–35.

- Bruner, J. S. (1966). *Toward a Theory of Instruction*. Cambridge, MA: Harvard University Press.
- Bullingham, L., & Vasconcelos, A. C. (2013). "The presentation of self in the online world": Goffman and the study of online identities. *Journal of Information Science*, 39(1), 101–112. <https://doi.org/10.1177/0165551512470051>
- Bulte, C., Betts, A., Garner, K., & Durning, S. (2007). Student teaching: Views of student near peer teachers and learners. *Medical Teacher*, 29(6), 583–590. <https://doi.org/10.1080/01421590701583824>
- Burton, R. R., Brown, J. S., & Fischer, G. (1984). Skiing as a model of instruction. In B. Rogoff & J. Lave (Eds.), *Everyday cognition: its development in social context* (pp. 139–150). Cambridge, MA: Harvard University Press.
- Burt, R. S. (2000). *Research in organizational behavior: An annual series of analytical essays and critical reviews. Vol. 22: 2000*. London: JAI Press.
- Calvani, A. (2009). Connectivism: New paradigm or fascinating pot-pourri? *Journal of E-Learning and Knowledge Society*, 4(1). Retrieved from http://je-lks.org/ojs/index.php/Je-LKS_EN/article/viewFile/268/250
- Catalano, A. (2015). The effect of a situated learning environment in a distance education information literacy course. *The Journal of Academic Librarianship*, 41(5), 653–659. <https://doi.org/10.1016/j.acalib.2015.06.008>
- Chaiklin, S., & Lave, J. (Eds.). (1993). *Understanding practice: Perspectives on activity and context*. New York, NY: Cambridge University Press.
- Chavis, D. M., Hogge, J. H., & McMillan, D. W. (1996). Sense of community through Brunswik's lens: A first look. *Journal of Community Psychology*, 14, 24–40.

- Chavis, D. M., & Pretty, G. M. H. (1999). Sense of community: Advances in measurement and application. *Journal of Community Psychology*, 27(6), 635–642.
- Clow, D. (2013). MOOCs and the funnel of participation. In: *Third Conference on Learning Analytics and Knowledge (LAK 2013)*, 8-12 April 2013, Leuven, Belgium. <https://doi.org/10.1145/2460296.2460332>
- Cocks, M. (2014). The hidden curriculum. *Canadian Medical Association Journal*, 186(2), 152–152. <https://doi.org/10.1503/cmaj.131455>
- Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 453–494). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Comer, D. R., & Lenaghan, J. A. (2012). Enhancing discussions in the asynchronous online classroom: The lack of face-to-face interaction does not lessen the lesson. *Journal of Management Education*, 37(2), 261–294. <https://doi.org/10.1177/1052562912442384>
- Conole, G., & Alevizou, P. (2010). *A literature review of the use of Web 2.0 tools in higher education. A report commissioned by the Higher Education Academy.*
- Corradi, G., Gherardi, S., & Verzelloni, L. (2010). Through the practice lens: Where is the bandwagon of practice-based studies heading? *Management Learning*, 41(3), 265–283. <https://doi.org/10.1177/1350507609356938>
- Cuesta, M., Eklund, M., Rydin, I., & Witt, A.K. (2016). Using Facebook as a co-learning community in higher education. *Learning, Media and Technology*, 41(1), 55–72. <https://doi.org/10.1080/17439884.2015.1064952>

- Curnow, J. (2013). Fight the power: situated learning and conscientisation in a gendered community of practice. *Gender and Education*, 25(7), 834–850.
<https://doi.org/10.1080/09540253.2013.845649>
- Daele, A. (2010). Reifying, participating, and learning: Analysis of uses of reification tools by a community of practice. *International Journal of Web-Based Learning and Teaching Technologies*, 5(1), 43–60.
- Davis, M., Bolding, G., Hart, G., Sherr, L., & Elford, J. (2004). Reflecting on the experience of interviewing online: Perspectives from the internet and HIV study in London. *AIDS Care*, 16(8), 944–952.
<https://doi.org/10.1080/09540120412331292499>
- De Laat, M., & Lally, V. (2004). It's not so easy: Researching the complexity of emergent participant roles and awareness in asynchronous networked learning discussions. *Journal of Computer Assisted Learning*, 20(3), 165–171.
- Dennen, V. P. (2008a). Looking for evidence of learning: Assessment and analysis methods for online discourse. *Computers in Human Behavior*, 24(2), 205–219.
<https://doi.org/10.1016/j.chb.2007.01.010>
- Dennen, V. P. (2008b). Pedagogical lurking: Student engagement in non-posting discussion behavior. *Computers in Human Behavior*, 24(4), 1624–1633.
<https://doi.org/10.1016/j.chb.2007.06.003>
- Dennen, V. P. (2014). Becoming a blogger: Trajectories, norms, and activities in a community of practice. *Computers in Human Behavior*, 36, 350–358.
<https://doi.org/10.1016/j.chb.2014.03.028>
- Denzin, N. K. (1989). *The research act: A theoretical introduction to sociological methods* (3rd ed). Englewood Cliffs, NJ: Prentice Hall.
- Dewey, J. (1899). *The school and society*. New York, NY: Cosimo Classics.

- DiVall, M. V., & Kirwin, J. L. (2012). Using Facebook to facilitate course-related discussion between students and faculty members. *American Journal of Pharmaceutical Education*, 76(2). Retrieved from <http://go.galegroup.com/ps/i.do?id=GALE%7CA325092029&sid=googleScholar&v=2.1&it=r&linkaccess=fulltext&issn=00029459&p=AONE&sw=w>
- Downes, S. (2008). Places to go: Connectivism & connective knowledge. *Innovate: Journal of Online Education*, 5(1), 6.
- Erstad, O. (2013). *Digital learning lives: trajectories, literacies, and schooling*. New York: Peter Lang.
- Evans, M. A., & Powell, A. (2007). Conceptual and practical issues related to the design for and sustainability of communities of practice: The case of e-portfolio use in preservice teacher training. *Technology, Pedagogy and Education*, 16(2), 199–214. <https://doi.org/10.1080/14759390701406810>
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219–245. <https://doi.org/10.1177/1077800405284363>
- Garrison, D., Anderson, T., & Archer, W. (2010). The first decade of the community of inquiry framework: A retrospective. *The Internet and Higher Education*, 13(1-2), 5–9.
- Garrison, D. R., Cleveland-Innes, M., & Fung, T. S. (2010). Exploring causal relationships among cognitive, social and teaching presence: Student perceptions of the community of inquiry framework. *The Internet and Higher Education*, 13(1-2), 31–36.
- Garrison, D. R., & Anderson, T. (2003). *E-learning in the 21st century : A framework for research and practice*. London, England: Routledge.

- Gašević, D., Dawson, S., Rogers, T., & Gasevic, D. (2016). Learning analytics should not promote one size fits all: The effects of instructional conditions in predicting academic success. *The Internet and Higher Education*, 28, 68–84.
<https://doi.org/10.1016/j.iheduc.2015.10.002>
- Gašević, D., Dawson, S., & Siemens, G. (2015). Let's not forget: Learning analytics are about learning. *TechTrends*, 59(1), 64–71.
- Gherardi, S. (2005). *Organizational knowledge: The texture of workplace learning*. Malden, MA: Blackwell Publishing.
- Gibson, J. J. (1986). *The ecological approach to visual perception* (17th pr). New York, NY: Psychology Press.
- Glynn, T. J. (1986). Neighborhood and sense of community. *Journal of Community Psychology*, 14(4), 341–352.
- Goffman, E. (1959). *Presentation of Self in Everyday Life*. Garden City, NY: Double Day Anchor Books.
- Goffman, E. (1961). *Encounters: Two studies in the sociology of interaction*. Ringwood, Victoria, Australia: Penguin Books Ltd.
- Goos, M. E., & Bennison, A. (2007). Developing a communal identity as beginning teachers of mathematics: Emergence of an online community of practice. *Journal of Mathematics Teacher Education*, 11(1), 41–60.
<https://doi.org/10.1007/s10857-007-9061-9>
- Gourlay, L. (2014). Creating time: Students, technologies and temporal practices in higher education. *E-Learning and Digital Media*, 11(2), 141.
<https://doi.org/10.2304/elea.2014.11.2.141>

- Gray, K., Annabell, L., & Kennedy, G. (2010). Medical students' use of Facebook to support learning: Insights from four case studies. *Medical Teacher*, 32(12), 971–976. <https://doi.org/10.3109/0142159X.2010.497826>
- Greene, J. C., & Caracelli, V. J. (1997). *Advances in mixed-method evaluation: The challenges and benefits of integrating diverse paradigms*. San Francisco, CA: Jossey-Bass.
- Greller, W., & Drachsler, H. (2012). Translating learning into numbers: A generic framework for learning analytics. *Educational Technology & Society*, 15(3), 42–57.
- Gunawardena, C. N., & Zittle, F. J. (1997). Social presence as a predictor of satisfaction within a computer-mediated conferencing environment. *American Journal of Distance Education*, 11(3), 8–26. <https://doi.org/10.1080/08923649709526970>
- Hafferty, F. W., & O'Donnell, J. F. (Eds.). (2014). *The hidden curriculum in health professional education*. Hanover, NH: Dartmouth College Press.
- Haraway, D. J. (1991). *Simians, cyborgs, and women: The reinvention of nature*. New York, NY: Routledge.
- Harteis, C., Rausch, A., & Seifried, J. (2014). *Discourses on professional learning: On the boundary between learning and working*. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=808987>
- Hawkins, B. L., & Rudy, J. A. (2008). *Educause core data service: Fiscal year 2007 summary report*. Boulder, CO. Retrieved from <http://net.educause.edu/ir/library/PDF/PUB8005.PDF>

- Haythornthwaite, C. (2001). Introduction: The internet in everyday life. *American Behavioral Scientist*, 45(3), 363–382.
<https://doi.org/10.1177/00027640121957240>
- Haythornthwaite, C., & Kazmer, M. M. (2002). Bringing the internet home: Adult distance learners and their internet, home, and work worlds. In B. Wellman & C. Haythornthwaite (Eds.) *The internet in everyday life*, (pp. 431–464). Hoboken, NJ: Wiley-Blackwell.
- Haythornthwaite, C., Kazmer, M. M., Robins, J., & Shoemaker, S. (2000). Community development among distance learners: Temporal and technological dimensions. *Journal of Computer-Mediated Communication*, 6(1). doi:10.1111/j.1083-6101.2000.tb00114.x
- Haythornthwaite, C., & Kendall, L. (2010). Internet and community. *American Behavioral Scientist*, 53(8), 1083–1094.
<https://doi.org/10.1177/0002764209356242>
- Hew, K. F., & Cheung, W. S. (2008). Attracting student participation in asynchronous online discussions: A case study of peer facilitation. *Computers & Education*, 51(3), 1111–1124. <https://doi.org/10.1016/j.compedu.2007.11.002>
- Hine, C. (2013). *The Internet*. New York, NY: Oxford University Press.
- Hlapanis, G., & Dimitracopoulou, A. (2007). The school - teacher's learning community: Matters of communication analysis. *Technology, Pedagogy and Education*, 16(2), 133–151. <https://doi.org/10.1080/14759390701406745>
- Hogan, B. (2010). The presentation of self in the age of social media: Distinguishing performances and exhibitions online. *Bulletin of Science, Technology & Society*, 30(6), 377–386. <https://doi.org/10.1177/0270467610385893>
- Holzman, L. (2009). *Vygotsky at work and play*. New York, NY: Routledge.

- Hou, H. (2015). What makes an online community of practice work? A situated study of Chinese student teachers' perceptions of online professional learning. *Teaching and Teacher Education*, 46, 6–16. <https://doi.org/10.1016/j.tate.2014.10.005>
- Hou, H.-T., Wang, S.-M., Lin, P.-C., & Chang, K.-E. (2015). Exploring the learner's knowledge construction and cognitive patterns of different asynchronous platforms: Comparison of an online discussion forum and Facebook. *Innovations in Education and Teaching International*, 52(6), 610–620. <https://doi.org/10.1080/14703297.2013.847381>
- Hutchins, E. (1993). Learning to navigate. In S. Chaiklin & J. Lave (Eds.), *Understanding practice*. New York: Cambridge University Press.
- Ingram, J., Maye, D., Kirwan, J., Curry, N., & Kubinakova, K. (2014). learning in the permaculture community of practice in England: An analysis of the relationship between core practices and boundary processes. *The Journal of Agricultural Education and Extension*, 20(3), 275–290. <https://doi.org/10.1080/1389224X.2014.887756>
- Ito, M., Gutiérrez, K., Livingstone, S., Penuel, B., Rhodes, J., Salen, K., ... Watkins, S. C. (2013). *Connected Learning*. Cork: BookBaby.
- James, N., & Busher, H. (2009). *Online interviewing*. Los Angeles, CA: SAGE.
- Jenkins, M., Brown, T., & Walker, R. (2005). *VLE surveys: A longitudinal perspective between March 2001, March 2003 and March 2005 for higher education in the United Kingdom*. Retrieved from http://www.ucisa.ac.uk/groups/tlig/vle/index_html
- Johnson, L. R., Stribling, C., Almburg, A., & Vitale, G. (2015). “Turning the sugar” adult learning and cultural repertoires of practice in a Puerto Rican community. *Adult Education Quarterly*, 65(1), 3–18.

- Jones, C. M. (2008). From novice to expert: Issues of concern in the training of psychologists. *Australian Psychologist*, 43(1), 38–54.
<https://doi.org/10.1080/00050060601089470>
- Jones, N., & Peachey, P. (2005). The development of socialization in an on-line learning environment. *Journal of Interactive Online Learning*, 3(3), 1–20.
- Jones, R. H. (2004). The problem of context in computer-mediated communication. *Discourse and Technology: Multimodal Discourse Analysis*, 20–33.
- Jordan, B. (1989). Cosmopolitical obstetrics: Some insights from the training of traditional midwives. *Social Science & Medicine*, 28(9), 925–944.
- Kanuka, H., & Garrison, D. (2004). Cognitive presence in online learning. *Journal of Computing in Higher Education*, 15(2), 21–39.
- Kazmer, M. M., & Haythornthwaite, C. (2001). Juggling multiple social worlds: Distance students online and offline. *American Behavioral Scientist*, 45(3), 510–529. <https://doi.org/10.1177/00027640121957196>
- Kernahan, C., Zheng, W., & Davis, T. (2014). A sense of belonging: How student feelings correlate with learning about race. *International Journal for the Scholarship of Teaching and Learning*, 8(2), 4.
- Kinash, S., Naidu, V., Knight, D., Judd, M.-M., Nair, C. S., Booth, S., ... Tulloch, M. (2015). Student feedback: a learning and teaching performance indicator. *Quality Assurance in Education*, 23(4), 410–428. <https://doi.org/10.1108/QAE-10-2013-0042>
- Kitto, K., Cross, S., Waters, Z., & Lupton, M. (2015). Learning analytics beyond the LMS: The connected learning analytics toolkit. *LAK '15*, 11–15.

- Kivits, J. (2005). Online Interviewing and Research Relationship. In Hine, Christine (Ed.), *Virtual Methods Issues in Social Research on the Internet* (pp. 35–50). New York, NY: Berg.
- Kleinman, S. (2004). Researching OURNET: A case study of a multiple methods approach. In M. D. Johns, S.L.S. Chen, & G. J. Hall (Eds.), *Online Social Research Methods, Issues, & Ethics* (Vol. 7, pp. 47–62). New York, NY: Peter Lang.
- Kop, R., & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past? *International Review of Research in Open and Distance Learning*, 9(3).
- Krippendorff, K. (2004). Reliability in content analysis. *Human Communication Research*, 30(3), 411–433.
- Kvalseth, T. O. (1989). Note on Cohen's kappa. *Psychological Reports*, 65(1), 223–226.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159. <https://doi.org/10.2307/2529310>
- Lave, J. (1988). *Cognition in practice: mind, mathematics, and culture in everyday life*. Cambridge ; New York, NY: Cambridge University Press.
- Lave, J. (2008). Situated learning and changing practice. In A. Amin & J. Roberts (Eds.), *Community, economic creativity, and organization* (pp. 283–296). Oxford University Press. Retrieved from <http://www.oxfordscholarship.com/view/10.1093/acprof:oso/9780199545490.001.0001/acprof-9780199545490>
- Lave, J. (2011). *Apprenticeship in critical ethnographic practice*. Retrieved from <http://public.eblib.com/choice/publicfullrecord.aspx?p=686257>

- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York, NY: Cambridge University Press.
- Lerman, S. (2002). Cultural, discursive psychology: A sociocultural approach to studying the teaching and learning of mathematics. In C. Kieran, E. Forman, & A. Sfard (Eds.), *Learning discourse: Discursive approaches to research in mathematic education* (pp. 87-113). Dordrecht, Netherlands: Kluwer Academic Publishers.
- Levett-Jones, T., Lathlean, J., Higgins, I., & McMillan, M. (2009). Staff - student relationships and their impact on nursing students' belongingness and learning. *Journal of Advanced Nursing*, 65(2), 316–324. <https://doi.org/10.1111/j.1365-2648.2008.04865.x>
- Lincoln, Y. S., & Guba, E. G. (2013). *The constructivist credo*. Walnut Creek, CA: Left Coast Press, Inc.
- Lisewski, B., & Joyce, P. (2003). Examining the five-stage e-moderating model: Designed and emergent practice in the learning technology profession. *Research in Learning Technology*, 11(1). Retrieved from <http://researchinlearningtechnology.net/index.php/rlt/article/view/11267>
- Littleton, K., & Whitelock, D. (2005). The negotiation and co-construction of meaning and understanding within a postgraduate online learning community. *Learning, Media and Technology*, 30(2), 147–164. <https://doi.org/10.1080/17439880500093612>
- Livingstone, S. M., & Sefton-Green, J. (2016). *The class: living and learning in the digital age*. New York, NY: New York University Press.
- Longfellow, E., May, S., Burke, L., & Marks-Maran, D. (2008). “They had a way of helping that actually helped”: a case study of a peer-assisted learning scheme.

Teaching in Higher Education, 13(1), 93–105.

<https://doi.org/10.1080/13562510701794118>

Manca, S., Delfino, M., & Mazzoni, E. (2009). Coding procedures to analyse interaction patterns in educational web forums: Analysing interaction in web forums.

Journal of Computer Assisted Learning, 25(2), 189–200.

<https://doi.org/10.1111/j.1365-2729.2008.00296.x>

Markham, A. N., & Baym, N. K. (Eds.). (2009). *Internet inquiry: conversations about method*. Los Angeles, CA: Sage Publications.

Marshall, H. (1986). Structural constraints on learning butcher's apprentice. *The American Behavioral Scientist*, 16(1), 35.

Masood, K., Ahmed, B., Choi, J., & Gutierrez-Osuna, R. (2012). Consistency and validity of self-reporting scores in stress measurement surveys. In *Engineering in Medicine and Biology Society (EMBC), 2012 Annual International Conference of the IEEE* (pp. 4895–4898). IEEE. Retrieved from http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6347091

McDermott, R. (1993). The acquisition of a child by a learning disability. In S. Chaiklin & J. Lave (Eds.), *Understanding practice* (pp. 269–305). New York, NY: Cambridge University Press.

Mercer, N. (1995). *The guided construction of knowledge: Talk amongst teachers and learners*. Bristol, UK: Multilingual Matters.

Merriam, S. B., & Merriam, S. B. (1998). *Qualitative research and case study applications in education* (2nd ed). San Francisco, CA: Jossey-Bass Publishers.

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

- Moore, J. A., & Chae, B. (2007). Beginning teachers' use of online resources and communities. *Technology, Pedagogy and Education*, 16(2), 215–224.
<https://doi.org/10.1080/14759390701406844>
- Moore, M. G., & Kearsley, G. (1996). *Distance education: A systems view*. Belmont, CA: Wadsworth.
- Moule, P. (2007). Challenging the five-stage model for e-learning: A new approach. *Research in Learning Technology*, 15(1). Retrieved from
<http://journals.sfu.ca/coaction/index.php/rlt/article/view/10911>
- Naidu, S. (1988). *Computer conferencing in distance education*. Washington, DC: US Department of Education Office of Educational Research and Improvement.
- Nam, C. W. (2014). The effects of trust and constructive controversy on student achievement and attitude in online cooperative learning environments. *Computers in Human Behavior*, 37, 237–248.
<https://doi.org/10.1016/j.chb.2014.05.007>
- O'Neill, K., Singh, G., & O'Donoghue, J. (2004). Implementing eLearning programmes for higher education: A review of the literature. *Journal of Information Technology Education*, 3(1), 313–323.
- O'Reilly, S. L., & Milner, J. (2015). Transitions in reflective practice: Exploring student development and preferred methods of engagement. *Nutrition & Dietetics*, 72(2), 150–155. <https://doi.org/10.1111/1747-0080.12134>
- Owen, A. M., & Ward-Smith, P. (2014). Collaborative learning in nursing simulation: Near peer teaching using standardized patients. *Journal of Nursing Education*, 53(3), 170–173. <https://doi.org/10.3928/01484834-20140219-04>

- Pearson, E. (2009). All the World Wide Web's a stage: The performance of identity in online social networks. *First Monday*, 14(3).
<https://doi.org/10.5210/fm.v14i3.2162>
- Petrovic, N., Jeremic, V., Cirovic, M., Radojicic, Z., & Milenkovic, N. (2014). Facebook versus Moodle in practice. *American Journal of Distance Education*, 28(2), 117–125. <https://doi.org/10.1080/08923647.2014.896581>
- Preece, J. (2000). *Online communities: designing usability, supporting sociability*. New York, NY: John Wiley.
- Reid, A. (2011). *From expert student to novice professional*. Dordrecht, Netherlands: Springer. Retrieved from
<http://public.eblib.com/choice/publicfullrecord.aspx?p=666502>
- Riverin, S., & Stacey, E. (2008). Sustaining an online community of practice: A case study. *International Journal of E-Learning & Distance Education*, 22(2).
 Retrieved from <http://www.ijede.ca/index.php/jde/article/viewArticle/3>
- Rogoff, B., & Lave, J. (Eds.). (1984). *Everyday cognition: Its development in social context*. Cambridge, MA: Harvard University Press.
- Romero, C., & Ventura, S. (2007). Educational data mining: A survey from 1995 to 2005. *Expert Systems with Applications*, 33(1), 135–146.
<https://doi.org/10.1016/j.eswa.2006.04.005>
- Rosa, M., & Lerman, S. (2011). Researching online mathematics education: Opening a space for virtual learner identities. *Educational Studies in Mathematics*, 78(1), 69–90. <https://doi.org/10.1007/s10649-011-9310-9>
- Ross, D. A. R. (2007). Backstage with the knowledge boys and girls: Goffman and distributed agency in an organic online community. *Organization Studies*, 28(3), 307–325. <https://doi.org/10.1177/0170840607076000>

- Rourke, L., & Kanuka, H. (2009). Learning in communities of inquiry: A review of the literature. *Journal of Distance Education (Online)*, 23(1), 19–47.
- Rovai, A. P., & Barnum, K. T. (2007). On-line course effectiveness: An analysis of student interactions and perceptions of learning. *The Journal of Distance Education/Revue de l'Éducation À Distance*, 18(1), 57–73.
- Ru-Chu, S. (2013). Effect of using Facebook to assist English for Business Communication course instruction. *TOJET: The Turkish Online Journal of Educational Technology*, 12(1). Retrieved from <http://search.proquest.com/openview/2aaaee3dd3699858772168e5f8bed77a/1?pq-origsite=gscholar>
- Saadatmand, M., & Kumpulainen, K. (2014). Participants' perceptions of learning and networking in connectivist MOOCs. *MERLOT Journal of Online Learning and Teaching*, 10(1), 16–30.
- Salmon, G. (2002). *E-tivities the key to active online learning*. London, England: Kogan Page. Retrieved from <http://www.books24x7.com/marc.asp?bookid=5572>
- Salmon, G. (2003). *E-moderating: the key to teaching and learning online*. London, England: RoutledgeFalmer.
- Salmon, G. (2013). *E-tivities: the key to active online learning* (Second edition). New York, NY: Routledge, Taylor & Francis Group.
- Salmon, G., Nie, M., & Edirisingha, P. (2010). Developing a five-stage model of learning in *Second Life*. *Educational Research*, 52(2), 169–182. <https://doi.org/10.1080/00131881.2010.482744>
- Salmons, J. (Ed.). (2012). *Cases in online interview research*. Thousand Oaks, CA: SAGE.

- Sandu, A. (2013). Transnational homemaking practices: Identity, belonging and informal learning. *Journal of Contemporary European Studies*, 21(4), 496–512.
<https://doi.org/10.1080/14782804.2013.865379>
- Santy, J., & Smith, L. (2007). *Being an e-learner in health and social care: A student's guide*. New York, NY: Routledge.
- Seddon, K., & Postlethwaite, K. (2007). Creating and testing a model for tutors and participants to support the collaborative construction of knowledge online. *Technology, Pedagogy and Education*, 16(2), 177–198.
<https://doi.org/10.1080/14759390701406802>
- Selwyn, N. (2009). Faceworking: Exploring students' education-related use of Facebook. *Learning, Media and Technology*, 34(2), 157–174.
- Selwyn, N. (2010). Online social networking on campus: Understanding what matters in student culture. *Evaluation & Research in Education*, 23(1), 70–72.
<https://doi.org/10.1080/09500790903533356>
- Selwyn, N., & Gorard, S. (2016). Students' use of Wikipedia as an academic resource — Patterns of use and perceptions of usefulness. *The Internet and Higher Education*, 28, 28–34. <https://doi.org/10.1016/j.iheduc.2015.08.004>
- Shackelford, J. L., & Maxwell, M. (2012). Sense of community in graduate online education: Contribution of learner to learner interaction. *The International Review of Research in Open and Distributed Learning*, 13(4), 228–249.
- Shea, P., Hayes, S., & Vickers, J. (2010). Online instructional effort measured through the lens of teaching presence in the community of inquiry framework: A re-examination of measures and approach. *International Review of Research in Open and Distance Learning*, 11(3).

- Siemens, G. (2004). elearnspace. Eportfolios. Retrieved October 13, 2015, from <http://www.elearnspace.org/Articles/eportfolios.htm>
- Siemens, G. (2005). Connectivism: A learning theory for the digital age. Retrieved from <http://er.dut.ac.za/handle/123456789/69>
- Siemens, G. (2008). What is the unique idea in connectivism. Retrieved from <http://www.connectivism.ca/?p=116>
- Siemens, G. (2010). My Personal Learning Network is the most awesomest thing ever!! Retrieved from <http://www.elearnspace.org/blog/2010/12/01/my-personal-learning-network-is-the-most-awesomest-thing-ever/>
- Siemens, G. (2013). Learning analytics: The emergence of a discipline. *American Behavioral Scientist*, 57(10), 1380–1400. <https://doi.org/10.1177/0002764213498851>
- Simeonsdotter Svensson, A., Pramling Samuelsson, I., Hellström, A.-L., & Jenholt Nolbris, M. (2013). Experiences of SKYPE communication in education and research – Data collection concerning young children with long-term illness. *Early Child Development and Care*, 1–14. <https://doi.org/10.1080/03004430.2013.841154>
- Skinner, B. F. (1976). *About Behaviorism*. New York City, NY: Vintage.
- Stack, S. (2013). Does discussion promote learning outcomes? Analysis of an online criminology class: Research note. *Journal of Criminal Justice Education*, 24(3), 374–385. <https://doi.org/10.1080/10511253.2012.758752>
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage Publications.
- Stake, R. E. (2006). *Multiple case study analysis*. New York, NY: Guilford Press. Retrieved from <http://site.ebrary.com/id/10254842>

- Stoll, L., Bolam, R., McMahon, A., Wallace, M., & Thomas, S. (2006). Professional learning communities: A review of the literature. *Journal of Educational Change*, 7(4), 221–258. <https://doi.org/10.1007/s10833-006-0001-8>
- Stommel, W. (2008). Conversation analysis and community of practice as approaches to studying online community. *Language@Internet*, 5.
- Stryker, S. (1967). Symbolic interaction as an approach to family research. In J. G. Manis & B. N. Meltzer (Eds.), *Symbolic Interaction* (pp. 371–383). Boston, MA: Allyn & Bacon, Inc.
- Stryker, S., & Burke, P. (2000). The past, present, and future of identity theory. *Social Psychology Quarterly*, 63(4), 284–297.
- Suchman, L. A. (1987). *Plans and situated actions: The problem of human-machine communication*. New York, NY: Cambridge University Press.
- Tenenbaum, L. S., Anderson, M. K., Jett, M., & Yourick, D. L. (2014). An innovative near peer mentoring model for undergraduate and secondary students: STEM focus. *Innovative Higher Education*, 39(5), 375–385. <https://doi.org/10.1007/s10755-014-9286-3>
- Thomas, L., Herbert, J., & Teras, M. (2014). A sense of belonging to enhance participation, success and retention in online programs. *The International Journal of the First Year in Higher Education*, 5(2). <https://doi.org/10.5204/intjfyhe.v5i2.233>
- Thorpe, M., & Edmunds, R. (2011). Practices with technology: Learning at the boundary between study and work. *Journal of Computer Assisted Learning*, 27(5), 385–398. <https://doi.org/10.1111/j.1365-2729.2010.00405.x>

- Ticknor, C. S. (2012). Situated learning in an abstract algebra classroom. *Educational Studies in Mathematics*, 81(3), 307–323. <https://doi.org/10.1007/s10649-012-9405-y>
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed). Chicago, IL: University of Chicago Press.
- Trammell, K. D., & Keshelashvili, A. (2005). Examining the new influencers: A self-presentation study of A-list blogs. *Journalism & Mass Communication Quarterly*, 82(4), 968–982.
- Troisi, J. D., Leder, S., Stiegler-Balfour, J. J., Fleck, B. K. B., & Good, J. J. (2015). Effective teaching outcomes associated with the mentorship of early career psychologists. *Teaching of Psychology*, 42(3), 242–247. <https://doi.org/10.1177/0098628315587623>
- Tsai, I.-C. (2012). Understanding social nature of an online community of practice for learning to teach. *Educational Technology & Society*, 15(2), 271–285.
- Tyson, R. (2016). When expectations clash: Vocational education at the intersection of workplace and school. *Interchange*, 47(1), 51–63. <https://doi.org/10.1007/s10780-015-9271-5>
- Van Barneveld, A., Arnold, K. E., & Campbell, J. P. (2012). Analytics in higher education: Establishing a common language. *EDUCAUSE Learning Initiative*. Retrieved from <https://qa.itap.purdue.edu/learning/docs/research/ELI3026.PDF>
- Verbert, K., Duval, E., Klerkx, J., Govaerts, S., & Santos, J. L. (2013). Learning analytics dashboard applications. *American Behavioral Scientist*, 57(10), 1500–1509.
- Vickers, C. H., & Deckert, S. K. (2013). Sewing empowerment: Examining multiple identity shifts as a mexican immigrant woman develops expertise in a sewing

- cooperative community of practice. *Journal of Language, Identity & Education*, 12(2), 116–135. <https://doi.org/10.1080/15348458.2013.775879>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. (1986). *Thought and Language*. Cambridge, MA: The MIT Press.
- Waldron, J. (2012). YouTube, fanvids, forums, vlogs and blogs: Informal music learning in a convergent on- and offline music community. *International Journal of Music Education*, 31(1), 91–105. <https://doi.org/10.1177/0255761411434861>
- Waller, V. (2009). Information systems “in the wild”: Supporting activity in the world. *Behaviour & Information Technology*, 28(6), 577–588. <https://doi.org/10.1080/01449290903188971>
- Waller, V. (2011). Not just information: Who searches for what on the search engine Google? *Journal of the American Society for Information Science and Technology*, 62(4), 761–775. <https://doi.org/10.1002/asi.21492>
- Waller, V., Farquharson, K., & Dempsey, D. (2016). *Qualitative social research: Contemporary methods for the digital age*. Los Angeles: Sage Publications.
- Wang, Q. (2010). Using online shared workspaces to support group collaborative learning. *Computers & Education*, 55(3), 1270–1276. <https://doi.org/10.1016/j.compedu.2010.05.023>
- Wedell, G. (1969). Correspondence education. *Education + Training*, 11(10), 415–418. <https://doi.org/10.1108/eb016213>
- Wenger, E. (1987). *Artificial intelligence and tutoring systems computational and cognitive approaches to the communication of knowledge*. Los Altos, CA:

- Morgan Kaufmann Publishers. Retrieved from
<http://books.google.com/books?id=v4VQAAAAMAAJ>
- Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. New York, NY: Cambridge University Press.
- Wenger, E. (2000). Communities of practice and social learning systems. *Organization*, 7(2), 225–246.
- Wenger, E., McDermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: a guide to managing knowledge*. Boston, MA: Harvard Business School Press.
- Wenger, E., White, N., & Smith, J. D. (2009). *Digital habitats: stewarding technology for communities*. Portland, OR: Cpsquare.
- Wenger-Trayner, B., & Wenger-Trayner, E. (2015). Learning in a landscape of practice A framework. In Wenger-Trayner, E., Hutchinson, S., Kubiak, C., & Wenger-Trayner, B. (Eds.), *Learning in landscapes of practice: Boundaries, identity, and knowledgeability in practice-based learning*. London ; New York: Routledge.
- Wenger-Trayner, E., Hutchinson, S., Kubiak, C., & Wenger-Trayner, B. (Eds.). (2015). *Learning in landscapes of practice: Boundaries, identity, and knowledgeability in practice-based learning*. London; New York: Routledge.
- White, M. D., & Marsh, E. E. (2006). Content analysis: A flexible methodology. *Library Trends*, 55(1), 22–45. <https://doi.org/10.1353/lib.2006.0053>
- Wise, A. F., Perera, N., Hsiao, Y.-T., Speer, J., & Marbouti, F. (2012). Microanalytic case studies of individual participation patterns in an asynchronous online discussion in an undergraduate blended course. *The Internet and Higher Education*, 15(2), 108–117. <https://doi.org/10.1016/j.iheduc.2011.11.007>

- Xie, K., Yu, C., & Bradshaw, A. C. (2014). Impacts of role assignment and participation in asynchronous discussions in college-level online classes. *The Internet and Higher Education*, 20, 10–19.
<https://doi.org/10.1016/j.iheduc.2013.09.003>
- Xin, C. (2012). A critique of the community of inquiry framework. *Journal of Distance Education (Online)*, 26(1), 1–15.
- Xing, W., Guo, R., Petakovic, E., & Goggins, S. (2015). Participation-based student final performance prediction model through interpretable genetic programming: Integrating learning analytics, educational data mining and theory. *Computers in Human Behavior*, 47, 168–181. <https://doi.org/10.1016/j.chb.2014.09.034>
- Zimmerman, T. D. (2012). Exploring learner to content interaction as a success factor in online courses. *The International Review of Research in Open and Distance Learning*, 13(4), 152–165.

Appendices

Appendix A: Evidence of ethics clearance

To: Dr Vivienne Waller, Dawn Gilmore, FHAD

SHR Project 2014/072 In an online subject how does student collaboration in the classroom impact the formation of a community of practice?

Dr Vivienne Waller, Dawn Gilmore FHAD
A/Prof. Karen Farquharson, A/Prof. Robin Nilon
Approved duration from 28-05-2014 to 31-12-2014

I refer to the ethical review of the above project protocol by a Subcommittee (SHESC1) of Swinburne's Human Research Ethics Committee (SUHREC). Your responses to the review, as per the emails sent on 16 May and 20 May 2014, were put to the Subcommittee delegate for consideration.

I am pleased to advise that, as submitted to date, the project may proceed in line with standard on-going ethics clearance conditions here outlined.

- All human research activity undertaken under Swinburne auspices must conform to Swinburne and external regulatory standards, including the current *National Statement on Ethical Conduct in Human Research* and with respect to secure data use, retention and disposal.
- The named Swinburne Chief Investigator/Supervisor remains responsible for any personnel appointed to or associated with the project being made aware of ethics clearance conditions, including research and consent procedures or instruments approved. Any change in chief investigator/supervisor requires timely notification and SUHREC endorsement.
- The above project has been approved as submitted for ethical review by or on behalf of SUHREC. Amendments to approved procedures or instruments ordinarily require prior ethical appraisal/clearance. SUHREC must be notified immediately or as soon as possible thereafter of (a) any serious or unexpected adverse effects on participants any redress measures; (b) proposed changes in protocols; and (c) unforeseen events which might affect continued ethical acceptability of the project.
- At a minimum, an annual report on the progress of the project is required as well as at the conclusion (or abandonment) of the project.
- A duly authorised external or internal audit of the project may be undertaken at any time.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance. The SHR project number should be quoted in communication. Researchers should retain a copy of this email as part of project recordkeeping.

Best wishes for the project.

Yours sincerely,
Astrid Nordmann
SHESC1 Secretary

Appendix B: Evidence of ethics clearance extension

To: Dr Vivienne Waller, Dawn Gilmore, FHAD

SHR Project 2014/072 - In an online subject how does student collaboration in the classroom impact the formation of a community of practice?

Dr Vivienne Waller, Dawn Gilmore FHAD

A/Prof. Karen Farquharson, A/Prof. Robin Nilon

Approved duration from 28-05-2014 to 31-12-2014; extended to 31/12/2015 [Jan 2015]

I refer to your request for a simple extension of ethics clearance to complete the approved human research activity as per the report form received at Swinburne Research on 15 January 2015.

There being no change to the approved protocol as submitted to date, I am authorised to issue the clearance for the extension to 31/12/2015. The standard ethics clearance conditions previously communicated and reprinted below still apply.

Please contact the Research Ethics Office if you have any queries about on-going ethics clearance, citing the SUHREC project number. Copies of clearance emails should be retained as part of project record-keeping.

As before, best wishes for the project.

Yours sincerely,
Astrid Nordmann
Secretary SHESC1

Appendix C: Consent Information Statement

Hello Students,

My name is Dawn Gilmore. I am a PhD Candidate in Swinburne University of Technology's Faculty of (insert current faculty name at that time). As you know your teacher has agreed to use (insert subject name) for my Ph.D. research.

I am very excited to be working with you this semester. The purpose of this letter is to familiarise you with my research project, how you can participate, and to obtain your consent to participate in online questionnaires and/or interviews.

Time and effort involved in participation

Questionnaires

For the purpose of my research I will be asking you to self-report your experience as an online student throughout the semester. I will email you the same questionnaire every fortnight. There are 9 questions on the questionnaire and it should take only 5-10 minutes of your time.

In the questionnaire you will be asked to recount your online and offline activities as they relate to (insert subject name). I am specifically interested in your hours of study, internet usage, and engagement. If you would like to know more about what you will be asked in the questionnaire I have included a copy at the end of this page.

Participation in the questionnaires is voluntary and unrelated to your grade for this subject. Your comments are for my research and will not be shared with your tutor or Unit Convenor. At any time you are able to terminate the questionnaire and withdraw participation without use of your given information, data or material contributed.

Interviews

Towards the end of the semester I would like to interview you about your experience as an online student. I hope to interview students across the full range of participation levels in this subject. **So, whether you never participate, sometimes participate, or always participate I would like to hear about your experience!**

During the interview your rights and interests are important to me. I will not ask sensitive or invasive questions. I will only ask general questions about the variety of ways in which you engaged in this subject this semester.

Participation in an interview is voluntary and unrelated to your grade for this subject. Your comments are for my research and will not be shared with your tutor or Unit Convenor. At any time you are able to terminate the interview and withdraw participation without use of your given information, data or material contributed.

Privacy & Confidentiality

Privacy and confidentiality of your data are a priority for me. Questionnaires, transcripts and audio files will be stored on a computer that is password protected to guarantee that just the investigators have access to given information. Your participation in this study will have no relation to your grade in this subject. This study is completely separate from and unrelated to your Unit Coordinator and tutors.

Research Output

I propose to use data gathered from questionnaires, discussion boards, and interviews for my Ph.D. research, which could also include project reports, conference presentations and publications. No participant will be identifiable in any publications, papers, or thesis.

If you would like additional information about this project, please do not hesitate to contact myself: Dawn Gilmore (Email: 4918746@student.swin.edu.au) or my Ph.D. supervisor Dr Vivienne Waller (Email: vwaller@swin.edu.au).

Providing Consent

Swinburne University of Technology

Principal Investigator(s): Dawn Gilmore and Vivienne Waller

1. I consent to participate in the project named above. I have been provided with a copy of the project consent information statement to which this consent form relates and any questions I have asked have been answered to my satisfaction.

- ☐ Yes
- ☐ No

2. In relation to this project, please tick your response to the following:

- | | | |
|---|-----|-----|
| • I agree to be interviewed by the researcher | | Yes |
| No | | |
| • I agree to allow the interview to be recorded by electronic device | Yes | No |
| • I agree to make myself available for further information if required | | Yes |
| No | | |
| • I agree to complete questionnaires asking me about hours of study, internet usage, and engagement | | |
| Yes | No | |

3. If you answered 'yes' to being interviewed, how would you prefer to be interviewed? (Please rank your preferences 1-6. 1 being most preferable and 6 being least preferable. You will be contacted at a later date to arrange your interview using a tool and at a time that is most convenient for you)

- ☐ The real-time communication tool used by this subject e.g. Elluminate, Collaborate
- ☐ Online video e.g. Skype, Logitech
- ☐ Live Chat e.g. Google chat, Skype chat
- ☐ Face to face should my location permit
- ☐ Telephone
- ☐ Email

5. What are your contact details?

(This information will be used to email you the questionnaire and arrange an interview if appropriate)

*Last name:

*First name:

*Email address:

Alternate email address:

Telephone (including area code):

6. I acknowledge that:

- (a) my participation is voluntary and that I am free to withdraw from the project at any time without explanation;
- (b) the Swinburne project is for the purpose of research and not for profit;
- (c) any identifiable information about me which is gathered in the course of and as the result of my participating in this project will be (i) collected and retained for the purpose of this

project and (ii) accessed and analysed by the researcher(s) for the purpose of conducting this project;

(d) my anonymity is preserved and I will not be identified in publications or otherwise without my express written consent.

I understand that by submitting this form my consent to participate/not participate will be recorded.

- ☐ Yes
- ☐ No

Thank you for your help with this!

You can expect to hear from me again in a fortnight! Again, below is a copy of the questions that you will be asked to complete on a fortnightly basis throughout this semester.

Warm Regards,
Dawn

This project has been approved by or on behalf of Swinburne's Human Research Ethics Committee (SUHREC) in line with the *National Statement on Ethical Conduct in Human Research*. If you have any concerns or complaints about the conduct of this project, you can contact:

Research Ethics Officer, Swinburne Research (H68),
Swinburne University of Technology, P O Box 218, HAWTHORN VIC 3122.
Tel (03) 9214 5218 or +61 3 9214 5218 or resethics@swin.edu.au

Appendix D: Questionnaire

Please complete the following questions about your experience as an online student in (insert subject name) over the past fortnight.

1. I am currently studying...

- ☐ Full-time
- ☐ Part-time

2. Logged in to the (LMS) site for (subject)

In the last fortnight where did you go in the (LMS) site for (subject) to **seek** and/or **share** information for this subject?

***Content-related** is information related to course content for example, theories, definitions, arguments, debates

***Administrative-related information** is unrelated to course content for example questions about referencing, essay writing, enrolment, due dates, word counts

*To **seek** information is to ask questions, read, investigate, browse

*To **share** information is to answer questions, contribute to conversations, create an artifact with/for other users

Logged in to the (insert LMS name) site for (insert subject name)				
Location	I went here to seek content-related information	I went here to share content-related information	I went here to seek administrative-related information	I went here to share administrative-related information
Discussion board				
Wiki				
Course materials				
Other				
Please list other:				

3. In the last fortnight approximately how much time did you spend **logged in** to the LMS site for tasks related to this subject?

(Logged in means you are signed into the university's (insert LMS name) site for this subject)

1 hour or less

2-4 hours

5-7 hours

8-10 hours

11-13 hours

14-16 hours

17-19 hours

20-22 hours

23 or more hours

4. internet use OUTSIDE of the (LMS) site for this subject

In the last fortnight where did you go **outside** of the (LMS) site using the internet to **seek** and/or **share** information for this subject?

***Content-related** is information related to course content for example, theories, definitions, arguments, debates

***Administrative-related information** is unrelated to course content for example questions about referencing, essay writing, enrolment, due dates, word counts

*To **seek** information is to ask questions, read, investigate, browse

*To **share** information is to answer questions, contribute to conversations, create an artifact with/for other users

internet use OUTSIDE of the (LMS) site				
Location	I went here to seek content-related information	I went here to share content-related information	I went here to seek administrative-related information	I went here to share administrative-related information
Social networking sites				
Please list social networking sites (For example Facebook, Twittter, Instagram):				
Content Communities				
Please list content community sites (For example TED, Youtube, SlideShare):				
Email				
Who did you email? (For example Professor, tutor, classmate)				
University library				
Other				
Please list other:				

5. In the last fortnight approximately how much time did you spend using the internet outside of the LMS site for tasks related to this subject?

1 hour or less

2-4 hours

5-7 hours

8-10 hours

11-13 hours

14-16 hours

17-19 hours

20-22 hours

23 or more hours

23 or more hours

6. Offline spaces for this subject

In the last fortnight where did you go offline (i.e. without the use of the internet) to **seek** and/or **share** information for this subject?

***Content-related** is information related to course content for example, theories, definitions, arguments, debates

***Administrative-related information** is unrelated to course content for example questions about referencing, essay writing, enrolment, due dates, word counts

*To **seek** information is to ask questions, read, investigate, browse

*To **share** information is to answer questions, contribute to conversations, create an artifact with/for other users

Offline-tasks				
*Offline-tasks are those activities that do not require the internet				
Location	I went here to seek content-related information	I went here to share content-related information	I went here to seek administrative-related information	I went here to share administrative-related information
Conversations with people				
Word documents, PowerPoint, Excel spreadsheets				
Print resources (For example book, newspapers, handbook)				
Physical locations				
Please list physical locations (For example libraries, museums, practicums):				
Other				
Please list other:				

7. In the last fortnight approximately how much time did you spend doing **offline-tasks** related to this subject?

1 hour or less

2-4 hours

5-7 hours

8-10 hours

11-13 hours

14-16 hours

17-19 hours

20-22 hours

23 or more hours

8. While studying online over the last fortnight I felt...

- ☐ Connected to a community of my online classmates in this subject
- ☐ Connected to a community of my online classmates from other subjects
- ☐ Connected to a community of people other than my online classmates
- ☐ None of the above

9. While studying online over the last fortnight I felt **most** engaged with this subject when I...

(Please tick all that apply)

- ☐ Read/wrote about the subject content
- ☐ Listened to a recording/video
- ☐ Used graphics, symbols, or diagrams
- ☐ Applied the subject content to real-life
- ☐ Attended a live session for example Elluminate, Collaborate, or Skype
- ☐ Worked with others on subject related content
- ☐ Chatted with classmates about social/personal topics
- ☐ Other, Please share:
- ☐ I have not felt engaged

Last name:

First name:

Your participation in this study will have no relation to your grade in this subject. This study is completely separate from and unrelated to your Unit Coordinator and tutors. No participant will be identifiable in any publications, papers, or thesis.

Appendix E: Interview plan

Semi-structure Interview Plan: Issues to be covered

Individual interview

Background information:

- Previous online study
- Current course of study

Preferences for

- Instruction
- Environment

Knowledge and information

- Processing
- Seeking
- Sharing

Engagement with:

- Content
- Classmates
- Teacher
- Online spaces/people
- Offline spaces/people
- Self

Appendix F: Participants by pseudonym, grade, and front stage performance

Case	Pseudonym	Front stage role	Age	Grade	Enrollment
Advertising 1	Kerry	Performer	31	HD	Part-time
Advertising 1	Barry	Performer	26	HD	Full-time
Advertising 2	Barry	Performer	26	HD	Full-time
Advertising 2	Lynn	Performer	23	D	Part-time
Mathematics	Mia	Stagehand	20	NA	Full-time
Mathematics	Jan	Cameo	0	NA	Full-time
Psychology	Leonie	Performer	52	D	Part-time
Psychology	Suzy	Cameo	30s	D	Part-time
Psychology	Rachel	Cameo	0	D	Part-time
Psychology	Vee	Stagehand	0	P	Part-time
Psychology	Joanne	Cameo	45	D	Full-time
Psychology	Fran	Performer	55	C	Full-time
Psychology	Eileen	Performer	30	HD	Part-time
Psychology	Kathy	Extra	23	P	Part-time
Psychology	Erin	Stagehand	NA	HD	Full-time
Psychology	Tina	Stagehand	NA	C	Part-time
Psychology	Saskia	Stagehand	23	P	Full-time
Psychology	Julia	Extra	40	NP	Part-time
Psychology	Kara	Stagehand	59	D	Full-time
Psychology	Maddy	Cameo	NA	NP	Full-time
Psychology	Yvette	Cameo	45	D	Full-time
Psychology	Ingrid	Performer	74	D	Full-time
Psychology	Briana	Extra	35	P	Part-time

Appendix G: List of content analysis codes for the discussion boards

Learning Codes	Student-to-Student	Student-to-Teacher	Teacher-to-Student	Broadcast
Share a personal story				
Share work				
Challenge				
Change current knowledge				
I like -				
I like +				
Knowledge from experience				
Apply and extend task				
Add to current knowledge				
Compare answers				
Correct				
Disagree				
Experiemnt with content				
Advice				
Respond to weekly activity				
UC weekly activity post				
Agree				
Agree + add information				
Agree + follow up question				
Agree + paraphrase				
Agree + why				
Question about content				
Answer about content				
Share Information				

Bring information from internet/youtube to discussion board
Bring information from library to discussion board
Bring information from past subject to discussion board
Bring information from textbook to discussion board
Training Codes
Technical problem
Question about admin
Question about assessment
Question about referencing
Technical solution
Answer about admin
Answer about assessment
Answer about referencing
Relationship management
Greeting
Greeting + Family
Greeting + family/location/study
Greeting + location/study family
Greeting + location/work
Greeting + study

Greeting + study/location/futre
Greeting + work
Greeting + work/location/family
Greeting + work/study
Greeting + work/study/family
Greeting +location
Respond to complaint
Complain
Self correct
Small talk
Thank you
Praise and Encouragement
Praise
Praise + add more info
Praise + invite
Praise + question
Encouragement
Supported Requested
Request help
Support for frustrated students
Support provided
Feelings of frustration
Respond to help request
Group work
Shared document
Shared tool

Negotiation of group work mechanics
Moving outside Bb