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The Open University, UK
Centre for Research in Education and Educational
Technology

A case study of learning, support and
disruption for distance learners in
student-led Facebook study groups

Submitted for the degree of
Doctorate in Education (EdD)

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Abstract

This thesis reports on a qualitative investigation of learning in student-led Facebook module study groups, used by undergraduate distance learning students at a UK university. The study investigates the following issues: reasons why learners choose to use these study groups in social media; the types of learning taking place there; the nature of support there; and types of disruption experienced and its effect on student learning.

The study uses a case study design to align with a constructivist, qualitative theoretical approach. Three data collection methods of participant interviews, documentary analysis of online group dialogue, and observation were used. This foregrounds the perspective of participants in various roles in these student-led groups, to prioritise student voice. The data was analysed in a thematic analysis, to identify latent and semantic themes. Many of the theory-led findings build on existing empirical research, and the explanatory concepts of connectivism, connected learning and the ethic of care are used to interpret the findings in more depth.

Principal findings suggest learner experiences in Facebook module study groups converge around five themes of activity: community and relationships; academic subject learning; learning with others online; managing own learning; and difficulties and conflict. This analysis represents a typology of student activity that extends existing published empirical work, and is using the novel research context of student-led Facebook module study groups for distance learners. Types of learning that take place in the groups include the expedient acquisition of knowledge, practice of participation, and the development of digital skills. Study groups provide important relational and community supports to learners, and valued information. While Facebook also has the potential to disrupt student learning, diverse views were usually embraced constructively as an opportunity for skill development and critical thinking.

Acknowledgements

This work was completed with the support of many people. Importantly, I would like to thank the participants in this study who shared their time with me to provide rich evidence about their experiences. The investigation here is about understanding the experience of distance learning more closely, to inform ways to improve the social and intellectual potential of social media for learning. Distance learners of the Open University deserve their distinctive experience to be heard.

In every course of study I have made valuable friends who shared their ideas with me. In this programme, I am grateful for this collection of people for their supportive encounters in person and online. There were also many quiet sub-cultures and groups in the social media scholarly network I could learn from, and the influence of these caring virtual communities was always positive.

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My initial interest in social media was motivated by my spirited offspring over ten years ago. Their experiences in the online social environment encouraged me to find out more, and through this I discovered the online study communities. In this investigation my youngest (adult) child helped with many days of transcribing, and encouraged me to work around obstacles in this experience. My lovely partner brought honest Northern charm, and indeed my family provided many sparks of inspiration and encouragement that really mattered. Thanks.

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1. Introduction

This research investigates the types of educational related learning and ways in which Facebook group participation supports or disrupts learning, among undergraduate distance students at The Open University, UK (OU). Studies show that university learners use technologies like computers and the internet for retrieving information in their studies, and many students use online social networks outside of the conventional classroom context to support their learning (Selwyn, 2009; Junco, 2014). While students inhabit online social media, limited qualitative investigation of the ways which students are using these to support learning has taken place. There is a particular gap in the literature in exploring how distance learning students use social media. Qualitative understanding of these learners' rationales will enable an in-depth understanding from the perspective of learners, foregrounding student voice. This chapter will introduce the context and background to this study, before defining the focus expressed as research questions.

Rationale for this Study

Three motivations guide and justify this study: to find out about the benefits and concerns learners consider are attached to their use of Facebook study groups; to make a novel research contribution to the academic knowledge base about this contemporary educational issue, and advance professional

practice for myself and others. There is a paucity of evidence and a gap in knowledge about distance student undergraduate learning in the student-led Facebook group spaces, and this study contributes to this knowledge. This research differs from other investigations as this study views UK distance learners, from the learner's perspective. Advancing knowledge about this will be of direct interest to practitioners to influence learning and learners at this university, other educational organisations, and can underpin policy related change to enhance learning.

As tens of thousands of learners now engage with peers in OU study groups in Facebook, it is important to find out what benefits are gained. As a tutor I noticed learners behaved differently in the lively, caring Facebook groups to how they behaved in the distance university forums I facilitated. I was interested in the educational impact of this, from the student perspective. I was curious to find out more about the learning in the Facebook study groups, and what could improve the student experience there. I turned to the empirical research to improve my understanding, and found existing research was limited about learning in the student-led social media spaces inhabited by distance learners.

Similar to my experience of facilitating university discussion forums, I saw some groups were able to work and learn together harmoniously and constructively, and for some it was a constant struggle to maintain order. Teaching colleagues were sceptical about the activities and nature of learning that took place in social media. However I observed a lot of support and informal learning being acquired, as a result of student participation in

these large, collegial online spaces. With more knowledge and understanding about this, it could be possible to help educators and learning designers to understand more about the benefits for learning in social media. This research finds out why learners are motivated to use these spaces, what they learn there, and explores the resulting positive and negative influences on learners. This study relates to an area of the student experience which is often invisible to educators. Student-led study areas are not designed to include teaching and educational support staff in an official capacity if at all, and hence any learning activity taking place here tends not to be considered in the learning design process. There is some variability and a gap in the interest and knowledge base of educators.

There is an established link between membership of social and academic communities, and learner progression and retention (Tinto, 1975, 1987). Learners who are integrated into the social and intellectual fabric of their university become more committed to the communal life of their institution, and are more likely to achieve stronger results and complete their studies (Tinto, 1987). Universities have a responsibility for retention (p. 205), and this 'hinges on the establishment of a healthy, caring educational environment which enables all individuals [...] find a niche in one or more of the many social and intellectual communities of the institution' (pp. 204-205). To achieve a high rate of retention, Tinto suggests universities should facilitate the social and intellectual integration of their students. 'Communities which reach out to and care for their members and their welfare are those which keep and nourish their members' (p. 205). Sadly, 41.8 percent of all students at The Open University have left two years after entry as 'non-continuation'

students (HESA, 2018). Hence it is important to understand the rationale for student uses of this popular social media space, and the benefits and risks of participation in such a community for learning.

The findings of this study offers empirical evidence to educators, learning designers and also students themselves at this university and in other educational contexts. This evidence relates to the types of learning that may take place in student-led social media spaces, and the ways in which this supports and offers potential risks to the learning experience.

Context

The Institution

Established in 1969, The Open University is the 'UK's only university dedicated to distance learning', and the largest university in the UK (The Open University, 2019). The OU was the largest university in student numbers in Europe, with 173,927 module registrations in 2016/17, equating to 65,724 full-time equivalent students (The Open University, 2017). This includes 122,000 registered students in England, Scotland, Wales, Northern Ireland and the Republic of Ireland, and there are further students based in over 100 countries around the world. It offers a broad curriculum with more than 400 modules for study, across 180 qualifications. Courses of study are offered in a blended distance learning format, with text and multi-media study materials and optional face-to-face tuition in some units of study. Tutorial

participation and attendance is regarded as supplementary and not essential.

The undergraduate entry requirements are open or unconditional, and the joining process encourages applicants to assess their own English language and information technology suitability for study. Students are aged 'under 17' to 'over 65' and the median age of new undergraduates is 28 (The Open University, 2016). 76 percent of undergraduates at this university are already in work (The Open University, 2018a). The Higher Education Statistics Agency data (HESA, 2018) indicates 41.8 percent of all students have left two years after entry as 'non-continuation' students. All undergraduate students at this university are considered part-time, and the majority are mature students aged 21 or over on enrolment. The total number of part-time entrants to higher education in the UK has fallen by overall 47 percent since 2009 (Bolton, 2018), and this has been attributed to an increase in tuition fees. The Open University has experienced a smaller fall of 28 percent (Parker, 2018) of enrolments.

Distance Learning

Distance learning originated from 1840 when Pitman offered correspondence courses in shorthand (Pappas, 2013). The University of London was the first institution to offer a distance learning degree in 1858 and the term distance education was used at the US University of Wisconsin-Madison in 1892. Educational research into '*fernstudium*' or distance education first appeared in academic research in Germany in the 1960s, analysing how particular

industrial principles, such as division of labour and use of technology, can be applied to the craft of teaching (Moore, 2013, p.68). It has been defined as: “the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours... so that communication between the learner and the teacher must be facilitated by print, electronic, mechanical, or other device” (Moore, 1972, p. 76). More recent interpretations of distance education include multiple channels for e-learning, including web based, mobile learning and immersive learning environments. Students are advised of their learning, curriculum and assessment primarily via online digital resources in the university website, and some posted books. Learners are familiar with the university being a digital space in lieu of a physical location they attend.

Academic staff are responsible for the production and presentation of teaching materials to learners at this university, and this is complemented by direct support provided by a regional tutor. The tutor will lead occasional group tutorials, facilitate computer mediated conferencing, assess and provide feedback on assessments and support learners’ progress through their qualification (The Open University, 2018b). Students work with a different tutor for each of the modules which make up their qualification.

Social Media

Social media is a term broadly used to describe ‘internet applications that rely on openly shared digital content that is authored, critiqued and re-configured

by a mass of users' (Selwyn, 2011, p. 1). Social media is used in higher education 'to deliver teaching material, educational information, updates and facilitate communication and collaboration' (Chugh and Ruhi, 2017, p. 606). Usage of social media for content sharing, public communication and interpersonal connection in higher education has grown during the period of this study and takes many forms. Online social software such as video channels, virtual games, blogs, instant messaging, bookmarking and social networking sites are different examples of ways in which social media manifests itself (Chugh and Ruhi, 2017). A survey of 275 social media users found participants were using social media mainly to maintain contact with friends (83%) and to obtain information (Drahosova and Balco 2017). The survey by Drahosova and Balco (2017) identified the main advantages of social media include information exchange and communication, teamwork, and education. Crucial disadvantages of social media they found include internet addiction and information overload.

Social Network Sites

Social networking sites (SNS) form an important part of social media, which aims to facilitate easy collaboration and connectivity between people on a large scale. A popular definition of social networking sites is 'web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system' (Boyd and Ellison, 2007, p. 221).

SNS are evolving quickly and facilitate many types of communication: synchronous and asynchronous; public or private; one-to-one or one-to-many (Kear, 2011). There are a range of online social network platforms available, and students select and appropriate the most relevant technologies to meet their learning needs (Conole *et al.*, 2008). Facebook is popular among university learners (Vivian *et al.*, 2014), and prolonged observation by the author of this thesis confirms this is a highly popular form of social networking used by tens of thousands of learners in the OU. In their study of higher education, Bateman and Willems (2012) found that learners form their own groups and discussion spaces. It is these loosely joined, group spaces in Facebook that will be investigated in this study of informal learning among OU students.

Social network sites are used for a range of purposes like maintaining informal social connections, and also for marketing of products and developing customer relationships (Eriksson and Larsson, 2014). Fox and Moreland (2015) add that Facebook is used by people to make new connections online, to find others with similar interests or concerns to become social connections. People often join social network sites for the lifestyle benefits offered, especially immediate access to friends for distributing information and organising activities (Xu *et al.*, 2012). With high intensity use, social capital for individuals can be increased (Ellison, Steinfield and Lampe, 2007); where social capital is 'the benefit individuals derive from their social relationships and interactions: [...] such as emotional support, exposure to diverse ideas, and access to non-redundant information'

(p. 873).

Statista (2018) report social media use is common in the UK, with 39 million users, and 67% of online adults using Facebook. Within this, a quarter of online adults visited social media more than ten times a day, and the number of users over 34 years old is still growing. An early UK survey study (Madge *et al.*, 2009) of 213 first year undergraduate campus based students, found 46% of learners reported using the Facebook SNS to informally discuss academic coursework on a daily or weekly basis. The 'social scholar initiates or joins an online community devoted to her topic, using a number of social software services or tools' (Minocha and Petre, 2012, p. 127).

Social network sites offer affordances for users (Fox and Moreland 2015), where an affordance is what an environment offers, provides or furnishes a user (Gibson 1979). An affordance is more than a feature of the environment. 'Affordance refers to the perceived and actual properties of a thing, primarily those functional properties that determine just how the thing could possibly be used' (Salomon, 1993, p. 51). An affordance implies a complementarity of the user in the particular environment, for the possible range of both intended and unintended activities an environment offers users. An affordance of information and communication technologies may 'have both positive and negative connotations' (Conole and Dyke 2004). Affordance can be applied to texts, social technologies, or social settings (e.g., Fayard and Weeks, 2007; Graves, 2007; Hutchby, 2001). Facebook offers particular affordances for students. For example, to facilitate connection between learners who may otherwise have difficulty accessing peer support networks face to face, due

to physical restrictions or mental health challenges. Hence as students already use SNS for social purposes and in everyday life, this encourages easy and regular participation in its educational potential too (Kear, 2011).

Ways in which online social networks are used to support learning include revision, coursework questions, social support about module materials, organising some group meetings and venting frustrations about assignments and tutors (Madge *et al.*, 2009; Selwyn, 2009). Student use of the Facebook site developed from it being purely social, to using it as an 'informational educational' network in parallel to, or even as an alternative to the university website provision. There are unexplored questions relating to this migration to Facebook: why students choose to participate in the OU study groups in Facebook, what they learn there, and the positive and negative influence this could have.

Facebook 'fosters micro-communities of people who share interests' or participate in similar activities (Bosch, 2009, p. 193). Further, social network tools can support educational activities making 'interaction, collaboration, active participation, information and resources sharing and critical thinking possible' (Ahern, Feller and Nagle, 2016, p. 35). Social network platforms in use at the time of writing (2019) include LinkedIn, WordPress, YouTube, Twitter, Instagram, WhatsApp, Snapchat, Discord, Messenger and Facebook.

Facebook

Facebook started as an amateur driven student community platform, although it was not developed for the purpose of learning (Van Dijck, 2013; Manca and Ranieri, 2015). Meanwhile it has emerged as a key space for communication between university students and between students and their universities (Pearce, 2014). Given its genesis and popularity in higher education, the potential role of Facebook as a virtual environment for learning is worthy of investigation (Tess, 2013).

Facebook is currently the most popular social networking site with over two billion active users (Hatfield, 2017). It was developed by an undergraduate at Harvard University in 2003 for use among college acquaintances there. After a further launch in 2004 it quickly became a dominant social networking site (Tess, 2013). Facebook is present in the usual digital environment of many undergraduate students in their everyday life, as 'Facebook is part of the informal and formal backcloth of the undergraduate digital environment' (Stirling, 2015, p. 101). As a result, many universities including the OU engage in student recruitment and relationship marketing activities with the public in social media, to recruit and improve awareness of their brand (Constantinides and Stagno, 2011; Fagerstrøm and Ghinea, 2011).

Studies of educational uses of Facebook take many forms, and there is now a growing corpus of empirical research about how the platform is used for university teaching and learning (e.g. Veira, Leacock and Warrican, 2014,

Birkeland *et al.*, 2015, Manca and Ranieri, 2016). This includes how the platform supports learning (e.g. Smith, 2016); the way staff engage with learners for teaching purposes in the site (e.g. Wang *et al.*, 2012); the impact of Facebook on academic attainment (e.g. Junco, 2012a, 2015); to assist managing induction and transition for students (e.g. Stirling, 2015); the social impact of using Facebook at university (e.g. Madge *et al.*, 2009); and ways learners use the site for collaboration (e.g. Henderson, Selwyn and Aston, 2017). However, some studies have expressed concern that Facebook may be detrimental to studying, as time spent on Facebook and checking Facebook has been negatively related to overall attainment (Junco, 2012b); and learners suggest it can be a distraction from studying (Kirschner and Karpinski, 2010).

Facebook offers asynchronous communication to help maintain relationships with others when they are not online and allows people to leave messages for others when they are offline (Pi, Chou and Liao, 2013). Facebook has potential as a cognitive and relational amplifier (Manca and Ranieri, 2013) to improve information acquisition and to connect people; and its position as the world's largest free SNS (Chugh and Ruhi, 2017) can contribute to the delivery of pedagogic aims. The platform offers an umbrella service, with a range of ways to connect and share text and multi-media information with others. Users select which online spaces they prefer to use and will best meet their needs for different purposes (Ahern, Feller and Nagle, 2016). Selwyn (2009, p. 160) describes the Facebook wall as 'an asynchronous chat facility owned by each user', and the earliest, conventional computer

mediated communication feature of the platform. It is now one space of a range of spaces where users can interact. Other functions of Facebook at the time of writing in 2019 include the private messaging application Messenger, video calls and posting, Events, Pages, Photo sharing and Groups.

Facebook Groups

Facebook groups are 'shared spaces within public social networks and create a system for information sharing, collaboration and decision making' (Ahern, Feller and Nagle, 2016, p. 36). Public Facebook groups were introduced in September 2004, and are used by more than one billion people around the world each month (Facebook, 2017). The number of Facebook groups has grown quickly because of its social design; one person creates a group then many people may join in quickly without having to build and manage individual friendships. In their survey study of undergraduates Ahern, Feller and Nagle (2016, p. 45) found learners had a high level of enthusiasm for Facebook 'as a highly useful personal communication tool'. In an educational setting, these groups enable learners to reach and correspond with a defined audience, and access is restricted to specific, relevant people by the Group leader/s which Facebook calls the 'Admin'.

Facebook refined the online group spaces further in 2010 with the introduction of closed groups, and these enable the creation of closed, specific communities (Miron and Ravid, 2015). Privacy settings can be customized for each group to allow or deny access to each group space, and

within this people can post updates, share links and resources, post photographs and organise events (Facebook, 2017). These closed group interactions do not appear in the News Feed of the participants' Facebook account, as the dialogue is kept private to the members of that group, avoiding oversharing online with unintended audiences. The contents of closed groups do not appear in internet searches. Learners can find and communicate with others in a closed Facebook group without being connected in any other way in Facebook. Group members do not necessarily have access to each other's Facebook personal information and status updates; members do not need to be "friends" on Facebook to participate in the group (Dalsgaard, 2016).

A study of campus based learners by Ahern, Feller and Nagle (2016) showed that many Facebook groups were initiated and maintained by university students. This reflected students' enthusiasm for, and capability with using social software to meet their varied needs for collaboration. Volunteer student Admins of the groups controlled and managed the privacy settings, membership approval and postings. The study found that learners joined as they knew that access to and hence, content in the group was informally monitored and was therefore focussed on the common interests of the group. Learners were motivated to use Facebook groups as they were easily accessible on a range of various devices. Mobile technology had increased the accessibility and potential ease of using Facebook groups, and learners valued being able to correspond with others conveniently at any time of the day or night. Further, Ahern *et al.* (2016) found that within the Facebook

platform, learners were using other modes of communication including chat and direct messaging. Students shared (uploaded) and downloaded documents in the group area which enabled rich knowledge sharing, and this was the most compelling reason why new users joined groups. Students stayed in the group for the duration of their university course as the groups were rich in higher level knowledge and relevant information.

OU Learners in Social Media

The largest student-led Facebook group for OU learners has around 22,500 people in it at the time of writing (May 2019). However, the exact number or percentage of learners using social media platforms and Facebook at the OU is not known. Nevertheless, as the general uptake of social media has increased, researchers have identified the need to analyse the use of social network tools in the educational context (Ahern, Feller and Nagle, 2016). There is a paucity of explicit research about the behaviour of distance learning students' learning- and education-related activity in Facebook. Understanding the student perspective on learning here could provide useful research to enhance learners' experience. Hence this investigation addresses this contextual gap as it explores the learning and experience of undergraduate distance learners in this large university, through the non-mandatory, student-led closed, Facebook module study groups.

Aims

The aims of this research are to investigate the learning that takes place in Facebook groups, and any positive and negative effects of these groups on learners. This can inform learners, learning designers and educators in higher education about the potential value and challenges of this social media platform. Much research on educational uses of social media focusses on the ways in which students are engaged and supported by tutors teaching in Facebook (e.g. Pi, Chou and Liao, 2013; Tess, 2013; Manca and Ranieri, 2016a). These represent studies of teaching interventions, and the effectiveness of this for learners. However, this investigation explores the learning taking place in Facebook study groups which are formed, organised and led by students themselves. Here, students may learn educational information that they would otherwise not have discovered as a solitary distance learner. For example, students may become motivated by others discussing their reflections on their module topics, or ways to improve their assessment results. Facebook groups may have affordances influential for learning, reflected in the content and tone of these social media groups, and reasons for these. Hence one aim for this study is to occupy some of the gap in understanding learning in student-led Facebook study groups.

These student-led areas are often overlooked in the prevailing research discourse about the use of social media in education, and as Dalsgaard noted 'there is a lack of in-depth research on Facebook groups managed by students and without participation from teachers' (2016, p. 261). Further,

much of the literature on this topic is written by researchers who portray the student from the researcher's point of view. The diverse interpretations of multiple perspectives are important to hear, and this can develop a new understanding of the educational use of this online space. New insight is gained from the perspective of participants in various roles in these groups, to prioritise the multiple perspectives of group participants, and foreground student voice. Ultimately this study aims to contribute to informing HE practitioners about aspects of learning, taking place in student-led social media module study groups from the student perspective.

Sharing this knowledge can enable tutors to understand student rationale and motivation for the learning that takes place, and the potential opportunities and risks presented for student learning, attainment and progression. There may be implications for a wider audience in instructional design, if more is known about how to improve support for distance learning in this student-led environment. This would contribute to discourse among educators and policy makers at this university and others. This study can inform education practitioners about the rationale for, and types of learning taking place which they would not normally observe. There may be unexpected, incidental findings from this under investigated context. This research study arose from a desire to understand if the time spent in this online social utility was useful to distance learners at the OU, or not.

Initial Pilot Study

An initial pilot study was conducted in 2015, to investigate whether OU distance learners found participation in Facebook study groups supports or disrupts their learning. A pilot study has several functions, 'principally to increase the reliability, validity and practicability of the research' (Cohen, 2007, p. 341). An important objective of this pilot study was to uncover and remedy any risks or problems with the research methods chosen, in advance of the main investigation. Further, this could identify omissions, redundant and irrelevant topics being pursued. The initial pilot checked timing, depth of questioning, scope of the study, skills and resources required, and tried out methods of data coding and analysis.

One OU Facebook study group was investigated using online dialogue data threads and four participant interviews, in a theory-led semantic, content analysis process. A data corpus of nearly 90,000 words and other data items was used. The findings of the pilot study showed three of Selwyn's (2009) five types of learning-related interactions were present in the study group, and two types of learning were absent. Pilot study group participants displayed learning related interactions including: (1) recounting and reflecting on the university experience; (2) exchange of practical information; (3) exchange of academic information. Selwyn's themes of (4) Displays of supplication and disengagement; and (5) 'banter' were not found. A mixed pattern of findings about types of support and disruption was noted, including community building and managing conflict. As no similar studies appeared to have been conducted in this Facebook setting for distance learners, this

suggested further research could be justified to understand distance students' learning in Facebook OU study groups.

The following points enabled improvements to the design of the next stage of this research investigation:

1. The research questions were refined to make a stronger contribution where there was a clear gap in the existing empirical research. A research question, to compare Facebook group activity with university virtual learning environment (VLE) group activity, was taken out to sharpen the focus and originality of the study.
2. The initial pilot study found the student-led Facebook OU group included many alumni, prospective students and other participants who were not current OU students. This had implications for an appropriate research design, detailed in Chapter 3.
3. New students and inexperienced participants were found to have less insight on the topic and research questions. Rich data was found when interviewing study group participants with a lot of experience of the Facebook OU groups. For this reason, the main research study focussed on OU Facebook module groups with students at undergraduate level 3 / final year.
4. Feedback on the pilot study advised it was best to avoid Facebook groups where I might encounter current students of my own, as I was tutoring at the university.

5. Conducting a pilot study improved research investigator practice at using the chosen methods; this added the opportunity to improve the quality of data integrity.
6. In the pilot study, data coding and analysis was conducted on paper to identify the important analytic themes. As the data set grew sharply in the main investigation, the qualitative data analysis NVivo software was used to manage the growing data set more efficiently.
7. A content analysis was used in the initial pilot study. However it did not adequately meet the needs of investigation, as it focussed on counting and quantitative measurement and analyses of qualitative data which I was co-constructing. This method also obscured or minimised the presence of themes which are important for learning but were found infrequently. The main research investigation used the qualitative method of thematic analysis.

Hence the pilot study formed a useful foundation to refine and focus the research questions, methods and analytic technique, to inform the design of this research investigation.

The Research Questions

The initial pilot study described above informed and tested the research questions, and practical ways to investigate these. This pilot study gave the opportunity to refine the research questions and calibrate their focus. This

study therefore examines four questions about OU undergraduate distance students:

- Why are students using closed, student-led Facebook OU module study groups? (RQ1)
- What learning takes place in these student-led study groups? (RQ2)
- How does this participation support student learning? (RQ3)
- How does this participation disrupt student learning? (RQ4)

Structure of this Work

After this introduction to the context, aims, motivations and questions, the second chapter is a review of relevant empirical literature and conceptual ideas used to shape and understand the findings of this study. The third chapter describes and justifies the methodological approach taken to examine the research questions. The fourth chapter presents and analyses the data found in relevant theory-led and data-led themes. Each of these themes is then discussed in turn using a conceptual framework to understand those findings. The fifth chapter responds to the research questions directly, summarises the contribution this study makes, discusses the implications of the study, and makes some suggestions for further research to develop more understanding.

Summary

In this first chapter, the context and background for this research study of educational practice was introduced. The findings and conclusions of this study will be framed by the specific organisational and social arrangements present here. This thesis investigates the rationale for, types of learning, and ways in which student-led Facebook groups may support or disrupt learning among undergraduate distance students at the UK OU. This introduction included the background of the institution, distance learning, social media, social network sites, Facebook, Facebook groups, and OU learners in social media. The chapter moved on to describe the aims of this research, motivation for this study and the research questions. The next chapter will review the most relevant empirical research and conceptual ideas underpinning the study.

2. Literature Review

This chapter explores the empirical research and existing scholarship, which this study will build on and use to interpret the findings. This review is organised in two parts. The empirical and theoretical research in Part A pursues lines of inquiry reflecting the research questions and important themes expected in the data. This includes research about online communities, why people choose to use Facebook to support their studies, the nature of what is learned, the support this provides for studying, and experiences of disruption. The conceptual framework in Part B will be used to interpret the findings of the investigation: this includes the Sociocultural theory of learning by Vygotsky (1978) with the modern interpretations of Connectivism (Siemens, 2005) and Connected Learning (Ito *et al.*, 2013), and the ethic of Care led by Noddings (1984).

The terms conceptual and theoretical framework have been used interchangeably in literature about research. In this study, the theoretical framework is the larger collection of empirical research which considers the findings and conclusions generated from previous relevant research studies. These may be used to predict the findings expected in this study where similar research has been conducted, in a related or similar setting. This study builds on this existing empirical foundation, and much is owed to this existing field of knowledge which offers a gap for the present investigation to fill. The conceptual framework is the smaller number of concepts and underpinning ideas which were used to analyse and explain the findings.

These are the lenses through which the findings are interpreted and discussed. In Chapter 4 this thesis argues the modern interpretations of these concepts shed new light on how to conceptualise student choices in building online communities for distance learning.

This research study is in the student-led Facebook study group context, with undergraduate distance learners. This context is under-investigated in the published literature, so the empirical studies evaluated here are from a varied lineage. Where there are limited studies about the topics in this student-led group context, studies have been reviewed for relevance about tutor-led educational and other Facebook groups; and general postings in Facebook for formal and informal learning purposes. Some literature has been used about Facebook use in non-educational settings if the themes are similar to my findings; about social media and group forum use in education and non-educational settings, and some aspects of the effect of general internet use where there are specific insights relevant to this study.

The conceptual framework in Part B emerged and developed during the data collection and analysis phases of the research study. It is a framework to explain understanding, perception and interpretation (Leshem and Trafford, 2007). It came from an appreciation of relevant readings, personal experience, and individual reflection on theoretical positions on the phenomenon being investigated. The abstract issues identified evolved as the investigation progressed from the initial study cycle, providing more focus

and support for the data collection, and ‘theoretical cohesion to the evidence’ (Leshem and Trafford, 2007, p. 100).

Literature Search Strategy

The review of relevant literature was an iterative process which developed and progressed throughout this study. To find key research articles and relevant books, five search methods were used. First, with advice from the OU Education subject Librarian, Google Scholar and online library databases including Academic Search Complete were used. Key search words and phrase combinations included Facebook, higher education, social media, social network, support, disrupt, learn*, peer, group, community, online education. Secondly, the snowball technique of following up the most relevant and frequently cited articles in these, provides additional sources to use. Thirdly, I searched EThOS (E-Theses Online Service) for relevant completed theses; and ORO (Open Research Online) for conference proceedings and studies specific to this university context. Fourth, I subscribed to Mendeley and Air-L (Association of Internet Researchers listserve), for regular email alerts of potentially relevant new areas of research. These elicited up to a hundred alerts to review each month for the duration of the study. Fifth, in the final stage, guidance from supervision and examiners added further relevant literature. These multiple sources offered a range of materials to broaden the intellectual lineage of the literature.

From these simultaneous mining processes I selected the most relevant literature which investigates similar activity to, or offers insight on the

questions of this study. Common themes were identified and used as the basis for the literature review here. The research studies of most interest were about student-led learning activity in Facebook; the large corpus of research about tutor-led interventions online is mostly excluded as it foregrounds a different perspective. This review was revised and updated in an iterative process at regular intervals, between 2014 and 2020.

Part A: Empirical Literature

This review of empirical literature considers online group learning at this university, and research about online communities, as these are relevant to a number of the research findings. This section is then structured around the topics central to the four research questions, and these informed the data collection. Those four topics are: rationale for using Facebook module study groups, learning taking place there, support gained in the groups, and experiences of disruption.

Online Group Learning at the Open University

The OU has a history of experimentation with new media for the delivery of its teaching (Mason, 1989a), and pioneered the use of distance conferencing for educational applications (Mason and Bacsich 1998). This section will examine some of the relevant literature about collaborative and peer learning conducted at this university. The investigation reported in this thesis is built

on this foundation of commitment to understand and apply the benefits of peer learning in this institution.

Early research at the OU acknowledged that the use of student 'self-help groups' was important to improve retention (Harry, 1982). After a small trial in the use of email, the university started using electronic discussion systems with students in 1988, when a computer conferencing system was used in a course on information technology (Mason, 1989b). This was 'presented to students as a metaphorical Electronic Campus in order to help them develop a mental model [of the] provision for the course' (Mason, 1989a, p. 50). A visual aid provided to learners (p. 51) included a drawing of a student union building, and a 'conversation area' where peer dialogue could take place. This computer conferencing was intended to improve convenience, equality, access to help, and the important social aspect of learning; to facilitate serendipitous encounters for student learning.

Constructivist theories of learning which move from knowledge transmission models towards active learning, gained popularity in the 1990s. By 1995 approximately 5000 learners were using the online 'conferencing' system at the OU each year (Mason and Bacsich, 1998). Students valued the interaction with other students, and used it to compare notes with their peers, to chat about issues tangential to their course, and to create the kind of community learners might hope to find on campus (Mason, 1994). This is similar to the rationale for students in the present investigation to engage in peer conversations in Facebook. However, Mason and Bacsich (1998) noted a crucial limitation of the computer conferencing, which was that students did not visit the system frequently enough to establish educationally viable

discussions about the course materials. Further, students considered the use of the medium to be optional, and therefore saw it as a means of support rather than a means of studying the course. Hence, while the motivation for using a peer conversation may compare with the present investigation, the location of the FaceBook environment outside university systems contrasts with this early experience of university-hosted conferencing environments. The present investigation investigates (among other issues) whether the pace of Facebook study group dialogue is now sufficient, and the effects of this.

For effective learning interactions to take place, Mason and Bacsich (1998) also suggested 'considerable hand-holding of students and exceptionally high input from tutors' (p. 251) was required to boost learners' confidence to contribute online. This peer conferencing was offered by the university platform with the current proliferation of SNS, students now create and join their own student-led study groups, and no tutor input is expected. This potentially offers a cost advantage for the university and learners if the groups are able to manage themselves for effective learning. As Facebook is often part of learners' everyday lives (as in the present study), these early findings offer a contrast to current OU student groups' usage in Facebook. The value of passive and vicarious learning is now recognised (Anderson, 2003), even if learners are not leaving an easily recognised evidence trace of participation in their online study group.

Social learning theories see learning as embedded in the normal daily practices of people as they carry out their work and learning (Hislop 2006). In a study evaluating participation in tutor-led and student-led collaborative

forums, Kear (2001, 2004) noted some important developments in how learners were using the forums at this time. In contrast to earlier research, findings showed 'students can learn from asynchronous communication largely without direct intervention from their tutors' (Kear 2004, p. 162). Indeed, if staff intervened this nearly always inhibited further discussions on the topic (Kear, 2001), and learning among peers was 'more effective than interventions by the tutor' (p. 1). This represents a change compared to previous studies at this institution, which found tutors needed to offer considerable hand-holding and carefully organised dialogue. The evidence of this time showed that learners had become more confident to contribute and respond to each other, and proficient to organise themselves in their independent learning. Students were notably more willing to respond to each other's questions and requests, with benefits for learning for all participants: 'It is clear from reading the conferences that students are providing help and support for each other' (p. 155). At this time, the role of the tutor was to plan the groups, set up ice-breaking activities, help learners avert mistakes and misconceptions about study topics, and to generally check messages while listening and staying quietly in the background. Tutor moderators aimed to let students help each other, rather than intervening quickly to respond to student questions, and there was 'evidence of real knowledge building among the students' (p. 155). This learning corresponds with thinking inspired by social perspectives (Hrastinski, 2009), and Lave and Wenger's (1991) community of practice, developed further by Wenger (1998). Although these discussions were led by the university tutors, these groups compare much more closely to the type of self-organised conversations taking place in

the student-led Facebook study groups in the present investigation. However the quiet presence of an active tutor in the group is still a key difference from the present study.

Students' increasing interest and proficiency in social media was further recognised around this time, with an internal OU report investigating social media usage among students (Sclater and Jarrett, 2010). Their survey study of 969 students found a mixed response to whether learners wanted to involve Facebook in their OU study experience, or not. Learners who were keen to use Facebook to support their OU studies suggested Facebook was "more useful by far than the forums provided through [the university website], which are pretty much dead of activity" (p. 2). The main reason for not using Facebook for studying, was that respondents preferred to keep their social, and academic or professional lives separate. Others feared Facebook use could become time consuming or distracting. Comparing the use of the university website and Facebook in this way suggests that many learners who were interested in interacting with other learners had already moved to Facebook, and those who were not interested were happily not obliged to join in. This corresponds with Downes' (2006a) assertion that 'the students own education', and it seems that a migration of learners who wanted to connect with others in student-led peer learning spaces in Facebook had started. Noting the student 'excitement' with SNS, Pettit (2014) later showed that student collaboration tools in the OU university website could be used alongside social networking tools for good effect: these are not mutually exclusive in the minds of learners. Offering an ephemeral voice-only peer learning space in the university website, he argued that the challenge for

educators is to create the right environment in the university web platform which learners will choose to use to complement their learning. Importantly, this acknowledges that learners exercise agency and 'freedom to choose' their preferred ways to support their learning (p. 28). In a study comparing OU forums and Facebook, Gardner (2014) found students describe the university forums as a safe online location. However, the forums were underused as people felt anxious about posting, in case others judged them too harshly for their comments. As it is not monitored by the university, Facebook was seen as a more natural form of peer communication, enhancing student ownership of their learning.

These evaluations of peer learning over time at the OU signal learners' skills and preferences have developed, and proficiency with electronic communication has improved. The OU has maintained an innovative approach to online collaborative pedagogy, and engaged intellectual curiosity to regularly reflect on and evaluate the usefulness of peer learning to achieve educational goals. All of these studies focus on tutor-led online spaces and this may differ from student-led discussion spaces in some key ways, which the current investigation uncovers. Research so far has concentrated on tutor-led spaces and this leaves a gap in understanding about wholly student-led spaces in Facebook. The present study is about a contemporary trajectory of student-led learning in a social network site that is a popular student choice, and this can contribute valuable knowledge to the literature. As a basis for this study, much is owed to the scholarly foundation these early influential studies offer.

Online Communities

The study of community has a multi-disciplinary lineage, with an ‘unsettled intellectual history dating back nearly 200 years’ (Parks, 2011, p. 107). Within this, an understanding of online communities provides an important backdrop in which this investigation is undertaken with educational communities. The idea of a community is accepted as integral to the building of effective online learning environments (Palloff and Pratt, 1999; Conrad, 2002), and the present investigation does not seek to evaluate any aspect of the community form. This sub-section is a review of some background to online communities and online learning communities, to inform and support the findings through this study. While much of this is early research in a fast moving setting, many ideas still have intellectual currency today.

The idea of a Community of Practice became popular as a way of defining a group where ‘participants share understandings concerning what they are doing and what that means for their lives’ (Lave and Wenger, 1991, p. 98). This is relevant to the student-led Facebook study groups in this investigation as it crucially suggests community is a set of relations experienced between people over time, and a network in which they relate to each other. It does not necessarily imply co-presence, or well defined tangible or visible group boundaries. Around the time this was developed, some adoption of internet technologies took place by people keen to connect with a community of others without the usual pre-requisites of geographic and temporal proximity.

Researchers define virtual communities as ‘social groups that display the psychological and cultural qualities of strong community without physical proximity’ (Parks, 2011, p. 107) or ‘communities without propinquity’ (Willson, 2006, p. 16). An influential early account described virtual communities as ‘social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace’ (Rheingold, 1993, p. 5). These criteria are relevant to the study groups in my investigation, and Rheingold’s well-crafted observations provide a footprint upon which many researchers have since studied online community. In his introduction to the WELL (Whole Earth ‘Lectronic Link) bulletin board community he was part of, he notes ‘I care about these people I met through my computer’, and the future of the technology landscape through which they are connected (p. xv). His emotional interest in the technology, and care for the social community of people online was clear in his compelling text. This offers similarities to the context of this investigation, as it suggests community is about the digital network, and also about some attachment to, concern and ‘care’ for the people who participate there. These twin concerns are implicit and included in the conceptual framework in my investigation described in Part B of this chapter.

In his recollection of events he explains ‘people in virtual communities do just about everything people do in real life, but we leave our bodies behind’ (Rheingold 1993, p. 3). This reveals his view that the online community was very much a reflection of what he called his ‘real life’ but without embodied,

physical connection. He noted the loosely interconnected computer networks of the internet hold great potential for community, but it can also be a crucible for fragmentation, potential difficulty and malevolence (Rheingold, 1993). The individual community groups form part of a larger network of other online groups in which people participate, and this may be relevant in my investigation too. He notes 'there is no such thing as a single monolithic online subculture, it's more like an ecosystem of subcultures' (p.xviii), with groups connecting through people. The internet is 'a marvellous lateral network [that] can also be used as a kind of invisible yet inescapable cage' (London, 1993) so opening up new connections of people but this implies people may feel trapped by reliance on it. Rheingold hoped the decentralisation of communication in using such online communities would empower individuals to resist corporate control and creeping government regulation. Hence some of the benefits and risks to people in this new mode of community were articulated ten years before Facebook was created in 2003 as the site of this investigation. These early issues still resonate in this thesis as current SNS are 'direct heirs' of the early virtual community described by Rheingold (Parks, 2011, p.106).

There is learning to be taken from this account to the present investigation. As well as influential findings about online community, Rheingold's (1993) approach can inspire some aspects of my investigation. The fashionable view of internet participants at this time in the 1990s was of anti-social, solitary characters. However Rheingold viewed internet users with a different perspective, to see these people as sociable networkers seeking human

connection in their online communities. This reminds me to look for new lenses to challenge traditional perspectives of the findings in my investigation too. While he does not adopt a strictly scholarly methodology, his commitment and vision for the value of these communities comes through in his engaging writing. Using a qualitative ethnographic case study method, he describes and analyses a series of online communities centred on internet bulletin boards. There is no claim that the phenomena he identifies can be generalised, but his analysis is still important and of particular interest in itself. This is the same as my investigation and I do not aim to prove anything or to generalise my findings very widely, but to accurately document, analyse and theorise in the communities studied.

While this early account by Rheingold 'captured the imagination' (Parkes, 2011), it is also critiqued for taking a utopian and celebratory stance on virtual communities (Goodwin, 2004). Some consider the very idea of a virtual community to be a contradictory oxymoron and suggests a community may not be possible online (Lockard, 1997, p. 24). Rheingold attracts a polarised debate, with critics suggesting online communities offer an impoverished version of traditional community, and say he overlooks the potential spectre of capitalism on the internet. Critics may have unrealistic expectations for the type of community and social connection that may be created online (Parks, 2011). The scepticism of his view has some merit, and my study will investigate both positive support and negative aspects resulting from participation in online student communities. I align more with Rheingold's optimism to investigate the potential of the internet as a

community location to create positive outcomes. If motivated group participants are aware of potential pitfalls, then the darker potential of virtual communities may be worked around. To balance this, my fourth research question in the present investigation actively focuses on seeking out and understanding negative experiences of online community involvement.

Further critique of Rheingold's well written case for online community, suggests his description and vision were mostly under-conceptualised (Goodwin, 2004). Nevertheless some important concepts were present in his work, for example the very idea of virtual community and its potential for democracy with decentralisation of authority, power and information. As Rheingold was a writer (London, 2018) and not an academic researcher at the time, his ideas may be under-conceptualised. This may mean his ideas are more difficult to subject to empirical investigation, than a community of practice (Lave and Wenger, 1991) or community of inquiry model (Col) (Garrison, Anderson and Archer, 2000) explained later in this section. This was a lost opportunity for Rheingold, but nevertheless this does not diminish his seminal contribution to knowledge about early online communities in the 1990s. The significance of his virtual landscape and enthusiasm around his vision prevails, and it became the starting point to stimulate ongoing interest and debate.

Commentary on migration from physical to online communities after this time held rather critical undertones. It suggested such communication in mass media platforms is inauthentic and lacked the necessary interpersonal

signals to connect people with a shared purpose. For example, social commentator Putnam (2000) famously mourned the loss of community in online life. He referred to online dialogue as 'drive-by', offering lightweight online relationships which are transient in nature (Nardi and Harris, 2010, p. 403). While the internet emerged as a convenient substitute for face to face interaction for busy people, Putnam claimed this impoverished quality of life and this trend should be reversed. In addition, dystopian perspectives of video game engagement and criminal activity online, contribute to a view that online activity and communities can be undesirable (Haythornthwaite, 2007).

Learners value the community they participate in, the learning they acquire there, and the opportunity to improve their digital communication skills. In a pioneering, relevant qualitative study of internet-based distance learners, Haythornthwaite *et al.* (2000) investigated if students felt belonging to an internet community, and how this was experienced. They concluded learners earn a 'dual education' as they become accomplished in distance interaction as part of a community, grow familiar with new technology, and also learn the subject matter for their course. This highlights that the interest and development of digital skill is necessary for participation. Identifying nuanced types of community forms, Haythornthwaite (2007) later concludes a network is represented by a critical mass of interconnection between people, while a community is identified by the relational social and support connections between people linked in such a network. This dual requirement is consistent with Rheingold's (1993) identification of the technology network and also people relations. This also has similarities to the way Preece (2000)

consistently differentiates between the twin requirements for online community: design usability to support sociability. Meanwhile, the notion of community still invoked spatial imagery and continued to be contested by critics, as it conjured up an image of a cosy pastoral village. Reflecting on this, Haythornthwaite (2007) suggests perhaps there should be new names and definitions for the contemporary collaborative forms of group connections being made online. The concepts of connectivism (Siemens, 2005) and later connected learning (Ito *et al.*, 2013) described in the conceptual framework used in this thesis were being articulated and developed at this time.

Also around this time, a Community of Inquiry (CoI) model was developed as a coding frame to analyse computer mediated conferencing for learning (Garrison, Anderson and Archer 2000). The authors suggested computer conferencing has considerable potential to create a community of inquiry for educational purposes, by combining social activity with the concept of learning community. The CoI model includes three interdependent pre-requisites for successful educational experience: cognitive presence, social presence, and teaching presence. Social presence may be defined as 'the degree to which a person is perceived as 'real' in mediated communication' (Gunawardena and Zittle, 2009, p. 8).

This CoI model was considered early in this investigation as a conceptual framework. The model emphasises the central importance of teaching presence in building an educational community: a study by Lin *et al.* (2016) had emphasised that the teaching presence is critical to a successful learning

experience when in Facebook. In the student-led Facebook groups in my investigation, learners are without this required traditional teaching presence as the 'binding element in creating a community of inquiry for educational purposes' (Garrison, Anderson and Archer, 2000 p.96). The CoI model also emphasises quantitative content analysis of online text, and this data may not be fully sufficient on its own to analyse the questions of my investigation about learning. On reflection, I now realise this could have been used with the absence of teacher presence, as learners may be teaching each other as 'contributions to supporting learning can also be made by students' (Kear, 2011, p. 21). There have now been many studies evaluating models of community in Facebook (E.g. Kucuk and Sahin, 2013; Lin *et al.*, 2016; Kazanidis *et al.*, 2018), so it seemed prudent to look for a new perspective.

The existing mode of educational production for learning at this time was critiqued as too slow to embrace the kind of fluid, transitory conception of knowledge necessary to understand new learning about the internet (Cormier, 2008). The 'expert centred, pedagogical planning and publishing cycle' was considered too static (p. 1), and the ephemeral nature of web based information was disrupting the way knowledge had traditionally been documented by experts. Educational curricula based on long accepted knowledge and slow peer review and validation processes felt outmoded, as knowledge became constructed in faster moving online communities. New communication technologies and the gathering of interested learners into online communities, expedited the exchange of valued information, as knowledge became negotiated between interested creators (Farrell, 2001). Rhizomatic learning is a way of thinking about this type or process of learning

that has no beginning or end (Gerber, 2016), and the direction of knowledge becomes governed by the online discourse community who gather. In rhizomatic learning the topics of learning or curriculum, are not defined by predefined content from published experts, 'it is constructed and negotiated in real time by the contributions of those engaged in the learning process' (Cormier 2008). However this democratic, self-directed concept of learning does not fully represent the type of student-led groups in the investigation of this study: the aim of the student-led Facebook module study groups is to support learners in completion of their OU higher education qualification with well-defined curricula. While there are many elements of spontaneity and serendipity in the Facebook learning groups, learners are focussed on their understanding of the university curriculum. Hence the rhizomatic learning concept will not normally explain the phenomena under investigation in this study.

The present investigation here builds on the foundation of these and other scholarly works. It looks at similar questions about learning, support and difficulties present in online communities, albeit it in a student-led online community space and at a different time. This study is located in a relatively new niche colony in the 'widening circles of virtual communities' anticipated by Rheingold (2000, p. xxxii). As more computer devices and new social media software extend the reach of the internet to more people, new uses and spaces are created for new purposes. These are formed and led by and for people with joint interests. The new uses and new online spaces become the unexplored gaps in the empirical literature as researchers analyse

activities taking place there. The focus of this thesis is one such gap, which extends and builds on existing knowledge.

Student Rationale for Using Facebook Study Groups

Participation in a community can bind a student into the social and intellectual life of their educational institution (Tinto 1987). Educational communities who include and care for the welfare of their student members are those which 'keep and nourish' their members (p. 205). Without this commitment to students and an identifiable ethos of caring permeating the institutional life, student turnover and departure can be high. Importantly, persistence to complete a programme of study is influenced by a learner's integration into the social system of their institution (Tinto 1975). Lack of integration in the community leads to low commitment to the social system of the institution, and increases the likelihood of a learner leaving their studies. Social integration happens primarily through informal peer group encounters, extra-curricular activities and interactions with staff, and these can provide important social rewards and goal commitment for learners. Hence social participation is 'directly related to [...] persistence' (p. 109). With this understanding, Tinto (1975) developed a predictive model of academic persistence, which suggests learners continue their studies depending on a longitudinal process of interactions between themselves and the institutional systems, to integrate them in its social and intellectual community (Simpson 2003).

However, there is limited empirical support for Tinto's analysis, and his account is based on a narrow view of a typical, traditional university student (Richardson, 2000). Tinto's research was conducted at campus universities in North America in the pre-digital 1970s, and may not be relevant to UK distance learners many decades later. Tinto's theoretical model may not be relevant to understand part-time distance learners behaviour (Bajtelsmit, 1988). Instead, Bajtelsmit suggested more emphasis should be placed on the students' external environment including their job and family situation. He offers an alternative model of dropout from distance education which foregrounds and prioritises the influence of learners' academic support systems and distance learning skills, instead of social integration in the institution (Rekkedal and Qvist-Eriksen, 2003). In contrast, Tinto's model was later examined and tested a number of times by Yorke (1999), who concluded the theory of social integration fitted better with data from part-time learners than full-time learners. Hence Tinto's model of social integration may really be useful to understand part-time distance learners. This may be relevant in the present investigation, as social media including Facebook provide a platform for these necessary peer group encounters and social integration to take place. In a distance learning university, there are few opportunities for extracurricular activities or to cultivate peer group supports.

Much empirical research has since evaluated the support and problems specifically associated with social media participation for higher education learners (Madge *et al.*, 2009; Selwyn, 2009; Mäntymäki and Islam, 2016). Less attention has been offered to understand the rationale for learners to join and maintain participation in social media, to support their studies

(Henderson *et al.*, 2015). The question of 'why' distance students are using student-led Facebook module study groups surfaces the needs and values that are met by a Facebook study group context.

Studies suggest learners are choosing and using alternative parallel technology platforms, and will add platforms to their digital ecology depending partly on their ease of use (Miller *et al.*, 2016; Thomsen, Sørensen and Ryberg, 2016). Students may be relatively conservative and choose shared spaces, which are easy to access and use, to decide what is relevant and useful for their studies. In particular, students are interested in expediency and the potential to save time when choosing technologies. If a tool is too complex it may take more time to learn than is saved in using it.

Learners may use multiple online channels to support their learning, and will add interactive social community spaces to the online learning space offered by the university. In a mixed methods survey and interview study, Thomsen, Sørensen and Ryberg (2016) found campus based learners form a parallel ecology of network technologies to support their learning, alongside discussion forums offered by the university. Students express a 'strong preference for working with Facebook' for group collaboration activities (p. 100) despite sensing their tutors have a distaste for using alternative spaces alongside the university website. Their study showed that Facebook and social media services 'play an important part as social and academic glue for the individual students', fulfilling student needs for expedient interaction (p. 100). They see the university website as suitable for downloading and their

Facebook space was for uploading questions, discussion and debate. My investigation looks at the reasons distance learners are using Facebook as an online space for interaction with their peers.

Learners may not be motivated to select between social media platforms, but may be hedging their options and curious to investigate many platforms simultaneously. Madianou and Miller (2012) suggest users are not switching but selecting more fluidly from the affordances of a range of technology devices and media platforms together.

Students are motivated to participate in a learning community which is fast, interactive, and responsive to meet their learning goals. Using a quantitative survey study, Ahern, Feller and Nagle (2016) investigated why undergraduate campus based students use Facebook groups. They found 'the attributes of Facebook groups lead to interaction, which in turn satisfies the higher level information and decision making needs of students' (p. 40). Their study suggests three important findings. First, student-led Facebook groups offer all students present an equal stake in using, managing and adding content, and this leads to a higher level of interaction; this interaction is central to the benefits being attained. Second, student-led Facebook groups offer a learning community for peer support and general interaction about other tangential items as well as study topics. Third, easy access and entry to Facebook groups motivates students to use it for interacting with one another, and this interaction is critical to achieve their learning goals. Hence the main benefits of using the student-led Facebook groups are 'information

seeking, efficient and quality communication, learning and community' (p. 47). They indicate educators should 'be aware that student-led groups are preferred by students' for these three reasons (p. 47).

Learners can only use their real name in the university website and forums, but it may be easier for learners to ask basic questions anonymously or in another identity. The use of another name or pseudonym in social media can reduce inhibition and offer more privacy to facilitate more self-disclosure (Dron and Anderson, 2014). Andalibi *et al.* (2016) also found significant differences between posts from genuine authentic accounts, and anonymous pseudonym accounts in the social media platform Reddit. In online communication, anonymity and the use of pseudonym accounts was linked to less accountability and more disinhibition (Suler, 2004). However increased disinhibition can lead to disruptive behaviours such as bullying and flaming (Hlavach and Freivogel, 2011). In the present investigation, the presence of anonymous or pseudonym accounts may increase the level of disruption in a study group if a participant using a pseudonym feels less accountable for their actions.

Learners may be interested in expedient responses. Comparing different learner motivations, Deng and Tavares (2013) conducted a qualitative, interview study of fourteen teacher educators. They investigated student engagement with Facebook discussions for learning, and compared this to their limited enthusiasm for joining discussion forums in the university's Virtual Learning Environment (VLE). The student-led Facebook Group

provided learners with information, social and intellectual support in a timely way to support their studies. Learners were strongly motivated to use Facebook as it was one of their existing everyday habits, they had a sense of ownership in the student-led group, and they valued the social presence of their fellow students in the online community group. Their 'interaction on Facebook was instant, spontaneous and organic, thus fostering their sense of community' (p. 174). In contrast the students were less enthusiastic to use the university website discussion forums as the formal, academic environment turned people off using the space beyond topic based discussions. They preferred the user friendly interface and ease of navigation in Facebook, and the expediency and high activity rate in Facebook made it more attractive to students. While the context for many of these findings were with learners in a campus university setting, these studies provide prompts to build on in my investigation of distance learners' activity in Facebook groups.

Learning

Learning has been the topic of much research, and a great deal of attention has been given to developing a definitive theory of learning (Biggs, 1999). Research specifically about student learning in context of schools and universities originated with a study of different levels of information processing; this suggested there were deep and surface approaches to learning (Marton and Saljo, 1976 a,b). A surface approach to learning is about remembering disjointed facts, and a deep approach to learning is about going beyond the text to understand the intended meaning of what the

topic or author is trying to say. Further analysis argues these are a reproducing (surface) orientation, and a meaning (deep) orientation (Richardson, 1994, 2000). Additional research on these added a strategic approach to learning, based upon obtaining the highest grades (Ramsden, 1981, Entwistle and Ramsden, 1982), or an achieving approach to learning (Biggs, 1987). These types are not traits of learners (Biggs, 1999), but reactions to varied teaching and environmental contexts including assessment of learning (Laurillard, 1979). Examining these ideas further, Richardson (1994) argued that a deep learning approach was typical of mature students as they are motivated by intrinsic goals, and bring prior life experience which aids a deep approach to learning. These may all be relevant in the present investigation.

Educational psychologists provide theories of individual learning in three domains: psychomotor, cognitive and affective domains (Reece and Walker, 2007). Psychomotor learning is concerned with learning physical skills which need practice, for example, learning to ride a bike (Dave, 1970). Cognitive learning requires thinking skills to remember and understand (Bloom, 1956); and affective learning is concerned with attitudes, feeling and emotions to internalise appropriate values (Krathwohl *et al.*, 1964). This conceptual framework by Reece and Walker (2007) draws on different specialist fields of psychology to those of Marton and Saljo (1976 a,b) above, but these ideas are all used in education with the common intention to theorise about learning. Hence, there are many differing schools of thought about learning theories (Dyke *et al.*, 2007). While the many perspectives and theories

highlight different aspects of learning and its context, these can offer a fresh perspective in new contexts.

Using the learning typology of Greeno *et al.* (1996), Mayes and de Freitas (2004) discuss the role of theory in the design of learning activity. They offer three broadly different perspectives on learning, although suggest that each of these offers an incomplete view, and a fuller understanding of theory for online learning requires an understanding of many complementary perspectives. They nominate three clusters or broad perspectives which make differing assumptions about learning. First, the associationist perspective where learning is the gradual building of patterns of association and skill through structured tasks. Second, the cognitive perspective is where learning happens through perception, thinking, language and reasoning. The third perspective is situative, where learning focuses on the way knowledge is distributed socially. They argue that learning using online tools does not necessitate a need for new models of learning; instead this requires a new model of education.

Learning taking place in online communities may also be organised in complementary perspectives (Kear, 2011), and here the behaviourist, cognitive and constructivist perspectives are prioritised as relevant. Similar to the associationist perspective above, the behaviourist perspective originating with Skinner (1954) and Gagne (1985) has roots in a teacher-centred approach, is about learning through positive and negative reinforcement for behaviour. This is useful in many contexts, but may not allow learners sufficient control to be relevant in the present study. The cognitive approach to learning focuses on perception, memory and forming concepts, like that

described by Mayes and de Freitas (2004). However, this perspective may take insufficient account of the context in which learning takes place and hence, may not be the most relevant choice for the present study. The constructivist theory of knowledge originating with Piaget (1970), is based on the premise that learners construct their learning through active and personal observation and activity. Social constructivism (Vygotsky, 1978) emphasises the role of the social context and process of learning, and the central importance of communication. This approach offers a closer relevant context to the present investigation, and hence is examined further in the section about Vygotsky below.

All of these theories of learning offer different perspectives or emphasis on learners, their context, and their acts of learning. Hence careful selection is necessary to identify which is most relevant in the present investigation and apply to this study. Educationalists are often driven to use the models of learning which enable improvements in their teaching (Biggs, 1999).

However, this study is about learning not teaching, and it is necessary to use a theory of learning which offers a way of differentiating and analysing the types of learning which learners use in undertaking their studies. A suitable theory of learning will need to be applicable to the online, distance context of the research site and evidenced in this mediating artefact of Facebook groups, and the learners' accounts of their learning.

At present there is a general drift away from individual behaviourist approaches to learning towards ways that are more social in nature, to better equip learners for a changing role in society (Conole, 2013). Contextual learning is more relevant to enable learners to locate and use relevant

information as required, so dialogic and constructivist learning approaches are prevalent. Critics suggest that learning management systems are predicated on a model of teaching, not learning, by transferring knowledge to learners in the virtual learning environment (Ehlers, 2007, Yamani, 2019). Ehlers (2007) developed his model of two typical modes for e-learning: distribution and collaboration. He advocates that e-learning can make a bigger difference to learners competence when they move from solely consuming distributed learning materials, and progress on to collaboration activities with other learners. Using similar concepts, Sfard's (1998) earlier model of metaphors of learning can provide a useful tool with its sharp focus for analysis in the present study. Sfard's (1998) Acquisition metaphor relates to the accumulating learning materials; and the Participation metaphor corresponds closely to active learning among students. Hence this is most relevant to this investigation of learning in online study groups. Hence the present investigation uses Sfard's (1998) theory of learning as it is applicable to the practice orientation and the needs of this investigation, of distance learning in student-led Facebook study groups. This is discussed further below.

Acquisition and Participation Metaphors for Learning

Sfard (1998) identifies two ontological positions of what constitutes learning. Her Acquisition and Participation metaphors for learning are a linguistic representation of two main types of learner activity, and they focus on the differing visions of the mechanisms of learning. These can apply in the online

social learning environment. A benefit of these simplified metaphors is that they highlight certain basic approaches towards learning (Paavola and Hakkarainen, 2005), and hence the debate between the cognitivist, behaviourist and situated perspectives on learning activity (Anderson *et al.* 1996, 1997; Greeno 1997). The Acquisition Metaphor (AM) is a way of thinking about learning as a cognitive process with 'basic units of knowledge that can be accumulated'. Here the learner 'constructs meaning' (p. 5), like the activity of accumulating material goods. If the human mind is a fillable container, then the learner will be the owner of this new material possession or commodity, so learning is about accumulation and acquisition of propositional knowledge (Paavola and Hakkarainen, 2005). This is seen as 'a static 'banking' model, interpreting understanding as the acquisition, ownership or possession of knowledge' (Ernest *et al.*, 2016, p. 2). Students can ask closed questions in Facebook study groups, and a direct answer can be supplied by another student present in the group. My study looks for evidence of this in the online group dialogue, and asks interview participants to recall occasions when they found such information in a Facebook study group.

The alternative Participation Metaphor (PM) emerges from contemporary ideas about learning as a process of legitimate peripheral participation (Lave and Wenger, 1991), or an apprenticeship in thinking (Rogoff, 1990). Legitimate peripheral participation is the process by which newcomers become established in a learning community, through participating in the discourse. This PM shifts the permanence of having or possessing

knowledge, to an activity or a constant state of doing. This sees learning as 'a process of participating in various cultural practices and shared learning activities' (McLaughlin and Lee 2007, p. 668). In contributing to questions and discussion in Facebook study groups, learners may improve their articulation and evaluation skills to engage in learning. With the PM, learning is viewed as an ongoing process of becoming part of a greater whole (the university community). The focus shifts to the emerging bonds between the learner and others, elevating the importance of the dialectic nature of learning interactions. 'According to the participation metaphor of learning, cognition and knowing are distributed over both individuals and their environments, and learning is situated in relations and networks of distributed individuals engaging in activities' (McLaughlin and Lee 2007, p. 668). Learning is a process of becoming a member of a community, using appropriate skills of dialogue to exchange information, and to act according to its socially negotiated norms (Paavola and Hakkarainen, 2005). This corresponds well with the present investigation which finds learning in relations between learners in an online community, and located in the network of geographically distributed individuals. In this investigation studying Facebook interaction, evidence of this is found, with more experienced undergraduate group participants able to construct influential and succinct contributions online, which can help others' learning.

These two positions were chosen as a way to understand and differentiate between different conceptions of learning, and they may be found in the context of this study in student-led Facebook study groups. These reflect

both the information a student needs to possess, and also the important practice of participating with others in inquiry, discussion and sense-making in university education. Sfard (1998) also notes that AM and PM don't tend to happen in mutual exclusion 'An adequate combination of the acquisition and participation metaphors would bring to the fore the advantages of each of them, while keeping their respective drawbacks at bay. Conversely, giving full exclusivity to one conceptual framework would be hazardous' (p. 11).

Using Sfard's (1998) model, Paavola and Hakkarainen (2005) develop how AM and PM apply in SNS, to propose an additional knowledge creation metaphor of learning, making use of Bereiter's (2002) knowledge building theory. A substantial critique of Sfard (1998) stems from the binary, dichotomy analysis it appears to offer, whereas learning may be in constant flux between the two positions of acquisition and participation in reality. Indeed these metaphors for learning may actually complement each other (Salomon & Perkins, 1998) rather than compete for primacy. In applying AM and PM to the present investigation, Sfard's (1998) ideas were not necessarily designed to be used in an online setting. Hence, while each form of learning (AM and PM) can be understood in its own right, understanding the interplay between these can yield a conceptually richer picture. While it is not advisable to make uncritical assumptions about the usefulness of Sfard's (1998) theory of learning: this analytic model will allow for examination of the data in the present investigation and stimulate critical evaluation of the learning taking place in the student-led Facebook module study groups.

JISC (2015, online) define digital literacies as ‘the capabilities which fit someone for living, learning and working in a digital society’, and participating in social media can improve positive communication and collaboration skills. Digital literacy also encompasses the ability to critically evaluate information encountered on the web, and improvement of digital literacy skills has been reported as a significant challenge (Adams Becker *et al.*, 2017). While learners are engaging in fast moving conversations in social media spaces, the requirement for succinct, short communication may hone students’ digital literacy skills (Purvis, Rodger and Beckingham, 2016). In their paper debating whether social media is a distraction or source of digital engagement, Purvis *et al.* note that fast moving social media has been criticised for providing only superficial engagement with its emphasis on short messages. However, they advocate this ‘brevity does not necessarily mean superficiality, and challenging students to think about how to communicate concisely and rapidly can allow for development of strong information processing skills’ (2016, p. 3).

Evidence of learning related activity is found in Facebook groups. A pioneering qualitative study of education related learning in Facebook by Selwyn (2009), looked at students’ posting activity. Observing the open dialogue among campus based university students, he identified five themes that emerged on education-related interaction on students’ open profile pages. He found study-related interactions form the following themes: recounting and reflecting on the university experience; exchange of practical information; exchange of academic information; displays of supplication

and/or disengagement, and “banter” (p. 161). These themes represent an early study in the uses of Facebook in education in the UK, and further research has followed since as learners have developed their use of this platform.

Learning related activity is found in student-led Facebook study groups. Dalsgaard (2016) studied student-led Facebook group activity among Danish secondary school pupils. From his content analysis, he formulated an alternative theory about education related Facebook posts. He suggests the posts are about: social activities in school; social activities outside school; subject matter; study technique, and practical issues. Importantly he noted ‘Whereas LMSs are seen by students primarily as institutional systems of the teacher, Facebook has an educational potential to be used by students for peer-to-peer learning in groups, in which teachers are not members’ (p. 272).

These studies by Selwyn (2009) and Dalsgaard (2016) are valuable to see the findings of educational related learning in student-led spaces in Facebook. Both studies used a qualitative analysis process on large datasets. Selwyn analysed Facebook activity of 909 UK campus based undergraduates wall (not group) dialogue, over a semester and holiday period. Dalsgaard analysed over 18,000 posts and replies in five Facebook groups; a questionnaire answered by 1,463 students and 148 teachers in 17 Danish secondary schools; and interviews with 4–6 teachers and 4–6 students from each of the 17 schools. Dalsgaard conducted a content analysis and derived five themes of social and academic posts. Some of the

findings of both studies can be used in a theoretical frame for my investigation, where the findings correspond with my research questions. For example, Selwyn (2009, p. 161) identified 'exchange of practical information' as a theme and similarly Dalsgaard (2016, p. 268) identified 'practical issues' as a theme. Selwyn (2009, p. 161) found 'exchange of academic information' as one of his themes and Dalsgaard (2016, p. 268) identified 'subject matter' as one of his five main themes in the data. Some differing themes they identified were social activities in and out of school (Dalsgaard, 2016) and supplication and disengagement (Selwyn, 2009). Supplication is 'presenting oneself as helpless in order to elicit the sympathy or help of others' (p. 167), and disengagement is 'presentation of themselves as unable [and] incompetent' to justify poor motivation for their studies (p. 168). These unique themes may be specific to the learner populations studied, their priorities and conventions. While these studies were both conducted in Facebook in an educational setting, and Dalsgaard (2016) looked at data from Facebook student-led groups, neither study looked at undergraduates in Facebook study groups. This refines the gap in the research about learning, and Dalsgaard confirms there is a lack of in-depth research in student-led Facebook groups.

Support for Learning

This section explores the most relevant aspects of support which have been found in Facebook study groups in the empirical research published. The literature is drawn from a range of contexts: some are about digital media use

in learning, and many are about the general use of Facebook and Facebook group use by campus based students.

A consistent thread of research in this area suggests that social bonding and connectivity are important elements of learning that lead to improved engagement (Kuh, 2009). As well as exchanging course-related information with classmates (Madge *et al.*, 2009) and administrative support (Leaver, 2014), a valuable rationale for using Facebook in education may be of a psychosocial nature (McLaughlin and Lee, 2014). By establishing supportive links with peers and engaging in constructive dialogue, learners can become more positive about their learning and experience an important sense of belonging and community. Learners can develop new community-based, collaborative forms of learning. This is through the sharing of ideas and seeking of assistance from peers, friends and experts in university life (Cain and Policastri, 2011). This social bonding may be important in the present investigation for distance learners in Facebook.

Facebook provides a network of relationships for learners in transition to university life. In a study about the use of Facebook for social integration into university life, Madge *et al.* (2009) describe Facebook as the 'social glue' (p. 141) that helped students settle in. The authors carefully differentiate between the teaching and learning that may take place, and their study was about learning (not teaching) in Facebook. The study was conducted at a UK campus university, and they found that Facebook was one aspect of students' general social networking practices and was complemented by the

usual face-to-face interactions and relationships. Students reported they used Facebook mainly for social reasons, and although it was not used for formal teaching purposes there was learning taking place there informally.

There are further benefits of participation in Facebook for undergraduate learners, after their initial arrival. In a web based survey study of learning among Canadian undergraduate students, Ahern, Feller and Nagle (2016) found five key benefits students experienced by engaging in Facebook groups about their undergraduate studies. These were 'information seeking'; 'communication efficiency'; 'communication quality'; 'learning capability'; and 'community' (p. 45). When the tone of the environment was considered supportive, it offered 'a ready source of peer support that is manifested through obtaining help as well as emotional support' (p. 46). Students indicated that they bonded in the supportive environment, and were mutually supporting each other to complete their course. The authors conclude that a strong online learning community will offer intellectual, academic, social and emotional support. Using the Facebook groups for both educational and social reasons, aligns them as an 'edusocial space' for learners (Pollara and Zhu, 2011; Ahern, Feller and Nagle, 2016). Hence the peer support offered in Facebook groups can facilitate greater ownership and self-direction among learners, to blend achievement of academic and social goals. This peer support environment offers the potential to achieve social and academic integration required for completion at university (Tinto 1975, 1987).

Learners participate in different ways in their student-led online study groups.

In a virtual auto-ethnographic study of interaction of an online discussion forum in a UK distance learning course, Orton-Johnson (2007) found five types of academic and social participation. She characterised these as lurker, member, expert, flamer and joker. Importantly the dominant form of participation was the 'active lurker' who would 'read messages and postings and follow strands of debate but not necessarily contribute to the interaction' (p. 4). These learners were participants through their attention rather than contribution. This forms the starting point for all other forms of participation, and is a valuable source of peer learning in a busy environment. Her concept of active lurking redefined the notion of 'spending time in an online space observing interaction patterns and reading postings' (p.4) as an active, peer learning activity in the digital space. Discovering this nuanced typology of learner participation behaviours sharpened my attention to look for these in the present investigation.

The learner voice can be elevated when using qualitative research methods to examine educational uses of Facebook. Using a survey design at two Australian universities, Henderson, Selwyn and Aston, (2017) used a thematic analysis of responses, and identified eleven key ways students use digital technologies to support their studies. These were frequently centred on the logistics of university study; fulfilling course requirements, engaging with materials and people remotely, and time management. Respondents cited Facebook and Google Docs as tools chosen to 'make working in a group a lot easier' and 'extremely useful in co-ordinating a virtual team' (2017, p. 1,574). These benefits were extended to asking questions of people

interested in similar aspects of their studies. Referring to the community support present in Facebook generally, a respondent said it 'is a casual forum where I can bounce ideas off friends, particularly those interested in similar areas as me, and I don't feel like I'm asking questions that are obvious or stupid like I do on Moodle' (p. 1,574). The authors remind educators to attend to the lived reality of students; to bridge the gap between what students actually need, and the ambitious educationalist rhetoric around the potential of technology-enhanced learning. In practice learners were using digital technologies for a small range of instrumental uses, relating to efficient completion of their individual studies. Social media was augmenting university learning materials in a way that learners could tailor to their own learning needs, driven by individual agency and choice over relevance.

Learners may have difficulty asking for help with their studies in the channels provided by the university (Kear, 2001). In a mixed method research study on support seeking behaviours and temporary accounts in Reddit social media, Andalibi *et al.* (2016) found that while gaining support can be helpful, people have difficulty doing so for many reasons. One risk of asking for help is losing face, where face is the positive self-image people present in their social interactions, aim to maintain, and feel discomfort without (Goffman, 1959). In asking for help in a university virtual learning environment forum, people may feel vulnerable or fear they look inadequate by admitting that they want help, and in so doing they think they present an unsuitable image of themselves (Kear, 2001). Hence peer group learning can be more effective than interventions by a tutor. A study of mobile Facebook in Taiwan found learners felt less pressured and were more willing to join in the online Facebook

discussion, than the conversations in class (Chen, 2015). In a small study of an educational tutor-led, closed Facebook study group, Cuesta *et al.*, (2016) found learners became integrated into academic culture more efficiently by participating in the group. Many learners in the study were from diverse and challenged academic backgrounds and were unsure about understanding the cultural codes of the academic community. The present investigation may find participating in a student-led Facebook module study group may be a more approachable environment, than the university website groups moderated by academic tutors, and provide the opportunity to ask questions more easily.

Learners who join student-led social media groups may want to widen the context of their learning to a larger peer group than that offered by the university. In two systematic reviews of the use of Facebook for learning, Manca and Ranieri (2013, 2016b) consider many relevant empirical studies. They considered peer reviewed journal articles which focussed exclusively on Facebook. In their first review they note themes in the evidence emphasising three pedagogical affordances of: mixing information and learning resources; widening the context of learning; and hybridisation of expertise (using the contribution of alumni, tutors and other professionals). Their later systematic review study differentiated between learning in formal (tutor-led) settings, and learning in the informal, student-led social media context like the focus of the investigation presented in this thesis. Facebook offers learners the opportunity to enrich the learning experience as learners are likely to mix more information and share new learning resources. They

are 'not limited to predefined [course] contents, but open to diverse sources exposing learners to a variety of inputs' (Manca and Ranieri, 2013, p. 494). On widening the context of learning, many learners feel discomfort and unease about the blending of social and study life in Facebook with their teaching staff. So while the context of learning is expanded to social media, learners want to use this as a space to explore ideas with other learners, not with their tutors. As Facebook groups are outside of the cohort-based access controls of the university website, they can go beyond the limited boundaries of defined modules and include people with additional expertise. In their later meta-analysis of studies the authors note that the pedagogical affordances of Facebook were still partially implemented, although 'different types of educational uses of Facebook exploit these affordances to different degrees' (Manca and Ranieri, 2016b, p. 503). This desire to enlarge the context and group of peers available for discussion and support, may be a motivation in the present investigation.

There is a notable gap in these studies examined so far exploring how learners share goodwill, or help and care for others in a social media context. In a study of peer learning at this university, Kear (2001) noted the helpful exchanges between students were sympathetic, showing respect, tact, and care for each other in small acts. In a study about online community and learning in a large collaborative game context (*World of Warcraft*), Nardi and Harris (2010) describe the actions that contribute to learning. These range from small light encounters, to highly structured organised activities for collaboration. They noted that, in the game, players offered gestures of

goodwill to passing players with whom they had no other relationship. It was part of the culture of the game for players to 'commit small acts of kindness to maintain a mutually beneficial atmosphere even though no immediate reciprocity is in the offing and no rewards [...] are gained' (p. 397). Nardi and Harris (2010) note the players in the WoW game have agency in managing their learning, they can decide, choose and deploy learning resources as appropriate, learning is not controlled by an outsider like an institution or curriculum: 'Learning occurs when the learner needs and wants it, in the context of solving a problem the learner genuinely wishes to solve' (p. 403). The culture and atmosphere, of mutual benefit and fun, establish an ethos of helping others and asking for help. These small gestures of goodwill may form important building blocks to establish trust in an online environment, which otherwise lacks intonation of speech and interpersonal gestures. These are relevant in my investigation as goodwill gestures are also found in the student-led module study groups in Facebook.

In summary, learners have varied needs for support when participating in a SNS study group. There is a notable paucity of research about distance learners' specific motivations and needs. This section about support has reviewed a range of relevant literature which has found Facebook groups, Facebook or other online environments supporting learning and people. Specifically, this includes themes of psycho-social support and community building; peer learning and information exchange; managing the logistics of university study; pedagogic affordances of mixing and sharing resources; and displays of goodwill, collaboration and mutual care. Importantly, the range of

literature shows there is currently limited understanding of the types of support shared on student-led Facebook groups for undergraduate distance learners. The varied range of supports offered by online communication can now be contrasted with the risks of the environment for providing disruption for learners.

Disruption to Learning

This section explores some of the most relevant aspects of disruption to learning, which students may experience through engagement in Facebook. The literature is drawn from an enlarged range of contexts, as limited published evidence on the disadvantages of engagement in Facebook study groups have been found.

Group work is often embedded in learning curricula for students to learn negotiation, and to learn ways to articulate their different points of view (Gore 1999). In the study of this thesis, learners have sought out a student-led social media community space to supplement their learning. In virtual learning communities, conflict can occur in discussions when ideas and personal values clash between community members (Ozturk and Hodgson 2017). However if it is not resolved, conflict can reduce cohesiveness and group efficiency, undermine the learning process and 'impede the progress of collective work' (p. 26). Ozturk and Hodgson found group members may adopt the following solutions to unresolved conflict in democratic online learning groups: compliance if possible; fragmentation of the group; or dropout from the group or course may occur. All of these solutions influence

the learning experience for students, and these solutions may also be present in the student-led social media study groups in the present investigation.

Social media and Facebook present a range of distractions for students, and an opportunity for diversion from the important task of learning. Some empirical studies suggest Facebook can offer a low level distraction for students, from their important task of learning (e.g. Kirschner and Karpinski, 2010). The platform presents a convenient tool for gossiping, procrastinating, virtual people watching or as a source of diverting entertainment during study time (McLaughlin and Lee, 2014). Other studies identify 'facebocrastination' (Meier, Reinecke and Meltzer, 2016, p. 65), 'intellectual and scholarly de-powering' (Selwyn, 2009, p. 158), SNS addiction (Fox and Moreland, 2015; Hong and Chiu, 2016), and cyberbullying, stalking and harassment (Kwan and Skoric, 2013) as risks which can sabotage learning. While using Facebook to maintain friendships may relieve feelings of inadequacy and insecurity, through solidarity with others (Cuesta *et al.*, 2016), this can also be a source of great distraction (Madge *et al.*, 2009; Chen, 2015). There may also be a mismatch between the multitasking required when using Facebook while studying, and the traditional pedagogic objective of critical thinking and engagement with learning required in higher education (Bugeja, 2006). The number of contributions can build up very quickly in online discussions, and these take time to read through leading to feelings of information overload (Kear, 2011). All of these activities may lead to a change in the types of behaviour and learning which can take place.

Facebook can be a space for social communication and trivial dialogue between learners. Selwyn (2009) interpreted the social function of Facebook dialogue differently and lamented the 'mundane, prosaic and often anti-intellectual' nature of student Facebook interactions, with insufficient practical and information value (p. 170). Social media can be a distraction that pulls learners away from the necessary deep engagement with learning required in higher education (Andersson *et al.*, 2013). Referring to the content of Facebook study groups, Swain (2015) reports academic staff saying they include "lift-sharing stuff and pictures of kittens". However, this type of relationship building small talk may have always taken place between learners, and can be an element of social support and bonding for learners: Facebook now just provides a written record of that. What may be interpreted as trivial uses and features of social network space may really 'play an important role in setting the social and informational context of the rest of the conversation' (Radovanovic and Ragnedda, 2012, p.10). They can be setting the social context for more complex follow-up conversations, while maintaining harmony, and a feeling of community and connected presence among students. It is these non-verbal, paralinguistic cues that are met by the short, connective phatic posts and cues offered in social media including Facebook. In their study comparing face to face and online tuition at The Open University, Price, Richardson and Jelfs (2007) found the online tutor group spaces in the university website were 'severely impoverished from a communication perspective' (p. 18). Students valued the pastoral care offered in their face to face tutoring sessions, as well as achieving their

intellectual goals. Attending to social and academic needs will integrate learners to their institution more closely, to aid motivation and retention (Tinto 1975, 1987). Price *et al.* (2007) recommended discussion forum participants and tutors in online tuition should be trained to compensate for the lack of paralinguistic information, and explicit verbal cues. Hence the research suggests different conclusions about whether social and trivial dialogue between learners is important for learning, or not.

Researchers notice particular problems and concerns when Facebook is for educational purposes. In their recent meta-analysis of literature about the limitations and problems of Facebook use in education, Chugh and Ruhi (2017) found a range of concerns expressed by researchers. The main limitations found were educators' dominance, inactive behaviour, lack of academic language usage, technological and privacy concerns, and discrimination. The use of Facebook in education can also be sabotaged by slow and unreliable internet connection (Bahati, 2015), and they also note the distractions available from the recreational and social content (Chen, 2015). Some of these concerns label the informal tone as a problematic feature of social media, however this can enable learners to feel comfortable and engaged (Kear, 2011), and may be important steps to build a productive online community. Hence academic researcher evaluations often prioritise cognitive and intellectual content over the social integration role of Facebook for learners. There is a gap in accepting that digital engagement in social media is more than a distraction from learning (Keidong, 2018). This perception contrasts with the importance of participating in a social niche to

maintain persistence and hence learner retention in their studies (Tinto 1987). As the learners in the present investigation are studying at a distance, the online social network of Facebook is an important space for this.

Learners may feel pressured by others to maintain their relationships online with frequent interactions, and a heightened expectation of speed in response. Inherent delays and lack of interaction in asynchronous communication in the university websites can have a negative impact on student learning (Vonderwell and Turner, 2005; Kang and Im, 2013). In a study of relational and psychological stressors associated with Facebook, Fox and Moreland (2015) looked at general Facebook usage, not educational use. They found although Facebook is conveniently accessible through mobile devices, this can make users feel tethered to the social network. They may experience a fear of missing out on information if they do not check regularly, creating social labour. The fast connectivity and ease of accessibility can present pressure when people do not want to connect with others, or want to withdraw from existing relationships, and it can enable unhealthy behaviour like monitoring and social comparison. Using focus groups, Fox and Moreland (2015) found some inconsistency in participants' responses; that although people think they do not get upset over Facebook interactions, they often have examples of when they did get hurt. The contradictions found in their research findings suggest that the breadth of user experiences are not fully represented in content analysis or large scale data scraping, and qualitative techniques could help illuminate much more nuanced realities in the way users describe negative experiences. My

qualitative investigation of student-led groups here adds to the understanding of these experiences in the novel environment of student-led Facebook study groups for distance learners.

Facebook may not be an ideal space for the type of sophisticated argumentation necessary for higher education learning. In their qualitative research about how Facebook users manage conflict and conviviality, Tagg, Seargeant and Brown (2017) note 'acts of offence-taking and offence-giving on Facebook constitute an important gap in the research literature' (p.5). Participants in their study said they mostly decided to ignore offending posts. Kirschner (2015) is also vocal in critique that social media is a space ill-fitting for argumentation and academic discussion; people may decide to tolerate opposing views presented online without challenging or engaging with them, as Facebook is not seen as a site for reasoned debate around different views. The ambiguity of online communication in Facebook allows for misinterpretation, and this can lead to conflict with peers (Hope, 2016). The present investigation can build on these studies and contributes to this by studying distance learners exchanges in a student-led educational group setting, where offending posts may occur.

Online harassment can have a negative impact on the learning experience and reputation of participants in a learning community. Learner-led, open spaces in SNS offer a space for peer learning that is at least as useful as that led by their teachers (Dron and Anderson, 2014). However without the secure access control of a physical classroom, and the professional

standards of teachers to manage the pedagogic process appropriately, students can be vulnerable to the malevolent behaviour of others.

Participants in a student-led open group 'may not have the cognitive or moral tools to recognize and distinguish the good from the bad' (p. 14).

Constructive cognitive and moral behaviour may be encouraged and moderated by group members valuing their reputation in the student community. Offering guidance about online research, Marwick, Blackwell and Lo (2016) suggest disapproval on social media can lead to online reputation damage, harassment, social shaming and other networked forms of abuse. Concern about exclusion or being the next target for harassment may have a chilling effect on participation, and this may be relevant in my study of distance learners. Studying socially malevolent behaviour, Garcia and Sikström (2014, p.92) identified a 'dark triad' of personality traits; psychopathy, narcissism and Machiavellianism. This includes behaviour manifested in Facebook interactions such as self-promotion, emotional coldness, duplicity and aggressiveness. In a chapter about trolling and problematic social media practices, de Seta (2018) evaluates many rich definitions of trolling behaviour. She found it includes various practices including deceiving, confrontational, offensive, negative, disruptive or antisocial behaviour (p. 392). My investigation will look for evidence of these behaviours in the online dialogue to frame the participant interviews, to examine the effect of disruptive behaviour on learning in the Facebook groups.

Disruptive behaviour can result when the goals of one or more individuals contrast with an online community they participate in. The earliest vivid account of online harassment was shared by Dibbell (1993), in which he described how one character deceived other students in a text-only online space. The infamous Mr Bungle character controlled the actions of other characters in the online community by deception. This essay surfaced issues relating to online harassment, identity, anonymity, digital dualism, democracy and governance of online community spaces, which remain unresolved and still present risk to participants today. Dibbell highlights how an online community dealt with the harassment, and how online hostility has an adverse effect on the individuals and community involved. Importantly he shows that while the actions may have been virtual, the participants involved felt an injustice and the harm caused was real to those involved. This is relevant in the present investigation if learners report that hostility in their student-led Facebook group disrupted their studies, or caused other problems.

Hence, using a social media channel for the espoused purpose of learning when it is not led by the university may be a 'double edged sword' (Smith, 2016, p. 44), offering risks as well as potential benefits. The present investigation is focussed on student-led groups which are not facilitated, moderated or monitored by the university. Considerable research has been conducted about the benefits of social media, like social and practical support in education (e.g. Ahern, Feller and Nagle, 2016), but there is a notable gap in the literature to explore negative experiences for distance students in

Facebook groups. Given that study groups espouse their aim as support groups, students may not expect negative interactions and experiences, and this may make such disruption more damaging or potent if they occur.

Part B: Conceptual framework

The purpose of this section is to explain the concepts chosen as the most relevant lenses to view and interpret the findings offered by the data in this study. These are the sociocultural theory of learning offered by Vygotsky (1978b), contemporary ideas of connectivism (Siemens, 2005) and connected learning (Ito *et al.*, 2013), and the ethic of care perspective by Noddings (1984).

Sociocultural Theory of Learning

The overarching conceptual approach for this study is sociocultural, as the focus of learning in the investigation is an active process of constructing knowledge, and not a solitary, individual matter (Vygotsky, 1978). Context or setting has an impact and role in learning, and the forms of learning acquired develop from the learner's social environment. The sociocultural concept is embedded in the research questions and implicit in the group context of the research. Sfard's (1998) participation metaphor is indicative of the practice of learners engaging in dialogue and sharing interactions using SNS, which are linked to socio-cultural theory (McLaughlin and Lee, 2007). This section outlines the important features of the sociocultural perspective as it relates to

this study. This includes the ways in which the sociocultural perspective is interrelated to the individual perspective; the influence of the Zone of Proximal Development (ZPD) for learning; and the importance of mediation and artefacts of learning examined in this study (Vygotsky, 1978). The ZPD is the term for the learning environment in which students develop their cognitive understanding, and is explained further in the sub-section below.

In the concept of constructivism, learners gain understanding through interactions with the environment and their peers (Vygotsky, 1978). Typical features of constructivist learning include 'emphasis on learner-centred and activity-oriented cognitive processes for knowledge assimilation, creation and construction' (Dyke *et al.*, 2007, p. 90). Learning necessitates construction of concepts and ideas, regardless of what is taught, according to constructivists (Swan, 2005). Social constructivists extend the constructivist view and consider that interaction, language and collaboration form an important part in learning. They consider that 'groups construct knowledge, collaboratively creating a culture of shared meanings' (Barkley, Cross and Major, 2014, p. 17). A group of students can share their knowledge and this sharing and exchange of knowledge in the combined group is greater than that held by any of the individuals.

Group and Individual Focus of Learning

The perspectives of individual and group learning may be seen as a forced choice in direct conflict between opposing constructivist and sociocultural

perspectives (e.g. Cobb, 1994). Sociocultural theorists connect learning to participation in culturally organised practices, while constructivists prioritise students' individual conceptual activity: 'For the constructivist approach, the learner acts alone first then interacts with others, for the sociocultural approach it is the reverse' (Hall, 2007, p. 98). However, it is possible that the sociocultural perspective informs the conditions for individual learning to take place in a learning community. While socio-cultural theorists take the individual-in-social-action as their unit of analysis (Minick, 1989), constructivists analyse learning located in the individual so participants are the embedded unit of analysis for depth of understanding in my study.

Alternatively the individual and the context may be considered together, and Vygotsky (1978) emphasised the interrelated roles of the social world and the individual. In a similar interpretation, Rogoff (1992) uses the analogy of organs working together in an organism with an inherently interdependent relationship. Each organ has its own structure and function but would not work on its own without being part of the whole organism system. This is relevant for the present investigation where any study group does not achieve its potential without sufficient contribution from its members; and members do not achieve their goals without a suitable community environment.

Conceptualising sociocultural activity on three inseparable, mutually constituting planes, Rogoff (1995) advocates the personal, interpersonal and community process work together in an inherently *interdependent* way

(emphasis added). Each may be the focus of analysis at different times, with the other planes necessarily remaining in the background. This combined and interdependent focus between the learner and their environment provides a rationale for the analysis of learning in this investigation. In her comparison of concepts, Hall (2007) suggests the sociocultural approach is more than just adding a collaborative activity to an individualistic course; rather it is about the use of the social context throughout the learning process. This highlights a difference between learning interactions around a particular module activity, and ongoing participation in the learning community.

The central notion in Vygotsky's work is internalisation, or embedding of knowledge or skill in the person. In his essay on the internalisation of higher psychological functions, Vygotsky (1978) posits that internalisation or learning consists of a series of transformations or steps. Firstly 'an operation that initially represents an external activity is reconstructed and begins to occur internally' (p. 56). So learning starts by interpreting signals based on intelligence, what is paid attention to, and memory. Secondly 'an interpersonal process is transformed into an intrapersonal one' (p. 57). So learning signals are transferred between people, then form into learning within a person depending on what they pay attention to, their memory and intelligence at forming ideas from those signals. Thirdly 'the transformation of an interpersonal process into an intrapersonal one is the result of a long series of developmental events' (p. 57). This notes some development as gradual and ideas may take time to incubate with a person, to be deeply

understood. Overall he suggests learning is communicated through signals not bound in the individual mind, but as distributed in the activity of the person and artefacts woven together. These signals of learning may be found in the content of a Facebook study group.

Zone of Proximal Development

The extent to which the setting enables students to enhance their learning is a key aspect of the concept of the Zone of Proximal Development (ZPD) (Vygotsky, 1978). This concept is the label for the environment in which students develop their cognitive understanding. The zone is 'the distance between the level of actual development and the more advanced level of potential development that comes into existence in interaction between more and less capable participants' (Cole and Wertsch, 1996, p. 254). Less capable learners can acquire learning that was beyond their solitary competence alone. Learners need new or more mature psychological mental structures, people and tools, to learn. If the learning context has the right amount of support, with people who are able to help learners develop, then the learner can grow their learning in the ZPD. Then learners' interaction in the social environment can enable them to achieve success in the learning activity, in a way they could not have done without the social support (Hall, 2007).

The cognitive apprenticeship theory later offered by Brown, Collins and Duguid (1989), suggests the role of teachers and more experienced peers is

to offer 'scaffolding' in the ZPD. The metaphor of scaffolding refers to interactions where more competent individuals offer help and guidance to less accomplished individuals (Wood et al., 1976). It is a 'process that enables a [...] novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts' (p. 90). The term scaffolding also implies that the support offered is temporary, and it is taken away as the learner increases competency. This modelling, support and coaching from experts, helps novice learners build new understanding and thinking in dealing with new challenges. In modelling, peers and educators provide expert behaviour and explanations. Coaching is about encouragement, diagnosis and direction. This scaffolding is the structure and direction through the ZPD and the learning environment. Hence learners with less knowledge and skills can benefit from more capable classmates, and all participants can benefit from this collaboration (Vygotsky, 1978).

To improve attainment in distance learning, this scaffolding has to be available but flexible to meet the needs of learners who don't have proximity to each other, or a tutor. Digital technology is also seen as an effective means of providing individuals with enhanced access to sources of knowledge and expertise outside their immediate environment (Selwyn, 2017). Participating in an online community can involve a range of learning practices, including developing expertise in conventions relating to identity, etiquette and trust (Carr and Oliver, 2010). This may be happening in the student-led Facebook module study group context of the present

investigation, and Figure 1 below shows how the ZPD may apply in a Facebook study group.

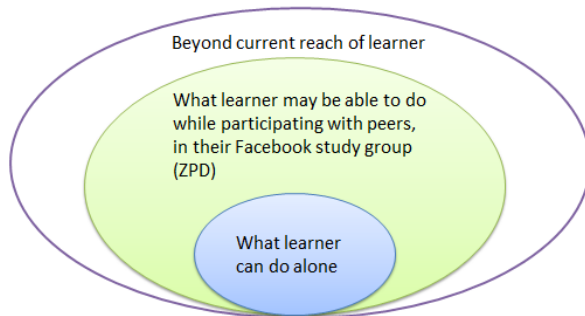


Figure 1. ZPD for Facebook Study Group

Vygotsky's (1978) work focussed on how children learn but his ideas have been widely used to underpin learning design for adult learners. By foregrounding learning through interaction with others, Vygotsky's ideas have been important to promote the approach known as social constructivism (Mayes, 2020). In this perspective, the ZPD is important for teaching and learning as it helps educators reflect on and improve the conditions and environment they create for learning. Many studies about online learning evaluate the role of the educator in growing learners' knowledge or competence in the ZPD (E.g. Hall, 2007; Robinson, Kilgore and Warren, 2017). My study is unusual in looking for learning in a ZPD where an educator is not leading that activity; the 'educator' as a mediator is missing in the setting for this investigation. The Facebook module study groups for distance learners in this study are wholly student-led, and learners have to adopt and share the teaching mediation role themselves.

Mediation and Artefacts

Sociocultural theories place the mediating social environment as central to learning, and without which the 'development of mind is impossible' (Cole and Wertsch, 1996, p. 253). Learning may be extended in the ZPD as a result of a physical, digital or other context. Vygotsky (1978) identifies the mediation tools that are used to express thinking, including the language of culturally developed signs, symbols, notation, maps, drawings, and the important tool of written text. He suggests cognitive development or learning is not a direct result of activity, but of other people interacting with the learner, using mediatory tools to facilitate learning and then learning or 'internalisation' may occur (p56). The mediating environment for distance learning includes the mediated artefacts of contemporary learning such as books, a website containing information, electronic documents, and an optional synchronous communication space online. These are all designed by teaching practitioners to facilitate learning, and the concept of mediating artefacts has been drawn on extensively in the field of educational technology (Conole, 2013). The mediating tools and artefacts in this study are decided by learners, specifically: the online space (tool) and dialogue (artefacts) in student-led Facebook study groups.

As artefacts are recognised as transforming mental functioning in fundamental ways, Vygotsky (1978, pp. 139-140) noted there may be implications for learning with the insertion of a new artefact to the learning context. 'The inclusion of a tool in the process of behaviour (a) introduces

several new functions connected with the use of the given tool [...] (b) [...] alters the course and individual features of all the mental processes that enter into the composition of the instrumental act, replacing some functions with others. (i.e., it re-creates and reorganises the whole structure of behaviour just as a technical tool re-creates the whole structure of labour operations)'. This view suggests tools (i.e. Facebook group) and artefacts (i.e. messages) here may not simply facilitate mental processes, such as learning that would exist with another mediated artefact like books or the university website (Cole and Wertsch, 1996). Importantly, he is suggesting that the learning artefacts used, and the sociocultural environment they might offer, can fundamentally shape, change and transform the learning that is acquired.

This sociocultural perspective is important because the focus and research questions of this study are about learning taking place in a group setting, with students who voluntarily choose to join the optional non-mandated, student-led online study groups in Facebook. An often discussed limitation of Vygotsky's socio-cultural theory of learning is that it may not be as relevant to all cultures, and all types of learning situations as scaffolding is heavily dependent on verbal instruction (Rogoff, 1990). Many of Vygotsky's theories remained incomplete before his premature death, and there is debate about the definition of the ZPD. The zone "does not provide an accurate picture of [the learner's] learning, ability, style of learning, and current level of development compared to other children of the same age and degree of motivation" (Miller, 2011, p. 198). In relation to the present investigation, an

important limitation of the well-established sociocultural theories of learning is they were developed before digital technology based learning became popular (Selwyn, 2017). 'Put in these terms, the main relationship between an individual and technology may not be related to processes of learning per se, but based around his or her relationship with information' (p. 88). Hence, contemporary concepts of technology-based learning are worthy of further explanation, including Connectivism and Connected Learning. Connectivism is about knowledge and where it is created in an online network, and connected learning is about the nature of learning that takes place in the online network context. While some commentators use these terms interchangeably (e.g. JISC, 2018), they each have a subtly different focus, and these can provide new insight to analyse the data in this investigation.

Connectivism

Connectivism conceptualises learning as a network phenomenon influenced by social factors and technology (Siemens, 2005). Anderson and Dron (2011) suggest that connectivism is the third generation of distance education pedagogy; after the early cognitive-behaviourist, recent social constructivist, and now connectivist pedagogy is the current mode for learning.

Connectivism has been defined as 'the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks' (Downes, 2007). In connectivism, the learning community or 'node' is included in a larger network of nodes where knowledge and learning can flow through people

and digital formats. Successful connectivist learning communities are diverse with a wide range of points of view; offer autonomy for participants; are open to new perspectives being shared in the community; and connected to other nodes (Downes, 2006b, 2012). As a result learning occurs when connecting, moving and immersing in the network activities. The concept has been applied to Massive Open Online Courses (MOOCs) where educators were absent or offer a facilitation role, and learners direct their own learning (Goldie, 2016). Hence, these features make this a relevant framework to examine the learning in student-led online study groups in this investigation. The groups are part of a larger network of online learning groups and digital resources, where empowered learners guide their own learning.

One aspect of the importance of technology in education may lie with the idea that information can be accessed on a just-in-time basis (Selwyn 2017). If knowledge exists in digital technologies in the same way it exists physically within our minds (distributed, neurologically), then it is possible to ascribe knowledge and learning attributes to the distributed nature of networks formed between people (Siemens, 2005). Technology helps facilitate between knowledge we already know, and our ability to access more. The latter has expanded with internet use but learning depends on the ability of the individual to identify, retrieve and connect particular online information sources exactly when needed. These knowledge spaces are non-hierarchical, non-linear and fluid in structure. Being knowledgeable is now about learners being able to acquire and nurture the connections to find and connect specialised information when required, for a purpose determined by

the individual.

In connectivism, learning is not wholly under the control of the individual learner, and there are 'non-linearity and unanticipated network effects in the learning process' (Li and Greenhow, 2015, p. 3). This corresponds with (Vygotsky's 1978, p. 140) assertion above that '*it [the use of technology] re-creates and reorganizes the whole structure of behaviour.*' It is this new behaviour that this study seeks to find, and examine. Siemens (2005, p. 4) expands this idea with his principles of connectivism. He explains knowledge and learning rests in a diversity of opinions, it is a process of connecting a range of specialised information sources and nodes (communities). Learning can be held in non-human artefacts (e.g. a website), and the capacity to know more is more important than what is currently known. Maintaining and nurturing connections is necessary to facilitate continual learning, and the ability to see connections between ideas and concepts is a core skill. Accurate up to date knowledge is central to all connectivist learning as is selecting what to learn in changing situations. Connectivism therefore reflects a belief that the primary skill in learning is the ability to 'find and retrieve information, from relevant non-linear and non-hierarchical online spaces, with fluid transient structures' (Selwyn 2017, p. 89). The ability to passively retain information is less important than the ability to access and augment information stored online.

Critiques of connectivism challenge whether this is a new theory of learning at all, given that constructivist theories may still be fit for purpose in the digital

setting (Kop and Hill, 2008; Goldie, 2016). Social constructivism suggests that learners gain understanding through interactions with the environment and their peers (Vygotsky, 1978), and this still applies. Despite the development of artificial intelligence, the assertion that learning can reside in 'non-human appliances' is subject to scepticism (Goldie, 2016). This treats learning as an artefact, not a process, and Downes (2007) argued that knowledge is not propositional, it is 'the set of connections formed by actions and experience'. Hence these fundamentally differ. Verhagen (2006) also contests that learning can reside in non-human appliances, and suggests connectivism theory is unsubstantiated philosophising. Empirical testing of connectivism has taken place mainly in MOOCs, and this has found mixed results due to the low completion rates of MOOCs (Goldie, 2016).

Weighing up the benefits and costs, Weller (2019) urged restraint about over-estimating the potential of connectivism. He suggests large scale devolving of support for learners to their peer network places a labour cost on students which they may be ill-equipped for, and is not sustainable at scale.

Nevertheless connectivism is a novel concept about knowledge and where it resides, to apply and examine in a social media student-led group learning context.

Connected Learning

Connected learning has a complementary focus to connectivism. While connectivism is about knowledge and where it is created in a digital network,

connected learning has its focus on the nature of learning that takes place in this new setting. Like socio-cultural learning, connected learning takes place through dialogic interactions with other people and artefacts in the learner's social contexts, including more knowledgeable peers to co-create knowledge with others. Connected learning is more about successfully finding and using a wide network of *people* who hold the knowledge needed. Where connected learning is distinctive and new, is in using networked technologies for this learning to take place (Selwyn, 2017). Hence, connected learning is not new but internet based tools provide a new and enhanced opportunity to make this form of learning more accessible to more people. This is applying socio-cultural learning in the new technology mediated environment.

The original framework is built up from a series of case studies by Ito *et al.*, (2013, p. 12) focussing on adolescents and young people in the US, although they assert it can apply to any age group in any national or cultural context. They suggest connected learning combines three important components for learning: it is peer supported with 'sharing and giving feedback in inclusive social experiences'; interest-powered 'when a subject is personally interesting and relevant'; and academically orientated, connecting 'interests and social engagement to academic studies' (p. 62). As part of this, people have a shared purpose in social media and web based communities, using openly networked online platforms. The design principles of this environment include: 'everyone is able to participate', 'learning happens by doing', 'challenge is constant', and 'everything is interconnected' (p. 81). New media amplifies opportunities for connected learning by fostering engagement and

self-expression, increases accessibility to knowledge, and crucially this all encourages access to diverse perspectives.

Using Ito *et al.* (2013) Selwyn (2017) expands on this connected learning framework. He indicates connected learning is peer-supported in fluid and engaging exchanges, relevant and interest-led, and academically orientated so learners can achieve their academic, civic and career potential. The central aspects of connected learning experiences include people producing and sharing digital content, cross generational and cross cultural learning around a shared purpose, in open online platforms and channels to make learning accessible in all settings. The media channels used facilitate responsive feedback and pace learning according to individual needs. Through this community space, Selwyn (2017, p. 92) says 'young people' can access information and find support for their self-directed and interest-driven learning. Through use of social media, people can foster 'relationships with peers and caring adults' centred on their interests, and this can empower marginalised groups.

Hence, networked technology offers ways to support interest and learning in some distinctive ways (Selwyn, 2017). The platforms provide a way of making connections and meaningful links with peers for collaboration and co-creation. This includes finding more experienced colleagues as well as peers to learn from in an organic, not forced hierarchical way. This technology based learning could be interest driven, from an individual inclination to participate, not imposed, and often accompanied with informal channels of

conversation. So hobbies, social activities, work and other interests are shared willingly. Connected learning is a profoundly mobile process with ‘a series of boundary-crossings in and across social spaces (home, school, and peer cultures; in and out of school) and epistemic practices (formal, informal, authorised, unauthorised)’ (Kumpulainen and Sefton-Green, 2014, p. 8). It also offers a way of connecting an individual’s interests to wider opportunities for academic, work and community opportunities.

Connected learning theory has been well received by many in the educationalist community (Gerstein, 2012, Heick, 2014). However critics dismiss connected learning as just a new buzzword for the corporatisation of education (Solomon, 2012), and if it offers an increased workload, this is also a concern for educators (Educause, 2013). It may offer insufficient critical thinking and it relies on ‘a formula for students getting what they already want to find [rather than] broadening horizons to discover what is not already known’ (Gardner 2012). Further, critics suggest that connectivism and connected learning as theories of digital learning require much more development and testing (Goldie, 2016). Some go further and suggest these concepts may be ‘little more than flat descriptions of the logistics of online information seeking and communication’ (Castañeda and Selwyn, 2018, p. 2). This suggests there is scope to apply these theories to empirical findings, to contribute to a richer understanding of their use in practice. A key limitation of both the connected learning and connectivism concepts, is that they have little empirical research among distance learning undergraduate cohorts. The present investigation aims to address this gap in the research and make a

contribution linking learner activity in Facebook to these contemporary theories of connectivism and connected learning.

Ethic of Care

A further explanatory concept was noted as influential in interpreting and providing rationale to explain the data and results: this is the notion of care in teaching and learning relationships and communities. This was more of an emergent theory in the data collection and analysis, noted from the particular ideas and concepts brought by participants during the investigation. A number of philosophers have articulated their view on care ethics or an ethic of care (Gilligan, 1982; Noddings, 1984; Held, 2006). Held (2006) suggested that care ethics includes a general concern with wellbeing of others' and recognising their importance. In research about student attrition, Tinto (1987 p. 206) found an 'ethos of care' underpins a commitment to students and permeates the character of educational institutions, which prioritise student welfare over other goals. Forming some original ideas for the ethic of care in educational settings, the perspective offered by Noddings (1984) was selected as able to offer clarity to explain some findings. While her ideas may be seen as unfashionable or perhaps controversial to current intersectional thinking (Hoagland, 1990), some segments of her work can offer an alternative insight on the findings of this study. Noddings was an early advocate of the importance of care in education, and her work as a Maths school teacher offered insight to the discussion on how the ethic of care applies in education.

In her first work about the ethic of care, Noddings (1984) advocates caring ways of being, over the usual consequentialist or duty-based deontological ways of relating to others. She offers an appreciative investigation of caring, and her final chapter is about the importance of care in education. I first encountered the significance of this concept while in a team educating undergraduates to be healthcare professionals, and faculty colleagues were mostly experienced nurses and healthcare professionals. Their approach and modelling of this, created a culture different to that experienced elsewhere. A colleague explained this concept of care was central to the way team members related to each other and the learners: this was because of the vocational background of the team, and the professional role we were preparing students for. It inspired me to develop my own way of relating to learners and colleagues in education, with transformative results. This team emphasise the related underpinning value and concept of compassion in healthcare, so I considered the use of compassion as a conceptual frame for this investigation. Compassion is about the recognition of suffering in others, which prompts helping and alleviatory action (Dewar *et al.*, 2011). In a systematic review of compassionate care, compassion is defined as 'being comprised of healthcare provider virtues (honesty, kindness, helpful, non-judgment) and actions (smile, touch, care, support, flexibility) aimed at relieving the suffering of patients' (Singh *et al.*, 2018). Hence while this may have been a valuable concept to learn about in my work role, the notion of 'relief of suffering' did not fit with the requirements of the present investigation. The concept of care in education is more closely aligned to the

findings in the data, and would allow closer examination of the experience of learners in this study.

Care is not understood as an inappropriate emotional over-involvement with learners, or willingness to empathise with everything. It is about prioritising a general concern and interest in learners, a way of listening and including their perspectives, and recognising the importance of their voice. Noddings (1984, p. 9) suggests caring is about mental engrossment, solicitude about someone or something. She mentions willingness to spend time in caring, having 'regard for you'; being concerned with what you think, feel and want; and being charged with your protection, welfare or maintenance. She contrasts this type of 'engrossment caring', with perfunctory caring or 'going through the motions', where people espouse or aim to appear to care, but lack authenticity, presence and real regard. She asks us to keep in mind the real distinction between the possibility of caring about something or someone verbally or in principle, and the real actuality of providing the actions of care for someone.

It is clear that Noddings has based her work on experiences and observations when working with children, and the ideas are always described as such. In her essay critiquing Dewey's ethical principles underlying education, Noddings (1998) confirms her view that children should be treated differently to adults. However, she maintains the principles of conduct are the same for children and adults, inside and outside an educational institution. She recognises people have differing requirements at different

developmental stages 'but these differences should not obscure fundamental similarities at the level of principle' (p. 480). Hence, her ideas about the ethic of care are principles that can apply equally for higher education learning too.

The motivation for caring emerges from innate drive (Noddings 1984).

Importantly 'caring involves stepping out of one's own personal frame of reference into the other's. When we care we consider the other's point of view, his objective needs and what he expects of us. Our attention, our mental engrossment is on the cared for, not ourselves' (p. 24). A small act performed generously is preferable to a major act done grudgingly or out of duty. She also differentiates aesthetic caring; those acts of caring about things or ideas that are often labelled as caring, for example caring primarily about students' performance on academic tasks. This risks not appreciating students as individuals with personal aims, other contexts, and lives to be considered. Noddings explains the important effect of being present to the person cared for, to share their experience in what they recount, and make ourselves available to them. This has some similarities with ideas about pastoral care in higher education at the institution in my investigation. Price, Richardson and Jelfs (2007) found that distance students at the OU want their tutor to combine academic activity with pastoral care. Learners want their tutor to display support and encouragement for them, to assist with building their confidence in their academic endeavour. They want a personal relationship with comfortable communication. This corresponds with ideas of Gordon, Benner and Noddings (1996) seeing caring as occurring within relationships between people. The investigation by Price *et al.* (2007)

concluded conceptions of tutoring have both cognitive and affective components, and students 'were concerned with achieving intellectual goals but also with satisfying their emotional needs' (p. 18).

In her chapter about education, Noddings (1984) advocates moral education is a community enterprise with various parties taking responsibility for educating others. Here she differentiates and questions whether education should focus more on the intellectual-academic world, or to the emotional-social one. Students vary and their personal values and goals will determine the priorities for each person individually. Noddings explains that normally education trains intelligence, and other influences contribute to 'emotional wellbeing' (p. 172). She advocates people are an integral composite of qualities in several domains, and these functions cannot be separated theoretically. Noddings says 'the primary aim of every educational institution and of every educational effort must be the maintenance and enhancement of caring' (p. 172). Then while pursuing, nurturing and elevating the ethical ideal, education can also refine and train intellect. This community caring establishes the range of acceptable practices, and the 'lens through which all practices and possible practices are examined' (p. 173).

Later work by Gordon, Benner and Noddings (1996) suggest 'caring as a set of relational practices that foster mutual recognition and realization, growth, development, protection, empowerment, and human community, culture, and possibility' (p. 393). Authentic caring behaviour will vary with situation, time, context, personality and culture (Owens and Ennis, 2005). Building on the

ideas of Hult (1979), Noddings (1984) indicates that pedagogical caring does not necessarily require deep, lasting, time consuming, close personal relationships with every student. However, it is important that the teacher should be completely present and active when with a student: 'the time interval may be brief, but the encounter is total' (p. 180). To implement caring in an educational community, Noddings suggests implementation of 'circles and chains' of caring (p. 46), where circles are the people we have in proximate relationships in life, for example our inner circle are people with whom we form closer relationships and outer circle are others who we care for. Chains of caring suggest less hierarchical, more lateral relationships. To do this, Noddings (1984) advocates smaller educational institutions and smaller formal group arrangements. This harnesses a benefit of socio-cultural group relations advocated by Vygotsky, although Noddings still places a Tutor or her 'One-caring' as necessary in learning 'even with the adult student' (p. 178). It will relieve the load from teachers 'suffering battle fatigue and burnout' (p. 181) if 'schools can be deliberately designed to support caring, and caring individuals' (p. 182).

Noddings (1984) suggests a process of three steps to nurturing a caring approach; dialogue, practice and confirmation. She later added a preliminary step of modelling (1992). Dialogue is about 'talking and listening, sharing and responding to each other' (p. 186) where a level of trust is required for open dialogue which can change professional expectations and relationships. Practice is showing and cultivating competence in caring, and an immersive culture in a caring environment will lead to the adoption of those ways of

being. Confirmation is about showing learners educational tutors are idealistic, and assume the best possible motive for their learners' actions. It is about affirming and encouraging the best in others (Owens and Ennis, 2005). How people interpret and implement these aspects have to be done in their own style and with authenticity, and then they can contribute to a caring approach in education. The steps may need some interpretation and forethought in the distance learning university environment, and no studies have been found to document and analyse this to date.

Noddings (1984) ethic of care has been subject to robust critique, and has waned from popularity due to the intersectional inequities she implies. For example she uses religion and many metaphors of mothering and family roles, to illustrate her vision of how people relate to each other. It may be seen that care ethics focus too much on personal relationships and gives special status to people in closest proximity to us. It may not always be feasible to implement systematically in a large organisation with many competing priorities, and so might be an unrealistic perspective to implement institutionally. Importantly, care ethics may not have sufficiently considered the impact of the dark triad of personality traits people may have (Garcia and Sikström, 2014); and other malevolent needs and feelings present in people.

Some works (e.g. Owens and Ennis, 2005, p. 393) identify Noddings as offering an 'innately feminist framework'. However in her critique of the principles of the ethic of care, Hoagland (1990) identifies structural inequalities relating to gender roles, race and heteronormative assumptions

about caring in Noddings's (1984) work. Hoagland acknowledges the important contribution Noddings makes that the sentiment of the ethic of care should be natural sentiment, not rules. Noddings' (1984) analysis of care uses mothering as the model for caring while Hoagland thinks this metaphor perpetuates inequality and assumptions about gender roles. Hoagland suggests the unidirectional assumption of care advocated by Noddings (by carer to the one cared for), is oppressive, lacks the reciprocity of a mature relationship, and as such is unhelpful. She says this is 'ipso facto a diminished caring relationship' (1990, p. 110), and the dependency relationship creates an incomplete analysis of caring. Noddings (1984) indicates there is no judgement involved in the initial impulse to care for another in the educational environment, where judgement is an assessment of right and wrong. However, Hoagland (1990) suggests if a carer denies a non-judgemental stance, this shows flawed self-awareness. Noddings maintains the ethical self emerges through caring for others, and withdrawal of this would diminish the carer. Hoagland (1990) concludes saying that if an ethic of care behaviour is actually possible, it must broaden its appeal and be mindful it is not perpetuating outdated modes of oppression, especially taking advantage of the caring nature of women. Hence it may need a vision for change and to go further, in order to be an ethic of care that benefits everyone including the carers. This is relevant in my study as there is no teacher role present in the Facebook study groups, and hence Noddings' assumption of unidirectional care from teacher to the student is absent. Noddings has since subtly revised her original work as a relational (not feminine) approach to ethics (Noddings, 2013). In the preface to the revised

text she acknowledges the inclusion of the word 'feminine' in the sub-title of previous editions was off-putting and often misunderstood. I consider this represents a shift in her how she presents her rationale for caring.

Nevertheless this concept of care prevails and can be a way to examine the data in this investigation. It would seem to provide a novel perspective on group activity that has rarely received attention in an online setting.

These conceptual frameworks will work together to offer new understanding of the findings of this investigation, in a complementary way. The group learning context suggests an active process of constructing knowledge, and not a solitary, individual matter (Vygotsky, 1978). The modern interpretation of connectivism conceptualises learning as a network phenomenon influenced by social factors and technology (Siemens, 2005). This is then augmented by the complementary focus of connected learning on the people who are using such a technology network (Ito *et al.*, 2013). Connected learning is new in its focus on the people using networked technologies for learning to take place (Selwyn, 2017). The ethic of care is an additional dimension that was mentioned by respondents in the present investigation and noted in the data. It provides an additional perspective for understanding the learning, support and disruption experienced by OU learners in their student-led Facebook module study groups. The relationship between these concepts is represented in Figure 2 below. All of these are novel applications in this setting, representing new findings in this investigation.

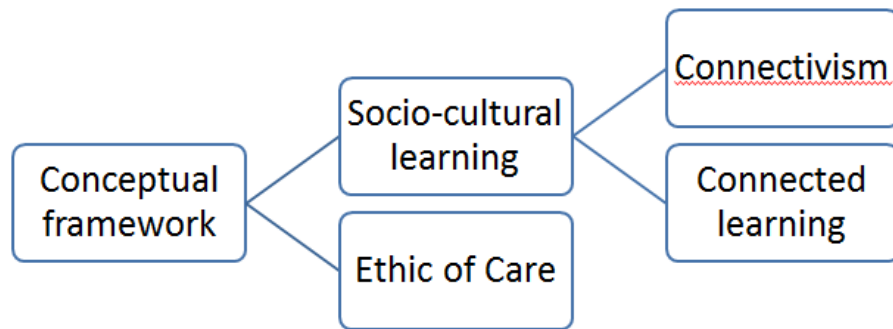


Figure 2. The Conceptual Framework

Summary

This chapter has examined some relevant theoretical and conceptual literature for the study in two parts. First, Part A was a critical review reflecting the research questions and the important themes embedded in these. This included research about the rationale for why learners might choose to participate in student-led Facebook module study groups; the nature of what is learned and the explicit model of learning applied to this study; the support the group provides for studying; and experiences of disruption. This literature was drawn from a range of contexts. Some research has focussed on the use of Facebook in education, the use of Facebook in general, the use of social media in education, social media and the internet in general. Using the literature, I have argued that distance learners are choosing to follow others into Facebook study groups, and they provide information, social and intellectual support in a timely way to support their studies. Students acquire educational related learning with others in a supportive online environment independent of the university, and they value the psycho-social support and sense of community they find there. Socially

malevolent behaviour may present itself, and there is potential for difficulty and risk to learning if interactions are distracting and not sufficiently well managed.

Second, Part B offered the explanatory concepts chosen as the most relevant lenses, to view and interpret the findings offered in this study. These were the overarching pre-digital sociocultural theory of learning offered by Vygotsky (1978b), contemporary ideas of connectivism (Siemens 2005) and connected learning (Ito *et al.*, 2013), and the ethic of care perspective by Noddings (1984). These were chosen as relevant ways to understand and interpret the findings about rationale, learning, support and disruption experienced by distance students engaging in Facebook module study groups. How these phenomena were investigated is outlined in the next chapter.

3. Methodology

This chapter will describe and justify the research methodology and methods adopted to investigate the research questions. Research methods refer to the techniques and processes used to gather data, and methodology is about the approaches to, types and paradigms of research (Cohen, Manion and Morrison, 2007). Hence this chapter includes consideration of the logic of inquiry, design strategy, case study evidence, naturalistic sampling and selection, data collection, ethical considerations, ensuring quality and reliability, and data analysis. The methodological framework chosen for the study is led by the ideas of Lincoln and Guba (1985); Stake (1995); Yin (2009); BERA (2011); and Braun and Clarke (2013).

Logic of Inquiry

The investigation is predicated on the basis that learning takes place in Facebook study groups, and evidence of that can be found in the online text and interpreted by the people who participate in those groups (Wang *et al.*, 2012, Pi *et al.* 2013, Miron and Raved 2015, Ahern *et al.* 2016, Dalsgaard 2016). Data to measure or articulate that learning can be collected or evidenced from different sources, depending on the underpinning epistemological position of the researcher. The phenomenon of learning in social media may present itself in different ways, and these ways have been the focus of quantitative and qualitative research studies.

To assess the impact of Facebook use on the outcomes of student learning, Junco (2012b) used a large sample of over 1,800 US students. He used hierarchical linear regression analysis to measure the relationship between the grade point average scores of students and multiple measures of Facebook use. He suggests his empirical study predicts that the presence of learning is dependent on the way Facebook is used by students. This follows an objectivist view of reality: using numerical data to count evidence of learning, to make inductive conclusions about the presence of learning. Junco argues that measuring quantitative epistemological outcomes of learning can provide knowledge about learning.

Earlier research by Selwyn (2009) presented a wholly qualitative analysis of open Facebook activity of over 900 undergraduate students in a UK university. He used documentary analysis of learning, to conclude that students use their online space to actively engage in many informal educational learning strategies. These included resource sharing, collaboration in negotiating common dilemmas in a course, and social bonding. This followed a constructionist approach to using interpreted evidence of learning, which enabled the development of his hypotheses about educational behaviour. Within this qualitative epistemology, learning is constructed and not simply discovered. This constructionist approach acknowledges there may not be one true way to measure learning. So knowledge about learning is a representation of reality, influenced by what we choose to observe, interpret and measure.

These differing ways of understanding reality show nuanced ways of investigating learning and are based on varied ways of interpreting it. These ontological assumptions regulate how researchers have studied the topic being investigated. First the realist-nominalist ontological debate asks if learning is external or internal to individuals, whether it is reified in a tangible outcome 'out there', or if it is the product of individual consciousness and participation (Sfard, 1998). It may be both, and the focus of this study is that which is experienced by the individual learners. Second the epistemological assumptions are about whether learning is acquired, or is something which has to be personally experienced. How I align in the debate affects how I proceed to uncover knowledge about learning in the online study group space. Importantly in this study the third set of assumptions concern the nature of people, and whether people are responding mechanically to their environment, or have autonomy to initiate their own activity. As students are using the unmoderated online space entirely of their own free will, their actions seem to be voluntarist, not determinist. It is their choice whether to participate in this online space, or not.

A principle concern is to understand the way in which the individual interprets the world, and the learning they find. With the emphasis on the particular and the individual, the approach is understood to be idiographic; that is in methodological contrast to analysis of aggregate data (Cohen, Manion and Morrison, 2007). This is a focus on detail and nuance, in contrast to analysing pattern in a large data set. From these choices, I consider the

present study is congruent with a subjectivist position and that has implications for the methodology.

If the study were to inform policy making for government, or resource allocation for an institution, then a positivist, realist, nomothetic approach using aggregate, macro student data could be persuasive. As this investigation is about understanding rationale and situations in depth, my standpoint necessitates a focus on the micro view of individual learners, on 'small data' to understand and interpret more nuanced insight through this detail. Hence, a qualitative, nominalist approach to the study is beneficial (Cohen, Manion and Morrison, 2007). These two perspectives can work in a complementary way, to understand depth and scale, to inform policy.

These perspectives ignore the political and ideological context in which learning behaviour is interpreted. An important approach in educational research is a critical research paradigm, where its purpose is not just to understand situations and phenomena but to change them. The critical research paradigm aims to emancipate disempowered individuals, redeem inequalities and be transformative to promote individual inclusion and choice (Cohen, Manion and Morrison, 2007). Critical theory and Intersectionality is about prioritising analysis of power in race, class, gender, and of dis/ability, and to bring about social justice to realise individual freedoms. At the time of planning this investigation, this paradigm initially offered no obvious connection to the requirements of the research questions, so this was not pursued. As I understood more about research I later saw this could be a

relevant alternative paradigm to adopt for this study.

In summary, this work is grounded in a constructivist epistemology, where knowledge is constructed rather than discovered. People are influenced by what they choose to observe and how people interpret what is found.

Qualitative research aims to create knowledge grounded in people's experience (Sandelowski, 2004). Hence, the research questions in the study will be interpreted in a qualitative, constructivist approach to using evidence of activity, which will enable the development of knowledge about learning.

Twining, Heller, Nussbaum and Tsai (2017) advocate a need for consistency between the goals of the research, underpinning theory, methods of data collection and analysis, and the claims made. This section showed how the research questions at the end of Chapter 1 align with the underlying theoretical philosophical framework, and I will now show how that is consistent with the type of research design chosen.

Design Strategy

The research design aligns with the constructivist, qualitative theoretical approach. Typical designs adopted in the interpretive stance include action research, ethnography or case study which emphasise inductive reasoning (Twining *et al.*, 2017). Action research is a collaborative process for change in the research setting (Denscombe, 1998), however the research questions here were not prompted by immediate problems warranting an intervention or solution. An ethnographic design framework would necessitate immersion

online with students over a period of time for qualitative data collection (Hooley, Marriott and Wellens, 2012). A naturalistic case study design can also focus on online groups which have evidence responding to the research questions. This section now discusses the suitability and limits of ethnography and case study design strategies, as design frameworks for the study.

Ethnography

If the purpose of ethnography is to describe people, groups and their culture (Denscombe, 1998), then the method can be suitable to frame the study of learning in online social media. Ethnography requires researchers to spend time in the field, to fully consider routine and normal aspects of naturally occurring everyday life there, and give special attention to the way the people there see their world. As the internet has provided a space for people to interact, so ethnographic methodologies provide an appropriate way to investigate the lived experience of participants there (Hooley, Marriott and Wellens, 2012). Ethnography on the internet has variously been described as virtual ethnography (Hine, 2000), netnography (Kozinets, 2009) and internet ethnography (Hooley, Marriott and Wellens, 2012). These works reframe ethnographic approaches for an online environment, recognising the opportunities presented by technological affordance may be new and different. The proliferation of platforms, availability and the embedded nature of the ways people use social media, create rich opportunities for new ethnographic research.

Ethnographic study can enable a holistic explanation which can surface processes behind events (Denscombe, 1998). However, an ethnographic design frame has some limitations. First, the emphasis on providing rich descriptions of events leaves less scope for developing analytic insight to contribute to a more critical and theoretical position. Second, there can be a risk of being led by insider knowledge that may create blind spots obscuring interpretation. To strengthen the design, I also investigated the merits of using a case study approach.

Case Study

The goal of a qualitative case study approach is to collect, present and analyse data fairly, and provide a compelling and accurate report of it (Yin, 2009). It is an exploration of a bounded system or case over time, location or issue, where in-depth description of complex social phenomena is required (Stake, 1978). It is also a perspective very specific to the case/s studied and the context in which they took place. Constructivist Stake (1978) advocates that the case study approach allows for holistic immersion and understanding of phenomena within real-life contexts. A case study is considered from the perspective of those involved, allowing researchers to grasp more detail and intricacy as participants tell their stories (Baxter and Jack, 2008). The aim of a case study is understanding, extension of experience and an increase in conviction in what is known (Stake, 1978). Case studies allow research to respond to 'how' and 'why' questions.

The rationale for single site case study designs include situations where the case represents a critical case offering a significant contribution to knowledge; an extreme, unique or rare circumstance worthy of investigation; or a typical case that represents many others (Yin, 2009). Alternatively a single case study may include a revelatory or longitudinal case study, although none of these situations apply to respond sufficiently to the research questions posed here. Hence, a case design examining the themes in more than one Facebook module study group offers an advantage over the single group case design in this study. The evidence can be more convincing, and the conclusions can be more robust than using just a single study group.

While pure ethnography and the case study approach each offer a solution for this study and setting, both contributed to the research design used to address the qualitative research questions. The final design primarily aimed to follow the process for case study research offered by Yin (2009) and a constructivist instrumental collective case study by Stake (1995). Hence, while both the ethnographic and case study approaches have limitations, the small but deep case study research strategy offered the strongest opportunity to respond to the requirements of the study. Yin (2003) suggests the case study as a 'unit of analysis' (p. 21) should be sited as close as possible to the phenomenon being studied, so OU Facebook module study groups were chosen as suitable sites, using the input of the participants there for depth of understanding.

Selecting the cases in a replication design was undertaken after some consideration of the merits of what could be learned in each group or case, responding to the research questions and their themes. To increase the likelihood of finding sufficient and relevant evidence, this study uses three forms of data, and these are discussed in the next section.

Case Study Evidence

Case study evidence is found in many sources. Yin (2009) advocates six major complementary sources of evidence in a qualitative inquiry, where no single source has a complete advantage over others in every situation, and the use of multiple sources of evidence strengthens a study. Kozinets (2009) moves beyond evidence form to conceptualise different kinds of data in the digital environment, and the present study used methods to capture all three forms: elicited, archival and field note data. To maximise the likelihood of finding sufficient and relevant evidence this study uses three forms of data captured online, which are now explained in detail in this section: interviews with volunteers from the module groups; documentary evidence of the online dialogue of those interviewees; and direct observations of group dialogue. All of this evidence was collected and managed in digital form.

Triangulation occurs when events or facts are supported by more than a single source of evidence (Yin, 2009). The use of multiple sources of evidence facilitates the development of converging line of inquiry, making any findings or conclusion more convincing. The primary data source used for the

investigation and analysis was the interviews, and these were informed by observations of the group. The posts in the group by the interview participants were used for triangulation.

Interviews

In-depth research interviews were conducted with volunteer participants from the Facebook study groups, as this is a credible way to gather in-depth information from a small number of relevant people (Denscombe, 1998). The semi-structured interview method enabled access to students' own views about their learning practices online and study experience in the study groups. There was scope to discuss other relevant issues they brought to the conversation. The themes of the research questions were used to develop the core questions for semi-structured interviews (Appendix A). Further explanation of how the themes were derived is given in the section of Thematic Analysis later in this chapter. The interview plan has a range of open and closed questions, which ensured a blend of interviewer- and interviewee-led ideas. Some of the issues in the research questions required some time for respondents to recall and share their interpretation of experiences, for example, about disruptive behaviour in their module study group. In these interviews I was able to follow up ideas, subtleties, probe responses and investigate more complex motives for effects found in the groups. In this way the data was co-constructed, rather than simply collected (Cohen, Manion and Morrison, 2007). The open questions focus on qualitative differences in the way students perceive their use of the Facebook

study group. My approach was to behave in a neutral, attentive way, and it was necessary to manage to flow of questions carefully, to tease out moments of insight from participants. This was valuable to appreciate that participants might see some activities from a different perspective to that initially expected (Baker and Edwards, 2012). The participants appeared keen to share their ideas and thoughts about the foci of the study, with someone taking an interest in their experience.

The interviews were conducted using the Skype VoIP (Voice over Internet Protocol) synchronous platform. This seemed appropriate as volunteers were all found in social media, and were technically able and digitally literate to cope with educational software. Participants were geographically dispersed, and conducting the interviews this way enabled views to be captured in a time and financially efficient way, increasing the variety of responses (Lo lacono, Symonds and Brown, 2016). The interviews were scheduled at times convenient for the learners around their study, work and family responsibilities, and most took place during weekends, evenings and bank holidays. It was helpful to use screen sharing of particular incidents on the Facebook group to stimulate participants' recall of events, to prompt participants to comment on incidents and threads in the study group. The real-time nature of video conferencing also has the potential to increase social presence in the interviews, improving communication (Kear, 2011). Skype interviews may be limited if they affect rapport and the interpretation of non-verbal cues (Rowley, 2012); however, students can be at ease in the convenience of their own environment. On balance this method represented

a viable, credible data collection platform to extend the sample of respondents efficiently (Lo Iacono, Symonds and Brown, 2016).

While the Facebook study groups were selected with naturalistic sampling criteria, all self-selecting volunteer interview participants were accepted in a convenience sampling approach. They were people who were willing to participate and make themselves available (Cresswell, 2008). One limitation of any student self-reporting method like interviews is that participants may offer inaccurate reports and judgements about their behaviour, compared to what they actually do (Junco, 2014). Therefore, the use of multiple methods and multiple respondents was intended to help corroborate or identify areas of conflict in the data.

A total of 23 interviews were conducted in the pilot study and the main investigation. Each interview took between 45 and 80 minutes, depending on the Facebook study group experience of the participant, and the depth of insight they could offer to the questions. I offered a £15 Amazon e-voucher to interview participants, and most people accepted this. All interview conversations were digitally recorded and transcribed in a verbatim form, excluding non-verbal utterances and irrelevant noise words, using guidance by McLellan, MacQueen and Neidig (2003). The transcripts retain all relevant information needed, are true to the original nature and practically suited to the purpose of analysis (Braun and Clarke, 2006). The acts of transcribing and checking transcripts were themselves an active process of engaging with the data, partly analytic, improving consciousness of what was said (Evers,

2011).

No data was collected about ethnic origin as this was not an item of interest in the study, and the participants may not be representative of the groups studied. However, it was noticeable that the female participants outnumbered the one male in greater proportion than the module enrolments and Facebook group memberships in all cases in this investigation. The reasons for more female volunteers may be because the researcher presented as female in the initial call for participation, or the females were more willing to offer their experiences and time to the research process. A limitation of this convenience sampling approach accepting all volunteers is 'it does not seek to generalise about the wider population' (Cohen, Manion and Morrison, 2007, p. 114), and this is compatible with the case study approach. The sampling strategy of the case study method necessarily compromises generalisability, and limits the external validity of the study. Case studies seek to understand particular cases and generalisation is not a primary aim (Stake, 1995; Yin, 2009). Nevertheless, if the aim of qualitative research is to find meaning and ideas that might resonate and apply in other settings, then the findings can still resonate and may be suitable to migrate to other contexts (Twining, 2018).

Documentary Evidence

Online dialogue in each Facebook module study group is a primary source of rich digital information, showing a snapshot record of learner activity in a live

module. One pilot group and three further groups were chosen for the main investigation. This large and rich corpora of naturally occurring data is a way of understanding learning through the information traces people leave in social media. The themes of the four research questions were used to guide the search for data in the module study groups, although data about every theme was not always present in explicit form in the text. Each item was chosen based on their correspondence with the research themes of the study, while keeping an open mind for additional interesting or unexpected findings (Stake, 1995).

Informed consent was gained from the interviewees to use their dialogue in the online study group, as well as their interview. The documentary evidence was used in advance of each interview, to inform and augment questioning (Yin, 2009). I was able to use the participant contributions as a conversational prompt, to explore responses to key themes in the study in more depth. Hence with each interview, I collected some of the participants' key contributions online, which responded to themes for coding and analysis alongside their verbal interview responses. I was able to see where the documentary evidence corroborated or differed from the respondents' interview responses.

One limitation of such data is that documentary evidence may not be the unmitigated truth (Yin, 2009): I was looking out for situations where the writer may have made comments for another reason than the espoused purpose of the group. For example, in Chapter 4, Theme 5 about difficulties and

disagreements the data may conflict with the purpose of the study support group. The multiple methods were intended to corroborate or identify conflicting data to examine this. The data corpus contained in the threads includes words, acronyms, and hyperlinks to resources, photographs, pictures and emoticons.

Direct Observations

Short written notes and direct observations were made about the activity in each module study group, as field observations. These note the purposes for which the group is used and relevant common behaviours, events, interactions, issues, expressed beliefs and routines that took place over many months. The process of taking field notes and observations began the process of understanding what and why things were happening, and making connections with activity happening elsewhere, for example in the university. Field note observations captured evidence in situ and reflections responding to the key themes of the research. Direct observation enables an immersive thick description portrayal to be made to form a realistic view of context, for the purpose of evaluating transferability. This should give a sense of a holistic, vicarious experience (Stake, 1995) rather than a fictionalised abstraction. Digital observation was particularly useful for focussing individual interview questioning, and enabled triangulation of points noted in documentary evidence and interviews, improving objectivity. Study group participants were advised in a group message that I would be observing their activity at the beginning of each study: those participants who did not want to

be observed were reminded to message me or block my account so they were excluded. 'Blocking a user on Facebook essentially prevents them from communicating with you and seeing your content while also hiding all of their content from you' (Lifewire, 2018). There are simple instructions on Facebook which explain how to do this, and I asked people to email me if they wanted to be excluded but they did not know how to block me. The number of members in the first group went down by one, and no changes were noted in other groups.

Naturalistic Sampling and Group Selection

There are a range of online group spaces inhabited by OU students in Facebook, and selecting the most relevant space was an important step. The Facebook module study groups are usually created and moderated by volunteer students or alumni. Membership and maintenance of each group is then managed by one or more volunteer students that Facebook call the group 'Admins'. Lists of these groups are maintained in a wiki format by students in a large Facebook group called 'Open University'. At the time of data collection it contained 126 Module study groups for the 2016/7 academic year (January 2017).

There were also 116 OU General, Regional and Qualification study groups listed by their student administrators, although there are more unlisted groups. These general groups are ongoing student groups not aligned to any particular module; they are aligned to a topic, interest, faculty or region.

These groups, for example, the Disabled Students Group, do not conform to the usual academic calendar of activity. The initial pilot study and some insider observation (Greene, 2014), suggests these groups are more likely to include alumni, prospective students and other participants who are not current OU students. Hence, the data found in these types of group is less likely to respond fully to the research questions about student learning; the data from the module study groups are more likely to respond more closely to the research questions.

The richest data in the initial pilot study was found when interviewing study group participants with a good amount of experience of the Facebook OU groups. New students and inexperienced participants have much less insight to offer the research questions. For this reason, the present study focussed on OU Facebook module groups with students at undergraduate level 3 / final year. These learners are usually in their fifth or sixth year of part-time study with the OU and are the learners most likely to have the most experience of a range of Facebook student groups.

With undergraduate distance learning as the prime focus of this research study, consideration was given to the number of module study groups to recruit. I aimed to get sufficient evidence to respond to each research question, using data collected across multiple methods. In the first study group (Group A), interview participants were drawing on a number of different Facebook study group experiences to respond to the questions of the study. Nevertheless, I found that by interviewing all volunteers and examining their

dialogue contributed to the group online, there was some corroboration or saturation emerging in the evidence (Yin, 2009). Selection of groups to the point of redundancy would normally be an aim in scientific inquiry, to ensure no new information about cases could be uncovered by further investigation. This may not be a feasible aim in a naturalistic case study, as the context for every case available is subtly different. However, it became clear in data collection that students shared many similar experiences and views, so some saturation of participant responses to the research questions was noted. In a study using thematic analysis of data from sixty in-depth interviews with women, Guest, Bunce and Johnson (1995, p. 59) 'found that saturation occurred within the first twelve interviews, although basic elements for meta-themes were present as early as six interviews'. Respondents offered new ways of expressing similar points in each additional interview, but the points made were becoming consistent.

Hence, while conducting the first case study with six volunteer participants, I used the findings there in an emergent design to then recruit two subsequent study groups of a similar size (Group B and Group C). I estimated a similar number of volunteers would be willing to discuss their experience in these groups in this replication design (Yin, 2009); and the number of volunteers would be manageable and sufficient to report relevant findings for this study. However as qualitative research is exploratory by nature I was not certain how much data I would need in advance, as saturation, repetition and pattern forming in data is central to qualitative sampling (Baker and Edwards, 2012). While conducting the first case study, I realised that some of the findings

might have been occurring specifically because it was a new module of study with an updated teaching and learning design model. The second and third groups were chosen as they were supporting older modules, and using an older approach to the design of the learning. As the volunteer participants in the first two groups were all female, the third group was chosen as a greater number of men were present and active, and I aimed to improve the gender mix. Hence each group was chosen to complement and extend the information found so far, while maintaining a focus on the research questions and a range of volunteers. This came after interacting with the study participants in the natural context, to understand the issues important to them (Appleton, 2002). No specific analysis of the different responses of men and women was conducted as this does not respond to the research questions.

Yin (2009) suggests a replication design is analogous to that used when repeating multiple experiments to confirm or refute findings under similar conditions. This differs from a sampling design strategy where a selection of different types of groups is chosen. Hence, each group was carefully chosen to be similar (albeit with subtle contextual differences), so it predicted similar results in a literal replication. The three study groups chosen for data collection were similar sized module study groups, with OU distance learners studying at undergraduate level 3.

Alternative insight may be gained from utilising the experience of stakeholders supporting learners, for example, teaching staff, managers, administrators and learning designers at the university. However, unless they

have some experience of participation in the module case study groups, the insight of these stakeholders on the research questions would be unreliable, assumption or conjecture. I wanted to focus on the perspective of those people involved in the groups. Foregrounding the perspective of the case study group participants elicited the most relevant information about what was being learned in each online study group setting. It was possible to capture the naturally occurring events in the study group, compare this with participants' interpretations at interview, and therefore understand learning activities from multiple learner perspectives. Hence the call for participation in the investigation was made in the chosen study groups, and the study participants responded to this (Appendix B). They included current OU students, alumni who had left the module or the university, Admin organisers of the study groups, a Student Association Representative and a student who was also a staff member on another module.

This design approach to selection was consistent with the naturalistic paradigm, that 'designs must be emergent' rather than preordinate (Lincoln and Guba 1985, p.208). To investigate the multiple realities prevailing in a situation, what can be learned at a site cannot be known until the investigation commences. Each situation is dependent on the interaction between the researcher and context, for example when investigating critical incidents in the study groups (Cohen, Manion and Morrison, 2007). Stake (1995) goes further to advocate that pursuit of complex meaning cannot be just designed in or caught retrospectively; it requires sustained attention, and

the ongoing interpretive role of the researcher is central in qualitative case study.

In the same way that positivist research is critiqued for its macro-sociological persuasion, interpretive and qualitative theories may be critiqued for their 'narrowly micro-sociological perspectives' (Cohen, 2007, p.26). Some argue that interpretivist research can go too far in abandoning scientific procedures, and hope of discovering useful generalizations about behaviour (Mead, 1934). Subjective reports may be incomplete and misleading (Bernstein, 1974). Critics of naturalistic inquiry suggest it can be subjective, with inconsistent advice about how to ensure its trustworthiness (Holt, 1991, Glaser, 2004). Holt (1991) argues the techniques for improving trustworthiness suggested by Lincoln and Guba (1985) necessarily sabotage the interpretive nature of a qualitative analysis process. Glaser (2004) suggested naturalistic inquiry research put too much emphasis on description of 'tight details, bogged down in endless scholarship with no conceptual mastery'(p. 8) so any research findings age fast. Glaser (2004) claimed Lincoln and Guba (1985) also 'remodelled and eroded grounded theory' (Glaser, 2004, p. 1) in naturalistic inquiry. Nevertheless, Lincoln and Guba (1985) did not claim their theory of naturalistic inquiry was final, saying it 'should not be viewed as a complete product. It is more profitably seen as a snapshot in time of a set of emergent ideas' (p. 9). In the same way, the naturalistic inquiry of present investigation captures a snapshot of learning activity, in the time and context that it happened. That time and context have already moved on.

Further concerns about naturalistic inquiry stem from the ability of this method to ensure trustworthiness (Lincoln and Guba, 1985). They differentiate between naturalistic inquiry and conventional research designs: that naturalistic inquiry is intended to provide a wealth of uniqueness and individuality about the case presented. This differs to conventional research design whose aim is often to find points for generalisation, but this focus on uniqueness and individuality is fully commensurate with the case study methods advocate by Yin (2003, 2009) and Stake (1995). hence it follows that Lincoln and Guba (1985) acknowledge it is necessarily true that naturalistic inquiry cannot make generalisations because of sampling flaws, and they conclude this matter is trivial and not a relevant argument to diminish their approach.

This naturalistic sampling differs from conventional sampling, as its purpose is not to facilitate generalisation (Lincoln and Guba, 1985). The procedures also differ and depend on the continuous adjustment and refocussing of the flexible, opportunistic sample, to respond to what has already been found. This meant monitoring the available data found as data was collected in each study group, rather than adopting strict a priori considerations of case selection. This is emergent selection, choosing one study group at a time in serial selection from the many possible cases.

Selection of Study Groups

Stake (1995) advocates that the first criterion in choosing a case study should be to maximise what can be learned. It is not intended that a case is studied in order to understand other cases. In this instrumental collective (Stake, 1995) or multiple site (Yin, 2009) case study, the groups were selected on merit if they offered good insight on the research questions. There are many student-led module study groups to select from, and practical considerations to gaining access to these include working with the necessary rhythm and priorities for students in their academic calendar. The aim was to identify groups which were similar enough to enable comparison, but offered some differences in their membership to ensure some variety of interview respondents.

This balance of similarity and variety is important in selecting data. Stake (1995) considers this to be an instrumental case study as subsequent groups are used to understand something. In this investigation study groups were chosen: at the same level of study and at 60 credits; in modules with a similar number of students enrolled (500-600 people); and with Facebook study groups of a similar size (200-250 people), to use literal replication logic (Yin, 2009, p. 54). Choosing similar groups served to minimise and isolate extraneous variables, and improve consistency.

To find and test rival explanations for the responses found to the research themes, I aimed to find some differing results in each group, but for reasons

which could be anticipated in theoretical replication logic. The three groups were in different degree qualification pathways. To find the final cases I joined and screened 9 small and medium sized level 3 / final year study groups in reconnaissance visits, looking for evidence which responded to the research questions. The groups were for current, not previous years of study groups, to improve participants' recall of events there.

I looked for evidence responding to the research questions. Some data was hard to find in the groups I screened; for example, threads of disagreement and disruption in groups were often deleted by Admins (boyd (2014, p. 64) called this 'whitewalling'). However, I could find threads which mentioned that a difference of opinion had taken place, and had been deleted. While the ephemeral text data of the actual disagreements had disappeared, these prompts allowed me to probe the incidents in the interviews. This enabled triangulation corroborating the vague or meta-discussion data available, with more information uncovered in the interviews. In the initial screening process I was satisfied that the online dialogue was created by authentic students as they understood the timetable, processes, and specialist acronyms and terms used by the university.

Hence this sampling and selection strategy of the study groups ensured those chosen were satisfactory for the specific needs of this study. The groups provided sufficient relevant, rich data to respond to the target research questions (Cohen, Manion and Morrison, 2007; Cresswell, 2008). More resources would be necessary to investigate the full range of groups

available, related to the phenomena of interest. As such, the findings in this case study design do not purport to represent the wider population; the non-probability sample is deliberately selective (Cohen, Manion and Morrison, 2007) to respond to the specific questions of the investigation.

Recruitment and Negotiating Access to the Study

Groups

I studied the wiki list available of the module study groups for the year 2016/7. As a Facebook Admin myself for some study groups, I wanted to avoid any contact with groups and students I was already in regular contact with. I also had a teaching role with the university and feedback from the assessment of my pilot study advised me to avoid groups where I might encounter current students of my own. I did not want the Admin or participants of the case study groups to feel any duty or responsibility to me to agree to the study, and I was clear that there was no pressure or obligation to participate. Then where a module study group contained data which responded to the research questions of this study, I concluded there was good opportunity to learn from the case. If the nature and quality of the data in a group was relevant to the research questions this would strengthen the applicability of the findings (Yin, 2009).

When I was ready to commence the first case study, I contacted the Admin by private message in Facebook (Messenger) and explained my research with more detail on a separate WordPress page online. She was very

supportive and agreed I could use the Language module group (Group A) for this study in February 2017. Access to the second (Sociology, Group B) and third (Politics, Group C) case study groups in April and May 2017 was gained in the same way. I contacted an Admin in each group, explained the study and obtained their full agreement in advance for my involvement.

After this agreement an initial message was posted to each module study group to advise them about the research study. In this message I sought to recruit volunteers who would be willing to discuss their experiences of learning in the online group in more depth (Appendix B). I decided to accept all volunteers in a convenience sampling strategy of participants, where the group members were willing to be interviewed and make themselves available (Cresswell, 2008). I requested group members to contact me or 'block' me in the platform, if they did not want their contributions considered in my observations in the study.

In addition, in Groups A and C, I proactively approached one interview respondent who had left the group, to elicit their experience related to the research questions. These people had been mentioned by interview participants, and inviting them to the study was a way to actively seek out alternative explanations for specific incidents that had taken place (Yin, 2009). Otherwise all interview respondents were volunteers responding to the call for participation in the module study group. These participants were situated in various geographic locations mostly in the UK, with a balanced

age range from their 20s to 60s. Some had already left the university at the time of the conversation although they were still active in the study groups.

Selection of Data for Analysis

While conducting the interviews with participants, I reflected on the usefulness of the data to respond to the research questions (Baker and Edwards, 2012). I needed to analyse sufficient data to provide a fair and honest response to each research question. Groups A and C provided the best quality data directly responding to the four research questions. In conducting the interviews with Group B, I found while they had an incident of disagreement, none of the main protagonists had volunteered to be interviewed about the incident. There was no trace of the disagreement left in the study group to know who to contact, as it had all been deleted. The richest data relating to the fourth research question (RQ4) about disruption was in groups A and C. Hence to make best use of the data and time available, the data collected from the six participants in Group A (Language), and six participants in Group C (Politics) were used for the analysis. In these groups A and C, a total of twelve participants were interviewed. This corresponded with the research finding by Guest, Bunce and Johnson (1995, p. 59) above, 'where saturation [of themes] occurred with the first twelve interviews'. If the data from Group B had been added there would be no new insight gained, as saturation had been achieved with the groups A and C in relation to the research questions posed. Using two groups of data would allow for deeper analytic insight, to find the glimmers of insight gathered in

the data, and make a worthwhile original contribution to knowledge.

Achieving deep, rich quality narrative evidence was the crucial, primary criterion for evaluating the suitability of the data in this qualitative study, not a concern to achieve a numerical target as in a positivist inquiry. The aim was to offer sound qualitative insights, rather than mimic a quantitative representative logic (Mason in Baker and Edwards, 2012). Rich personal perspectives are necessarily absent from quantitative studies, as they have a different emphasis. Qualitative research is not intended to generalise and is designed for the purpose of developing in-depth, analytical insights (Twining, 2018). The priority was to do justice to the data with depth of analysis, not generalisable scale. Hence these two groups were selected as the priority for analysis in this investigation, to maximise the use of time, data and resources available with this small scale solo study. To keep the nomenclature consecutive, for the remainder of this work Group A will be referred to as Group 1, and Group C will now be called Group 2. Group B is not included in the analysis.

Data Collection

The online threads, observation and interview data were collected in parallel in each group, with the study of each group sequenced consecutively between February and June 2017. The interview data is used as the primary evidence in the thematic analysis. This was informed by the observation data, and triangulated by the online documentary evidence where

appropriate. I collected interview and online documentary evidence for twelve participants and observed the actions of around 400 group members, in total, in Groups 1 and 2. I did not assume the data found by each method should validate, corroborate or inform each other; they were sequenced and considered independently. Hence, the study uses a blend of data to capture more than one perspective. The use of multiple perspectives can triangulate data on themes, but importantly this aims to understand the issues from independent vantage points to capture a multi-layered perspective (Brannen, 2005).

The inquiry events followed in sequence with some flexible timing to respond to the requirements and constraints of the part-time student cohort. For example, the Easter holiday break was an efficient data collection period as participants were able to allocate time to their studies, and their participation in their study group. Intervention in the weeks leading up to the submission deadlines of important assessments was avoided as students prioritised their studies. This flexibility and responsiveness to the requirements of the participants improved my ability to collect the most relevant data (Stake, 1995).

Ethical Considerations

Before commencing field work the ethics, privacy, informed consent and confidentiality were considered for student participants, and ethics is considered throughout the study. The procedural rituals required by the

institution were conducted (Rossman and Rallis, 2010) before the initial pilot, and again before the main study. I explained the study and methods to the university Human Research Ethics Committee (HREC), and gained a favourable opinion for my approach (Appendix C). I consulted the university Student Research Project Panel (SRPP) to ensure students were not subject to too many simultaneous research requests. I registered the research study with the university Data Protection Co-Ordinator and implemented their guidance to work to good data protection principles. The technical compendia and people in these three sources of institutional guidance offered good advice for the study, and protection for student participants.

Guidance on educational research ethics was studied and referred to (BPS, 2010; BERA, 2011; BPS, 2013). The most useful guidance for the particular requirements of the online research was found in the BPS ethical guidelines specifically for internet mediated research (BPS, 2013). This builds on BPS (2010) guidance, and considers the particular and non-obvious challenges present in online research activity. I applied the BPS (2013) four principles underpinning the ethical conduct of research, congruent with the main guidance. The four principles are: respect for the autonomy and dignity of persons; scientific value; social responsibility; and maximising benefits and minimising harm. This section now explains how these were applied.

Respect for the Autonomy and Dignity of Persons

To implement the first principle study participants were assured that their data would be depersonalised and anonymised for confidentiality and privacy. Interview participants were asked for recorded informed consent to use their interview and online group data, and informed about the process for withdrawal. When advising online study groups about the research, I gave people the chance to not be observed in the study: by notifying me by direct message, or by blocking my Facebook account so I could not see their contributions. These activities correspond with the first principle of respect for the autonomy and dignity of persons; to consider 'valid consent, withdrawal, confidentiality, anonymity, fair treatment, and rights for privacy' (BPS, 2013, p. 6).

In requesting informed consent from the volunteers for interview, agreement to use their postings to the module study group was also sought. Participants agreed 'I understand that my participation will involve an interview conversation and the use of text/content from an online study group'. The multimodal posts, comments and visual data were then treated in the same way as interview data, and were collected, coded, analysed and presented in an anonymised and depersonalised form. The posts would not be found by an online search engine as the group has a 'closed' Facebook group status, and entry to the group is by individual agreement from the Admins. Full electronic records were kept of documents created, including records of each participants' informed consent.

These points are also congruent with the BERA (2011) guidelines on responsibilities to participants. Data is considered to be private even if participants agree to other terms in the web service providers' End User Licence Agreement, and even if that affects the social/scientific value of the research findings. Importantly, the BPS (2013) guidance suggests 'discussion group moderators' will be able to provide good advice on the best ways to research their online groups, so I worked closely to inform and engage the study group Admins throughout the data collection process.

Scientific Value

The second principle of scientific value offers guidelines which note the importance of ensuring research meets the criteria of quality, integrity and contribution (BPS, 2013). It amplifies aspects of the BERA (2011) guidance about respect for the quality of educational research.

The distance from participants in internet mediated research can lead to difficulties in ensuring an adequate level of control over the research environment (BPS, 2013). This includes who participates, what they may also be doing while responding, and being able to observe and respond to how participants react to the research process itself. I could see the interview participants in synchronous online video interviews (Lo Iacono, Symonds and Brown, 2016), but much of the participants data in an online study group discussion cannot be verified. People can use a pseudonym or conceal their

real identity in some way, and not be who they claim to be, in an online environment. While I was looking for evidence of learning and the things that support or disrupt learning in the study groups, I could only use or interpret what participants report. There could be participants there who were not bona fide students at this university, or not enrolled on the module a particular study group was about. These other people may include module tutors, course administrators, people who may be considering that module in future, and indeed anyone who has an interest in that study group for any reason can usually join: it is public to apply to join. As there is no intervention from the university, admittance to a group is at the discretion of the individual group Admins. Nevertheless, the presence of the range of group members is significant if they participate in the study group and hence, may be included in the study.

Social Responsibility

The principle of Social Responsibility is important for the research but presents some ethical choices to consider (BPS, 2013). The principle emphasises maintaining respect for and avoidance of disruption for social structures, and it is mentioned in a more general way in the BERA (2011) guidance about consent. To avoid disrupting social structures for learning, I aimed to avoid study group participants seeing my presence as invasive or an intrusion into their space, or socially irresponsible in any way. This principle helped me identify a tension or a dilemma between that and the scientific value of the research I conducted more closely: I wanted relevant

data, and to be open about my purpose for being in the group, but I also wanted to avoid my presence having an adverse impact on learning in the groups I joined. I did not want to make any intervention which could inhibit group members and affect their learning. I did not want the research to be unwelcome, or to change the use of the group from its intended purpose. One approach considered was to find groups of participants who had stopped using their online group space, for example if a module had been completed recently. Collecting evidence retrospectively from the study group of a completed module also reduced the possibility of respondents being susceptible to social desirability or intentional misrepresentation in the dialogue. However, as 6-18 months would have elapsed since students had used the group, their ability to accurately recall events would be reduced. After some discussion and taking advice, it was decided to approach and investigate groups where the Admin considered the group members would be unlikely to be concerned with my presence. I expected this was more likely in subjects where the participants would understand the qualitative research methods and the purpose of my study more readily. I did not want individuals trying to improve their social desirability, and not be properly representative of the usual behaviour in such a group (Furnham, 1986).

Maximising Benefits and Minimising Harm

The fourth principle embraces BERA (2011) guidance. It asks researchers to consider that publishing the name or address of a website of the online study groups where data was gathered from, could compromise the anonymity of

individuals. The reason is this could have a negative effect on the community even where pseudonyms are used (BPS, 2013). In addition, the present study uses conventional methods and choices throughout, rather than anything innovative, to maximise the credibility of the findings (Gregory, 1995).

This utilitarian view may be symptomatic of my standpoint. Having worked in teaching since 2008, an ethic of care for students and their learning sometimes is prioritised in the procedural apparatus of the university in practice (Noddings, 1995). An alternative approach could prioritise the data and the scientific value of research outcomes, in a Kantian non-consequentialist ethical approach (Israel and Hay, 2006): that is an equally valid standpoint for colleagues with a different approach. I realised that in the event of any tension between these priorities I might be conflicted and prioritise student learning.

Ensuring Quality and Reliability

The quality of any research is dependent on the appropriateness of methodology and instrumentation used, and also by the suitability of the sampling strategy adopted (Cohen, Manion and Morrison, 2007).

Researchers in the scientific, positivist paradigm are led by their search for rigour in research quality. Rigour in this conventional sense explores the value of the inquiry in its internal validity; its applicability or generalisability; its consistency or reliability; and its objectivity. However, in the constructivist

paradigm the very act of identifying something as evidence is an interpretation led by a socially constructed understanding of multiple realities (Schwandt, 2007). In their influential work evaluating naturalistic inquiry, Lincoln and Guba (1985) highlight the more suitable parallel criteria of trustworthiness and authenticity in qualitative research. This section explains how the criteria for quality and rigour in a naturalistic inquiry were operationalised through trustworthiness.

Trustworthiness

This study used the criteria proposed by Guba (1981) for establishing trustworthiness in qualitative research as: credibility, transferability, dependability and confirmability, and these are discussed here.

Credibility

Credibility is assessed with the researcher's ability to take into account many of the complexities that present themselves in a study, and to investigate patterns that are not easily explained (Guba, 1981). One method for achieving this includes prolonged engagement with the setting and participants. This was achieved with persistent observation over several months from January to July 2017 to gather the three forms of evidence. This identified the most salient issues, and possible sources of influence and distortion to investigate further.

Four complementary forms of triangulation maximise the rigour in any social

research. These are data, theory, methodological and investigator triangulation (Patton, 2002).

Data triangulation is about finding multiple sources of evidence which assess and corroborate a phenomenon. Comparing and integrating the available evidence enhances construct validity. Where the same responses to the research questions were found in data within a study group, or between one or more case studies, then this is data triangulation. In this study, interviewing multiple people in different roles about events in a group, could triangulate and assess the effect of the events more closely.

Theory triangulation is seeking out different perspectives for the same data set. A range of theoretical frameworks will influence interpretation of the findings. Applying more than one theoretical lens to explain phenomena found in the data will help to develop conclusions about it.

Methodological triangulation is the use of multiple methods to collect data. In this study this includes collecting documentary information of conversation threads from the online study group, participant interviews, and observations of the group. Conducting a pilot study added the opportunity to improve the quality of data integrity, improving research investigator practice using the chosen methods.

Investigator triangulation in using multiple investigators was harder to achieve in this study as this was an individual, not a team research activity. Instead I elicited feedback from supervisors to check my perspectives on the data sets.

Credibility is enhanced with an active search for 'negative instances relating to developing insights' (Lincoln and Guba, 1986, p. 19), and continuing the inquiry until no further explanations are found for events. This process was pursued to find different explanations for things, for example, from a range of participants in the online group discussions to get multiple points of view. If the key participants in group incidents were unable to volunteer for interview (if they had left the study groups), then I proactively contacted them and asked if they would be willing to share their experience of participating in the group. This enabled multiple perspectives on the salient issues in the research questions.

Transferability

Naturalistic inquiry may be criticised by positivist researchers on the premise that it cannot yield generalisations because of sampling flaws (Lincoln and Guba, 1985). However, both Yin (2009) and Stake (1995) suggest that generalisation is not a primary aim of the case study method; it is not advised to study a case primarily to understand other cases. Instead the aim is to understand this case in particular, and the emphasis is on the uniqueness, and a depth of understanding of the case. Generalisations are assertions of enduring value that are context free (Lincoln and Guba, 1985). However, the case study methodology relies heavily on uncovering unique and particularised, specific knowledge. As human behaviour is time- and context-bound, this suggests that such an inquiry can only produce working hypotheses that relate to a given and specific context. Hence, the best a

naturalistic inquiry can do is to establish plausible inferences, not causes.

A compromise perspective by (Stake, 1995, p. 7) suggests theory building of generalisation about a case or a small number of cases are not real generalisations, but may be considered 'petite generalisations'. Hence, any theory developed from a case study may be transferable depending on the similarity between the two contexts, of where it was created and where it may be applied (Lincoln and Guba, 1985, p. 124). This 'fittingness' is the degree of congruence between the sending and receiving contexts. The description of the context of a case study enables a decision about 'transferability' by comparing the salient features of the contexts; this information becomes a thick description of the context (Geertz, 1973). Hence, the present study aims to provide analysis and plausible inferences from a case study of final stage undergraduate distance learners in particular subject areas. The context data will enable a reader to decide the potential fittingness of any alternative context where the analysis and conclusions may apply.

Dependability and Confirmability

The data gathered in this study is specific to this university, its student groups and their challenges at this point in time. Hence, dependability is a more appropriate way of applying reliability in this qualitative case study approach. This dependability is concerned with the extent that the selected data and its analysis can be seen as a truthful account of the phenomena under review. A direct technique for this is the 'overlap method' (Lincoln and Guba, 1985, p.

317) which makes concurrent use of multiple classes of data which overlap on the substantive focus of the investigation. One way this was achieved in this study was by collecting multiple sources of data about the key themes; this may triangulate data already found but can also uncover important additional new perspectives from different, independent vantage points (Brannen, 2005).

Confirmability is about the objectivity or neutrality of the data and research process. Ways to ensure confirmability include creating an audit trail of the data and the process by which it was analysed, so an electronic record of all correspondence and records has been kept.

Data Analysis

A single analysis is rarely sufficient and Yin (2009) advises a further analysis stage to develop the cognitive richness of the case over time. Hence coding was conducted first in NVivo software, and later coding and analysis was via a manual paper review. This section explains and justifies steps taken in data analysis, to enable greater validity and trustworthiness of the findings. Data analysis is about 'examining, categorising, tabulating, testing or otherwise recombining evidence, to draw empirically based conclusions' (Yin, 2009, p. 126). The fieldwork and data collection was undertaken between January and July 2017. This section moves on to show how the data was analysed, and considers quality, coding, and the thematic analysis method.

Interview Data

The Skype interviews were recorded and transcribed in verbatim form, in order to make the data easier to code and revisit. The recording allowed full focus on the conversation with each participant, so full note taking was not necessary during the interviews. Interviewees were informed on the initial information sheet that the recording would take place. Short notes were made after each conversation to be able to recall key points, and areas to act as additional prompts with other participants in that Facebook study group. Participants were given a pseudonym in the analysis to ensure confidentiality, and care has been taken to avoid identification of participants by an accumulation of evidence together. The transcription of the interviews in the first case study data set was done by myself and someone else transcribed the interviews confidentially for the interviews in the final study group. I carefully checked each transcript for accuracy and meaning, by listening to the recording while I verified the text in each interview transcript.

Online Documentary Evidence

Threads of dialogue between group participants in the Facebook module study group were collected electronically. The main period being reviewed was the six to eight weeks preceding notifying the group of my intention to observe their study group activities. For the first group this was from 1 January 2017 up to 16 February; in the second group this was from 1 March 2017 to 21 April. Critical incidents prior to this time were used as

conversational prompts in interviews, if they illustrated a theme relevant to the research questions of the study. The quotations presented in Chapter 4 are from the interview participants only, as their informed consent for this was convenient to agree. No information was taken from students' personal profiles on Facebook to respect privacy.

Observation Notes

Observation notes were made of the general activities happening in the study groups. The notes could explore any differences in what interviewees said they did, and what they actually did (Hammersley, 2006). The observational data is intended to do more than reiterate a common sense account, and provide more than a surface or summative overview of the topics of interest.

Data Quality

The aim was to develop a good quality data set to offer 'rich, detailed and complex accounts of the topic[s]' relating to the research questions (Braun and Clarke, 2006, p. 98). The task became more than an 'extractive activity' (Chacko, 2004, p. 55) and it was important to interact with research participants appropriately in interviews, while they reflected on and articulated their insights. In interviews this entailed building rapport, with an amount of self-disclosure to facilitate relationship building and sharing of similarities. This enabled more disclosure, and better reflection and insight on the research themes from interviewees. This made the process of knowledge production more authentic for the participants and myself, and created richer

data. However, it was sometimes challenging to remain objective with participants' experiences and disclosure, to remain impartial and avoid any 'delusion of alliance' (Stacey, 1988).

Data Coding Process

Coding is the process of tagging parts of the data set that provide evidence of the themes or phenomena being investigated (Jacobs, 2015). These tags or codes are then clustered in themes, and aggregated to provide a picture of the evidence in each theme under review. From this reorganising process more clarity, meaning and insight is uncovered from meaningful groups of data around the phenomenon investigated (Boyatzis, 1998). Using the electronic data corpus, I worked systematically in NVivo looking for the salient issues to code relating to the research questions. Many data extracts displayed more than one theme, and are coded as such. Identifying the instances of themes in the data corpus informs the analytic process, for later synthesis and sense making.

Codes could reflect the semantic content of the data (data-derived or semantic codes), as well as more conceptual or theoretical interpretations of the data (researcher-derived or latent codes). For example when looking at the interview transcript data, participants might say 'found out' or 'realised' for the concept of learning being sought in this study. This knowledge of theoretical frameworks brought to the data enabled interpretation of the

codes present in the data. These latent codes 'go beyond the obvious' (Braun and Clarke, 2006, p. 210).

In the pilot study, coding was conducted on paper with highlighter pens to code the themes. In the main study reported here, I used the qualitative data analysis NVivo software. The reason for using this was to improve my ability to manage and analyse the growing data set efficiently. In NVivo I could identify features of the data that may be hard to see, or obscured by other methods. I also improved my skills and knowledge of using this popular qualitative data management software. While I did the coding myself with no semantic auto-coding in NVivo, the main benefit of using this software was the efficient sorting and collating of coded extracts of data for analysis. Where data extracts were coded with multiple codes, NVivo provided clarity and efficiency to manage the coded data. The commenting features of Microsoft Word were considered for coding the data, or using a spreadsheet, but using NVivo offered more reliability and versatility for analysis. However, this came with a cost of time and my efficiency was reduced as I learned how to manage the data productively in the software. Using NVivo also limited how much progress could be communicated with others, as it was hard for some colleagues to collaborate and advise me on the analytic process unless they had also installed the software. Occasional printing and sticking arrays of coded data onto large paper sheets enabled better visualisation and 'post-computer thinking' (Yin, 2009, p. 127) to refine developing themes. This enabled a faster insight into the shape and texture of the data, but a limited analytic overview as there was a lot of data to manage. Examples of early

data coding are provided in Appendix D to give transparency in how coding decisions about data were made.

Thematic Analysis

A range of qualitative approaches were considered when choosing the method of data analysis for the interview data, documentary evidence of online threads, and observations. As words are used as the data in this research study, I considered content analysis (e.g. Hsieh and Shannon, 2005). However, this often emphasises numerical counting, and comparison of the incidence of key words and phrases present in data. I used this directed content method of analysis in the initial pilot study, but found it was limited and could not adequately meet the needs of this research investigation. It focussed on developing quantitative measurement and analyses of qualitative data which I was co-constructing. This method also obscured or minimised the presence of themes which are important for learning but were found infrequently. It may be possible to use IPA (interpretative phenomenological analysis), discursive or narrative analysis; however, there is limited variability on how these can be applied as these approaches have to be used in particular ways (Braun and Clarke, 2006). Hence, in this investigation I used the qualitative method of thematic analysis.

Thematic analysis 'can be used with any form of qualitative research' (Boyatzis, 1995, p. 160). It is a relevant method for examining the

perspectives of participants with varying standpoints in research, highlighting similarities and differences (King, 2004, Braun and Clarke, 2006). It can enable new insight (Nowell *et al.*, 2017) and can facilitate summarising of key findings in a large or small data set (King, 2004). A good thematic analysis will enable interpretation and making sense of data, as well as summarising it (Maguire and Delahunt, 2017). It is a flexible method that differs from content analysis, as the importance of a theme is not predicated on the frequency with which it is found in the data. Buetow (2010) warns 'thematic analysis tends to conflate two concepts: recurrence and importance'. However, Braun and Clarke (2013) note that the central feature that defines qualitative research is its focus on meaning not numbers. More instances of a theme do not necessarily mean a theme is more important, as in quantitative content analysis. As some of the themes sought and examined in this study are influential but may occur infrequently, for example student conflict, thematic analysis is more suitable than content analysis for this investigation.

Thematic analysis is used to identify and analyse patterns in data, and is compatible with the interpretivist, constructivist paradigm (Twining *et al.*, 2017). It has been argued that thematic analysis is the definitive 'code based' approach as it entails a process of encoding qualitative information (Fereday and Muir-Cochrane, 2006). It is 'a method for identifying, analysing and reporting patterns (themes) within data' (Braun and Clarke, 2006, p. 79). It involves searching for and identifying topic themes across a set of data, to find patterns that respond to the research questions. A theme 'captures something important about the data in relation to the research question, and

represents some level of patterned response or meaning within the data set' (p. 82). A code is a subset of a theme and 'captures the essence of what it is about that bit of data that interests you' (Braun and Clarke, 2013, p. 211). The themes and codes (sub-themes) examined in this study were initially related to the existing empirical knowledge base in a theory-led analysis. In addition, other relevant codes were assigned in the data, and this can contribute to new theory about distance students' learning in Facebook study groups.

Themes are identified in two ways: in a deductive, theory-led and top-down way, and also in an inductive, data-led and bottom-up way (Braun and Clarke, 2006), and both were used to identify the codes in this study. In this investigation, the interview and documentary evidence data was organised to respond to the research questions, initially adopting a theory-led or theoretical approach. A thorough search of existing literature for relevant themes, and planning of suitable interview questions and online text data collection around these themes, strengthened the use of this method. This was intended to lead to greater validity of the findings. However, while the planned research questions and readings influenced the theoretical coding approach, it was important to also find out what participants learn and value from their own perspective through open questions. Hence, the analysis and data collection were a combination of inductive data-led, and deductive theory-led approaches. There were subtle new findings to add to existing research, as well as testing existing theory in this new setting. During the interviews, some respondents displayed a preference for a structured

interviewer-led approach, and some interviewees were confident to be able to add to this structure and comment in an open ended way around the topics (Hammersley, 2006). This helped to uncover both theory-led responses and respondent-led perspectives on the research topics. Hence top-down (deductive) and bottom-up (inductive) approaches were combined in this way in the analysis, and this is usual in thematic analysis (Braun and Clarke, 2013).

An initial planned coding frame was identified from the empirical literature, and modified a number of times as the coding progressed in NVivo, to include respondent-led, inductive codes. The codes and themes identified were iterated several times to include, then later discard some themes that were interesting but not sufficiently focussed on the research questions. Coding became an organic and evolving process and the codes within each theme were modified to include new material, as the data and the thematic analysis process became more familiar. Some codes were discarded; some overlapped and could be merged or separated as understanding of the data progressed. Codes were initially given theory-led names and some names were adjusted to reflect new findings. Code and theme analysis was an active iterative process of coding, organising, writing, review, reflection and revision over a year. Part way through each cycle of analysis, I discussed the potential options for coding and grouping data with supervisors. These socio-cultural learning discussions of my own assisted me to focus, reflect, justify and refine my decision making with the data codes and themes. Then the alternative interpretations from each source were considered and used to

refine the findings (Yin, 2009). Hence the approach was to develop a provisional theory-based coding frame, then familiarisation and immersion in the data, to find the codes which best responded to the research questions.

A purely inductive approach would have been naïve to attempt, as early engagement with the theoretical literature from an initial pilot study had influenced how the data was approached and interpreted. That knowledge was useful for becoming sensitised to some of the more subtle features in the data. Further, I became aware that my own background and work interests were underpinning some inductive themes noted in the data. Indeed Braun and Clarke (2006, p. 96) suggest that inductive ‘themes do not just emerge’ anyway. I realised that I was making selections and choices in an active process of considering what ideas to segment and report on. While these other themes may enrich the analysis (for example, about leadership in the groups), they were not always relevant to the research questions, just because they were salient to me. This resulted in a long list of over thirty ideas in the initial coding frame. In analysing the second study group data I was able to finely tune my approach and focus more efficiently on the research questions. This was while maintaining a flexible approach to find the most relevant inductive codes in the data, responding to the topic areas of the research questions.

The thematic analysis necessitated a reflexive approach on my standpoint in the study. There may not be a fully right or wrong way to select the relevant data for analysis, but it is necessary to recognise that selection is limited by

any individual standpoint, and what resonates with the researcher. This is balanced with what was raised as important by participants, to provide a report of findings that remain true to the data. The themes chosen are the overarching issues in the broad conversation with research participants, in response to the research questions. An active search was made to code for 'negative instances relating to developing insights' (Lincoln and Guba, 1986, p. 19) to include multiple perspectives, and any contradictory views of events (Stake, 1995). For example, I sought and found alternative perspectives about learning. This enabled a more balanced selection and array of coded data in the themes.

The final stage of coding was to collate and compare the data in each code for consistency, and determine the salient points for inclusion to then formulate themes. This was also an iterative, recursive process; the grouping of the codes and focus of the themes were sorted several times to find the best representation of the data. This is an interpretive judgement and there is no scientific rule-based way to do this (Braun and Clarke, 2013). A balance was sought to identify commonalities, prioritise the most prevalent student perspectives, and to also include relevant non-dominant experiences and voices. This is a key strength of qualitative research to include instances of n=1 experience, where those instances respond directly to the research questions. For example, incidences of disagreement were sought as these can be an important aspect of student experience in social media. As a result, the codes were remixed and arranged multiple times, in electronic and physical forms, to develop richness over time.

Various compositional structures were considered for presenting the findings, and these were initially written up as two case studies. However, the theme-based 'linear-analytic approach' was preferred to minimise repetition (Yin, 2003, p. 138), and the Findings chapter (Chapter 4) is now organised by themes, with data from the two study groups dispersed through each section. Some codes were found in only one case group (e.g. Facebook as a proxy for a university forum), but are nevertheless worth reporting. The final 22 codes were organised into generally recognisable categories of five themes.

The interview text and group dialogue presented contain the most pertinent and critical evidence and are organised by the five themes identified in the data. The 'conceptual loading' (Stake, 1995, p. 29) of the themes in the Findings chapter is heavy with direct quotes from participant interviews, and their text in the online Facebook study groups. The reason for this is to improve transparency and to prioritise the participants' own authentic words in the construction of their learning. The emphasis in the discussion sections of Chapter 4 is on interpretation using the conceptual framework.

Summary

This section has explored the methodology which was adopted in this qualitative investigation, and Figure 3 below summarises the theoretical methodology frameworks used. I argued that a qualitative strategy, with a

replication case study design and thematic analysis method, offered the strongest opportunity to respond to the requirements of the research questions. The chapter provides rationale for the logic of inquiry, design strategy, evidence, naturalistic sampling, selection, and data collection. The investigation was underpinned by guidance on educational research ethics; and the ways in which the study aimed to ensure quality and reliability were explained. The thematic analysis method was chosen for data analysis, and the coding and analytic process was detailed.

Research concept	How it was applied
Ontology	A constructionist ontological approach, using interpreted evidence of learning to enable the development of theories about educational behaviour (Cohen 2007).
Epistemology	Knowledge about learning is influenced by what we choose to observe, interpret and measure. This constructionist approach acknowledges there may not be one true way to understand learning. In qualitative epistemology, learning is considered to be jointly constructed, rather than simply collected (Cohen, 2007).
Methodology	A qualitative, naturalistic, interpretivist methodology, where learning is studied in its natural environment, and there may be multiple interpretations of events (Cohen, 2007).

Design strategy	The replication or collective case study design strategy relies on uncovering unique and particularised, specific qualitative knowledge, about multiple cases (Stake, 1995, Yin, 2003, 2008).
Data Collection Methods	Three kinds of case study evidence used: online multimedia group dialogue data; interviews with volunteer study group participants, and observation to inform this data selection. The use of multiple perspectives develops understanding from independent vantage points (Brannen, 2005), and triangulates findings.
Data analysis	Thematic analysis of qualitative data, using semantic and latent themes in a deductive, theory-led, top-down and inductive, data-led, bottom-up analysis (Braun and Clarke 2006).

Figure 3. Summary of Methodology Frameworks Used

The following table in Figure 4 shows how the the theoretical frameworks, methods used and data generated answer the research questions.

Methods used	Data generated	Theoretical frameworks	Research question
Online study group data	Qualitative text	<ul style="list-style-type: none"> • Connectivism • Connected learning • Care 	<ul style="list-style-type: none"> • RQ1 • RQ2 • RQ3 • RQ4
Interviews	Qualitative text	<ul style="list-style-type: none"> • Connectivism • Connected learning • Care 	<ul style="list-style-type: none"> • RQ1 • RQ2 • RQ3 • RQ4

Figure 4. How the Theoretical Frameworks, Methods Used and the Data Generated Answer the Research Questions

The following diagram in figure 5 shows the relationships between the research questions, theoretical and conceptual frameworks chosen in the literature review, the data gathering methods, thematic analysis and the theory that has been developed in this thesis as a result.

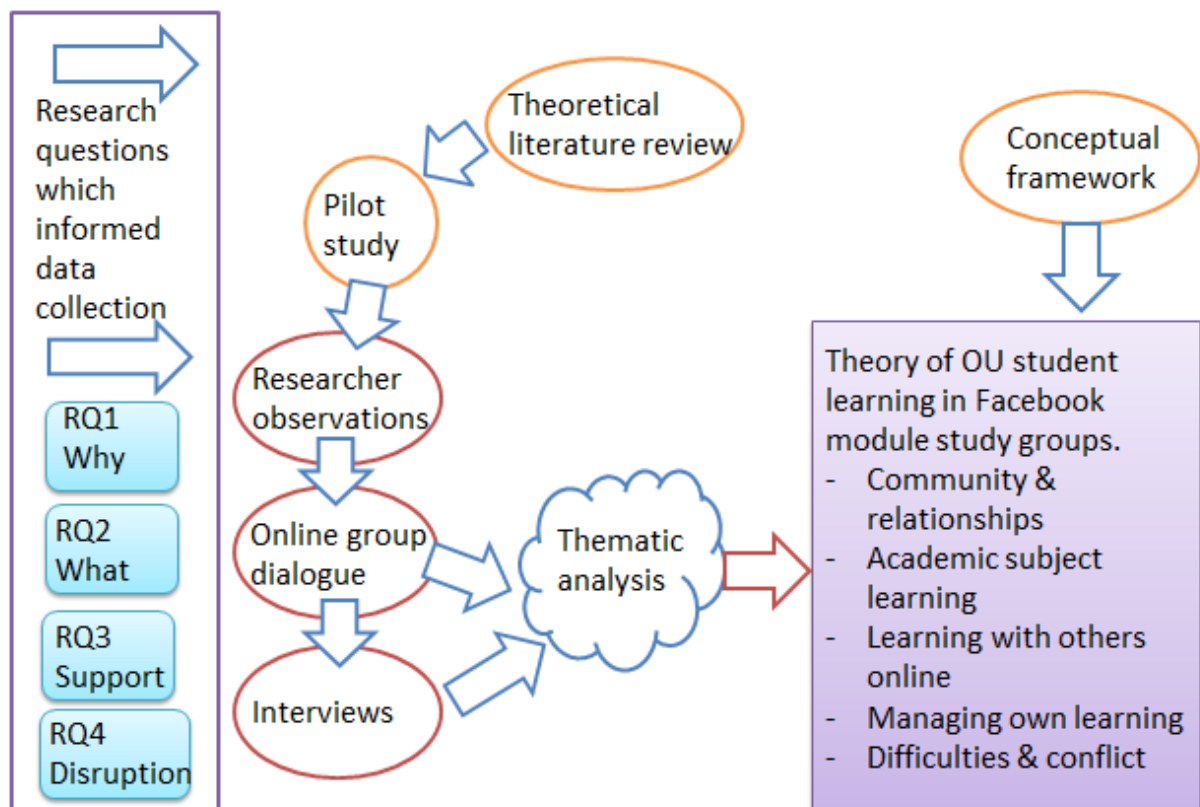


Figure 5. How the Literature and Methods Work to Develop Theory

The next chapter will show the findings of the investigation and offer an interpretive discussion of these findings using the lenses of the conceptual framework.

4. Findings and Discussion

This chapter will present the findings of the analysis of data collected from the interviews, and online group dialogue, structured around themes identified in the data. There is emphasis on student voice, and students' own words and interpretations are used to show nuanced insight into their experience. This provides an evidence-led response to the research questions, constructed with learner voices.

Arrays of qualitative data are presented here in thematic results of two groups, Group 1 and Group 2. There were twelve interview participants: six participants in each of the two study groups. The arrangement reflects the balance of theoretical and data-led approach, foregrounding participant voices in the case study analysis. While identification of codes from the data was initially theory led, identification of the themes was emergent by grouping and remixing the codes to identify appropriate themes. Codes were clustered together in a number of arrangements to make sense, make meaning from the dataset, and conceptualise the themes in a systematic way. In this chapter, the codes will be referred to as 'sub-themes', as they are grouped and presented as part of the five themes of findings in this study. The themes identified have good potential to provide insight on the research questions which will be addressed in Chapter 5.

The findings section foregrounds and offers a description of the coded data;

then the discussion sections here foreground interpretation using the conceptual framework. The salient themes about the experiences of learners in the student-led Facebook module study groups are as follows:

1. Community and Relationships
2. Academic Subject Learning
3. Learning with Others Online
4. Managing Own Learning
5. Difficulties and Conflict

The following figure 6 lists the sub-themes found in each of these five overarching themes.

Theme	Sub theme or code
1. Community and relationships	Solidarity Encouragement and motivation Assembly Saving 'face' Distraction and procrastination Fear of missing out
2. Academic subject learning	Acquisition learning Extra links to augment learning Facebook as a proxy for the university forum Alumni and prospectors
3. Learning with others online	Participation learning Expediency Notifications
4. Managing own learning	Skill learning Staying on target Locating study materials Administrative guidance Complacency Overload and oversharing Occupational and professional use
5. Difficulties and conflict	Disagreement Hostility and harassment

Figure 6. How the Themes and Sub-themes are Organised

Before examining these sub-themes, a description of the two study groups and their participants is given first for context.

The Case Study Groups and Participants

The Facebook group dialogue data for the study was observed, and collected up to the point where the interviews commenced in February 2017 for Group 1 and April 2017 for Group 2. This was to minimise any disturbance to participants in the groups and not inhibit the normal purpose and function of the groups. Group participants were active in their Facebook study groups before, during and after the time the modules were live between October 2016 and June 2017. The student participants interviewed in the study were aged from 26 to their early 60s (see Appendix E). They were located in disparate locations in the UK and elsewhere, and they unified by their membership of their study community. This study followed the participation and reflections of the members of the two Facebook module study groups, relating to the research questions of this study.

Group 1

The distance learning module being studied by Group 1 was a newly designed and launched module about Language. Study modules at this university are usually offered for between five and ten years, and this was the first time this module was offered to students. This module typically contributes to degree pathways in Arts and Humanities. The participants in

the study mentioned they were working towards the following BA qualifications: English Language and Literature; English Language and Creative Writing; Humanities with English Language; and the Open degree which allows a flexible range of subject content. The Facebook module study group was started by a volunteer student enrolled on the module in the summer of 2016, before the module commenced in October 2016.

The module had 584 students registered on it (OU LTI, 2017) . The Facebook study group had between 200 and 210 members present at the time of the study. The proportion of current students was likely to be higher in this group than in other Facebook module groups as this was a new module to the university, so there could be no past students present. It was not possible to accurately discern if all the group participants were bona fide OU students or enrolled on the module, as the group was not managed by the institution and participants may not be using their real name. Requests to join the group were agreed by the group Admin, if the Facebook profile of the applicant indicated they were resident in the UK.

The members list within the Facebook study Group 1 indicated there were 170 female participants and 30 male group members present. Membership was 201 on the day of the audit on 15th March 2017 (one person could not be confirmed from their unisex name). This is an 85:15 female: male gender balance. The undergraduate gender balance at the university is 60:40 (The Open University, 2016). University data indicated a 73:27 female: male gender balance among enrolled students on this module (OU LTI, 2017). Hence, the 85:15 gender balance in the Facebook group suggests women

may be more likely to participate in this study group, and this may influence the type of responses in the group dialogue. Reliable background information about other demographic data such as age and location was not available for the whole group.

After the module had completed and around the time when the university website went to 'read only' status in mid July 2017 (so no further posts could be made between students there); the Facebook group still had up to ten posts each day, attracting up to twenty comments each. This included the period when results were published and half of the learners were receiving final classification results, and planning their graduation. Over a year later there were still active posts as learners shared their experiences in post-graduate studies, teacher training, job hunting, births, bereavements, family weddings, promotions, other events and general news updates.

Group 2

The distance learning module studied by Group 2 is a more established module about Politics that has been running in a similar form since 2014. This module normally contributes to degree pathways in Politics or International Studies. The participants in the study mentioned they were working towards the following BA qualifications: Politics, Philosophy and Economics; International Studies; Global Politics and Economics, and the flexible content Open degree. The Facebook module study group was formed for a previous presentation of the module, and some of the group members

had studied the module in previous years and decided to stay in the group. Participants were often active in the group from before they had decided and registered to study the module.

The module had 489 students registered (OU LTI, 2017). The Facebook study group had between 185 and 195 members present at the time of the study. The number of current students may be slightly lower in this group than in Group 1, as Group 2 was created for an established module and past students could remain in the group. A small number of group members had been present in the group since 2014, 2015 or 2016. Again it was not possible to accurately discern if all the group participants were bona fide OU students. All requests to join the group were generally agreed by the two group Admins.

The Facebook study Group 2 had a membership of 189 on the day of the audit on 21st April 2017 and indicated there were 105 female participants and 84 male group members present giving a 55:45 female to male gender ratio. Data held by the university indicated a 45:55 female: male gender balance among students enrolled on that module (OU LTI, 2017). The 55:45 gender balance in the Facebook group suggests women studying the module were more likely than men to participate in this Facebook group too.

Interview Participants

I initially explained and discussed the research aims and methods to the study group Admins, and posted a message in Group 1 in mid-February 2017, and Group 2 in April 2017. I informed group members about my study and asked for volunteers who would be willing to talk about their experiences of learning in the group in more depth. I spoke with everyone who provided their consent, and could make themselves available for interview. An additional participant had left the group in each case, but was central to a conversation thread mentioned by a number of interviewees: I approached these people separately as they would not have seen the message posted to the groups as both had been removed. These additional two participants agreed and brought the total number of interviewees in each case study to six, so twelve in total for the two groups. Eleven of the twelve interviewees were female and the one male respondent was from Group 2 studying Politics. The age distribution of participants in the case study groups and a short biography of contextual information about each participant are contained in Appendix E. Participants discussed their study related learning in this group, and sometimes supplemented this with their experiences of other relevant Facebook OU study groups where it was particularly pertinent.

The remainder of this chapter explores and discusses the findings of this empirical study. This is organised by the five themes.

Theme 1 - Community and relationships

This theme is about the exchange of learner directed relational communication, and belonging to a community in Facebook. This can foster increased social engagement in learning and build confidence (Deng and Tavares, 2013). The community can offer peer support interaction, for general course and institution related issues. The following sub-themes or codes of positive and negative features of this theme were found, and these are now explored in turn: solidarity; encouragement and motivation; assembly; saving 'face'; distraction and procrastination; and fear of missing out. The thematic map in figure 7 below shows how these subthemes are organised within this first theme.

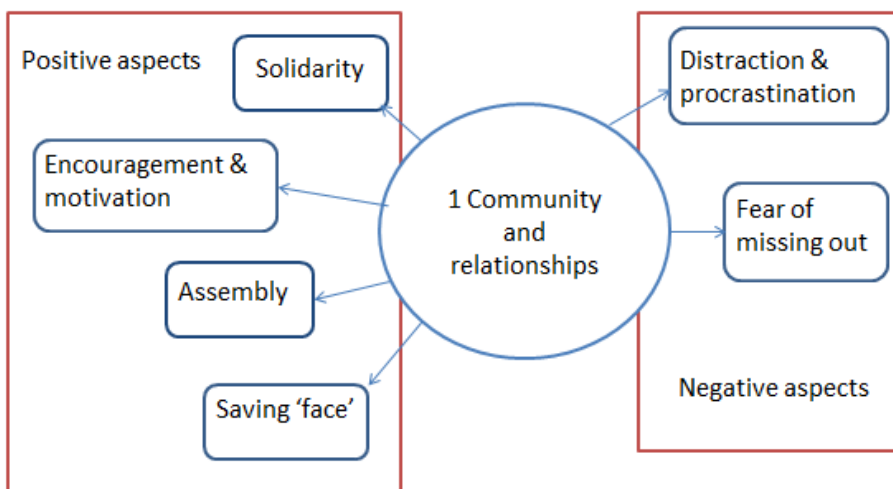


Figure 7. Thematic Map of Community and Relationships Theme

Solidarity

In this investigation, learners experienced a feeling of unity and empathy with others who shared their common interest in pursuing their module studies.

Group 1:

'It can be very very helpful and it can be very encouraging as well, as when you are doing it [studying] on your own, it can be quite isolating and it feels like a bit of a slog. [...] Whereas in the [Facebook] groups it very much is like a big social community hub, where people can push each other along, give encouragement. So you don't feel like you're falling behind or anything like that. You're all in the same place' (Cerys).

'You know that you're not alone. [...] I wouldn't have that, if I didn't have that little peer community, my little study community online. [...] Where I live, there is nothing, no-one.' (Alice).

'[It's] nice to try to form a community, so you don't feel like you're on your own. If you do write something a bit funny then other people can contribute and you kind of form a bond with people, and it doesn't feel like you're studying completely on your own then.' (Beth).

Learners liked to offer and receive mutual support within their group.

Participants treated the group as a digital retreat from other responsibilities, where people were included whether they were active or passively silent.

Learners contributed the following points to express camaraderie with others in their shared, common interest.

Group 2:

'Do people post jokes or funny pictures or anything like that in there?' (Researcher) 'I think so, yes, yes, I've seen that' (Rosie). 'And what purpose does that serve?' (Researcher). 'I don't know, I think it's like the support. It's good support to have a social community. It makes it less formal I guess, than the module forum' (Rosie).

'Actually I have to say some of the people on my Facebook are friends that I have kept in contact with from Facebook study groups [...] fairly local and so you meet up

[...] they've turned into good friends and I wouldn't have met them except through the Facebook [OU student] forums' (Shreya).

The findings here pattern match those in previous investigations with campus student's rationale to use Facebook for psychosocial reasons (Cain and Policastri, 2011, McLaughlin and Lee, 2014). Displays of solidarity with other distance students have also been noted in the university website (Kear 2001), and this can enhance social integration leading to improved persistence (Tinto, 1975, 1987).

The sense of belonging and solidarity in the community was a highly valued theme of support by participants in the study. Combining use of Facebook for educational and social reasons aligns with the idea of an *edusocial* space for learning (Pollara and Zhu, 2011). Learners talked about the solitary, individual nature of distance study and the lack of specific support available for their ideas in their immediate social environment of family, work and friends. Most people were not in regular face to face contact with other students, but were able to make connections with others through the convenient Facebook study groups when they wanted to.

'On Facebook you're corresponding with them on a daily basis or at least two or three times a week, you build up a rapport and the emoji's and the emoticons add emotion to what you say. You do actually get a picture of the people you're talking with' (Tom).

In Facebook study groups they were able to establish their own relationships and facilitate their own independent learning. Participants describe a sense of belonging and feeling of kinship in these study groups, as they are connecting with others who understand their situation. Students liked to

share stories, jokes and illustrations they had seen elsewhere, to share their interest in their subject. For example there were many pictures showing word play and puns in Group 1 studying language. After completing a number of modules, some students had built up a matrix-style network of collegiate connections of people they had encountered through the OU Facebook study groups. Participants said these fluid relationships persist past the duration of individual modules and their qualification. Students reported the fast and supportive responses to their contributions in the form of answers and 'likes', and this contributed to a feeling of solidarity with their online community. Participation in a Facebook community enables efficient and convenient connections to be pursued with a larger and more diverse group of acquaintances (Ahern, Feller and Nagle, 2016), and this is especially valued by the distance learners in the present investigation.

Encouragement and Motivation

Many participants in this investigation appreciated the encouragement and motivating dialogue they received and offered, in their online peer group community. They felt a sense of support from others in the same situation, who uniquely understood the challenge to study while managing other competing requirements on their time. Learners valued being able to check their understanding of study topics and being reassured they were making progress (Henderson *et al.*, 2017). The encouragement they received and offered to others helped overcome some of the isolation of studying at a distance.

Group 1:

'We're all there chivvying each other along you know. Encouraging one another.'

(Emily).

'Knowing that there's always going to be a million people just to chat to, and just talk randomly about the course to, it makes a difference [...] like a little group hug. You know you're not alone' (Alice).

'I went for reassurance. Or if I had done it wrong I wanted someone to say, because I had plenty of time to kind of quickly re-do something. But no, everyone reassured and it was fine. So that was good.' (Beth).

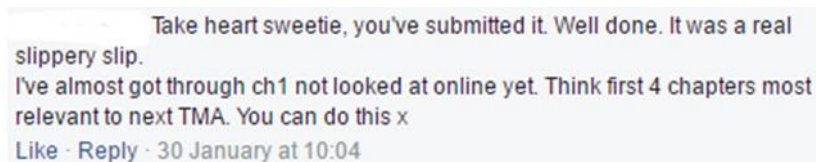
Evidence in the online dialogue between study participants showed group members could informally reflect on and share their experience of preparing assessments, and support each other's progress:



Well done x
Like · Reply · 18 January at 13:35

Brilliant, well done. Mine's just left the building.
Like · Reply · 1 · 18 January at 13:35

(Dottie and Emily)



Take heart sweetie, you've submitted it. Well done. It was a real slippery slip.
I've almost got through ch1 not looked at online yet. Think first 4 chapters most relevant to next TMA. You can do this x
Like · Reply · 30 January at 10:04

(Emily)

Group 2:

Reflecting on her final assignment:

That's it then. Last assignment submitted today, and six years of study finally finished. Only the grade hangs in the balance. So wonderfully chilled by the thought of all the free time waiting for me! I think it's called 'reclaiming my life'!! Hang on in there everyone still writing, and good luck to all us for the results in July!!

18 Likes 2 Comments

(Shreya)

'[Group members] were really nice. I couldn't believe how nice they were to one another, very, very supportive, [...] 'Good on you. Keep going, you're doing fine, you're doing brilliant'. It was all of that.' (Una).

The participants in both groups in this study valued the giving and receiving of personal support and encouragement. Some noted their friends and family could be ambivalent about their studies. Participants were interested to hear the stories, situations and challenges faced by other learners, and those who had needed support had said they valued the encouragement and feeling of shared experience with others very highly. They reported a feeling of social integration with peer learners, valuable for persistence (Tinto, 1975).

When people were despondent or frustrated with their studies, or anxious about their prospects, they appreciated the kindness, well-meaning advice and concern offered in the groups. They could show their vulnerability to some extent, and were not always presenting highly edited and curated social media text in their closed group. Participants felt included by this social glue (Madge *et al.*, 2009) or social niche, and this can help maintain persistence and hence, improve completion of their studies (Tinto 1987). They could share their highlights, setbacks and hardships they experienced, and reflect on these with hindsight.

Tom explained that after deciding to leave a module in his first year of study but '[the Facebook group members] all came back with 'oh no', 'no don't do that', [...] 'you know you're more than half way through it, you're a fool if you leave now' [...] I was so close to chucking it all in and it was partly Facebook but partly also the tutor that convinced me that maybe I should stick at it. I had lost all confidence in my ability to stick at it, you know' (Tom).

A participant who had been close to leaving his studies reported the strong encouragement they had received in the Facebook group had helped him to continue his studies. This feeling of being included in the community was sufficient to encourage him to continue and not leave his studies, corresponding with findings by Tinto (1975, 1987). There is strong and positive peer pressure in the Facebook study groups for learners to persist and prioritise their studies, and this supports module and qualification completion.

Assembly

Learners want to connect with others studying their module, and use the study groups as a place to regularly assemble with others. Participants express no particular preference for Facebook, but they value the closed group as a convenient place to ask and share information and experiences.

Group 1:

'I think with Facebook there's always someone on as well. It doesn't matter what time of the day, in the early hours of the morning. There's someone there' (Dottie).

'[It is] nice to try to form a community, so you don't feel like you're on your own' (Beth)

'It's just to see people that know what you're talking about [...] 'oh look they're in the same boat', when everyone else [in your daily life] thinks you're mad [for studying a degree], there's someone else there who's doing the same thing' (Fatima).

The flexibility of time and location is important to distance learners who often have to allocate specific time for their studies, and have to make efficient use

of that time. This corresponds with a study by Ahern *et al.* (2016), who found learners valued being able to correspond and share with others at any time of the day or night. Participants in this study said they use this Facebook space because of the high likelihood of relevant dialogue, and the good number of people who will be around and willing to discuss the module topics with them when they are available. Students go to the Facebook module study groups mainly because many other learners are discussing their module there. If students do not have a strong opinion about the social media platforms available, they are most likely to mimic the other people around them they wish to associate with and take the 'social default' option (Morin, 2014). Thomsen *et al.* (2016) also confirm Facebook as the favourite online meeting place for university students and say 'the choice of Facebook can be described as an almost automated or default selection' (p98).

Saving 'face'

In a mixed method research study on support seeking behaviours and temporary accounts on the Reddit social media platform, Andalibi *et al.* (2016) found that while gaining support online from others can be helpful, people have difficulty doing so for many reasons. One risk of asking for help is losing face, where face is the positive self-image people present in their social interactions, and feel discomfort without (Goffman, 1959).

Group 1:

'There seems to be an underlying fear [...] I wonder whether people worry about whether in the university forum that your tutors are going to see it, so maybe people

aren't so relaxed. [...] Even when I wrote something on there it was more formal as I was writing directly to my tutor, whereas on the Facebook group it's very much more of a chat' (Beth).

Participants suggest that *other* learners use the Facebook study groups to ask questions and find out things discretely, without getting something wrong in front of their tutor. They reported other people are aiming to save 'face' (Goffman, 1959). Students show some reluctance to ask what they think may be silly questions, and reveal a weaknesses or lack of knowledge. The study group dialogue becomes a form of small talk to build up trust and ease people into a discussion about their learning topics. This psychosocial, informal dialogue helps people develop rapport and build trust with others (McLaughlin and Lee, 2014), before revealing their questions about the administration of the university processes, and academic topics.

Group 2:

'To some people, I think tutors can be scary' (Tom)

'I think they feel they're being supervised, you know, by the tutors [on the university forums]. I know I behave differently [...] when I have posted anything on the module website' (Quella).

Hence students want to ask basic questions safely and confirm or discuss their understanding, without discomfort or fear of getting something obviously wrong. They mentioned other learners being frightened of evaluation by their tutor, if they asked for help or guidance in the university website. In asking for help from university staff, people may feel vulnerable or fear they look inadequate by admitting that they want help, and so they decide to avoid asking questions. Instead it seems easier to ask in the safety of the non-

hierarchical student-led Facebook study group, and there were no concerns noted in this study about fear of peer evaluation.

Distraction and Procrastination

Research into the educational uses of social media has often lamented it is a distraction that pulls the attention of learners away from deep engagement in their subject and studies (Madge *et al.*, 2009; Andersson *et al.*, 2013; Chen, 2015; Purvis *et al.*, 2016). It can provide superficial distraction with many connections to other people, and there is temptation to quickly tempt people away from their studies, into unfruitful activity. This could be attending to relational needs like friendships, and engagement with other readily available recreational content. The fast moving, short message content can provide superficial interaction, and may inhibit the deep engagement required for learning.

Group 1:

'I'll find people can be distracting.' (Dottie).

'It's so time consuming. [...] before you know it you've spent a half an hour just checking what your friends have been doing all day.' (Fatima)

Tinto (1975) noted that while social integration with peers is important for learner persistence, overinvolvement with peers can be distracting and dampen attainment

Group 2:

'Well at level 3 [final year], people haven't got time for the messing around, was something of interest or not. We may have done that in year one or year two'
(Poppy).

'Do you have the notifications on your phone or tablet? Or do you switch that off?'
(Researcher) *'Not for Facebook, no otherwise it's just it's too much'* (Rosie)

'For me it's a distraction as well as a help, because I might be typing trying to focus on an essay plan, before writing the essay up for example, and something [a notification of Facebook activity] will pop-up in the bottom right hand corner [of the screen] and you just have to look at it, don't you? If I was doing my day job I would ignore it, but nope because I'm studying it's just really important, yes? It's a bit like your untidy sock drawer; it just has to be tidied up' (Tom).

Learners' concentration may seem compromised by the ongoing conversation online, as others reflect on their studies and debate module topics. Participants in this study also had a new explanation about the distracting role of Facebook study groups, which challenges current perspectives.

'If I'm doing fine I do not spend too much time on it. [...] if I'm not doing that great, then I'm on it a lot more [...] because I am distracted and I can just find it a lot easier to relax and see what everybody else is doing [...] it's like a welcoming distraction, I like it.' (Quella).

These study groups may provide a goal displacement activity, by attending to relational needs like friendships, and engagement with other readily available recreational content. The fast moving, short message content can provide superficial interaction, and may inhibit the deep engagement required for learning. Nevertheless 'despite its power to advance learning, many parents, educators, and policymakers perceive new media as a distraction from

academic learning' (Ito *et al.*, 2013) so some commentators do acknowledge social media also offers a positive purpose and can advance learning. Hence, the fallow time of this aspect of studying may be a necessary preparation for learning.

Learners spend time satisfying their curiosity about how other learners are finding their studies. The regular notifications of group activity provide an additional distraction tempting people into Facebook. Some learners say this encourages procrastination from their priority task of reading and preparing their assessments. Some learners indicated their use of Facebook could be time consuming or time wasting, and participating in the online community was seen by some as inconvenient and taxing. Other participants looked beyond the immediately obvious purpose and indicated this was a welcome distraction and actually helpful to keep them rooted in their task, and not tempted to do something else completely different. They see this as a chance to recharge, ready for more study. Reviewing and commenting in the Facebook group is a valued study break, to recuperate and maintain motivation in their studies. Hence learners construct multiple interpretations of their realities. The over simplified moral panic of much previous empirical research about 'facebocrastination' (Meier, Reinecke and Meltzer, 2016) fails to acknowledge the benefits recognised by some learners to take regular breaks to connect with others online while studying; and this improves their social integration in the academic setting (Tinto, 1975). Participating in a student community takes time.

Fear of Missing Out

The fear of missing out can pressure people to visit social media and the Facebook study group frequently. While people can experience feelings of dissonance about being tethered to the site, they do want to be updated about new course related information that could be important to their studies.

Group 1

'I get a notification when anyone writes anything [in the study group]. So if it comes up on my phone, I straight away go and have a look. So it's good because you do keep up to date with how a lot of other people are doing [...] I do look a lot.' (Beth).

'you can [...] easily spend of a couple of hours a day [...] If you added up all of the five minutes I check then, and five minutes I check then, it probably does amount to a lot.' (Alice)

Group 2

'I did panic at first.' (Una) *'Why did you panic?'* (Researcher) *'It [the study group] becomes part of your life, and you can almost get obsessed with it because you almost think you need it, you depend on it to get information.'* (Una).

'I think you're frightened of missing something, it's a bit like a kid who won't go to sleep [...] in case there was something I might need to know' (Una).

In a thematic analysis of stressors of Facebook, Fox and Moreland (2015) found the fear of missing out pressures people to visit the site frequently (Przybylski *et al.*, 2013).

The participants in this investigation did not mention the fear of missing out on social updates. Instead they consistently reported a fear of missing out on

useful information to help with their studies, if they did not visit the Facebook study group frequently enough. This is an additional underlying rationale for why learners visit their Facebook module study group regularly.

Discussion of Theme 1: Community.

A discussion of this theme will now deepen the analysis, using the interpretive conceptual lenses set out in the Literature Review. Learners assembled in an online social media space form a dynamic sense of community from the solidarity of belonging to the same educational group because members share a common purpose or learning goal (Crook *et al.*, 2008; Ahern, Feller and Nagle, 2016). Participants in this study consistently indicated this sense of joining a community was very valuable to them. Many had built up a network of collegiate relationships in Facebook with other learners over many years of studying, and felt part of a community network of people with similar shared interests. Some learners said although participating in the Facebook groups could be time consuming or delaying their progress, they continued to visit regularly as a break during their studies. These breaks aid persistence and courage, and help learners' manage the fear of their challenge to complete their module at a distance. Participants valued their learning community as a necessary tool to support their learning.

In her chapter of ideas about the ethic of care specifically in education, Noddings (1984) advocates that education is a community enterprise with the

various parties taking responsibility for others. She questions the primacy of education foregrounding intellectual knowledge, and considers the importance of social, emotional provision. Many participants in this investigation noted this foregrounding of the social and emotional provision was the priority for the Facebook study group. Noddings suggests 'the primary aim of every educational institution and of every educational effort must be the maintenance and enhancement of caring' (1984, p. 172). Then secondly while nurturing the person, education then can also refine and train intellect. It is this prioritising of aims in this order that reflects the way learners saw their participation in Facebook study groups.

In this investigation the groups were described as a 'big social community hub, where people can push each other along, give encouragement' (Cerys). This corresponds with the confirmation step of Noddings' model of care (1984), where learners affirm and encourage the best in others (Owens and Ennis, 2005). The online text indicates the ethic of care often present in the tone and content of study group interactions between learners. The emoticon communication tools in Facebook can facilitate this when they are 'deliberately designed to support caring, and caring individuals' (Noddings 1984, p. 182). This corresponds with an earlier study at the institution by Price *et al.* (2007), suggesting university online contexts may be 'severely impoverished from a communication perspective' (p. 18). They suggested tutors and students need more training to compensate for the lack of paralinguistic information in the university website. Participation in a Facebook study group may be filling a need for community in learners.

By using public social media for their study community, people can form 'relationships with peers and caring adults that are centred on interests, expertise and future opportunities in areas of interest' (Selwyn, 2017, p. 92) in this connected learning setting. Participants note the affordances of the Facebook module study group offer opportunities for short, phatic communication (Radovanovich and Ragnedda, 2012) to display caring, including the emoticons, stickers, and approving 'likes'. Those visual signals of caring communication were used frequently in the Facebook study groups in this investigation. There may be different social expectations of a non-hierarchical and informal relationship in the Facebook study group, which allow displays of caring, to facilitate a community approach.

When questioned about their rationale for adding Facebook as an intermediary tool for learning, learners suggest they have expectations that are unmet by the learning activities offered by the university. The choice of this particular social media venue was a passive not an active choice and people take the 'social default' option (Morin, 2014). Learners assembled in the Facebook module study groups mainly because other learners were already there, suggesting some ambivalence or inertia with this space for virtual assembly. This had become a culturally organised practice (Vygotsky 1978). Their priority is to find the other learners in the same module of study to extend their ZPD; they were not concerned with scrutinising and selecting from a range of slick technology and online locations. Learners' critical awareness of the technological infrastructure available was low (Thomsen *et*

al., 2016); students were not as concerned about choosing a leading edge technology platform as they were about finding access to a relaxed and caring learning environment with relevant information and peers.

In her early three stage model to nurture a caring approach, Noddings (1984) advocates dialogue, practice and confirmation. Dialogue is about 'talking and listening, sharing and responding to each other' (p. 186) where a level of trust is required for open dialogue which can change professional expectations. In a spirit of trust and openness, volunteer students willingly set up and run their student-led groups in Facebook, and they root their justification for this with a sense of service to others. The participants in this study said they benefit from the fast and caring community of encouragement and support they receive and offer, in their student-led Facebook module study groups.

Summarising this first theme, the participants of this study valued their membership of the community which the student-led Facebook module study groups offer. Learners described their Facebook group as a place where people are supportive and encourage each other. They appreciate that they can 'build up a rapport, and the emoji's and the emoticons add emotion' (Tom) in the online group environment of Facebook. The short phatic communication techniques encourage empathy and social presence.

Participants value the reassurance, encouragement and support that is generously offered and received in the study group, as a way of reducing the isolation and uncertainty of studying at a distance. People who took part in this study appreciated the availability of people to discuss their module topics and concerns, at flexible times in the day and night. They were unconcerned

about the choice of platform, and took the social default option to just connect with other learners. The research participants liked to discuss ideas without fear of being evaluated harshly in front of more knowledgeable others, and they were able to do this in their supportive community study group. They realised they were spending time away from their studies when present in the Facebook study group: although some participants said it was good to relax and the group was a welcome distraction. Participants have found their involvement in the community so useful they can fear missing out on some relevant information if they do not visit the group frequently enough.

I have argued that this theme of findings can be explained and underpinned particularly by the concept of care (Noddings, 1984) in a connected learning community (Ito *et al.*, 2013). These concepts underpin the justification for student needs met by the student-led Facebook study groups.

Theme 2 - Academic Subject Learning

This theme is about the exchange of ideas and subject matter on the modules learners are studying. Many studies have noted the exchange of academic subject information in Facebook between students (e.g. Madge *et al.*, 2009; Selwyn, 2009). Learners share information, and ask and respond to closed and open questions about the topics they are studying. This academic-related content can be about current study topics and assessments. The following sub-themes were found relating to this theme: acquisition learning; extra links to augment learning; Facebook used as a

proxy for a university forum; and alumni and prospectors. The diagram in figure 8 below shows the thematic map of the subthemes within this theme, including a lateral link between sub themes.

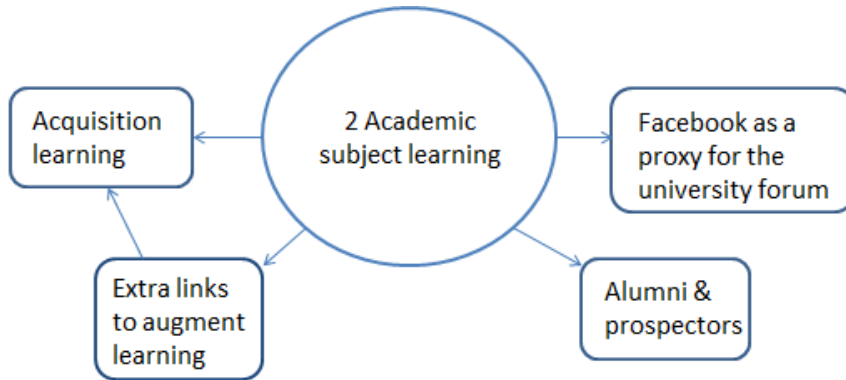


Figure 8. Thematic Map of the Academic Subject Learning Theme

Acquisition Learning

The Acquisition learning metaphor is a way of thinking about learning as a cognitive process where knowledge is acquired, as a possession or item of property (Sfard, 1998). Knowledge is understood as property of its owner and has some permanence. Here the learner 'constructs meaning' (p. 5), like the activity of accumulating material goods. Participants may ask closed and open questions in Facebook study groups to gather new learning, and answers can be offered by other group participants.

Group 1:

'The module books do explain, but sometimes it's a lot of waffle. [...] Looking through the books it can be hard to decipher, especially gearing your mind around the language they use because it's all academic. So seeing how other students

interpret it, it's like 'oh yea, now I finally understand'. Some people explain it much better.' (Cerys).

This learner explains her understanding of a playwright in the

Language group:

I think he is more meaning that some reappropriate words to take the original intent out of it. It is creative in the terms he is describing but reappropriated words by marginalised people aren't always souly adopted by the entire group and usually there is conflicting arguments for and against. Some dont use it some do. This is because of social context. Plus not everyone adopts it. And it can be especially annoying when those outside the group assume the whole group is ok with it because one person within the group uses it to describe themselves. I would say a good example of reappropriation of a word would be the resurgence in the 00s of using the word gay to mean bad thus giving it a third meaning. Ugh i really hated that trend. e.g. katy perrys 'ur so gay' song sort of exemplified this.

(Cerys)

Group 2:

'Often someone will post something quite meaningful and give a different insight, and you think 'oh yes OK, I haven't looked it that way, that's good'. (Shreya).

'I'm constantly thinking 'I didn't think of that' and 'that's interesting', 'oh now I see where that's going'. You know that sort of thought process, which maybe you don't get when you're just reading your own textbooks' (Shreya).

Learners said seeing how other people understood the study materials enabled them to understand the academic content of their module. This is not the process of co-construction of knowledge but seeing how other people interpret the knowledge, in ways that enable understanding of key academic concepts and ideas. Study participants talked of acquiring new perspectives and ideas from other people, offering a different insight or way of understanding something that enhances their own individual learning. This is complementary to, and in addition to the learning they acquire when they

read their study texts alone.

In this sub-theme, it was also useful to triangulate between what multiple participants reported in their interviews about the study groups. Other participants in Group 1 reported:

'What sort of things did you learn about?' (Researcher). 'I didn't really find that it was that sort of thing. The forums are more for learning, and the Facebook groups are more for chatting. [...] It's not really academically focussed. That's what I liked about it. That's what everyone likes about it' (Fatima).

Dottie said 'I don't think I've actually found out anything study wise'

Hence in some cases participants said the Facebook groups were used for acquiring learning, and for some people they were not. The evidence of different vantage points uncovered conflicting views in the interview data. Some learners said they learned new things in the study group, some said they did not learn in the study groups, and the online text suggests some learning was being shared. The use of multiple respondents (data triangulation) and multiple methods (methodological triangulation), suggest acquisition of learning is not consistent, for the range of people involved.

Extra Links to Augment Learning

In the present investigation, study group participants use their Facebook community as a multimodal online space to share text, pictures, video, emoticons and other resources. Learners share extra links to articles, events, news stories, blog posts and other items of interest as multimedia files, which

link to their studies in some way. This can add more depth to enhance the topics of interest, increasing their autonomy as independent self-directed learners.

In a study of tutor-led activity, Buzzetto-More (2012) noted Facebook was a useful platform for 'sharing of links to articles, new events, multimedia files, or other matters of interest' to supplement study (p. 87). In a quantitative study, Junco (2012b) found that sharing of such links was positively predictive of overall assessment score. Junco considered this knowledge sharing of links is close to academic activity, as the links were often to relevant news stories and blog posts. In this study participants made the following comments.

Group 1:

'The other thing you find is that when people find things online somewhere else or they find materials that are useful to the course, they'll post the links to it, and that's really good because that's extra reading [...] you might not necessarily see yourself' (Emily).

'I work full time and I have a child, I don't really have time to look at stuff that's not on the course materials. So when anything pops up that's a nice add-on I don't really have time to look at it too much' (Beth).

In Group 2 studying Politics, learners were using up to date and multiple sources offering differing views on world political matters, which would add new perspectives to their knowledge. These sources could be more current than their study materials. Participants said they had used the extra links to augment their learning and improve their arguments for assessment purposes.

Group 2:

'I find out about useful links to information that relate to my studies' (Quella).

'[We share it] if the IFS (Institute for Fiscal Studies) release something interesting statistically, or something comes out the Bank of England or Downing Street, or the Economist come up with some good ideas' (Tom).

'A lot of people have been posting articles that could be useful for assignments for example, related to the chapter we're doing at the moment. That's very helpful. I've used one in the past for my assignment which is really good.' (Rosie) *'On what?'* (Researcher) *'North Korea. [...] It seems to be a popular subject. Trump as well'* (Rosie). *'[...] and where are those articles from? What's their source online, do you remember?'* (Researcher). *'It's very different [...] some of them are American news I think, and websites I haven't heard of'* (Rosie).

'[There are] certainly pointers to other books, and relevant things out on the web and in the news. If you look at [the Facebook group] you'll see people saying 'ah look at that, look how relevant that is, that's talking about what we're doing now', you know, US v China and that kind of balance of power' (Tom).

The participants' recollection and online documentary evidence shows group members regularly post links to websites and articles, which offer new perspectives on study topics. Group participants use the site to discover and share additional resources to augment their learning. Students are generally interested to explore and read through the links and visual rhetoric, depending on the time they have available. One student indicated her circumstances with other responsibilities prohibited this, and she preferred to strictly stay just with the module materials given by the university. Other learners said they appreciated the place to share items of mutual interest, and benefitted from relevant links shared by others to supplement their

knowledge and interest. Sometimes a discussion about the links would ensue, enabling people to deepen their understanding of the perspectives on topics of most interest.

Facebook as a Proxy for a University Forum

Facebook groups may be used as a substitute for a discussion space in the university website. They can be set up and led by tutors or students, to meet particular needs as required. A study by Manca and Ranieri (2013) found tutors used Facebook as a substitute for space in the university website, relying on learners skills in social networks to participate.

In this study, space was allocated in the university website for all enrolled students and tutors in both groups to discuss their progress and learning in small tutor group forums of up to twenty people. Group 2 had an additional large forum space where all learners and staff involved in the module could correspond with each other. Group 1 was studying a newly designed module, and did not have the same large forum facility for everyone to discuss topics together with all other students and staff. Learners in Group 1 reported they wanted the same large whole module forum space in the university website (they called it a national café forum).

Group 1:

'Tutor group [small group] forums don't work, they do not work and you have such a small group of people that it's not the space to be able ask the questions. You ask them and you may get one or two responses. On a national café you ask a question and you'll get thirty or forty easily. [...] and you'll feel validated because you've been

heard. In a small tutor group forum [in the university website] it could be a week before somebody pops on' (Alice).

'We literally only have this [Facebook group]. So in some ways it's made it better, it's made it a closer, a more cohesive group. You know, just a bit of knowing you're not alone. That sort of empathy really does help' (Alice)

Referring to not having a large whole cohort forum space in the university website: 'I think that's why I joined the Facebook one. On other modules I found there has been more participation in the university [website] forum, so with that I've had constant updates of people asking questions and whatnot. In this one, I don't think there's much. [...] So that's why I went on to the Facebook one' (Beth).

'The OU [small tutor group] forums [...] nobody uses them as they are intended and everyone goes to Facebook' (Fatima).

Alice had requested a large discussion forum for the whole cohort through the official channels, as an elected representative of the OU Student Association (OUSA) 'I keep telling my [OUSA] colleagues, because I keep saying 'we need this for [this module], we need this!'

Wang *et al.* (2012) found that Facebook could be used as a substitute for a learning management system if the latter was unavailable. Students in both groups said the tutor group online spaces are too quiet as they are small, with insufficient opportunities for learning, hence they were using Facebook group as a proxy for group learning in the university website. Students had previously enjoyed the benefits of large group spaces in the university website, with active staff members in previous modules. Participants in Group 2 were studying an older module, which offered the large discussion forum for all learners and staff. This large group space was not offered in Group 1, and participants expressed dissatisfaction with their online

discussion space in the university website. They described the university website forums as too quiet.

A student had requested a large module forum in the university website, through the official OU Student Association. Learners said they wanted access to the full range of other students to discuss their study topics; they felt unable to satisfy their needs in the university website. They reported this had made their student-led Facebook study group stronger, as the space to connect with many others was important to these learners.

Alumni and Prospectors

While teaching materials and group discussion spaces in the university website are offered to current registered students, access to educational information by future students, alumni and the public is restricted. Manca and Ranieri (2013 p. 495) found a 'hybridisation of expertise' could be formed, with current and past learners interacting in social media. In their study of public (not closed) Facebook groups, Perryman and Coughlan (2014) found those groups were inhabited mainly by current undergraduates, and also included alumni and some prospective students interested in choosing their next modules. This investigation uses a closed Facebook module study group and builds on these findings, to uncover more about student rationale for alumni and prospective students to be present.

In Group 1:

Cerys the Admin had completed her degree, and decided to remain in the module group to assist other students. She justified her presence as an alumni saying ‘the group is educational you know, it’s to help other people doing the module.’

New people joined the study groups, to find out what the module was like and decide if it was a good choice for them. Existing students would offer an evaluation of the module and their experience of it. For example:

Having completed this will stand you in good stead for
It is somewhat analytical and there seems to be an insane amount of reading spread over three books, stylistics and on-line module materials. I never seemed to have enough time to thoroughly research all the topics presented but that could just be me. Only 4 TMAs with 1 EMA is great but, don't be deceived, the assignments are complex and wide open, needing athletic mental acumen to cram in required details. Would I recommend it? Yes, in a heartbeat.

Like · Reply · 1 · 9 hrs

(Emily)

These Facebook study groups have permeable boundaries, so prospective students can find out about modules they are considering, and past learners can stay in groups to help others.

In Group 2:

‘I did join some groups for modules I was thinking of doing’ (Shreya), ‘That’s a good idea?’ (Researcher), ‘Just so that I could say ‘hey what’s it like? what books should I get?’ that sort of thing.’ (Shreya)

‘All the modules groups I’m in yes, and I tend to stay in them, I don’t leave them. [...] I found that when I was in the group, people that had already done the module were in there, and they dropped in and helped. I sometimes go back into my old module groups. [...] You know people used to send me a message ‘you know actually if you read this, this and this, seriously if you continue to immerse yourself in it, it will click and you will understand it. Seriously’. And then I found myself telling other people that’ (Tom).

Learners find it valuable to find out authentic reactions to the modules in advance of enrolment, to help inform their module choices. Students said they appreciated being assisted in their learning by former students. They are widening the context of their learning (Manca and Ranieri, 2013). Some learners like to support others by adding their perspective after they have completed their module, and offer encouragement for others studying the module after them. Both Group 1 and Group 2 were formed and led by volunteers who had since completed or left that module; one of these had completed her degree and had left the university. Hence, Facebook is working as a proxy for the larger collegiate community.

Building on and adding to the findings of Perryman and Coughlan (2014), the present investigation uses closed Facebook module study groups, to uncover a novel finding about the rationale for alumni and prospective students to be present.

Discussion of Theme 2: Academic Subject Learning

This section now offers a discussion of this theme of academic subject learning, using the ideas of connectivism and connected learning from the conceptual framework in the literature review.

Connectivism is predicated on informal learning being a significant aspect of our learning experiences (Siemens, 2005). Learning is a continual process and can occur in a variety of communities, personal networks, and through

completion of tasks. Siemens (2005) suggests learning rests in diversity of opinions and is a continuous process of connecting varied sources of information. The expression of diverse opinions was important to the participants in this study, who expected to participate in an exchange of views on their study topics. They were actively looking for ways to understand and interpret the ideas in the study materials provided. Learners were able to find new perspectives in the range of views expressed by others in the study group, although some did not recognise this as learning. Sometimes learners sought information because they didn't understand a topic, and sometimes they would proactively seek out alternative perspectives to contrast and compare with their own. In Group 2 (a Politics module), many learners shared links about topical political events which took place while the module was running. The module study materials provided generic and theoretical understanding of the issues, and these students were keen to supplement their understanding with practical and current articles and debate. This enhanced their acquisition learning (Sfard, 1998).

Finding, maintaining and nurturing connections with knowledgeable people or places are important in connectivism so learners can access relevant knowledge resources at the right time (Siemens, 2005). These study groups were welcoming to include learners who had previously studied the module. While the Facebook study group has purposeful boundaries of membership, these are more permeable and flexible than the 'citadels high walled exclusiveness' of the university website (Moore, 2013, p. 703). This connected learning (Ito *et al.*, 2013) option was mentioned as valuable to

alumni who had previously completed the module and wanted to share their knowledge and refine their coaching and communication skills. It was also used by students who were considering the prospect of taking the module in future. The experience alumni bring to the groups can also contribute to the cognitive aspect of student engagement, to support academic integration (Tinto, 1975, 1987) and qualification completion (Appleton *et al.*, 2006). All of these people participating were welcome to ask, listen and contribute to meet their interest driven needs. In both groups learners had a benevolent rationale for helping others with studies they had already completed, and they were keen to share their knowledge as others had previously helped them. Alumni are willing to participate in study groups for modules they have completed, to engage and encourage others, while growing their own potential (Ito *et al.*, 2013). While Selwyn (2014, p. 141) suggests the turn towards digital education does little to guard against a withdrawal from civic participation, this study shows students are developing community duties in the online environment, not withdrawing from them. Noddings' (1984) principle of 'practice' of care is displayed as learners practice care for each other through participation, as well as the experience of contributing to the community (Owens and Ennis, 2005).

Social media offer new ways of expanding the accessibility of connected learning, to widen the opportunities so everyone can benefit (Ito *et al.*, 2013). Although they regularly refer to this phenomenon applying to young people, Ito *et al.* suggest connected learning is 'socially embedded, interest-driven, and oriented toward educational, economic, or political opportunity' (2013

p.6). The evidence of the present investigation here makes a contribution to show that this concept can apply equally to adult learners too. Participants indicated they wanted access to the full range of other students to discuss their module study topics. The first case study group suggested that they were using the Facebook study group as a proxy for university discussion space, to improve their educational opportunity in their studies. They wanted a large group discussion space so they could reach and discuss their study interests with and through a wider range of people (socially embedded). They reported this was available to them in Facebook and hence, this had made their student-led module study group stronger.

In summary the ideas of connectivism and connected learning provide appropriate lenses through which to understand the way learners use the Facebook module study group to enhance their academic subject learning. This second theme in the data showed some of the ways learners are finding and exchanging knowledge relevant to their academic interests, to accelerate their learning. They were able to acquire a better understanding of the study materials, deepen that understanding and find more current information through the different perspectives present in the group. This corresponds with acquisition learning (Sfard, 1998). Participants were able to quickly locate resources they would be unlikely to find themselves, as they are benefitting from the combined knowledge sharing. Research participants said they use the groups to find alternative perspectives on their interpretation of study materials, so they could strengthen their own arguments and provide more critical thinking in their assessments. They were keen to do this with

knowledgeable others with the same interests, whether current students, staff or learners with previous experience of that module. Having been guided by others in the past, some learners display benevolent sharing of their knowledge to support future cohorts of learners: this is their online space to connect the various cohorts of students. Participants in the first case study group studying a new module, said the OU forums were unfortunately too quiet as a result of being too small. The student-led module study group in Facebook was especially valued by these participants.

Theme 3 - Learning with Others Online

This theme is about the experience of learning with peers at a distance, through the student-led Facebook module study groups. It builds on the previous Theme 2 focussing on the academic content, by considering the mutual activity of learning with others in the online environment. This is predicated on participants not seeing learning as an entirely solitary activity, so some of the mechanisms and prompts that support and inhibit learning with others can be explored. The following sub-themes were found: participation learning, expediency, and notifications. The thematic map in figure 9 below shows the subthemes.



Figure 9. Thematic Map of Learning With Others

These link to the Community and relationships theme 1, in figure 10 below, showing positive and negative lateral links in aspects of working with others online:

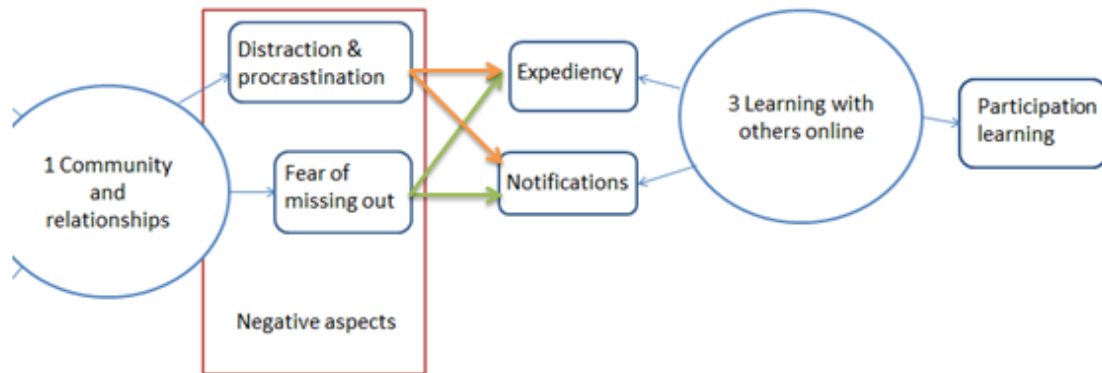


Figure 10. How Subthemes in Theme 3 and Theme 1 Connect

Participation Learning

The Participation Metaphor (Sfard, 1998) emerges from ideas about learning as a process of legitimate peripheral participation, where newcomers become established in a community through their participation (Lave and Wenger, 1991); or an apprenticeship in thinking (Rogoff, 1990). They improve their writing skills to explain their views to others, in succinct and focussed messages. Many want the multiple points of view expressed and exchange of information to maximise their learning, and this can facilitate a change in their outlook on topics. They recognise these encounters have a positive impact on their student experience and develop their digital communication skills.

Group 1:

'I'm getting out of it being part of the conversation I suppose, and helping others see it from a different point of view which is what I always think university is for, that kind of thing. You need those different points of view to round how you view your topic and your coursework and it does help you. [...] I think being part of a conversation like that, it does definitely change your outlook' (Cerys).

'I learn by interacting and having tasks where if I'm getting it wrong I've got someone there saying 'well actually this isn't the way we're thinking with this' then you can be pointed in the right direction.' (Emily).

Many participants described their learning as an active process of participating in a dialogue, of being part of an interesting exchange, to jointly form perspectives on their study topics and ideas. They value the plural perspectives and multi-voiced interaction in the group, which adds to their learning. While it can be challenging to accommodate alternative views at times, participants generally appreciate the different perspectives.

Group 2:

'I rather like discussions, say 'I started reading this chapter thinking this and now I'm thinking that, has that happened to anybody else? Or do you see it differently, or I'm still thinking the same way', you know? And then somebody can come back and say 'well actually I think you've got a different perspective here, I think you could look at it from this point of view.' [...] that sort of dialogue gives you more breadth and depth, because it's so easy to just approach things from one mind set' (Shreya).

Rosie said 'I have improved my critical thinking skills from getting different perspectives, so yes [...] I like the fact that I can construct arguments in a far more effective way and get my own point across at work, so it helps in that respect. It's been good'. For example in the group she shares the following views on political

news issues:

I agree it is not a ban of all Muslims however, taking into account Trump's speeches and promises, it looks like it is only the first step. And history has taught us what happens when a government (even democratically elected) discriminates against people on the basis of their religion, however small and justified the first measures are. People protesting have learnt history's lessons, people who build walls and refute climate change have not

Like · Reply · 1

As for Trump's visit to the UK, if we get a referendum on whether or not we want to be associated with the EU, a petition on whether or not we want to be associated with Trump is a fair point. Although post-brexite we might have to give up our principles and suck up to any leader who offers trade opportunities, putting Theresa May in a very difficult position (in my humble opinion)

(Rosie)

Learners debate and exchange views which enable them to form a more rounded view of topics, and they talk of this being an expectation of university learning they hoped to participate in. The intersubjective meaning-making and opportunity to improve understanding of topics was important to learners. There were also students who indicated they were actively lurking in the groups in order to learn (Orton-Johnson, 2008), even if they did not contribute and exchange dialogue with participants. They appreciated the availability of the group, and being included as passive participants on the periphery to advance their understanding.

Expediency

Participants noted their discussion in the Facebook study group progressed quickly and this met their needs for answers to questions in their limited study time. This corresponds with findings by Deng and Tavares (2013) that student discussion on Facebook was more interactive and faster than the university website. In this investigation, students made the following comments about their rationale for using the Facebook module study groups.

In Group 1:

'[Facebook is] a lot more immediate. If you post something in the VLE [the university website] and you don't get any response for a day or two, nobody cares. [...] the expectations of the medium are different' (Alice).

Participants explained it was much easier and quicker to get to a Facebook group, than to get to a discussion forum in the university website: 'You know it's hard work to like go through studenthome [the university website]. You have to google it, go to Open University, [log in] then your student home page, then you go into the forums and you go into the right forum. You know it's too much hassle. You have Facebook open. You go there and ask the question' (Fatima).

They found the university website large and complex to navigate on small devices, and they were unsure where to locate specific information quickly in the website. They were likely to trust other students to know the answer to basic questions, or be willing to add their experience on questions; and they were confident of a fast response in the Facebook group.

In Group 2:

'I know I can look on the OU website but it takes time. Time that you don't really have, whereas you could just ask one of these guys [in the Facebook study group] and you know they'll know [the answer]' (Una).

'For me personally, Facebook is permanently on. I've always got 3G on and it's much easier to pick up your phone and tap tap tap, send, gone. It's instant, it's there. The Open University I don't have on my phone. Is there an app?' (Una)

These distance learners talked about the importance of speed of entry and speed of response in their Facebook study groups. Distance learners rarely have daily access to other students like those at a campus university, where

this would be the normal arena for having those quick conversations to clarify detail with others. These distance learners in the study groups say they get a more immediate response to their questions in Facebook than they would have to finding out information in the university website. Some suggest there are too many steps in the technology to access the university website to get answers to questions, and the response times were often slow. Interactions in Facebook were faster moving and more suited to their individual needs for these two reasons.

Notifications

One of the technological affordances offered by Facebook is to notify users when a message has been posted in groups they have joined. These push notifications may be switched off, otherwise notifications appear as a pop-up, audible alert or eye catching red dot on the screen, on users' phone, tablet and laptop devices. So when participants look at one of their devices they are notified there has been some activity in the Facebook module study group. In a study looking at how and why undergraduate students use Facebook groups, Ahern *et al.* (2016 p40) found: 'the attributes of Facebook groups lead to interaction'.

In Group 1:

'Did you have the notifications on, on your phone, to tell you what was happening in the group?' (Researcher). 'Yes they were on for the Group, yes they were on, yes' (Fatima). 'Did that encourage you to keep on going and looking?' (Researcher). 'Definitely yes' (Fatima).

Beth had only contributed to the group six times in seven months, but she said: 'I get notifications when anyone writes anything [in the study group]. So if it comes up on my phone I straight away go and have a look. It's good because you do keep up to date with how a lot of other people are doing' (Beth).

Beth was making the most of the vicarious, passive learning opportunity (Anderson, 2003) afforded by membership of the group.

In Group 2:

'I think what happens is many people have push up notifications on Facebook, [...] whenever there is something going on they get an alert' (Quella).

'Do you have the notifications going off on your phone? (Researcher) All the time, it drives me mad!' (Una).

'I wouldn't say it distracted me, but it would grab my attention, put it that way [...] I would read it. Purely because I might have been missing something that was important' (Una)

Hence, the impact of push notifications was reported as influential in encouraging users to look at the Facebook study group on a regular basis. Learners in both groups reported the regular notifications tempted them to look at the activity in the group, and some reported they would respond straight away. They could look on their phone while doing other things, and as this became a habit they reported visiting the Facebook group many times daily. One learner said she had rarely contributed, but was looking at the group many times each day as every message posted sent her a notification. Participants report using and receiving notifications with multiple devices, and this speeds up the pace of interaction in the study group, speeding up expectations of a fast response in the dialogue. They justify this intrusion by

reasoning it allows them to keep up to date with conversations about their studies.

Discussion of Theme 3: Learning with Others Online

This section builds on the previous theme 2 discussion of academic subject learning, to foreground the activity of learning with others online. If learning is seen as a 'lasting changed state [...] brought about as a result of experiences and interactions with content or other people' (Siemens, 2005, p. 2), the idea of connectivism positions interaction with other people alongside acquiring academic knowledge. The central tenet of Vygotsky's (1978) socio-cultural theoretical framework is that social interaction plays the key role in the development of cognition. In her comparison of the concepts Hall (2007, p. 98) asserts 'for the constructivist approach, the learner acts alone first then interacts with others, for the sociocultural approach it is the reverse'. Hence when learners go to the Facebook study group to find things out from other students, this is sociocultural learning. If learners in the study group to explain their understanding to others, this is constructivist learning. There is potential for both types of learning. Vygotsky (1978) emphasised this mutuality and the interrelated roles of the social world and the individual. Learners in this study were looking for easy access to other learners for the duration of their module, for a cohort conversation about their topics and study experience. Without a hierarchical relationship in the Facebook study group, learners can take turns to ask and respond to each other's peer-led questions, sharing experience and information before, throughout and after

their module.

The conceptual lens of sociocultural learning (Vygotsky 1978) place the mediating social environment as central to learning, and learning may be extended in the Zone of Proximal Development (ZPD) in a digital, physical or other context. The mediating environment for the learners in this study has extended beyond the books, tutorials and the university website to include their choice of student-led online study group related to their module. This study found around one third of learners choose to extend their artefacts for learning, to include the Facebook study group, and grow their ZPD beyond that offered by their university resources.

Developing the ideas of Siemens (2005) on connectivism, Selwyn (2017) suggests an important role of educational technology is to provide access to information on a just-in-time basis. A primary reason for learners migrating to use the module study groups in Facebook was this expedient, just-in-time access to information which students search or request, select from and use when needed. In connectivism, being knowledgeable is a skill learners acquire to nurture connections and find particular information quickly, and for a specific purpose. Many students rely on the use of Facebook and the fast responses people exchange at flexible times of the day, and this reliance 'recreates and changes the whole structure of behaviour' (Vygotsky, 1978, p. 140). Students know they can ask particular questions and do not need to recall a lot of minutiae; they can rely on someone in the Facebook study group cohort replying quickly with the exact information they need.

Respondents indicated they checked the dialogue in the group regularly, and they often did so when prompted by the regular notifications received when a new comment was made in the group. Many participants contrasted this expediency in Facebook with the slow response times they had experienced to queries and debate in the university website.

The concept of connected learning applies more closely to the forms of participation learning (Sfard, 1998), which shifts the permanence of having or possessing knowledge to an activity or constant state of doing. Connected learning is socio-cultural learning in the technology mediated environment (Selwyn, 2017). The concept of connected learning differentiates itself in using networked technologies for participation learning to take place. This investigation found that research participants wanted to be in the Facebook study groups for being part of the study discourse, and helping others see things from a different point of view. Participants particularly in Group 1 claimed this was important for distance learning as they had no other place to congregate with others to learn 'we don't have anywhere on the official forums to be able to discuss these things, we have to turn to Facebook for it. It's one of the really really really bad design concepts of this new course is that we don't have a national forum to share this stuff' (Alice). Hence, the participants in this study saw the shared dialogue in their Facebook study group space as a crucial channel for their socio-cultural, connected learning.

In summary this theme focusses on the socio-cultural benefits of learning with and from others, in their student-led Facebook module study groups.

The participants in this study viewed learning as an ongoing process of becoming part of a greater whole (the university). In the absence of attending a physical university, participants in this study placed great importance on having a place to go to be a university student, and experience *being part of the conversation* with others. They were focussed on improving the bonds between themselves and others, elevating the way learning happens through communication with knowledgeable other people.

Theme 4 - Managing Own Learning

This theme is about the practical apparatus and routines of study skills, and learners integrating their study routine with other responsibilities. This can be bringing their existing skills and methods to their study experience, and taking away new skills learned. The following sub-themes were found in the data relating to this theme: skill learning; staying on target; locating study materials; administrative guidance; complacency; overload and oversharing; and occupational and professional use of social media. The thematic map of this theme is shown here in figure 11:

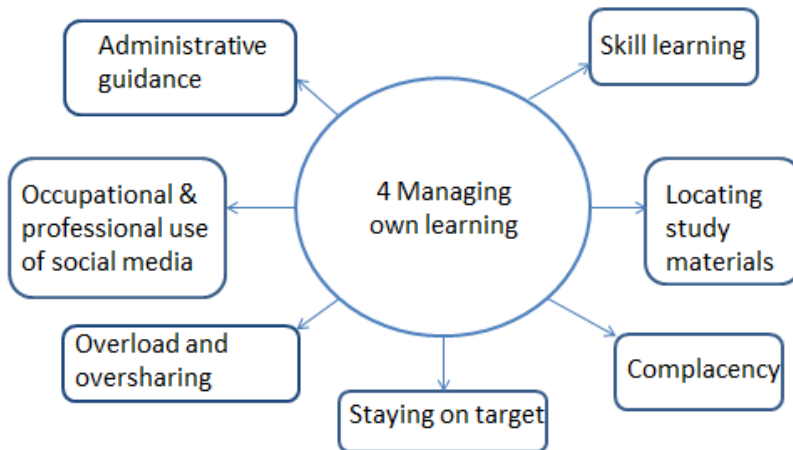


Figure 11. Thematic map of Managing Own Learning Theme

This theme is connected to the previous theme 3 'learning with others', with lateral links between sub-themes in the following way in figure 12:



Figure 12. How this Theme Connects to Theme 3 Learning with Others

Skill Learning

Sfard (2010) notes the use of skill as underpinning, and being necessary to enable the use of both the acquisition and participation types of learning. The skills of being able to acquire and accumulate knowledge, and being able to participate in the active process of knowledge construction are key to growing as accomplished learners. In a study of dialogue in Twitter, Purvis *et al.* (2016) noted social media communication is fast moving, and 'brevity does not necessarily mean superficiality, and challenging students to think about how to communicate concisely and rapidly can allow for development of strong information processing skills.'

Group 1:

'It's not employability, but if I want to sell books at some point, this is all building towards that so it kind of is, but not in a 'I'm not getting a job from this' kind of a way [...] It's more about making me more, making me better at what I'm actually doing' (Alice).

Learners mention personal skills they had used and improved as a result of their online interaction. Participating in social media can improve and influence communication and collaboration skills. Learners find it a challenge to process text then communicate accurately, quickly and concisely. This can facilitate growth and development of group member's information processing and digital communication skills. Some learners linked these skills to their employability.

Group 2:

'I learned that [...] I should try and write something a little bit more clearer' (Quella).

'I would say I have improved my critical thinking skills from getting different perspectives [...] and I suppose really I like the fact that I can construct arguments in a far more effective way and get my own point across at work, so it helps in that respect' (Rosie).

'I think if it's taught me one thing is that [...] the inflection of how you speak doesn't come across in writing, it can cause misunderstanding. So if there's anything that I've really learnt about that is sometimes things have to be re-worded in writing [...] you know when you can see me, I can see you, so there's lots of non-verbal communication going on. When there is only text things can be misinterpreted' (Tom).

'And also the fact that you're exposed to more people than you would be in normal life, and people can get offended by things you wouldn't even blink an eyelid at. There's that cultural aspect as well [...] I try to be concise and I try to get across the meaning' (Tom).

Participants mentioned practical skills they were acquiring to help them work towards particular goals, for example to write and express their points well. They learned skills to evaluate information rapidly. They thought about the ways their contributions to the group would be interpreted by people from other perspectives, and different cultures of people present. Learners noted their writing had improved in clarity, brevity and focus as a result of their messages to the Facebook module study groups. They enhanced their ability to elicit, engage with, and use alternative points of view on topics in their study curriculum. Students improved critical thinking as they learned to differentiate between aspects of different arguments offered in the study group, and they were especially keen to improve how to construct an

effective argument themselves. They understood more about the limits of written and online communication, without non-verbal signals. Hence, by participating in Facebook module study groups, learner reflections suggest they had improved their critical thinking ability to discern relevant knowledge, and enhanced their articulation and rapid evaluation skills to communicate in text more effectively.

Staying on Target

Learners mostly indicate they were reminded about the requirements and timing of their module by the dialogue in the Facebook study group. They could assess their progress by comparison with others, and reflect on whether they were on target, or prioritise what they needed to do to catch up. Vivian *et al.*, (2014) showed academic activity increased around certain points in the academic calendar when assessments or exams were near. There is scope in the present investigation to build on this evidence about how learners use the study groups around assessment time. The distance learning modules being studied had no mandatory attendance requirements, and there is no formal process for learners to gauge their progress in comparison to other learners. For learners who value these progress indicators, group members use the Facebook study groups to provide accountability on defined tasks like reading materials and writing assignments.

Group 1:

Learners would report their progress on assignments in a post to the study group. For example:

With 2344 words it has finally gone!!

Like Comment

22

(Dottie)

'There is definitely a bit of keeping you on target, because people will be ahead, people will be on track, and people will be behind. Wherever they are, it makes you feel a bit better somehow. Or if they're really ahead it makes you feel a bit like you're behind then that helps as well because that makes you think 'oh crikey, [...] so either way that is really good to keep you on target' (Fatima).

'There was a group of us that were still struggling and we had had an [assignment] extension [...]. We really really helped each other through that, and just knowing that there were other people there that were also in that same position helped' (Alice).

'I have actually thought that may be a good thing because it's constantly reminding me about my studies, so that maybe keeps it at the forefront of my mind. So yes I think that's quite good that I do keep looking at it' (Beth).

The university expects learners to submit assessable work on defined dates every four to ten weeks, and extensions are common. Participants also noted they valued the support available after the assignment cut-off dates had passed, as most students work to the advised study calendar and move on to a new study block after each assessment is submitted. The encouragement and psychosocial support (McLaughlin and Lee, 2014) for learning available in this situation is valuable to maintain momentum, social integration (Tinto, 1975) and hence, support module completion.

Locating Study Materials

Distance learners are presented with a lot of information held in the university website to guide their learning. Administrative guidance is presented in a number of places in the large website, and learners appreciate help finding the correct materials. Participants in this study reported using their Facebook module study group for prioritising what to focus their attention on, and where it was located in the module materials. They value peer advice about where to start looking for information, to make efficient use of their time.

Group 1:

'Some people who I think are a bit behind have then said 'what's best to focus on?', and people have said 'oh this chapter, that chapter and that chapter'. So again that's quite useful to get clarification to think 'well have I included those?' It's just good to see what other people have included just to know if I am on the right track' (Beth)

'Coming up to the [assignment] submissions there's a lot of people asking questions about where to find stuff in the course materials. That's quite useful because sometimes I might have forgotten about a term and someone will say 'where do I find this?' and I will remember 'oh yes I should put something like that in', so that's useful' (Beth).

'I knew what I'd got to write, I knew I had to pull it together and I couldn't get my head round it. Someone said 'why don't you look at this book because that's got some stuff about musical experiences which really helped me out'. So they didn't tell me what to write, they just pointed me in the right direction to where I should look, and that was really useful' (Emily)

Group 2:

Where have you found the audio version? I could do with playing it in the car on the way to work.

(Poppy)

Yes. But there is a problem at the moment with the OU website and I can't get the address. Where is it? I am traveling from quite far and don't know the area. Thanks!

Thank you. I hope that you get better soon. you are a wonder woman writing your TMA with a fever! BTW where did you find the definitions for Security politics and insecurities? The one I am using for security is one given in a theory bites video. I am using the NPT as a case study and securitisation an balance of power for theories.

(Quella)

Learners in these study groups report they are using the Facebook study group for navigating the knowledge content of their modules. As a result of lengthy searches in the university website, learners chose to use Facebook as an alternative information route. Learners valued the exchange of information as reassurance that they were spending their time efficiently, by reading the most pertinent and relevant content for learning in the module. This exchange of information is similar to the way learners may help each other in the university website (Kear, 2001), and learners can use the advice to go on to discover answers for themselves. This is not a simple electronic content searching facility, but a concern to focus on the relevant chapters and topics for responding to assessments, in order to achieve their best potential and make best use of their time.

Administrative Guidance

Related to the sub-theme above, learners valued a fast response to small and large administrative queries. They informally exchange practical information particularly about assessment requirements and the submission process. In a study of educational related interactions on Facebook, Selwyn (2009) identified five themes; one of these was an exchange of practical information. This idea was developed and investigated by other researchers including Leaver (2015, p.26) and is included here as administrative guidance.

Group 1:

'I needed some reassurance as I didn't know whether I had read the guidance wrong. So I wrote that [in the Facebook group] and had a lot of response, and I've gone in to help a couple of people. There've been a couple of times when someone has been struggling, and they just needed to pinpoint where they've found something' (Beth).

Group 2:

[I ask about] 'all sorts of things, about deadlines and things like that, which are usually.. Well after a few comments it becomes quite accurate.' (Rosie).

Observation indicates learners also seek individual and fast administrative guidance in many other groups in the wider ecology of OU student Facebook groups. The module groups used in this investigation are mainly focussed on discussions about one particular module. Typical queries include: where to find things on the university website; tutorial bookings; module registration; module choices; payment, grants and benefits available; switching

qualifications; books; delivery of books; computer software; required credits for qualification; assignment submission conventions; expectations of tutors; website problems; council tax; graduation costs and expectations.

These administrative topics are highly individual, and relate to the logistics and experience of being a part-time, distance student. These are often pertinent questions related to involvement with the institution or assessment protocols, and may be too minor or personal to ask in the university website, which focuses on academic matters. The module academic tutors may not be able to respond to some of these questions reliably in the university website, as the questions are not necessarily within their influence. Other students are often more likely to know the answer to specific questions if they have experienced the same practical issue. Students ask and respond knowing the answers received are usually a guide and their circumstances can differ by location, module, qualification and individual circumstances.

Complacency

As learners were sharing and tracking the progress of their peers in the study group, this had a dual effect. If learners were falling behind others, then the study group posts served as a motivational reminder to catch up and stay on target as discussed above. Conversely, if learners considered they were ahead of their study group peers in their progress in a module, they reported this had a dampening effect on their desire to study, and they could become complacent.

Group 1:

'People have said 'Oh I haven't even opened the book yet', and I think 'ooo I'm on chapter 3 so I'm quite ahead, so I can have a few days without doing anything.' Then I found with the [assignment] due in yesterday, I really had to cram at the last minute, so I think that has hindered me a bit' (Beth).

'A lot of people have said [in the Facebook group] 'oh I need an [assignment] extension', and then other people say 'oh yes, I'll ask for an extension as well then'. So I think it can hinder things, as it can make people more relaxed. If other students can get it, then I'll get it as well.' (Beth)

These experienced learners (the majority are students studying at undergraduate level 3 /final year) have been studying at a distance for several years and have well developed independent study routines. They compare their progress and understanding with that reported by others in the Facebook study group, and find that they are sometimes ahead of others in their reading and understanding. For some this can provide a false sense of security, and this can encourage people to spend less time studying and composing their assessed work. Tinto (1975) noted that while social integration with peers is important for learner persistence, involvement with peers who are 'disinclined towards academic attainment' (p. 109) can dampen attainment. This comparison with the slow progress of other learners may encourage a tendency to late submission of assessed work, and if that persists it could lead to students falling behind in the schedule of the module. For others it can be reassuring to observe that other learners are struggling with the difficulty of meeting the standards and requirements of the module. Hence overall, the fast and easy social comparison enabled by Facebook may facilitate complacency as a potential source of disruption for studying.

Overload and Oversharing

General Facebook use can contribute to cognitive overload and feelings of distress (Chen and Lee, 2013). Students may then experience difficulty in efficiently locating the correct resources for their studies, while experiencing information overload (Taylor, 2012). Participants in a study at this institution have also described the university website as having ‘too many messages’ (Kear, 2011). While participants report the dialogue and message exchange is fast and responsive in Facebook groups, this benefit is counterbalanced by a lot of information accruing very quickly in the study groups.

Group 1:

‘They say what they’re doing [in an assignment] and I think ‘that’s not what I’m doing. Have I got it wrong?’ So I sort of go ‘no, I’m just going to go with what I think’ and not read them posts.’ (Dottie).

‘You panic and think ‘am I meant to put that in [an assignment], or am I not?’ There’s too much information’ (Beth)

While participants report the speed of dialogue and message exchange is fast and helpful in Facebook groups, this benefit is counterbalanced by a high volume of information accruing. Learners reported there were often too many ways suggested to approach a study topic or content to include in an assignment, and people could feel overloaded with the information shared. Further, learners occasionally share their assignment results in the study groups for others to see, and some participants considered this was inappropriate or immodest oversharing.

Group 2:

'Some people really do go to town, 'oh look at me, oh fantastic I got x%' 'really, great well done'. It's the attention seeking part that I don't like.' (Poppy)

'If you were happy to share your grades there, some people found that helpful, some people didn't. We had a special section so that if you didn't want to see it you didn't have to' (Quella).

In Group 1 participants found that others were happy to share their ideas about what to focus on and include in assignments. If there was a lot of choice about how to approach the topics for assessment, participants commented that there could be too many options mentioned in the study groups. Comparing their ideas with others was not always helpful or reassuring, if they had selected a different approach or topic. The range of options to consider in the group when preparing an assignment could become overwhelming, and people sometimes felt overloaded with information.

Group 1 allocated an optional extra space for group members to share their assignment results with others who decided to look in there. Group 2 did not designate a separate extra online space for results, and learners would share their results in the normal part of the group. Some participants mentioned this sharing of results in the normal area of the group could be off-putting, and some conspicuous attention seeking was mentioned. This type of behaviour was noted as an occasional reason for disharmony, and was a contributory cause of an incident of harassment examined later in Theme 5. Some learners wanted to share their results, while others indicate the sharing is

unnecessary. Further, the immodest way the information was shared could upset some learners. Having a separate, optional closed space for sharing assessment result information seemed to stop the conspicuous oversharing in the study group, and be more discreet.

Occupational and Professional Use of Social Media

Using a holistic perspective Selwyn (2010) identified some concepts driving the use of social media by university learners. He suggests learners that go to university have changed to be more highly connected and familiar with working in a collective fashion than their predecessors. Gleason, Greenhow and Li (2014) later found a blurring of boundaries between social and academic issues in social media. Distance learning OU students often work full or part-time, during their part-time studies (The Open University, 2018a). This employment has an impact on the expectations and behaviour of learners in the Facebook study groups.

In Group 2:

'I use Twitter; I used to use it a lot when I was a politician and I'm still on it now and make the odd comment. But I do a lot of writing, a lot of journalism and that kind of thing [...] So I've become deliberately less opinionated now and start looking at the big picture.' (Tom).

This learner noted ways in which students use social media as part of their professional work, and this underpinned his expectation that he would use social media in his studies too. It is feasible he may have brought vocational skills to his role as a learner, and these would also be used in his interactions

with other students. The mature part-time distance learners in this investigation may differ to the majority of full-time university learners, who have been the subject of much of the existing research. It may be influential that 76% of registered OU students work full or part-time during their studies (The Open University, 2018a). As a result learners bring related expectations and professional skills to their studies, and these may be as varied as the professional and life experiences they bring.

Discussion of Theme 4: Managing Own Learning

The conceptual lenses of connectivism and connected learning are relevant to offer more understanding, on ways in which learners use and may improve their personal skills and learning. In the learning theory of connectivism, Siemens (2005 p.5) suggests the 'capacity to know more is more critical than what is currently known'. He further asserts 'Learning may reside in non-human appliances', for example learning may be online. Great volumes of information available to online distance learners have to be navigated efficiently, and this investigation suggests students use their Facebook study group to support this. Participants reported they use the Facebook group for navigating the knowledge content of their modules: they find out fast ways to locate the most relevant information in their module. They also rely on the combined knowledge of other students for guidance about administrative and logistical issues to support their studies and being a student. This pattern matches with previous studies (e.g. Selwyn, 2009; Dalsgaard, 2016) listing the academic subject matter and practical issues as typical topics for

dialogue in student Facebook groups. Importantly, students are acquiring and using the connectivist skills of being able to 'plug into sources to meet the requirements' (Siemens, 2005, p. 8) of their task in the open, real-time, two-way digital information flow. Access to what is needed becomes more important than the information a learner currently possesses. 'Self-organization on a personal level is a micro-process of the larger self-organizing knowledge constructs created within [...] institutional environments. The capacity to form connections between sources of information, and thereby create useful information patterns, is required to learn in our knowledge economy' (p. 4). This highlights the importance of networking and skill learning in connectivism.

Although learners are navigating their online study landscape with enhanced access to large amounts of information, they are still learning self-discipline within this. While the expedient exchange of support and relevant information was welcomed, this provides a challenge for learners. Participants reported there were risks of complacency when they compared their study progress to that of other learners in their Facebook study group. Their access to a wide range of people online encouraged them to informally compare progress, and they reported this could lead to them falling behind. Some research participants occasionally felt at risk of experiencing information overload, to rapidly evaluate and prioritise all of the advice exchanged. These are examples of learners being new at practicing the important skills of connectivism (Siemens, 2005), to deal with the high volume of new

information they can access to support their studies. They are learning these new skills quickly.

One learner described how he had previously used social media in a marketing job and also as a politician. This was an unexpected finding and illustrates the range of interconnections which manifest in a study group of mature distance learners; they bring a diverse range of skills and experience to their study groups. The principle of 'everything is interconnected' (Ito *et al.*, 2013, p. 12) can offer a more diverse network of connections than might be immediately obvious to other members in a Facebook study group. There can be unexpected effects as a result of this extended network of experienced people, and this is discussed in more depth in the next theme of difficulties and disagreements.

To summarise, the research participants in this study mentioned particular skills they were using and had enhanced, linked to their involvement in their study group. Some skills were valued and gained, for example, critical thinking and writing skills; and some traits represented a challenge to improve their self-discipline, for example to overcome complacency. These are all traits which enable and encourage students to improve and manage their own learning. These sub-themes were considered in depth particularly using the learning theory of connectivism (Siemens, 2005). Participants of the student-led Facebook module study groups may acquire some important experience of connectivism; to deal with the high volume of new information they can access in online sources and people, to support their studies.

Theme 5 - Difficulties and Conflict

This final theme is about the effect on learners when there is a disagreement in a study group. Some participants shared experiences of hostility and harassment, resulting from participating in a student-led Facebook study group. The following two sub-themes were found: disagreement, and hostility and harassment. The thematic map in figure 13 here shows the sub-themes:

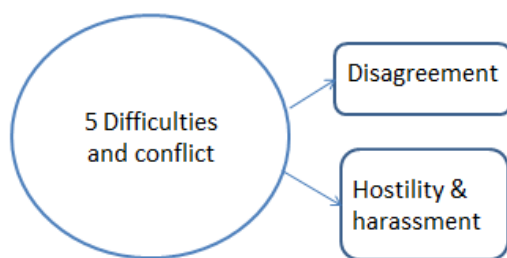


Figure 13. Thematic Map of Disagreement and Conflict

Disagreement

Acts of 'offence-taking and offence-giving' are an emerging general concern in Facebook and are an important current gap in research literature (Tagg and Seargeant, 2017, p. 5). This study investigated how disagreements emerged, how they were managed, and outcomes for learners in the student-led Facebook study groups.

Group 1:

'If you get a group of people bigger than about five, there's going to be disagreement. Then when you multiply that by the sheer amount of people [in the Facebook group], nobody's ever going to all agree on the same things all the time, so there is going to be disagreement.' (Alice)

'Someone messaged me and pointed me to a set of threads. I don't think I can find them any more as they're deleted. But those particular posters were asking really specific things regarding the assignment.' This later led to a disagreement about the detail in which an assignment was discussed. (Cerys).

'I think maybe I was just too fraught and reacted badly to that comment [...] and oh it's just awful' (Fatima).

Group 2:

'There was a lady, [Una] trying to put a point across and ask for a general opinion, and he [Tom] was giving his opinion [...] and telling everyone else that their opinion was wrong. And she was like 'look I'm not asking for your opinion, sod off'. [...] he then came back that she was being mardy [moody] and things like that, which I thought wasn't really fair. And it was just something that shouldn't have gone on Facebook, it was just ridiculous' (Poppy)

'What effect does that have on the group then?' (Researcher) 'I think it makes it quite toxic. Then I don't really want to go there' (Poppy).

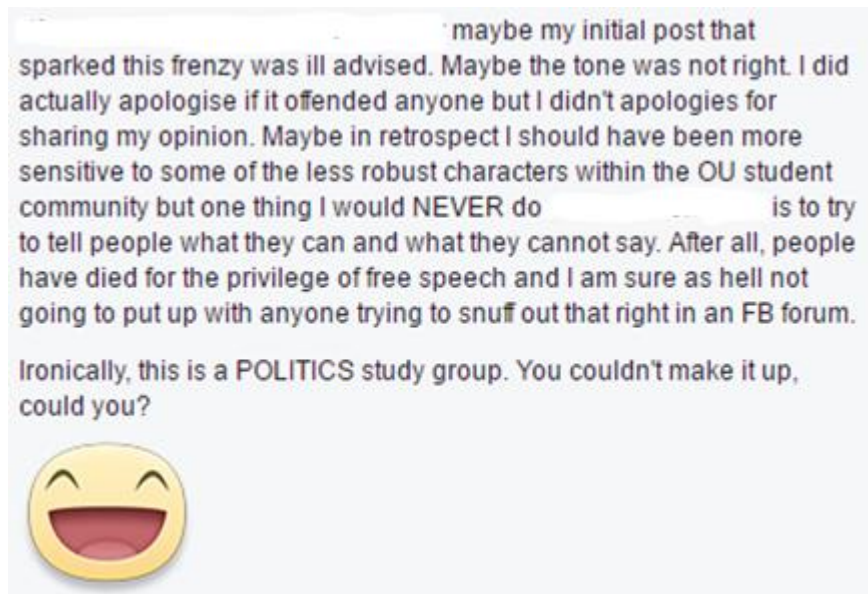
'I try not to accidentally offend people, because it's those short messages on social media [that cause problems]. I try to be concise and I try to get across the meaning, but sometimes you write in a hurry' (Tom).

'Occasionally I do make the odd provocative comment just to spike a bit of debate.'
(Tom)

Social media may not be suited for academic argumentation and discussion, if people decide to tolerate opposing views presented online without necessarily engaging with them (Kirschner, 2015).

Reflecting on his approach in the disagreement in the study group,

Tom posted:



A number of participants suggested that online communication inhibited understanding, as messages were sometimes posted hurriedly, with minimal proofreading, and while doing other things, which could unfortunately cause offence. This represents a limitation of the expediency and pace this context offers. People adopt different communicative practices to convey similar messages, and this can lead to people being misunderstood. Learners have multiple perspectives and hence, different expectations of the study group environment. They can differ in their willingness and ways to negotiate a difference of opinion. Learners vary, and some will accept diverse opinions while others will not.

Interview participants described recent disagreements and the effect they had on their studies and the interactions in their module study group.

Participants noted the most heated disagreements were often deleted by an

Admin, so a reminder of the discord is not left in the group to reignite or prolong the disagreement. Posts and threads could be deleted by the original poster if they did not want a post left in the group. In Group 1 a disagreement had taken place where some students thought others were responding to questions about the assessment with too much specific guidance. An Admin got involved, the situation deteriorated and Fatima was removed from the group. Fatima did not see the call for participation in this research study posted in the study group, so she was invited to the research interview separately. In the interview Fatima claimed she had been misunderstood in the disagreement in the group, but she realised her fatigue and emotions had affected her responses late in the evening. These are all new findings relevant to this novel context of student-led Facebook module study groups.

In Group 2 a dispute between Tom and Una was mentioned by interviewees. Una was an Admin and had been excluded from the study group (by another Admin) after a disagreement about the module assessment process. Una was therefore also invited to participate in this research study separately, as she would not have seen the call for participation in Facebook. An outline of the disagreement was still in place in the study group, although many comments in the thread had been deleted. It had been a lengthy exchange of views, and tens of group members were involved late on one evening. Interview participants indicated that several conversations about the disagreement were also taking place in the private message facility 'Messenger', and some of these were more offensive from Tom.

Tom was previously an elected politician trained in social media use for marketing and building political support. At interview Tom said he was discreetly also using a second Facebook account in a different name (Tom2), so he appeared to be two separate people who supported each other in the study group dialogue. He explained he had started using the second account in a different name to keep his political identity private, and separate from his studies. However, he was using both accounts in the study group and this activity of him using two separate accounts amplified his voice and impact, creating an artificial sense of relevance. Other learners in the group did not seem to know this was one person using two accounts. After this disagreement in the group and the private messages exchanged, Una explained at interview that another Admin had removed her from the group without explanation. She did not understand why she had been removed from the group. Hence the multiple interpretations of the event were not fully explored and considered by the Admin before excluding her from the group.

Hostility and Harassment

Disapproval on social media can lead to online reputation damage, harassment, stalking, bullying and social shaming (Kwan and Skoric, 2013; Marwick, Blackwell and Lo, 2016). The fear of rudeness and harassment can have a chilling effect on participation and engagement with others online.

In Group 1, Alice had previous experience of harassment while she was an Admin in another group:

'He'd literally wrote this rant thing about how inappropriate I am, and that I have no rights to be in charge of a group like this, and then he literally trawled through my public Facebook profile, my twitter profile, my linked-in, my everything public up there about me and he'd gone through it. He completely stalked me [...] It was really really awkward and very very uncomfortable. I did feel a little bit intimidated by some of the hatred (Alice).

'It happens, we have to deal with it. You can't really guard against it because you can't mitigate for that [...]. There's going to be weirdos no matter where you go or what you do, and you just have to kind of protect yourself against that' (Alice)

Studying 'griefing' acts of disruption and deception in video gaming behaviour, Rubin and Camm (2013) found victims of harassment were not aware they were a target of any deception. They considered the activity as harassment, inciting an emotional reaction, or as an imposition of power for the harasser to exert their dominance.

Group 2:

Referring to the disagreement in the section above 'There was conflict on Facebook and private messages from two individuals' (Una) 'From two individuals from the Facebook module group?' (Researcher) 'Yes because we were just getting verbal abuse from them, some of them were getting personal messages. I blocked them to stop them from doing it [to me].' (Una)

'I was [previously] an Admin on there and then one guy starting being derogatory and so I asked him not to be, and then I was accused of bullying [...]. The two [problem] guys were [Tom and Tom2]' (Una) 'And both of these people were messaging you personally?' (Researcher) 'They were absolutely awful. There was another girl on there, well [Tom] messaged her directly too. [...] [Tom] kept coming on and being derogatory towards us, especially me' (Una)

'I will not let guys like that try to belittle me, try to bully me, try to just bully me into submission to be scared of him. I mean there were times when I said 'just leave me alone' and he didn't, and that shows, I think he probably saw that as a bit of weakness but I genuinely just wanted him to leave me alone.' (Una)

'When they [Tom and Tom2] started to bombard me [with messages] I thought 'I know..' so I actually had a look on their Facebook and they live very close, in the same region' (Una) 'That's strange as well, that's strange isn't it?' (Researcher) 'Very strange' (Una).

Reflecting on being excluded from the study group, Una said 'It's awful, I can't believe just how much it did affect me actually. You know as I say I had a word with my tutor and said this is just horrendous. This has never happened to me before and I do rely on that connection with other students [...] I do remember thinking is this going to affect me, as in am I going to fail because of it?'

To deal with the loss of access to information in the Facebook study group, Una said 'Weekly I would have a conversation with her [the tutor], and I do think it's because I was out of the main Facebook [study group], where I couldn't see what was being said [...] I mean she was on speed dial, you know.'

These were difficult and emotionally charged experiences for interview participants in both groups. Alice in Group 1 described prior experience of harassment by an OU student while leading another study group. She indicated the harasser was regularly disagreeing with things she said in the group to provoke a reaction, and also to damage her reputation by searching for, and publicising things she had put online elsewhere. She indicated the other group members did not see her behaviour as inappropriate, and the harasser was ignored.

In Group 2, Tom explained he was present in the group using two different

accounts: Tom and Tom2. Students in the group did not know the two accounts in the study group were actually the same person. Another participant said both accounts were sending unpleasant private messages to women in the group. His use of a pseudonym was leading to disinhibition and less accountability; a finding that resonates with prior research exploring how people interacting online may do so with more disinhibition than face to face (e.g. Suler, 2004). Una said she asked Tom and Tom2 to leave her alone, and blocked the two accounts. Una was later removed from the study group without explanation by another Admin, and at interview she offered a vivid description of the negative effect this had on her studies. There was no evidence in the online group dialogue or the interview that Una created a new account to re-join the group in another name. Her membership and dependency on the group proved to be a source of anxiety and difficulty for her. The 'deceptive façade of distance' in the online interactions (Conrad, 2002, p. 15) did not lessen the discomfort and disruption experienced by Una, who felt a loss of the benefits the group could offer to support her studies. The interactions pattern match (Yin, 2009) with other studies who found cyberbullying and harassment (Kwan and Skoric, 2013); although this study found the interactions between distance students in this new context of student-led Facebook module study groups.

Discussion of Theme 5: Difficulties and Conflict

The findings of this theme provide some prompts for critical thought about the limitations of the conceptual framework, to aid understanding of difficulties

and disagreements experienced in the study groups. The evidence may contradict the benefits of social media use, so is worthy of examination. Hence, all three ideas in the conceptual framework will be considered to understand the issues of disagreement.

In connectivism, learning is not wholly under the control of the individual learner, and there may be 'non-linearity and unanticipated network effects in the learning process' (Li and Greenhow, 2015, p. 3). This theme 5 identified there were risks present in the connectivist principle that 'learning and knowledge rests in diversity of opinions' (Siemens, 2005, p. 5), if those diverse opinions are not well managed. Some refinement of online communication skills are needed to ensure a further principle 'nurturing and maintaining connections is needed to facilitate continual learning' (p. 5). If a disagreement takes place, this can have a chilling effect on dialogue for everyone in a study group, which can inhibit learning for a while. Both connectivism and connected learning are predicated on core values of equity, participation and social connection (Joint Information Systems Committee (JISC), 2016); however, these theories do not fully consider what happens in the event that a student may subvert learning for others.

By being openly networked, inclusive, peer supported and non-hierarchical in nature (Ito *et al.*, 2013, p. 12), the student-led Facebook module study groups are putting more trust in individuals to co-operate to achieve their goals in the group. Meanwhile, learners come with a range of different personality traits and needs, and hence these will be present in an openly

networked and inclusive group. Similar to Garcia and Sikström (2014) who found a 'dark triad' of socially malevolent behaviour in Facebook (psychopathy, narcissism and Machiavellianism), participants in this investigation reported and displayed behaviour such as self-promotion, duplicity and occasional aggressiveness. Rubin and Camm (2013) found victims of bad behaviour in an online game were unaware of deception taking place: the participants in my investigation were not aware a Facebook study group member was misrepresenting their identity.

In issues of disagreement in both case study groups, participants saw the disagreement as an imposition of power to exert superiority, on both sides. They primarily associated it with harassment, to incite an emotional reaction. A participant considered a further explanation that his own bad behaviour was for entertainment; being unwilling to comply with the norms of the community 'just to spike a bit of debate' (Tom). Meanwhile other participants in the group were unaware this person was presenting in two different accounts in the study group, who supported each other in such debates. If Facebook encourages expression of narcissistic behaviour (Manca and Ranieri, 2016b), it may be inevitable this is found in an unmoderated, non-hierarchical group of a large number of people.

Interpreting difficulties and disagreement through the lens of care ethics is more challenging. There can be a period of mental engrossment (Noddings 1984) while a difficult exchange takes place, although this did not always have positive outcomes for participants. It may be because the principles of

care ethics were not always adhered to by all individuals in the study groups that negative undertones emerged, and some relationships deteriorated. Caring involves attending to the needs of others out of sensitivity and concern for them, while meeting own needs. Meanwhile learners have other needs which may be in conflict with others for power, pride, control or respect. Privileging of one persons' (malevolent) needs over others can result in unpredictable and potentially harmful effects for other learners in student-led Facebook groups.

The early exposition of disagreement and harassment in a social, educational virtual community by Dibbell (1993) showed some of the ethical challenges implicit for participants, that still remain unresolved. The controlling behaviour of one character violated the community spirit, and this affected the real-life experience of other participants in that virtual space. It showed the unresolved risks when allowing anonymity with democratic governance of an open community, if not all participants have good intentions: anonymity can be used to conceal identity and indulge in progressively pernicious behaviour. In this research investigation the disagreement in online study groups left the participants who were taken out of the groups rather baffled and overwhelmed by the incidents. The 'lucid illusion of presence' (Dibbell 1993) in the study groups and the value some learners place on what they gain there can make the experiences of disagreement especially poignant for participants when they 'felt sad that my lonely OU journey has been made even lonelier' (Fatima), and 'they made my last module a misery' (Una).

It is trite to say members should just log off or leave the group to avoid upset, as this fails to acknowledge the benefits that group participants think they can accrue from the group. Like the incident documented by Dibbell (1993) the incident may have been virtual, but the injustice and harm caused to the participants felt very real. Leaving an online community or group does not solve the challenges of its existence, as reputation damage can continue whether the person is present or not. The valued opportunity for learning with others online is reduced. Withdrawal from an online group to avoid dispute assumes a digital dualist view, however the online and offline lives are intertwined and not separate in the minds of participants of the study groups. That virtual disagreements have the potential to affect learners adversely highlights the importance of learning how to resolve disagreements fairly and efficiently.

If care is the 'lens through which all practices and possible practices are examined' (Noddings, 1984, p. 173), then the incidents of disagreement and harassment show that not all learners in an open platform will be concerned with maintenance of the community; will not all be concerned with what others think and want; and some will not be concerned about the welfare or development of others. Socially malevolent behaviour may be present (Garcia and Sikström, 2014); participants may be intending to cause grief for others (Rubin and Camm, 2013), and the real identity of others may be hidden and their own good intentions may not always be reciprocated.

In summary, incidents of disagreement can escalate to harassment and may have an adverse effect on learners and their learning. There are risks with an open community platform that the benefits of connectivism and connected learning may not be achieved unless all members of the community have the same goals. Findings in the Facebook module study groups suggest group participants may not all have supportive intentions and authentic identities, and this can encourage socially malevolent behaviour. The concepts of connectivism, connected learning and ethic of care do not account for and consider socially malevolent behaviour in the educational environment. It was possible for the positive benefits of these concepts to co-exist but be affected by the disadvantages of poor conduct.

Summary of Findings and Discussion

This chapter began by describing relevant background information to the student-led study groups of the investigation. The chapter went on to show and analyse results of the investigation. The resulting themes found are about the experiences of learners in the student-led Facebook module study groups. The five themes are:

1. Community and Relationships
2. Academic Subject Learning
3. Learning with Others Online
4. Managing Own Learning
5. Difficulties and Conflict

A thematic map of the five themes and how some of the subthemes relate to each other in key ways is shown in figure 14 below:

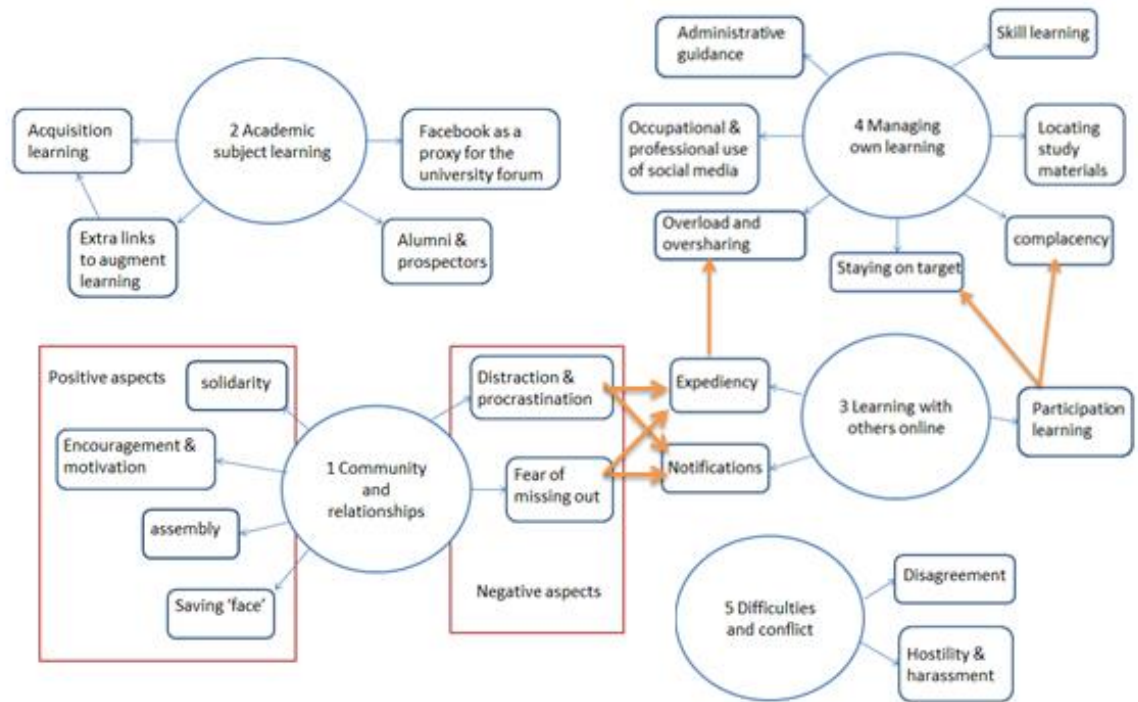


Figure 14. Thematic Map of how the Themes and Sub-Themes Connect

The primary themes build on previous theories of the education-related dialogue which takes place in Facebook: for example by Selwyn (2009), or more recently Dalsgaard (2016), who have reported on similar spaces and other types of learners in Facebook. This study was intended to address the research questions for mature, distance university UK learners using closed student-led Facebook module study groups, and this represents new knowledge about learning in this context. These findings can now be used to address the research questions in the next chapter. In addition the

conceptual framework of connectivism, connected learning and care ethic has been applied to these five themes of findings. This represents a novel application of these concepts in this context. The next chapter offers some final conclusions to this work, including: a response to the research questions of the study; consideration of the contribution of this work; implications and recommendations; a discussion of limitations of this study, and suggestions for further research.

5. Conclusion

This qualitative study has examined the rationale for and nature of learning, support and disruption, for undergraduate distance learners who participate in closed, student-led Facebook module study groups. The findings were organised into themes, then discussed and conceptualised with the central theoretical ideas of connectivism (Siemens, 2005), connected learning (Ito *et al.*, 2013) and the ethic of care (Noddings, 1984). These student-led study groups have been under investigated in prevailing research discourse about the use of social media in education, and this investigation provides new knowledge about education-related activity in this online space. This was from the perspective of participants in various roles in these study groups, to prioritise the student perspective and foreground student voice.

This investigation shows there is learning taking place in the student-led Facebook module study groups. There are benefits for learners in the support they find there, and there are risks to manage which have the potential to disrupt learning. Findings show learner experiences in this context form five themes of activity: community and relationships; academic subject learning; learning with others online; managing own learning; and difficulties and conflict. This analysis represents a typology of student activity that extends existing published empirical work, and is using the novel research context of student-led Facebook module study groups for distance learners. Types of learning that take place in the groups include the fast acquisition of knowledge, practice of participation, and enhancement of digital skills. Study groups provide important community and relational

supports to learners, and valued information. While Facebook also has the potential to disrupt student learning, diverse views tended to be embraced constructively as an opportunity for skill development and critical thinking. The risks posed by anonymous and pseudonym social media accounts are a special challenge in distance learning.

This final chapter will now return to address the four research questions investigated, and explain the nature of the original contribution to knowledge made in this thesis. Next some implications and recommendations of this investigation are considered, the limitations of this work are discussed, and finally suggestions are made for further research which can be pursued.

Response to the Research Questions

This section will consider how the findings of this investigation respond to the four research questions posed in the introduction. How the conceptual framework and thematic analysis contribute to these research questions, represented in the diagram in figure 15 below:

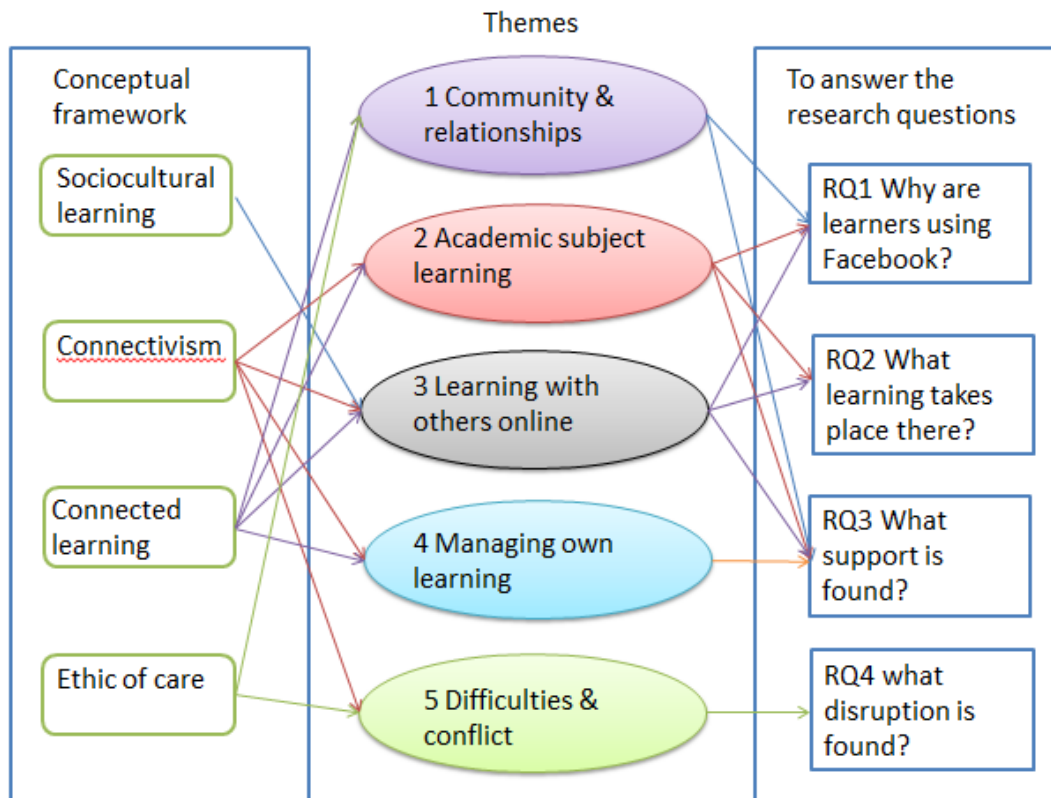


Figure 15. How the Conceptual Framework and Thematic Analysis Contribute to the Research Questions in this study

Why are Students using Closed, Student-led Facebook OU Module Study Groups? (RQ1)

This study suggests the reasons why learners choose to use the closed student-led module study groups are multi-layered, and linked to learners' experience and expectations of study supports.

Similar to the findings of Thomsen, Sørensen and Ryberg (2016), this investigation found the affordances of Facebook enabled expedient, fast notifications and responses, which encouraged student use of the study group. Students use Facebook in preference to any other social media,

mostly because other students in their module were present there, taking a social default option (Morin, 2014). In Facebook study groups learners expect to receive an immediate, fast response. In the university website, learners wait longer for a response: in addition to expediency, a more personable connection and ethic of care (Noddings, 1984) is displayed in the Facebook group. Learners appreciate the pace of conversations and speed of response in the Facebook groups, as they often have other responsibilities to manage, and they may not have a lot of spare time to wait for a response. An important underpinning rationale for the primacy of speed in response; that it shows someone else is present, is listening and they care enough to respond. Learners feel validated because they are heard. Learners were willing to offer and receive support frequently, and 'commit small acts of kindness to maintain a mutually beneficial atmosphere' like the study of an online game by Nardi and Harris (2010, p. 397).

Students report that tutor group forums in the university website are too small to support a critical mass of active posters, with around 20 learners plus a tutor to facilitate learning. Discussions are infrequent and learners experience delay in waiting for a response to their questions and comments. Older modules also have a large discussion forum for the whole cohort of around 500 people including learners and staff. Staff visit frequently to respond to queries, and learners find this was very useful and valued. If a module does not have this large group, learners justify their frequent use of the Facebook study group as meeting their needs for ongoing discussion about their module topics and assessments. Hence the number of participants in a group

discussion space is important to learners: and twenty potential classmates is too small. A Facebook group of around 200 is not too large.

Learners appreciate being able to ask and gain understanding from others who have previously completed their study module. In return, students also like the opportunity to pass on their knowledge to the next cohorts of learners after themselves. The presence of these alumni and prospective students in Facebook distance learning study groups was documented by Perryman and Coughlan (2014); now the present research study adds new understanding about the reasons why this is valued by learners. For example, students who have left the university justified their inclusion in the study group by explaining its educational role to help others achieve their goals. Others had benefitted from previous students' knowledge in the past, and wanted to extend this to other learners who were studying the modules after them. These actions display an ethic of care towards others, to create and participate in a community who have similar interests and aims. Learners create and extend their own self-directed circle of caring (Noddings, 1984). These actions also reflect an implicit understanding of connected learning (Ito *et al.*, 2013) featuring intellectual openness, conscientiousness and leadership to support others. In this way learners enhance their ability to 'find and retrieve information, from relevant non-linear and non-hierarchical online spaces, with fluid transient structures' (Selwyn, 2017, p. 89). For distance learners, these study groups become the main channel to be able to find and ask alumni, displaying features commensurate with connectivist learning.

Learners contrast their experience of the quiet and distant university forums, with the empathy and intimacy they share in their student-led Facebook study groups. They found the university website did not contain sufficient dialogue to satisfy their learning needs, and there was more support offered in the student-led, Facebook module study groups. This is not a novel comparison, and much existing research about student use of Facebook is predicated on this comparison (e.g. Buzzetto-More, 2012; Wang *et al.*, 2012). What is interesting is that learners regularly offer this comparison as their justification for using Facebook module groups. Facebook groups were acting as a proxy or substitute for the socio-cultural learning they expected in the university forums.

Participants' academic needs are met in the university website if they have access to large discussion forums of the university website. However, the new modules designed during a period of change in teaching and student support at the university (Swain, 2015; Rose, 2018; Taylor, 2018) do not offer such large space, leading students to be less satisfied that their academic needs were met. Students want a large group space in the university website to discuss their learning, and if this is not available, this makes their student-led Facebook group closer and stronger. Participants were disappointed with the small tutor group discussion spaces in the university website.

What Learning takes place in these Student-led Study Groups? (RQ2)

Using the Sfard (1998) typology outlined in Chapter 2, both types of learning were found: acquisition and participation learning. Sfard suggests these forms do not take place in isolation of each other, and this was the case in the Facebook study groups.

Learners acquire new perspectives on the study topics, from reading the interpretations of other learners. Some crucial study concepts were encoded in language that was difficult for learners to understand in the study texts, or concepts were hard to identify if they were not clearly signposted within large volumes of text offered by the university. Students then learn by interacting and listening to the perspectives of others when they do not understand a point or perspective. They employ the connectivist principle of gathering distributed knowledge in an external network with a 'diversity of opinions' (Siemens, 2005, p. 5). Maintaining these external network connections via technology to have this interaction is a necessary requirement for connected learning.

Learners use the Facebook group dialogue to sift and prioritise the information available in the study materials, and repackage complex concepts into words and ideas they understood. These are all supported by the informal community which learners contribute to and take ideas from, in an interdependent mutually beneficial way. Through this sifting and

rewording, learners embed or internalise their new knowledge (Vygotsky 1978). Vygotsky suggested learning starts by interpreting signals (words and reactions in the group), based on intelligence, what is paid attention to, and memory. Learning happens in study groups when participants pay attention to ideas which filled the gaps in their knowledge. This is then incubated and retained in the individual to be meaningfully understood. Some respondents in the study recognised this was happening for them.

The central tenet of Vygotsky's (1978) theoretical framework is that social interaction plays the key role in the development of cognition. When learners go to the Facebook study group to find out things from other students, or to explain their understanding to others, this is essentially sociocultural constructivist learning. This two-directional learning was taking place in the student-led Facebook study groups. At times the different forms of evidence gave conflicting account of learning. The group dialogue (sociocultural) suggests that acquisition learning was taking place, while some of the individual (constructivist) participants reported they did not acquire knowledge in the group. There may be a range of explanations for this as learners have different conceptions of learning. Using multiple forms of evidence was intended for methodological triangulation. While every effort was taken to improve participants' recollection of events in the study groups, the evidence sometimes conflicts. Group dialogue suggests that learning takes place, while some of the participants reported they did not acquire knowledge in the group. There were also differences in the data between participants. Some learners do not discover information to support their

learning, and consider their participation in the dialogue about their studies is sufficient to meet their needs of their university experience.

Student rationale for continuing to participate in the study group is to benefit from access to, and collaboration with, more knowledgeable classmates (Vygotsky, 1978). Learners are keen to find more knowledgeable peers to 'scaffold' their learning in relevant and cognate topics in their enlarged ZPD. This sociocultural lens to examine the findings shows that learners engaged in the student-led Facebook study groups are acquiring new knowledge in new formats. For example instead of reading newspapers to stay up to date with current affairs, learners share online links to a broader range of reports and world news sources, where events may be reported with a wider range of differing perspectives. Importantly they share many links to cognate topics and issues which are related to, but not limited to their module curriculum. Learners who enjoyed the optional excursion of reading through these links were extending their filtered knowledge, to include the study interests of other students who had shared these links in their module study group. This concurs with Vygotsky's (1978) idea of transforming mental functioning. The inclusion of this new tool of a student-led online study group introduced new functions connected with the use of the platform, and altered the course of the mental processes, replacing some functions with others. Hence the learning and sociocultural environment could fundamentally shape and transform the learning that is acquired.

Most, though not all, learners appreciate links to wider reading shared in the study groups. The links contain information which was previously unknown to participants. The use of multiple data sources (data triangulation) suggest

there are individual differences between participants in their use of Facebook study groups for acquisition learning. Multiple participants noted that their writing improves in clarity, brevity and focus as a result of their group participation, and they improve their critical thinking and evaluation skills by sharing different perspectives. They realise they are constructing arguments in a far more effective way, and they learn to get their point across clearly in a small number of words.

Connectivism is predicated on learners being able to acquire and nurture the connections required to find and link specialist information for a particular purpose (Selwyn 2017). This is the very requirement mature learners expect in their studies, and they bring this new expectation with them from working life. This corresponds with Vygotsky's (1978, p. 140) assertion that the use of technology 're-creates and reorganises the whole structure of behaviour.'

This new behaviour is supporting learners to achieve their study goals, in the new ways of connecting with others informally in the student-led study groups. The features of connectivism identified by Thota (2015 in Selwyn 2017) suggest acquiring more knowledge depends on interaction with views, in a personal or networked community; this is how many participants see their study group. Connectivism proposes that the primary skill in learning is the ability to retrieve and find information from relevant non-linear and non-hierarchical online spaces just like these student-led study groups. The ability to passively retain information is less valuable than being able to augment and access knowledge flow, stored and transmitted between people in this online network.

The concept of Connected learning applies more closely to the forms of participation learning, which shifts the permanence of having or possessing knowledge, to an activity or constant state of doing. Connected learning is socio-cultural learning in the technology mediated environment (Selwyn, 2017). Connected learning differentiates from prior theorising around socio-cultural learning, by working from a position of requiring networked technologies to be employed for participation learning to take place. This is crucial for these learners studying in the distance learning setting: in the absence of another congregation space, they see the dialogue in their student-led Facebook study group space as being important to their overall student experience.

Hence, there is evidence of the acquisition and participation types of learning posed by Sfard (1998) in the student-led Facebook module study groups. On balance however, the data shows the results are inconsistent between learners, so learning may not be happening for everyone, or may not be the primary purpose for participation in the student-led Facebook module study groups.

How does this Participation Support Student Learning?

(RQ3)

The evidence of this study indicates students appreciate a range of support offered in Facebook study groups. The most compelling reason offered to justify participation in the groups was to find a community of encouragement

and mutual support with others in the same situation as themselves.

Learners want to see that other people faced the same challenges in the pursuit of their qualification; they felt reassured by seeing their difficulties normalised in the group (Henderson *et al*, 2017). This shared experience and sense of participating in a community of others facing similar challenges was highly valued by participants. This shows legitimate peripheral participation (Lave and Wenger, 1991), as novices learn by small steps of participation in a community where there are more experienced members. Learners move from legitimate peripheral participation to deepening, full participation through their engagement with others. Hence learning is not seen as an acquisition of knowledge but an incremental process of social participation. This locates learning in a network of co-participation in cultural practices. Participants in the present investigation valued this experience of social integration with their peers, and this corresponds with the social integration aspect of Tinto's work, which he showed can be valuable to support their persistence (Tinto, 1975, 1987) and module completion.

The themes about community and relationships, and learning with others online, are significant for distance learning students. Their access to, and presence in the student-led Facebook study groups made them feel included in a larger network and close peer community (Ahern *et al.*, 2017). Distance students living in remote areas would otherwise have no contact with fellow students or a community. This care ethic (Noddings, 1984) between supportive members of the group community was highly valued, and contributed to the student experience of social integration with their studies, so important for persistence and module completion (Tinto, 1975, 1987). The

Facebook study groups fulfil a need for community support, for many students.

If education is a community enterprise with various parties taking responsibility for others (Noddings, 1984), learners questioned the educational priority foregrounding intellectual knowledge, and they value elevating the importance of social, emotional provision. In the distance university setting, there are few opportunities for people to connect on an informal or personal basis, so the content and tone of communication exchanged online is crucial. The Facebook tools and experience of group members correspond with Noddings' suggestion that educational settings should be 'deliberately designed to support caring, and caring individuals' (1984, p. 182).

The Facebook groups are valued for encouraging participants to stay on target and not fall behind with their studies, and both social and academic integration are valuable for persistence and completion (Tinto, 1975, 1987). Learners see the Facebook groups as a community hub, where people encourage and motivate each other. They benefit from the easy proximity with other students to grow their ZPD (Vygotsky, 1978) and the legitimate peripheral participation they avail themselves to from the easy access to learn from their peers in their network or community over time (Lave and Wenger, 1991). This peer supported, interest led and academically orientated focus of each group is fully commensurate with a connected learning context (Ito *et al.*, 2013). Group members contribute ideas and questions in a more

social context, and this is centred on their study interests. Moments of insight and results are encouraged and shared in this peer culture, foregrounding academic topics with links to additional resources shared. Importantly participants experience a valued source of encouragement and solidarity. This aligns with the situated learning perspective of Lave and Wenger's (1991) community of practice; and enhances students' academic and social integration, having a positive influence on learner persistence (Tinto, 1975, 1987).

The practical support of wayfinding and signposting through lots of academic and administrative resources was highly valued. Learners have to distil the most important ideas from a lot of information and the way they approached this illustrated principles of connectivism (Siemens, 2005). Seeing the connections between ideas and concepts from a diversity of perspectives was mentioned by participants. Learners considered that the opportunity for practical, mutual support, and being included and embraced by the structured habitat of a community, contribute the most to support their learning.

How does this Participation Disrupt Student Learning?

(RQ4)

The question of disruption of studies elicits mixed results and some unexpected findings. From one perspective, one reason cited by learners for using the Facebook module study groups is because of the expedient replies they received, and the affordance of notifications by the platform when

messages are posted. Learners consider this a positive practical support mechanism to help them stay informed, and accelerate acquiring a wider knowledge base. However, when considering the ways in which their group involvement disrupts their studies, learners acknowledge the frequent notifications, extra reading and involvement with others is also a distraction, and leads to non-productive procrastination. This represents a counter intuitive paradox of involvement in such study groups. Learners feel they get enough out of their participation to justify the investment of time required, but also consider such a large amount of information to be temptingly unproductive. However, learners continue to participate in the group because they fear they may miss out on some important information that might be shared there. There is so much scope in the range of information that can be acquired through connectivism (Siemens, 2005) and connected learning (Ito *et al.*, 2013) ; learners still have to prioritise and sift out the most relevant things they need to support their learning.

Learners welcome the difficulty of potential differences in points of view as part of the necessary struggle towards depth and competence in their subject. However, this sometimes led to disagreements and discord. The nature of disagreements varied, and the most disrespectful group dialogue has the potential to disrupt student learning. When the dialogue deteriorates, personal comments and insults may be exchanged with others with an opposing point of view.

Participants viewed this sort of turbulence as creating a toxic environment,

eroding trust, and discouraging learners from involvement in the group for a while. Some differences have the effect of stifling discussion about particular topics, for example in politics. Other differences have the effect of silencing people who did not want to engage with learners with a reputation for creating discord. This lack of regard for others, lack of respect, and empathy that Noddings (1984) suggests is required, is inconsistent with a caring approach. Some participants are more able to 'step out of their own personal frame of reference, in to the other's' (p. 24), and expect others to do the same. If group members could not reciprocate commensurate empathy, respect and care, then detachment, withdrawal or disruption to the membership of the group can ensue.

Reviewing the situations which learners describe as disruption, the ethic of care may not include other behaviour emotions found in Facebook group situations, such hostility, harassment and trolling. De Seta (2018, p. 392) found online behaviour included 'a variety of practices often described as deceiving, confrontational, offensive, negative, disruptive, abusive, unethical, non-normative, deviant or antisocial'. Hence, while a focus on care offers a new explanation for the use of social media to support many learners, it may be limited and may not explain the less frequent acts of negative behaviour experienced in these student-led environments.

Participants appreciate the varied points of view present in the Facebook module study groups and see the diversity of opinions as a necessary requirement for undergraduate learning. They welcomed the positive

potential of group involvement to disrupt their own thinking. Learners value the dialogue of approaching topics from different perspectives, and sharing their own points with others. They value the breadth and depth of perspectives others can offer. This access to a range of people can influence the way people assume and think, if they are willing to engage and listen. Students also learn how to communicate their arguments better in short messages, and scrutinise the ideas of others enhancing their evaluation and critical thinking skills. Their participation in the study groups supports their learning, and their nuanced reflections show that disruption can have good and bad effects. Students are mostly able to understand some of the limitations of communication on this platform, and they know the inflection of spoken word cannot always be represented adequately in writing and hence cause misunderstanding. The frequent informal exchanges increase their experience of using online communication. Then they feel better equipped to deal with differences of opinion that arose, while some acknowledge that this was not always the case previously when they have less experience of online discussion. Hence, the disruption of Facebook study group participation can have both positive and negative effects on learners.

This investigation found it is not always possible for group members to know the true identity of the online accounts they correspond with, and it is not always clear when deceptive and dishonest behaviour is present. If a study group participant decides to covertly use a different Facebook account in the study group, this can create an artificial sense of relevance and amplifying their voice. Group members may accept the use of an anonymous second

account without question, if the Facebook identities appeared valid and authentic. The anonymity of group members is enabled by the physical separation of learners in the distance university. This may not happen so easily in study groups at a campus university, where Facebook group members are also likely to be known in person to others. This provides an unexpected finding of this investigation. Hence this potential for anonymity can lead to deception, and this represents an additional risk to participants in distance learning student-led Facebook module study groups.

Disruption to learning may occur when access to the Facebook module study group is withdrawn. Being removed from a study group has differing effects on learners in this investigation. This investigation shows that social exclusion can damage the student experience, or may have no effect on attainment and module completion. When learners are removed from a study group, it can have a disruptive and detrimental effect on confidence and learning, and put their module completion at risk if they perceive their social and academic integration is impaired (Tinto, 1975, 1987). Such disruption to studies represents a risk of the openness of connectivism (Siemens, 2005) and connected learning (Ito *et al.*, 2013): Occasionally learners were not treated with the ethic of care (Noddings, 1984) expected in the student support groups, making the experience of disagreement more potent. Admins make decisions with limited information on behalf of the members of their group, and are not accountable to the university for their choices.

Disruption presents in many forms in the student-led Facebook groups,

including diverse opinions, communication issues, differing motives, fast and high volumes of information, and malevolent behaviour. Disagreements are infrequent, but the conflict faced by a minority of learners has the potential to affect the student experience for all group participants. This includes those who do not participate in the most heated debates, as the cooling and corrosive effect of disagreements affects the community and pace of learning dialogue. For students who experienced more significant situations of hostility, one said this did not impact on them academically, and the other said the situation deteriorated into disruption for their studies. Participants and Admin of student-led Facebook module study groups would benefit from being more informed about how to manage the risks of occasional potential for harm online.

Contribution

This thesis presents findings of original research about learning in student-led Facebook module study groups with mature, distance learning undergraduate students in the UK. The context of this investigation offers a variation on existing research which has looked at similar learning and dialogue in social media. Education related interactions present in Facebook news feed posts have been the site of previous research, and the majority of studies examine the learning of younger, campus based learners. Many studies focus on evaluation of teaching interventions. Some studies have investigated student-led Facebook group activity, but studying the educational related learning activity of mature, distance learning

undergraduates in this closed social media setting provides new findings.

Crucial findings from this study show the student-led Facebook module study groups offers a valuable, caring peer community. In this community, students learn to refine written communication skills and critical thinking; learn from the diverse views of others; elicit and evaluate relevant knowledge and information quickly; and exchange valued encouragement and motivation.

A qualitative study about how Facebook users manage conflict, Tagg and Seargeant (2017, p. 5) note 'acts of offence-taking and offence-giving on Facebook constitute an important gap in the research literature', and this study fills that gap for UK distance learners in student-led Facebook module study groups. Many studies of education-related communications in Facebook (e.g. Selwyn, 2009, Dalsgaard, 2016) use a content analysis approach to understand the activity of students general news feed or closed group activity. This investigation uses a qualitative, thematic analysis led by the four research questions to examine participant perceptions of activity in student-led groups, including disruption of learning. Given that participants said part or whole threads of the infrequent disagreements were deleted from their Facebook study group, a content analysis would not have included and analysed these ephemeral incidents, as the electronic traces of these are often deleted. Their effects, on participants directly and indirectly involved, can be damaging to learning and the learner experience. This study used in-depth interview data in a thematic analysis of the closed student-led Facebook module study groups, so this investigation includes and examines

the effect of these incidents. Hence, this work contributes to the gap in understanding the effect of gritty disagreements and disruption in student-led Facebook study groups.

This thesis presents new empirical work with original data collected using a range of qualitative methods. There was some testing of the results of existing empirical work which have been found in similar areas or with other types of students, in a process of theoretical 'pattern matching' (Yin, 2003, p. 106). Many findings mirror findings of existing research in other contexts, and the present investigation builds on those findings in this new context. Importantly it adds knowledge about the rationale for alumni to participate in Facebook study groups; and changes the negative narrative about the role of Facebook as a distraction, pointing out the benefits of participating in the student community as a study break.

Importantly, this study makes an empirical contribution with a new typology of education related activity which takes place in this space in Facebook. This was led by the research questions and qualitative thematic analysis. I argue the unique findings can be interpreted and explained using the conceptual framework, and this is original to this study. Using the ethic of care concept (Noddings, 1984) to understand the research findings has provided novel and different insights into phenomenon which may otherwise be taken for granted. This study showed the concept of connected learning (Ito *et al.*, 2013) can apply to mature distance learners, and connectivism (Siemens, 2005) can apply in learning environments other than massive open online

courses. Finally this study shows the application of these concepts is relevant to understand and explain the student-led online educational environment, and may co-exist with socially malevolent behaviour. The concepts cannot naively assume that all learners will have positive intentions.

Implications and Recommendations for Practice

This study will be of interest to learners, educators, and learning design specialists at the study site and other HE institutions, to improve how informal peer learning and community-based support is facilitated. With distance learning no longer confined to niche providers like the OU, the experience of distance learners is an emerging general concern in higher education (Brown, 2019). While originally designed to serve social-relational aims, social network sites 'are presenting complex challenges to educators and policymakers, as well as providing new meaning to emerging educational paradigms' and fostering socio-constructivist learning (Manca and Ranieri, 2015, p. 606). Educators and students can have new expectations for faster communication and adjusted roles, and communication may need to be considered and managed in new ways. Hence this research makes some practical suggestions for supporting such learning in social media spaces.

Distance Learners

Distance learners need to be made aware there are benefits and costs when engaging in social media channels, including student-led Facebook module

study groups. There are benefits of participation in a caring peer community, and students also learn communication and critical thinking skills. Learners become more proficient in finding relevant information and synthesise this into knowledge more proficiently. A social media student space has potential to bring social and intellectual leverage to people, but like other social media it 'must be used intelligently and deliberately by an informed population' (Rheingold, 2000, p xix). However, this takes time and resources, and learners may encounter occasions when the affordances of the platform or other students present may disrupt their studies. Some participants in social media groups may not be honest about their intentions or identity, and this can lead to disruption for others. The results of this study show learners participating in Facebook and the study group Admins would benefit from being more skilled at managing disagreements fairly. While there are challenges to be aware of, the unique and nuanced benefits of student-led social media groups are valued by many learners.

Educators and Support Staff

Educators and support staff in Higher and Further Education sectors who work directly with students can learn from this work, to improve interaction in their virtual learning environment. In the university discussion forums educators may consider emulating the shorter, more informal discussion posts found in Facebook, which create a more comfortable and inviting atmosphere online (Deng and Tavares, 2013). The use of visual cues, emoticons, and an informal friendly tone can help overcome the

impersonality of text-based communication in online learning communities (Kear, 2011). These adjustments can put learners at ease and create a more welcoming, inclusive culture and atmosphere, conducive to encouraging more interaction online. A strong learning community can have a social and emotional, as well as an academic and intellectual dimension (Palloff and Pratt, 1999), and has a balance of both interactions for social and academic purposes. Therefore a more generous balance of caring, social content with intellectual content in the university website could be sought to improve educational practice.

This study shows that learners prefer a faster pace of response to academic and social concerns, and learners may need some encouragement to respond to each other expediently in the university website. Tutors and educators can facilitate a more responsive approach this may improve the way learners use the university website. Adopting a notification system similar to Facebook when a message has been posted could help to meet learner expectations. There may be employee relations matters requiring staff to adopt this strategy as many tutors are employed for only a few hours each week. Roles may need to be renegotiated where social networking applications intersect with education (Gleason, Greenhow and Li, 2014). This renegotiating can be embraced in the development and professional updating of educators, to improve teaching and facilitation around the influence of social media.

Findings in this investigation suggest there is a need to simplify and update the wayfinding through a lot of online information and discussion tools,

offered in university websites. The affordances, convenience and use of apps on phones and tablets were mentioned by research participants, and people expect to reach their target online space more quickly. University discussion forums could be given a more user friendly interface, to give learners a better impression of the discussion space and to streamline navigation (Deng and Tavares, 2013). Simplifying the interface and minimising the steps would give learners features they value, and encourage them to make more use of the university website. An improved process for notifying learners when a comment is made (instead of by email) could match learner expectations more closely.

This study also found that learners value a way to correspond with alumni of modules; there is a need for prospective students to find out more from authentic alumni, not just from marketing communications. The student-led Facebook module study groups are the main channel to communicate with alumni. To complement this, institutions can create an appropriate forum for current and alumni students to communicate in their website. This inclusion of alumni and prospective students constitutes another key difference between the university discussion forums and the student-led Facebook groups.

Universities can consider if the affordances of their website would benefit from prioritising use of caring communication. The signals of caring communication necessitate careful design and planning. This study showed that university forums will be more attractive to learners when a stronger social presence in the community is incorporated. Mechanisms for caring

communication could be valued to build a critical mass of learners frequenting the university discussion forums. Features such as post 'likes', links to and space for social media dialogue are available to improve the student experience, and could be implemented by the university. Further work to understand user requirements to facilitate caring support for learning will be necessary.

Provide an online forum for all participants studying each module, to respond to student requests. Participants in this study asked for the university to reinstate a whole module forum for all modules offered at the university. This gives learners access to a sufficient range of people to discuss their module study topics, and importantly, gives access to the staff who write the learning materials. As learners study at a distance, many participants valued the Facebook module study group as their primary channel of communication with other students. If the university wish to engage the whole cohort of students with academic tutors, some rearrangement of the discussion forum spaces in the university website would respond to this finding and improve the student experience. Consideration can be given to the size of group discussion space which learners value in their university website: the evidence of this investigation suggests that a larger group space with more participants present, is preferred to maximise access to ideas for learning. These suggestions can support informed future decision-making about how universities design and structure the distance tutoring relationship, and this can also inform the wider debate on the contribution of Facebook activity for learners.

To address security issues and reduce the potential for learners to use pseudonym accounts, the university can encourage learners to connect with people they have met in person. This helps to build a strong community and facilitate safe interactions with bona fide students. It would be prudent to offer optional face to face tuition early in each module, to support this community building. This would improve social presence in the electronic environment, and minimise the risk and potency of anonymous or pseudonym accounts to disrupt learning. This will improve the experience for students who participate in social media study groups.

Practitioners in other Universities and Education

Institutions

Practitioners in other universities and educational institutions will benefit from learning about the findings of this study. Tensions arise from the challenges of reshaping relationships in open connected interpersonal networks of social media where anyone can apply to join a public group then contribute and comment. This contrasts with the closed boundaries and 'high walled exclusiveness' of traditional virtual learning environments (Moore, 2013, p. 703). Workload, contractual, progression and reward structures for education staff could embrace the necessary time required for engagement in social media for educational purposes if this is required, alongside traditional teaching, leadership and research roles.

Some suggestions for improvement may be predicated on the understanding

that institutions should be involved with the online presence of their learners, for example setting up teaching spaces in social media. There may be ethical and behavioural implications to consider if using public, commercial social media sites for educational aims (Manca and Ranieri, 2015). Importantly much evidence since the early work by Selwyn (2009) and Madge *et al.* (2009), has suggested that students resist university staff making official use of Facebook and other social media (Deng and Tavares, 2013), 'suggesting that these practices would better continue to be unabated and firmly backstage' (Manca and Ranieri, 2015). The delicate issue of learners 'saving face' was a common theme in this study too. This suggests it may be prudent for educators to avoid too much intrusion on student spaces, in order for their potential to be realised. Educators may decide to engage in the redevelopment of e-learning resources, although need to be wary of constructing social media spaces for teaching which may not be welcome by learners. While educators may be concerned for their own privacy (Manca and Ranieri, 2016a), this investigation shows learners want to protect theirs too, and seek space with other students outside the scope of universities' surveillance.

When students are unwilling, unaware or unable to access the Facebook module study group of peers, they can rely heavily on their tutor. Regular professional development for tutors to learn about the opportunities afforded in social media will be beneficial: to understand more about the learning, benefits and risks of student participation. This is not just a technical matter of acquiring software knowledge. This is more about recognising and moving existing beliefs and practices among tutors, to stay up to date with changing

student pedagogic practices. Tutors are required to fill the gaps in support identified by learners, so professional development about social media should be offered and supported by universities.

This study used student-led social media space as the research context: the data placed in public social media sites is becoming more valued in importance for decision making. As a result the UK Quality Assurance Agency for Higher Education is now considering the use of social media student data as a way to examine and evaluate higher education in future (Griffiths, Leaver and King, 2018). This will influence some universities to look at this data more closely themselves.

While Facebook module study groups are a dominant presence in the online activities of many students at the present time, new platforms are emerging, offering new features and benefits. It may be inevitable that learners will migrate to newer platforms, but the core themes of this investigation are still relevant and underpin priorities in the new forms of social software. Learners will transition their skills and knowledge of working in online communities to their professional lives. For example, they might participate in LinkedIn groups to build relationships and expertise across industry and national boundaries, or professional learning communities in Microsoft Teams. This research and recommendations necessarily focus on distance learners in the UK, but the issues have wider relevance to other cultures where learners study and connect in social media.

Limitations of this Research

This qualitative, interpretive investigation was intended to accurately represent the groups studied; it also offers findings which may resonate in other settings. However, there are a number of limitations to consider. Students with strong views, vivid experiences or an interest in research studies may have been more likely to participate and share their experience. As with much case study research, the data was collected from a small group of self-selecting volunteer participants; and there was a gender imbalance in the sample. A limitation of this convenience sampling approach, with respect to the individual participants, is 'it does not seek to generalize about the wider population' (Cohen, Manion and Morrison, 2007, p. 114), and this is true of the case study approach. Generalisation is not a primary aim of case studies, which seek to understand particular cases (Stake, 1995; Yin, 2009).

This study may be seen as small and limited by investigating just two modules. Such research can be 'useful for course development purposes' (Ertl and Wright 2008, p. 207) and to understand detailed motivations. Nevertheless, if the aim of qualitative research is to find meaning and ideas that might resonate and work in other settings, then the findings of the investigation can usefully migrate to other contexts (Twining, 2018). Hence the findings are interpreted within the limitations inherent in the design of this qualitative case study. To corroborate the findings of this study a different design could be employed, for example, an alternative sampling strategy as discussed in the next section for 'Suggestions for further research'.

As in any naturalistic study, the context is constantly shifting and internal and external influences are changing. The university was responding to a challenging external environment at the time of the study, with some changes to teaching approaches. The lived experience of the participants will not be repeated exactly, as the people, university, the online platform and social context have moved on. Other individuals may have different subjective accounts of the incidents examined. Hence given the methodology it would not be prudent to make simplified generalisations about distance learners from the results of this small qualitative study. However, this investigation has identified particular trends in learner preferences and rationale, which may resonate in other settings and from which broader conclusions can tentatively be drawn.

Suggestions for Further Research

The section suggests some ideas for further investigation noted during, or inspired by conducting this study. These are understanding the rationale of students who do not participate in student-led social media spaces; extending the purposive sampling strategy to review learning with students in other faculty disciplines; using a different sampling strategy for interview participants to reduce risk of bias; more explicit comparison with learning in the university website and with other social media sites; and comparing the use of Facebook study groups by new and final stage undergraduates. Fruitful research findings could also be sought to understand the use and

effect of social media and community inclusion by learners who take a gap year out during their studies.

This investigation found that around one third of the students in a study module were also a member of the student-led Facebook study group for that module. This suggests two thirds of students are not present in the student-led Facebook group, and it could be valuable to explore their rationale and motivations. This represents a gap in current knowledge about distance learners, and could uncover a deeper understanding of the limitations of the student-led social learning spaces to help practitioners improve learning design and materials.

This study focussed on two modules in the Arts qualification pathways. Learners studying sciences, postgraduate or other qualifications may have a different experience and requirements of their social media learning environment. Extending the purposive sampling to other study groups, the methods in this study could be replicated elsewhere. This could investigate the learning, support and disruption for distance students in other subject disciplines, and useful comparisons made to improve learning. This study used a convenience sampling strategy of volunteers to engage the individual interview participants. A further study with a probability sample of participants including more men could reduce bias and hence provide more generalisable findings (Cohen, Manion and Morrison, 2007). Other analytic methods, for example using a content analysis technique, and different conceptual lenses could provide new insight to analyse the existing dataset.

This investigation was conducted about learning in the Facebook social media platform, and no evidence was gathered or analysed about participation in the discussion forums in the university website. Learners may be active in a range of online communities, including the university website and other non-mandated social media. Future work could extend the boundaries of this study to look explicitly at the relationship between these online locations, their areas of overlap and difference. There were some unelicited comparisons made about this from participants in the study as they naturally compared the two environments without prompting. Understanding more about the strengths and limitations of each could assist learning designers to plan learning more effectively. New social media sites are emerging and it will be beneficial to investigate student use of these in future, to provide new insights and knowledge. Participants in this study improved their critical thinking ability to discern relevant knowledge, and enhanced their rapid evaluation and articulation skills to communicate in text more effectively. Further research could focus specifically on the personal skills acquired when students use social media for educational purposes.

This study found the supportive community, and relationships of learners in Facebook, were significant for many learners. As online communities grow, they establish rules of behaviour (Haythornthwaite, 2007) which members learn and adopt. This suggests the behaviour may be different in first, second and third year students as they grow in experience and embed the community norms, and this represents a gap in current research. Learners in this investigation were in the final stage of their studies and most showed a

'strong sense of compliance with tacit standards of respect and etiquette' (Conrad, 2002, p. 11). However, the research interview participants suggested that learners who are at the early stage of their studies and their membership of the university community may behave differently. A comparison study could prove valuable to improve their integration to contribute in the student community.

While the role of Facebook in the transition to starting university has been investigated (e.g. Vivian *et al.*, 2014), the role of social networks in maintaining connections with students who take a year out from their studies is under-investigated. This affects nearly 20,000 students each year in the UK, and less than 10% of these return to their original university (HESA 2018). In the post 2012 UK tuition fee environment, there is more emphasis on universities supporting students to a successful completion. Hence, this could represent another useful area of future research, which would be justified by the financial gain universities earn from facilitating a smooth transition of their learners back to qualification completion.

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Appendices

Appendix A – Semi-structured Interview Prompts

Prompt questions for semi-structured interview conversation volunteers:

I've got your IC form back, thank you.

Did you see the other information online explaining the study? I'm looking at what sort of study related learning takes place in Facebook study groups, and whether it helps or hinders us from learning.

Have a set of standard questions, asking people about these issues. Ask any Qs.

Opening: Background questions.

What subject are you in and what stage are you at with your studies?

Approximate age? In 20s, 30s, 40s

Section 1 Questions – social media use

What social media software do you use? Estimate how often do you use it? How much time using it? Do you use the notifications feature?

What sort of things do you use Facebook for generally? Is it primarily for connecting with people about your studies or other things? Is it on your computer, phone or tablet?

Learning

What sort of thing do you do in Facebook that relates to your OU work?

Which sort of study groups are you part of? Why use a Closed study group in FB?

Does more interaction with other students take place on your wall, or in groups?

What's the role of the Admin in a group?

What OU things do you find out about in this setting?

What other things do you find out about in the study groups?

Do you find that you give, or receive more information?

Is it constant throughout the year, or does it change a bit with the study calendar?

Do the topics of what's discussed change?

What purpose do the funny pictures and memes serve? Do you post links?

Section 2 Questions – Support and Disruption

Thinking about this XXX module study group, can you think of a time when you felt particularly supported in your studies, in Facebook? What happened? Explore.

Again specifically in this XXX module study group, can you think of a time when something stopped you studying, from the OU Facebook groups? Explore incident. What happens? Any other experiences?

Share screen to look at this particular incident of a disagreement. What happened here? Why do people do this? What's their motive?

Does being in any Facebook group encourage you to study in any way? How? What sort of things motivate you to study normally?

What's the best thing that's happened as a result of an OU study group? What's the worst thing that's happened as a result?

Section 3 Questions : FB compared to the OU forums

Do you use the tutor group forum, and other forums in the OU website? which ones? what do you use them for?

What seems different about the OU forums, and the Facebook study groups?

So what do the Facebook groups offer in particular?.

What could the OU do to improve all of this? What would it be like studying without FB?

Other

What's a university for?

Need normal email address for Amazon e-voucher

Will send link to copy of report

****THANK YOU ****

Appendix B – Call for Participation



PJ Seaward
21 April 2017

Hi, I'm a second year postgrad student on the OU Doctorate in Education. My research is about what distance students learn about in Facebook study groups, and how this supports or disrupts our learning. I had a conversation with your Admin this week, who agreed I could post here.

I've looked at what happens in a few OU groups and I'd like to use some of the discussion in your group anonymously as part of the data collection, to see what things students are learning about in Facebook. Then I will see how this compares to published research findings and theories about learning. This has all been checked with the OU including the Ethics Committee, and it can't affect your studies at all. We hope the findings will help the OU become even better at supporting students to complete our qualifications. I want to add this Student Voice into the decisions made by the OU.

I am also looking for up to ten volunteers who would be willing to have a 45-60 minute Skype conversation with me about the kind of support and any problems you have found with Facebook OU module groups. As a thank you for volunteering to talk about this, I will send you a £15 Amazon gift voucher electronically. If you have had a good or bad experience with Facebook OU groups, I'd like to hear about it. You might be a current or past student, an admin or a regular participant. Please comment below or directly message me if you are willing to volunteer. Thank you!

All information used is confidential, and will not be used for any purpose other than my research. Information will be depersonalised so it can't be traced back to you, and will only ever be seen as anonymous. If you are not happy for your input to this group to be included in the study, please message me or click on my name and block my profile so I won't see your input to the group. It's no problem. I would like to look at some of the recent information and conversations this year, up to today; not your current or future use of the group.

I will make my findings available to participants who are interested, just let me know. If you want to know more please ask me here or via Messenger. Thanks very much for your support!

 1 20 comments

Appendix C – HREC (Ethics) Favourable Opinion Letters



The Open University

From Dr Duncan Banks
Chair, The Open University Human Research Ethics Committee
Email duncan.banks@open.ac.uk
Extension 39198

To Philippe Seaward, Centre for Research into Education and Educational Technology

Subject "Do distance learners think participation in Facebook study groups supports or disrupts their learning?"
HREC Ref HREC/2015/2074/Seaward/1
AMS ref
Submitted 24 July 2015
Date 24 July 2015

Memorandum

This memorandum is to confirm that the research protocol for the above-named research project, as submitted for ethics review, has been given a favourable opinion by the Open University Human Research Ethics Committee. Please note that the OU research ethics review procedures are fully compliant with the majority of grant awarding bodies and their Frameworks for Research Ethics.

Please make sure that any question(s) relating to your application and approval are sent to Research-REC-Review@open.ac.uk quoting the HREC reference number above. We will endeavour to respond as quickly as possible so that your research is not delayed in any way.

At the conclusion of your project, by the date that you stated in your application, the Committee would like to receive a summary report on the progress of this project, any ethical issues that have arisen and how they have been dealt with.

Regards,

Dr Duncan Banks
Chair OU HREC

Human Research Ethics Committee (HREC)

From Dr Duncan Banks, Deputy Chair
The Open University Human Research Ethics Committee
Email duncan.banks@open.ac.uk
Extension (6) 52462

To Philippa Seaward, CREET

Project title Do distance learners think participation in Facebook study groups supports or disrupts their learning?

HREC ref HREC/2017/2074/Seaward/2

AMS ref N/A



Memorandum

Date application submitted: 16/12/16
Date of HREC response: 06/01/17

This memorandum is to confirm that the research protocol for the above-named research project, as submitted to the OU HREC for ethics review, has been given a favourable opinion by the HREC Review Panel.

Please note the following:

1. You are responsible for notifying the HREC immediately of any information received by you, or of which you become aware which would cast doubt on, or alter, any information contained in the original application, or a later amendment which would raise questions about the safety and/or continued conduct of the research.
2. It is essential that any proposed amendments to the research are sent to the HREC for review, so they can be recorded and a favourable opinion given prior to any changes being implemented (except only in cases of emergency when the welfare of the participant or researcher is or may be affected).
3. Please include your HREC reference number in any documents or correspondence, also any publicity seeking participants or advertising your research, so it is clear that it has been reviewed by HREC and adheres to OU ethics review processes.
4. You are authorised to present this memorandum to outside bodies such as NHS Research Ethics Committees in support of any application for future research clearance. Also, where there is an external ethics review, a copy of the application and outcome should be sent to the HREC.
5. OU research ethics review procedures are fully compliant with the majority of grant awarding bodies and where they exist, their frameworks for research ethics.
6. At the conclusion of your project, by the date you have stated in your application, you are required to provide the Committee with a final report to reflect how the project has progressed, and importantly whether any ethics issues arose and how they were dealt with. A copy of the final report template can be found on the research ethics website - http://www.open.ac.uk/research/ethics/human-research/human-research-ethics-full-review-process-and-proforma#final_report

Best regards,

Dr Duncan Banks, Deputy Chair
The Open University Human Research Ethics Committee

<http://www.open.ac.uk/research/ethics/>

www.open.ac.uk/research/ethics/

March 2015

Appendix D – Examples of Interview Data Coding

Codes: administrative guidance; participation learning; extra links to augment learning; staying on target; solidarity; encouragement and motivation.

Person	Data
Fatima	<p>.. if the TMA system was going to be down next week, I guess that sort of thing would be talked about or the fact that I think that online past year there was a problem with some bookings</p>
Emily	<p>I've been able to say, 'come on', they've been feeling the pressure and that, and I've been able to say 'come on you can get through this, it is do-able. Just take bite sized chunks', I think you know being able to encourage other people. So I find that really useful.</p> <p>.. ways of approaching things. Because sometimes if for example you're stuck on how to structure things, then they might say when I did this part of my course I did it this way or this way. Have you thought about looking at it from Y perspective as opposed to X, and pointing you in the right direction which sometimes really helps.</p> <p>.. . The other thing you find is that when people find things online somewhere else or they find materials that are useful to the course, they'll post the links to it, and that's really good because that's extra reading, extra back up you can do [...]. That you might not necessarily see yourself. So that's really good.</p> <p>If I see things I will post on there quite a lot really. I think it's a support both ways because it's not just giving of the information, but when get to a point when you're really struggling when it gets to the TMA time, and we're all there chivvying each other along you know. Encouraging one another you know..</p>

Dottie	<p>It [Facebook] started out mainly friends and family and then I discovered the module sites and it was like.. so like most of my friends are from the OU [now]. I've never met them, but they are sort of like they know what I'm going through. Even if we've gone on different pathways it's still that community aspect of it.</p> <p>I think with Facebook there's always someone on as well. It doesn't matter what time of the day, in the early hours of the morning. There's someone there that will go 'oh yes I'm seeing that' so you don't feel quite as alone.</p>
Cerys	<p>..people come there to ask questions and ask for help regarding general OU things</p> <p>.. I suppose I get help like especially interpreting certain aspects of the material, saying 'why is that saying that, when it says it on this page?' You know like sometimes it can contradict itself so it's nice to see how other people see it as well so it's not just me.</p> <p>.. I posted this thing of [...] an artist reinterpreted that into a modern day setting. It's the same place but what it's like now, but with a play on words of the original thing. So that was definitely related to course materials and I shared my own interpretation of it, to gear up some kind of discussion.</p> <p>.. I do think it can be very very helpful and it can be very encouraging as well, as when you are doing it on your own, it can be quite isolating and it feels like a bit of a slog I suppose [...] Whereas in the groups it very much is like a big social community hub where people can push each other along, give encouragement. So you don't feel like you're falling behind or anything like that. You're all in the same place.</p>
Beth	

	<p>I have actually thought that may be a good thing because it's constantly reminding me about my OU studies, so that maybe keeps it at the forefront of my mind. So yes I think that's quite good that I do keep looking at it. But that's good. A lot of them, like coming up to submission, there were so many notifications of people who are tapping away until midnight.</p> <p>I think also they are nice to try to form a community, so you don't feel like you're on your own. If you do write something a bit funny then other people can contribute and you kind of form a bond with people, and it doesn't feel like you're studying completely on your own then.</p> <p>.. A bit of that, definitely a bit of keeping you on target, because people will be ahead, people will be on track, people will be behind. And wherever they are, it makes you feel a bit better somehow. Or if they're really ahead it makes you feel a bit like you're behind then that helps as well because that makes you think 'oh crikey, she's got that far ahead, and I have that holiday to go to or whatever', and so either way that is really good to keep you on target.</p>
Alice	<p>.. So I wouldn't have that, if I didn't have that little peer community, my little study community for writing I couldn't do that. Where would I find writers here? Literally where I live, there is nothing. No-one.</p> <p>You learn what you're doing wrong from other people doing those things wrong. And you learn what works by seeing and interacting with other people that do the things that work.</p>

Appendix E – Age Distribution and Contextual Information about Participants

Age Distribution of Participants in the Study

Age Range	22-29	30-29	40-49	50-59	60-69
Group 1	2	1	2	1	0
Group 2	1	1	0	3	1

Contextual Information about Participants in this Study

Group 1- Language

Alice

Alice is in her late 40s and is in the sixth year and final module for a degree in English Language and Creative Writing. She previously did a science degree in the 1990s, thinking it seemed like the only way to get a better job, and provide for her family. She is studying her current degree as ‘my one for fun’. She does substantial volunteer work as an elected representative alongside her OU studies, and leads many online student groups inside the OU and Facebook. She estimates she will spend one to two hours each day on Facebook, in small periods of five to ten minutes at a time. She uses social media for about 20% keeping in touch with family, and approximately 80% to stay in touch with other people studying. She likes to encounter many people from different modules in her studies, and probably stays in touch with these people more frequently than older friends. She also uses Facebook to stay in touch with other creative organisations to cultivate her interests.

Beth

Beth is in her late 20s and is studying the English Literature and Language degree. She previously dropped out of a different degree subject at a campus university after 18 months, and transferred some credits to her OU qualification. She likes the OU as she can work full time while she studies and looks after her small child. She finds it hard to prioritise sufficient time to see her tutor, as she cannot always attend face

to face day schools with a small child. She indicates she does not contribute very much to the Facebook module study group, but she has the notifications set on her phone so each time a post is added to the group, she is notified and she will read and follow every thread for information. This is the first OU group she has participated in, and this is the final module for her degree.

Cerys

Cerys is in her late 20s and is the founding Admin of the module study group in Facebook. She had started but left the module at the time of the research, and had already claimed her English Language and Literature degree. Hence, Cerys is an alumnus of the module and university at the time of the research, and she is generously continuing to spend free time moderating the group. She started the module to boost her degree classification but realised it would be prudent to have a break before going on to postgraduate study. She likes the range of people she has encountered in the OU and the flexibility to be able to organise her own study schedule. A campus university would be more restrictive with specific times for attendance, and this would affect her earnings and economic independence.

Dottie

Dottie is in her early 40s and started with the OU on a low credit, low cost (£25) Access programme, to see if she liked studying or not. At the time of the investigation she was in the fifth year, in the penultimate module of a degree in Humanities with English Language. She says OU study fits her lifestyle perfectly as she says 'I've got to work, I'm a single mum and I've got to care for my dad now'. She uses a small range of social media platforms and dislikes Twitter 'as you can't write so much in it as you can in Facebook'. She started using Facebook to stay in touch with friends and family, but since being with the OU has mainly participated in a lot of different student groups for modules and special interests.

Emily

Emily came to the OU with 80 credits from another university and thought the OU mode of study would be easier with 'family and children and stuff'. She has studied on and off for ten years and is now in her final year on the final module. She has claimed the Open degree already and is doing the final honours year to get an Open (hons) degree with a classification. She appreciates the flexibility to combine studies with work and other responsibilities, and she cites the main disadvantage with OU is having no easy access to people to ask questions and discuss the learning

materials. She uses a small range of social media centred on the OU student groups, and enjoys being able to share and discuss things from various points of view in these.

Fatima

Fatima is in her late 30s and is in the final module of her English Language and Literature degree. She likes the way she can combine studying with her work, family and life which she describes as 'stressful'. She uses a small range of social media mainly using Messenger. At the time of the research she had been blocked from participating in the module study group, and she had deleted the Facebook app from her phone. She says 'I've had it since godknowswhen, since 2007 or something. And I don't know my password so I can't access it on my laptop or anywhere else.' As she was central to the main disagreement mentioned in the group, she was found and engaged in initial correspondence via the Messenger app.

Group 2 - Politics

Poppy

Poppy is in her early 30s and she is in sixth year of part time study, on the final 60 credit module. She had to get a job when she was 16 and leave home at 18, so she says she will be pleased to complete her education with a degree. She has found the routine of assessments every month good for staying on target, but a pressure to get everything done with a full time job, children, hobbies and life. In social media she says she only needs to use Facebook; she used to use it much more ten years ago but not so much recently. She uses Facebook mainly to support her studies and less for keeping in touch with family and friends now. She is part of two study groups and she reads them on her laptop and phone. She says at this stage in their studies people 'haven't got time for messing around' and she's not sure if the advantages of Facebook outweigh the disadvantages of using it.

Quella

Quella is in her early 50s and doing her degree in International Studies. She had already completed the course relating to this module study group the last time it was run, and she has progressed onto her next module now. She stayed in the group to support the current cohort studying the module, and she is studying in the seventh

year of her degree at the time of the investigation. She mentioned she has a disability. She likes to be able to plan and organise her own study schedule 'as everything is online' with the OU, although she found this very isolating and missed having people in the same situation to talk over the study topics.

She uses a small range of social media tools, and Facebook is used just to support her studies now. WhatsApp is used for family and other student groups she has met personally at tutorials, Facetime is used for family and Twitter is used for 'stalking my [famous] son everywhere!'. She uses an iPhone, iPad and laptop, which is 'too many gadgets'. Interestingly she is in Facebook under a pseudonym English name in order to fit in with the students in the module study groups. She says she has previously had a poor reaction from people when using her own foreign name, and says she has previously also used a male name to get a better reaction from people in online groups.

Rosie

Rosie is in her mid-20s and is studying 120 credits (full time equivalent) in International Development. She also works full time and says she could not afford to take three years off work, in order to study. Having this flexibility to work and study is crucial for her, but the distance aspect of OU study is very isolating. She says she dropped out of a campus university and she misses the 'face to face interactions on a daily basis' with other people studying, to talk over the topics. She visits Facebook many times each day on her phone and tablet, never on her laptop 'as it's too distracting'. She thinks a university is just a place where learning is shared; either a geographic or virtual location.

Shreya

Shreya is in her early 60s and at the end of six years of study in Combined Social Science, sponsored by her workplace in Education. She says she enjoyed the whole process of studying and learning, and she deliberately chose a degree pathway she knew little about. She found it hard to find scope to study for 15-17 hours a week on top of full time work and has used the school holidays, 'giving up every half term and that sort of thing just for study; that kept my head above water'.

She dislikes the 'shallow, soundbite mentality' of Twitter, and uses Facetime for keeping in touch with family and friends. She was an early participant in Facebook when her son went travelling for a few years. Facebook enabled them to stay in regular contact and exchange photographs of his journey very easily. She gets to

know people in the OU Facebook study groups, then likes to stay in contact with people she has encountered on a variety of modules throughout her studies.

Tom

Tom is in his early 50s and is the only man who volunteered to participate in the study. He is in the sixth, final year of his 'PPE' Politics, Philosophy and Economics degree. He liked the way OU study fitted in to his life and he could study while working and 'deal with family issues as well'. He liked being able to do a degree without actually going to a physical university site, but disliked the way distance studying was 'a very lonely thing to do'. He uses Facebook, Twitter and WhatsApp to separate different roles and activities in life, for example as a politician, business team member, and OU student. He has previously used social media in a work capacity in politics, to promote things in business, for maintaining a network of connections with people he has worked with worldwide, and communicating with family and friends.

He uses two separate accounts in Facebook (Tom and Tom2) and says this was because he was well known in local politics and he wanted some anonymity online in student groups. He did not disclose he was using two identities to the module study group. He became frustrated at being unable to get sufficient help with his OU studies at times, 'I find that unless you scream loud and you're very persistent, if you want help you can be overlooked'. He describes himself as a customer in the education system. He is continuing into postgraduate study. He gave the longest interview.

Una

Una is 50 and had been blocked from participating in the group, a few months after the module started. She had previously been an Admin of the group but left and was then blocked from returning. Una is in her final module after seven years of OU study, and will graduate soon. She works full time and will continue studying professional qualifications after her degree. She enjoyed the flexibility of OU study, but missed the contact with people to discuss the issues being examined. When she was blocked from the group she felt her support network had been cut off, and she couldn't understand why this happened.