A CONSTRUCTIVE, CONCEPTUAL ANALYTICAL REVIEW OF THE COMMUNITY OF INQUIRY FRAMEWORK

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ABSTRACT

This thesis comprises a critical review and suggestions for enhancement of the Community of Inquiry Framework (CoIF), the frequently cited model of collaborative community-based online learning. It combines a systematic engagement of relevant literature and research, with the application of the CoIF thinking to six of my peer-reviewed publications. Although not initially conceived as forming part of a doctorate submission, these publications are drawn upon throughout this narrative, to assist my interrogation of the CoIF. They are also used to provide evidence of my continuing journey as an education researcher. This thesis is therefore not an exegesis – a traditional meta-narrative encompassing this candidate's publications. It moves beyond my findings in the publications to create and present supplementary concepts, and develop pointed guidance about using the Framework in supporting online learning in tertiary education.

My review first critically interrogates the three constituent elements or Presences of the CoIF. Social presence emerges as a highly complex and multi-faceted construct, in which the de-emphasising of the affective in the CoIF seems at variance with current research reporting the strong student emotional response to working online, and particularly in collaborative, community-based groupings. Then, in Cognitive presence, there has been little consideration of, and specificity about, reflection in the CoIF. My critique proposes that reflection and critical thinking are distinct but inter-related concepts; both of which need to be addressed. Teaching presence is renamed 'Tutoring presence' informed by my review based upon my emergent understandings of student-centred learning.

Two enhancements to the CoIF are then proposed, together with the rationale for establishment of a Tutors' Network. The first enhancement, referred to as 'the Influences,' unites and enriches the individual Presences. The second argues for the existence and use of a personal learning retreat at the heart of a community of inquiry, addressing a perceived omission in the CoIF. This learner 'space' provides a 'quiet, safe place' for the private (internal) world of the learner, as a foil to the shared collaborative space in the CoIF (the external world). Finally, a Tutors' Network is outlined as a vehicle for advancing their understandings and knowledge of online, collaborative, community-based learning in general, and in particular of communities of inquiry. This should develop the abilities of online tutors, improve their learners' educational experiences and encourage research and scholarship into the CoIF.

Key words: online learning; community of inquiry; social presence; cognitive presence; teaching presence; emotion; reflection; critical thinking; student-centred learning; PhD by publication; intermental; intramental.

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I am indebted to my colleagues, my wonderful team, my mentors, especially Professor John Cowan, and my students at Queen Margaret University who have provided with me with so much inspiration, support and insights into online learning. I have been very fortunate to work with such an enthusiastic group from whom I have learnt so much, and continue to learn. I am also very grateful to the learners and tutors who participated in the studies, the funders of the research, and my co-authors of the publications, called upon with this thesis. I would also like to thank Routledge, Elsevier Limited (UK), Taylor and Francis Books (UK), and McGraw-Hill Education for permission to include a number of figures within this thesis.

Over the years I have been all too conscious that I have been exceedingly fortunate to have the continued unquestioning support of so many friends and family. Their patience, on-going belief in me, and indulgences have meant that I have progressed to this stage. My mother remains a constant source of inspiration – her love of life and sense of humour has lightened the journey. Mark, my incredibly patient husband, knows how much this endeavour has cost and has remained constant throughout. I owe him.

Finally, I dedicate this work to my father whom I miss.

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Introduction

The aim of this PhD by publication is a conceptual, analytical review of the role of the Community of Inquiry Framework (CoIF) (Garrison 2011) in supporting learning and teaching (L&T) in online tertiary education. The purpose of this exploration of the CoIF is to develop a more informed perspective on how technologies may be implemented to support an appropriate and effective educational experience for online learners and tutors. The critique which I offer answers the call by the CoI Research Community for constructive debate about the CoIF ensuring its growth by identifying ". . . potential problems and weaknesses in the model" as well as providing directions for further research (Akyol et al. 2009, p.123). In using the term "constructive", I echo not only Garrison's work but also that of Jézégou (2010) whose review of the CoIF is determinedly *constructive* in seeking to contribute to current debate about its conceptual base, and demonstrate its potential.

Requirement for this study

This topic is worthy of study because online learning in higher education (HE) has increased significantly even as this thesis was developing. Over 6.7 million American tertiary students are taking at least one module online, and nearly 70% of American institutions state that online education is critical to their long-term strategy (Allen and Seaman 2013, p.4, and p.66). In Australia, the online education market has grown by almost 20%, being worth an estimated US$4.68 billion (International Consultants for Education and Fairs 2012). China hosts 70 online colleges, with India, South Korea, and Malaysia all increasing their online offerings. In the United Kingdom (UK), in 2010, 100 higher and further education institutions offered over 400 online courses predominantly intended for postgraduate study (White et al. 2010, p.1), whilst more recently a growing recognition of the strategic importance of online learning has been voiced (Chatterton 2015, p.10). Online numbers worldwide are set to grow still further, as institutions reach out to more diverse, often international markets, whilst also responding to learner requirements for more flexible and accessible learning opportunities (Kim 2011, p.763; Smith 2008, p.35).

There has been an ambivalent response to these innovative online developments. Some learners have positive responses to online offerings conducted in an asynchronous internet-based format expressing feelings of joy, enthusiasm, and excitement (Zembylas et al. 2008, pp.112-115; Hara and Kling 1999). Employers note advantages of online learning especially when working practices place increased emphasis on digital literacies and inter and intra

professional teamwork, demanding higher level cognitive and interpersonal abilities often mediated through technology (Garrison 2011, p.9). Emergent findings hint that online learning may even result in better outcomes compared with face-to-face (f2f) provision (Means et al. 2010, p.xiv), whilst Shea and Bidjerano's study of community college students in the United States (2014) concluded that when controlling for learner background characteristics ". . . students who participated in distance education early in their college careers were more likely to attain a degree than students who had not done so" (p.110). Consequently, Akyol and Garrison (2011a p.23) opine that "Online learning has reached a point where it has been accepted as an important alternative or enhancement to traditional face-to-face education."

Nevertheless many, including employers, doubt the value and legitimacy of accredited online learning (Allen and Seaman 2013, p.27; Columbaro and Monaghan 2009; Linardopoulos 2012, p.192), especially with its:

- High attrition rates (Boston et al. 2009, p.67)
- Low levels of learner attainment (Bernard et al. 2000, p.262)
- Low levels of learner progression (Baxter 2012, p.109)
- Lower levels of learner self-confidence, and self-perception (Rovai 2002, p.320).

There is particular concern about the quality of online programmes (Kim 2011, p.763) and increases in the amount of plagiarism (Jones et al. 2013, p.262). Others note the requirement for:

- High levels of learner self-discipline, self-directedness, and self-reliance (Shea and Bidjerano 2012, p.317)
- High levels of trained tutor support who need to be patient and understanding whilst encouraging learners to transition into the new learning environment (Garrison 2011, p.56).

Negative learner responses to online learning such as fear, anxiety, alienation, guilt, and stress are also well-documented (Zembylas et al. 2008, pp.112-115; Hara and Kling 1999). In many cases, these outcomes are linked to learners attempting to balance competing familial, professional, and social life demands (Angelaki and Mavroidis 2013, p.88), which may be exacerbated by lack of knowledge about online learning and its requirements, compared with the more familiar and traditional classroom conventions (Zembylas et al. 2008, p. 115; Shea and Bidjerano 2010, p.1727). With particular reference to the topic of this thesis, Cleveland-Innes et al. (2007, p.4) noted the significant role changes required of learners and of tutors when first moving online; for example, coping with increased

technological demands and skills, different modes of communication with and amongst peers and tutors, and responding to different "places" for learning (anytime, anywhere).

Issues for this study

Online learning incorporating communication technologies may potentially address some of the issues identified above, especially concerning the isolation of distance learners (Bernard et al. 2000, p.274) and lack of interactivity amongst, and between, tutors and learners. Technologies may support student-centred learning, taking a socio-constructivist-based approach to learning, emphasising communication, collaboration and community (Kim 2011, p.763; Garrison 2009, p.97). Emergent research emphasises the potential of online community-based learning in improving learner retention, engagement, and potentially learning (Bernard et al. 2000, p.263; Lambert and Fisher 2013, p.13; Palloff and Pratt 2007, p.4; Rovai 2002, p.328). It has been estimated that, whilst an average f2f session of 50 minutes with 25 learners offers an average of 2 minutes participation per student, online learning may present ". . . unlimited potential for interaction, and threading the discussions means that many discussions can simultaneously take place on divergent topics" (Allen et al. 2013, p.144). However, the introduction of communication technologies may also exacerbate some issues. For instance, undertaking group-based assignments requiring interaction, communication and resolution of issues are not so welcome by many online learners. Figure A[1] summarises learners' negative responses to learning collaboratively online.

Many question whether the majority of learners are ready, and prepared, for the transition from the more traditional, didactic f2f learning experiences to online learning (Akyol 2013 p.30). In 2012, Cleveland-Innes and Campbell asserted that whilst technologies had been quickly and readily implemented for learners, there was little understanding of the abilities required of learners to flourish in such environments. Hung et al. (2010, pp. 1086-1087) reported that, although Taiwanese learners appeared to exhibit high levels of readiness in computer/internet self-efficacy and motivation for learning and communicating online, they exhibited lower levels in self-directed learning. Time management and self-discipline were identified as critical for success ensuring that learners participated in online discussions, submitted work on time and were not distracted by online games, and instant messaging. Parkes et al.'s (2015) research corroborated much of Hung et al.'s work (2010), but highlighted the lack of student preparedness for working collaboratively online, leading them to assert that the full potential of online learning based on a social constructivism paradigm may not yet be fully realised (Parkes et al. 2015, p.7).

[1] Figures in the Foreword are labelled alphabetically, whilst Figures in the following chapters are numbered according to the chapter number, for instance, Figure 1.1 is the first figure in Chapter One.

Figure A: summary of learner negative emotional response to working collaboratively online

Recent research into the related concepts of metacognition, self-regulation, and self-efficacy provide insights into how learners may potentially thrive in the intensive, challenging environments of online community-based learning. These studies echo earlier research in distance education where there has been for some time an acceptance that learners should be highly self-directed and self-reliant (Shea and Bidjerano 2012, p.317). Since these terms are referenced throughout this thesis, and are central in my work, I now explore their meaning and relevance for me.

Metacognition involves ". . . reflecting on and analysing one's own thinking" (Murphy 2008) and thus monitoring learning and cognition. As early as 2005, Azevedo and Hadwin were asserting that metacognition is particularly relevant for online learning (p.367) whilst White and Frederisken (2005) argued that developing metacognitive ability was crucial for fostering and improving individual learning through inquiry and group learning, maintaining that ". . .everyone in a learning community needs to speak and do metacognition " (2005, p.211).

Self-regulated learning (SRL) was defined by Zimmerman as the ". . . degree to which students are metacognitively, motivationally and behaviourally active participants in their own learning process" (Zimmerman 2008, p.167). Self-regulated learners proactively initiate thoughts, feelings, and actions such as setting goals, organising learning environments, planning, and selecting appropriate learning strategies involving metacognition and critical thinking (Cho and Heron 2015, p.81). Throughout their studies they monitor, reflect on their learning, and adapt behaviours to achieve their desired learning goals (Dresel 2015, p.455; Shea and Bidjerano 2012, p.317). Self-regulated learners often seek to improve their skills to achieve their learning goals, are confident about their abilities whilst displaying positive emotions such as hope, and pride in their learning (Cho and Heron 2015, p.82). Shea et al. (2012, p.89), as others working in the field such as Means et al. (2010, p.45), have suggested that online learners are potentially more successful if they exhibit SRL traits such as perseverance and initiative which ". . . stem from advantageous motivational feelings and beliefs as well as metacognitive strategies" (Zimmerman 2008, p.167). Shea and Bidjerano (2012, p.318) summarised research findings in this area indicating that self-regulated online learners tend to be better time managers, more effective at structuring their learning environments, more inclined to seek assistance, and, to be more positive about online learning,

Shea and Bidjerano (2010) define *self-efficacy* as a ". . . subjective judgement of one's level of competence in executing certain behaviors or achieving certain outcomes in the future" (p.1724). Bandura (1997) emphasises the strength of one's belief and confidence in being able to design and implement plans to complete a specific task and achieve the desired

goals despite encountering barriers and distractions (cited in Lee 2015, p.61). Implicit within this perspective is an acceptance that the learner will monitor and control their behaviours, levels of motivation and decision-making processes and are, as a result, more diligent and persistent learners. Certainly self-efficacy, as noted by Shea and Bidjerano (2009, p.1724), seems to encompass both an outcome expectation ("*I will succeed*"), and a personal efficacy expectation ("*I have the abilities, skills, knowledge to succeed*") and potentially this multi-dimensional construct initiates, and maintains SRL (Shea and Bidjerano 2010, p.1724). Researchers into online learning often focus on internet/computer self-efficacy but the work of Shen et al. (2013), and Hung et al. (2010) present wider conceptualisations including online communication self-efficacy. Both studies indicate that learners need to feel confident in their ability to participate actively in online discussions, responding to others, posing questions, probing, and, expressing emotion (Hung et al. 2010, p.1086; Shen et al. 2013, p.15).

The aim of such studies in the field of SRL, metacognition, and self-efficacy is claimed to be improving online attrition rates, student satisfaction, and learning (Akyol and Garrison 2011b, p.183-4; Shea et al. 2013, p.90). This is particularly important with the diverse learners now entering online education. However, whilst such factors make important contributions to learning, understanding the role of self-regulation and its related constructs such as metacognition in online learning, is still at the formative stage (Shea et al. 2012, p.92; Mayes and de Freitas 2013, p.26). There is also concern that requirements for learners to be so self-disciplined will be an impediment to the growth of online learning (Shea and Bidjerano 2012, p.317).

It is important to acknowledge that tutors, like learners, may be unfamiliar with the new, challenging online environment, which requires them to be subject, pedagogical, and technological experts. This demand is combined with a changing focus in which the aim of tertiary learning is now beyond the acquisition of specific subject-based knowledge, and extends to giving attention to the development of learner skills and abilities such as problem solving, critical thinking and communication. Much learning nowadays is participatory, collaborative, and community-based, focusing on the *application* of knowledge requiring pedagogic innovation (Hämäläinen and Vähäsantanen 2011, p. 170; White et al. 2010). The tutor needs to turn the ". . . computer screen into a window so that students feel and behave as if they are working together with a group of peers" (Rovai 2002, p.331). Hence Akyol and Garrison opine:

> . . an effective online learning teacher must have resilience, innovativeness, and perseverance. It is clear that teaching online represents a new challenge that requires a new set of responsibilities and roles. (Akyol and Garrison 2011a, p.26)

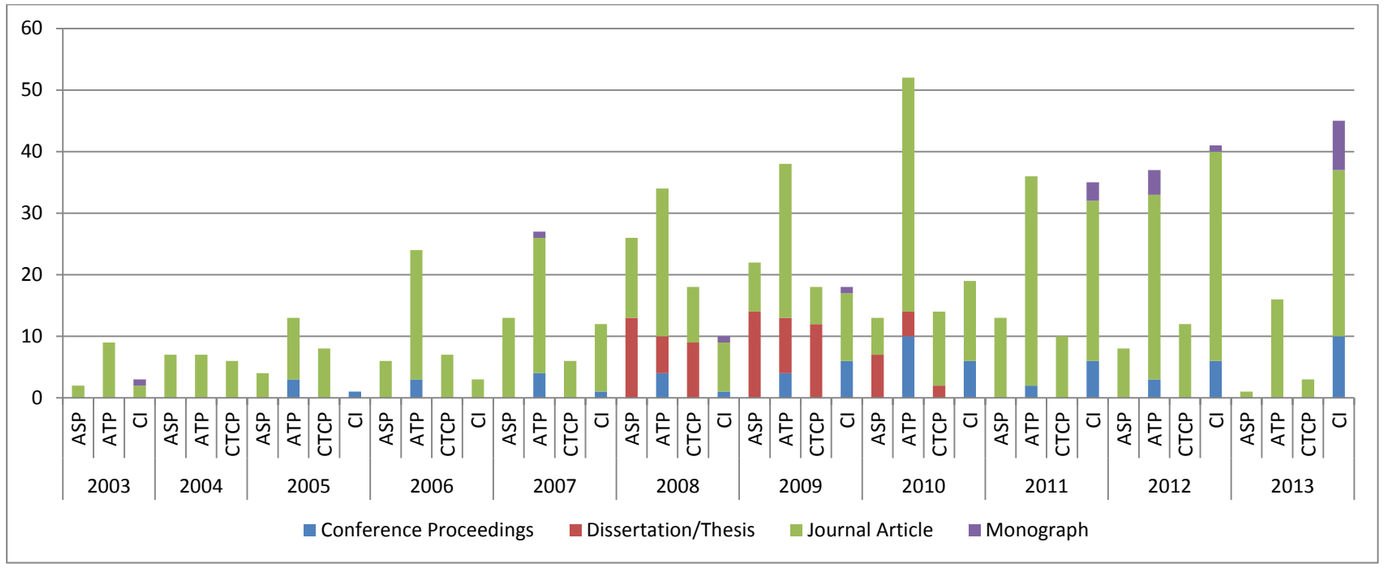
With the current growth in online learning, it is essential that vital resources are not wasted, opportunities galvanised, and that the quality of online learning experiences and outcomes is not compromised (Beldarrain 2006, p.140). Models and frameworks are needed to guide and inform thinking, planning and designing for online learning

The Community of Inquiry Framework

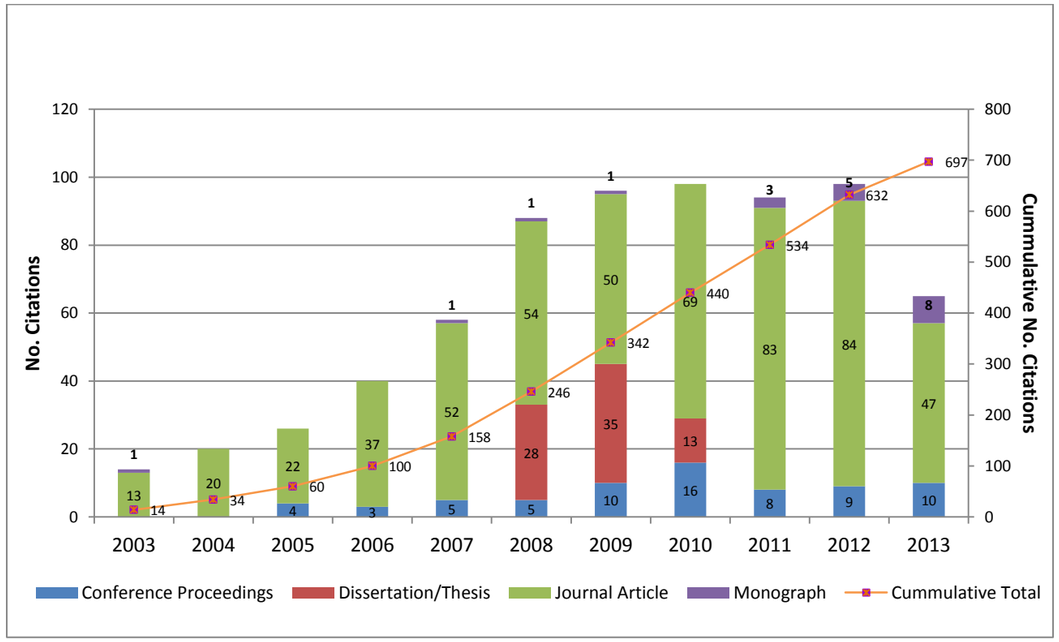
In this thesis, I have chosen to focus on the Community of Inquiry Framework (CoIF) which encompasses a guide to the development of an online educational experience, a set of online evaluative tools, and research tools with which to measure and validate the CoIF.

The CoIF was originally presented in five seminal papers by its Canadian authors (Anderson et al. 2001; Garrison et al. 2001; Garrison et al. 1999; Rourke et al. 2001; Rourke et al. 1999). It is arguably one of the most prominent and cited models of online learning; Figures B1 and B2 present graphs which illustrate the frequency of citations attributable to four of the original five publications between 2003 and mid-2013. Derived from a search on Web of Science and Scopus, just under 700 citations were found for four of the seminal papers during this period. No citation details were available for the fifth paper by Rourke et al. 2001.

Surprisingly citations for these four papers have remained high in journal articles throughout this period and although the data are incomplete for 2013, it is anticipated that the citations for that year would have been in the region of 80–90, demonstrating continued interest in the CoIF. Figure B2 provides a breakdown of the citations for each of the seminal papers. Citations regarding Teaching presence have been consistently higher, with the initial seminal paper (Garrison et al. 1999) gaining in interest.

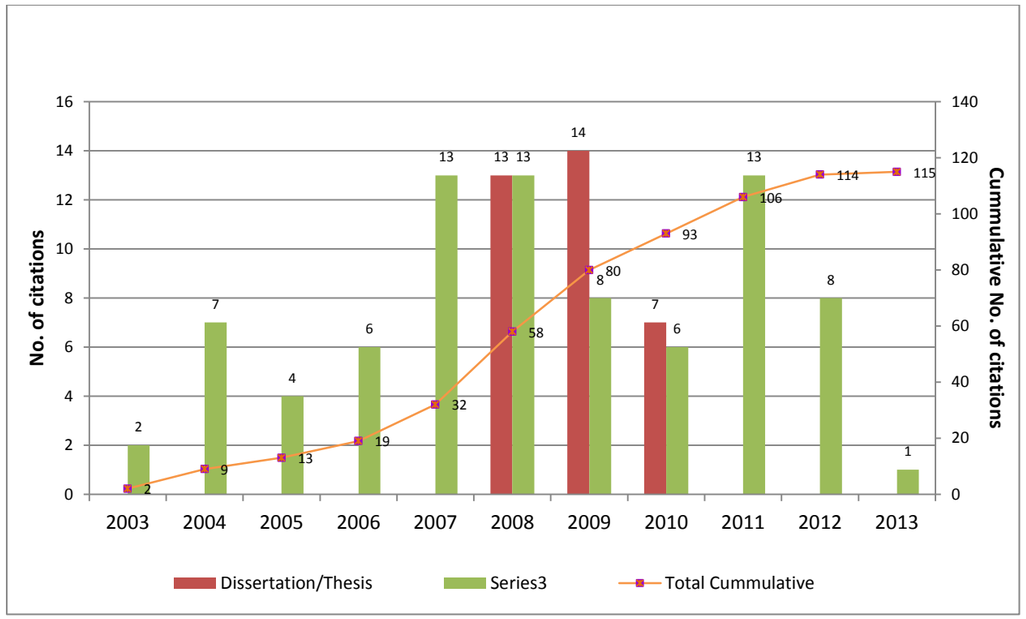


Legend	
ASP	ROURKE, L., ANDERSON, T., GARRISON, D.R. and ARCHER, W., 1999. Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education.* vol. 14, no. 2, pp. 50-71.
ATP	ANDERSON, T., ROURKE, L., GARRISON, D.R. and ARCHER, W., 2001. Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*. vol. 5, no. 2, pp. 1-17.
CI	GARRISON, D.R., ANDERSON, T. and ARCHER, W., 1999. Critical inquiry in a text-based environment: computer conferencing in Higher Education. *The Internet and Higher Education.* vol. 2, no. 2–3, pp. 87-105.
CTCP	GARRISON, D.R., ANDERSON, T. and ARCHER, W., 2001. Critical thinking, Cognitive Presence, and computer conferencing in distance education. *American Journal of Distance Education.* vol. 15, no. 1, pp. 7-23



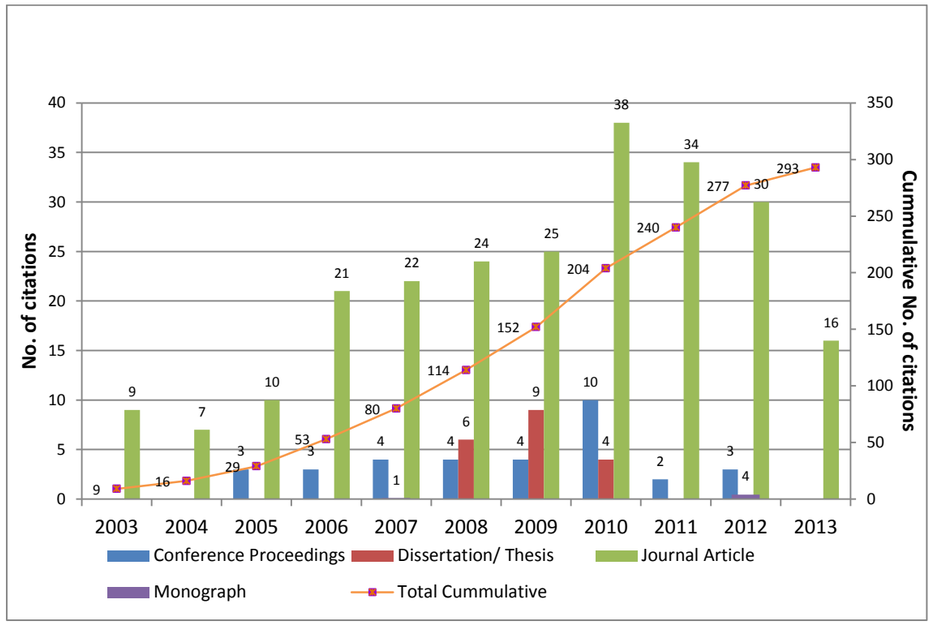
	Reference Type	Values							
	Conference Proceedings		Dissertation/ Thesis		Journal Article		Monograph		Total	Total Cumulative
Pub Year	Total	Cumulative	Total	Cumulative	Total	Cumulative	Total	Cumulative		
2003		0		0	13	13	1	1	14	14
2004		0		0	20	33		1	20	34
2005	4	4		0	22	55		1	26	60
2006	3	7		0	37	92		1	40	100
2007	5	12		0	52	144	1	2	58	158
2008	5	17	28	28	54	198	1	3	88	246
2009	10	27	35	63	50	248	1	4	96	342
2010	16	43	13	76	69	317		4	98	440
2011	8	51		76	83	400	3	7	94	534
2012	9	60		76	84	484	5	12	98	632
2013	10	70		76	47	531	8	20	65	697
Grand Total	**70**		**76**		**531**		**20**		**697**	

Figure B1: combined citation data from 2003 to mid-2013 for four out of the five key publications, forming the basis of the Community of Inquiry Framework



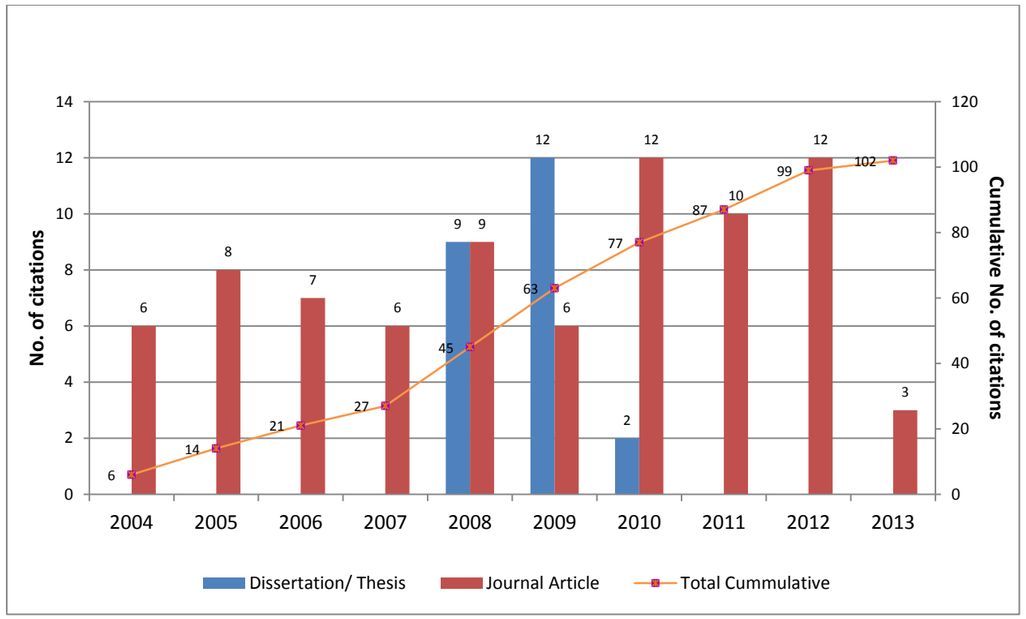
	Reference Type	Values				
	Dissertation/ Thesis		Journal Article		Total per year	Total Cumulative
Pub Year	Total	Cumulative	Total	Cumulative		
2003		0	2	2	2	2
2004		0	7	9	7	9
2005		0	4	13	4	13
2006		0	6	19	6	19
2007		0	13	32	13	32
2008	13	13	13	45	26	58
2009	14	27	8	53	22	80
2010	7	34	6	59	13	93
2011		34	13	72	13	106
2012		34	8	80	8	114
2013		34	1	81	1	115
Grand Total	34		81		115	

Cumulative citation data for ROURKE, L., ANDERSON, T., GARRISON, D.R. and ARCHER, W., 1999. Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education.* vol. 14, no. 2, pp. 50-71. Based on searches in Web of Science and Scopus from 2003 to mid-2013.



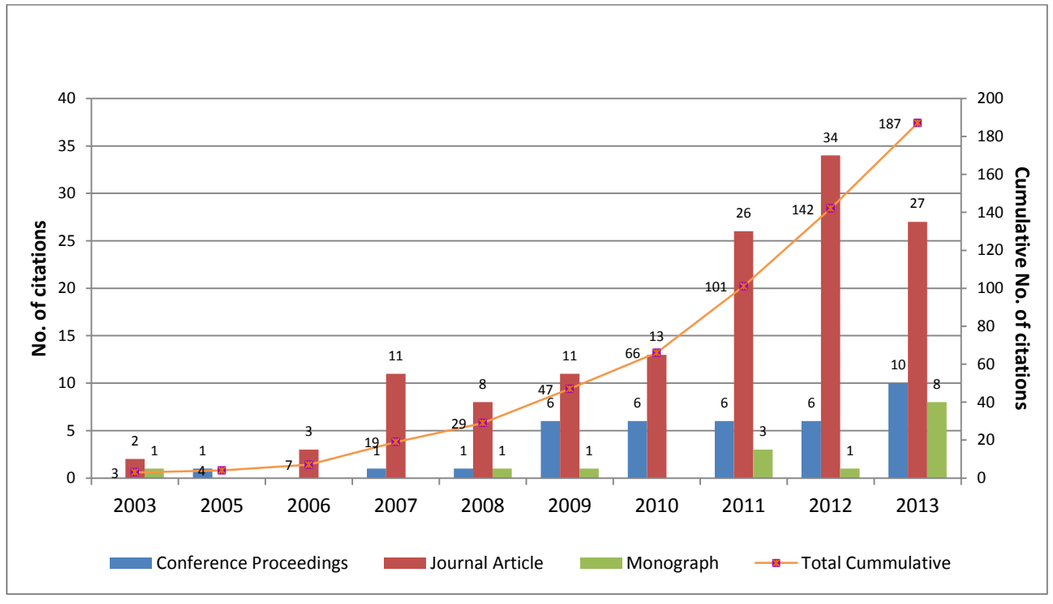
	Reference Type	Values							
	Conference Proceedings		Dissertation/ Thesis		Journal Article		Monograph		Total	Total Cumulative
Pub Year	Total	Cumulative	Total	Cumulative	Total	Cumulative	Total	Cumulative		
2003		0		0	9	9		0	9	9
2004		0		0	7	16		0	7	16
2005	3	3		0	10	26		0	13	29
2006	3	6		0	21	47		0	24	53
2007	4	10		0	22	69	1	1	27	80
2008	4	14	6	6	24	93		1	34	114
2009	4	18	9	15	25	118		1	38	152
2010	10	28	4	19	38	156		1	52	204
2011	2	30		19	34	190		1	36	240
2012	3	33		19	30	220	4	5	37	277
2013		33		19	16	236		5	16	293
Grand Total	33		19		236		5		293	

Cumulative citation data for ANDERSON, T., ROURKE, L., GARRISON, D.R. and ARCHER, W., 2001. Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*. vol. 5, no. 2, pp. 1-17. Based on searches in Web of Science and Scopus from 2003 to mid-2013.



Pub Year	Reference Type: Dissertation/ Thesis — Total	Dissertation/ Thesis — Cumulative	Journal Article — Total	Journal Article — Cumulative	Total per annum	Total Cumulative
	Values					
2004		0	6	6	6	6
2005		0	8	14	8	14
2006		0	7	21	7	21
2007		0	6	27	6	27
2008	9	9	9	36	18	45
2009	12	21	6	42	18	63
2010	2	23	12	54	14	77
2011		23	10	64	10	87
2012		23	12	76	12	99
2013		23	3	79	3	102
Grand Total	**23**		**79**		**102**	

Cumulative citation data for GARRISON, D.R., ANDERSON, T. and ARCHER, W., 2001. Critical thinking, Cognitive Presence, and computer conferencing in distance education. *American Journal of Distance Education.* vol. 15, no. 1, pp. 7-23. Based on searches in Web of Science and Scopus from 2003 to mid-2013.



Pub Year	Reference Type: Conference Proceedings — Total	Conference Proceedings — Cumulative	Journal Article — Total	Journal Article — Cumulative	Monograph — Total	Monograph — Cumulative	Total	Total Cumulative
	Values							
2003		0	2	2	1	1	3	3
2005	1	1		2		1	1	4
2006		1	3	5		1	3	7
2007	1	2	11	16		1	12	19
2008	1	3	8	24	1	2	10	29
2009	6	9	11	35	1	3	18	47
2010	6	15	13	48		3	19	66
2011	6	21	26	74	3	6	35	101
2012	6	27	34	108	1	7	41	142
2013	10	37	27	135	8	15	45	187
Grand Total	**37**		**135**		**15**		**187**	

Cumulative citation data for GARRISON, D.R., ANDERSON, T. and ARCHER, W., 1999. Critical inquiry in a text-based environment: computer conferencing in Higher Education. *The Internet and Higher Education.* vol. 2, no. 2–3, pp. 87-105. Based on searches in Web of Science and Scopus from 2003 to mid-2013.

Figure B2: cumulative citation data from 2003 to mid-2013 for four of the seminal publications, forming the basis of the Community of Inquiry Framework

The core paper by Garrison et al. (1999) introduced the CoIF, and then a further three supportive papers focused on the core elements (the Presences), plus a final paper addressed approaches to content analysis in online discussions. These five publications (in the blue boxes in Figure C) drew upon the experiences of the four authors in distance learning in higher education (HE), their knowledge of the literature plus an extensive quantitative content analysis undertaken on 16 studies published in the 1990s. In 2003, Garrison and Anderson's "*E-Learning in the 21st Century: a framework for research and practice*" subsumed the five seminal publications. Updated in 2011 by Garrison, this second edition is considered the benchmark for the CoIF, being the most current and complete version; it has sold over 3,000 editions[2]. All references in this narrative in the style of (2011: followed by a page number) refer to this publication. References are made to the 2003 first edition when there are notable differences and are referenced as (2003: followed by a page number). In a recent jointly-edited book with Akyol (Akyol and Garrison 2013), Garrison offers further insights in chapter one about the conceptual basis of the CoIF; this is referenced as (2013: followed by a page number). Figure C diagrammatically presents these publications. In 2008, Garrison with his doctoral student, Vaughan, published *Blended Learning in Higher Education*. Much of this work was superseded in the 2011 second edition "*E-learning in the 21st Century*" and subsequent publications. Although this work is referenced from time to time, it is not included in this diagram of key sources.

The purpose of the CoIF is to provide some order "…to the complexities of studying and understanding computer conferencing and online learning" (Garrison 2011: 28). The Research Group maintained that communication technologies such as online discussions could facilitate collaborative interaction, addressing "the implicit denial of community" in many distance education courses (Garrison 2011:30). The researchers also believed that online learning, based upon the more reflective, considered, leaner medium of online discussions, would add a new dimension to distance learning (Garrison et al. 2010, p.6).

Garrison believes that the CoIF should be considered a "parsimonious" theoretical framework, and potentially a nascent theory of e-learning (2011:27-28). He insists that such a framework must have boundaries if it is to ". . . provide some order to the complexities of studying and understanding computer conferencing and online learning …" (2011:28). Therefore he has decided that variables such as subject discipline, student characteristics, and technology, although they can be studied in relation to the CoIF, are classified as indirect (exogenous) variables for ". . . reasons of parsimony" (2011:27).

[2] Alex Masulis, a senior editor for Routledge provided this data on 5 January 2014 in an email correspondence.

AKYOL, Z. and GARRISON, D.R., 2013.

Educational communities of inquiry: theoretical framework, research and practice. Hershey: IGI Global

Please note all references **2013:** followed by a page number refer to this publication.

GARRISON, D.R., 2011.

E-learning in the 21st century: a framework for research and practice. 2nd ed. New York: Routledge. (2nd edition)

Please note all references **2011:** followed by a page number refer to this publication

GARRISON, D.R. and ANDERSON, T., 2003.

E-learning in the 21st century: a framework for research and practice. London: Routledge Falmer. (1st edition)

Please note all references **2003:** followed by a page number refer to this publication.

GARRISON, D.R., ANDERSON, T. and ARCHER, W., 1999.

Critical inquiry in a text-based environment: computer conferencing in Higher Education. *The Internet and Higher Education.* March, vol. 2, no. 2–3, pp. 87-105.

Please note all references **1999G:** followed by a page number refer to this publication.

ANDERSON, T., ROURKE, L., GARRISON, D.R. and ARCHER, W., 2001.

Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*. vol. 5, no. 2, pp. 1-17.

Please note all references **2001A**: followed by a page number refer to this publication.

ROURKE, L., ANDERSON, T., GARRISON, D.R. and ARCHER, W., 1999.

Assessing social presence in asynchronous text-based computer conferencing. *Journal of Distance Education*. vol. 14, no. 2, pp. 50-71.

Please note all references **1999R**: followed by a page number refer to this publication.

GARRISON, D.R., ANDERSON, T. and ARCHER, W., 2001.

Critical Thinking, Cognitive Presence, and Computer Conferencing in Distance Education. *American Journal of Distance Education*. vol. 15, no. 1, pp. 7-23.

Please note all references **2001G**: followed by a page number refer to this publication.

ROURKE, L., ANDERSON, T., GARRISON, D.R. and ARCHER, W., 2001.

Methodological issues in the content analysis of computer conference transcripts. *International Journal for Artificial Intelligence in Education*. vol. 12, no. 1, pp. 8-22.

Please note all references **2001R**: followed by a page number refer to this publication.

Figure C: key publications in the development of the Community of Inquiry Framework

Since the five seminal papers, a significant amount of literature has been published about the CoIF by the Research Group and the thriving research community[3] based in North America – so much so that many assert it is ". . . becoming increasingly influential for explaining and prescribing the effective conduct of online learning" (Arbaugh et al. 2008, p.133). Research focuses not only upon the CoIF as a guide to the development of online learning but also on tools to measure and validate the Framework. Initial research corroborating the CoIF focused on the quantitative content analysis (QCA) of online discussions. However, by 2006, Garrison was arguing for more multi-methodological studies addressing the limitations of QCA since analysing the transcripts of online discussions, he pointed out, was just one way in which "researchers can investigate and measure the development of a community of inquiry" (Garrison et al. 2010, p.8). A 34-item Likert scale questionnaire (often referred to as the CoI survey) was developed for larger studies, across subjects (Arbaugh et al. 2008, p.134). By 2009, Garrison was advocating a more mixed methods approach to research into the CoIF. This has been reflected in the work of, Shea et al. (2013), for example, whose team use social network analysis and quantitative content analysis to triangulate data.

Theoretical perspectives informing research into online learning

Here I address four theoretical perspectives which have informed research into online learning, discussing their underlying assumptions, and locating the CoIF amongst these. I begin with *behaviourism* and *cognitivism.* The former focuses on changes in behaviour occurring when an individual responds to stimuli; this learning is explained without reference to any internal states that are not observable. Behaviourist drill and practice and electronic page turning are generally associated with Computer Assisted Instruction (CAI). Research featuring behaviourism offers, for instance, comparisons of the learning time and effectiveness of CAI with standard classroom learning. *Cognitivism*, in comparison, is ". . . concerned with determining the mental states and processes that were assumed to take place in the mind between stimulus and response" (Jones 2015, p.51), making analogies between the mind and a computer (Harasim 2012). Research into artificial intelligence linked to cognitivism, investigates how intelligent tutoring systems can enable learners' progression through developmental tasks with minimum support. Much research into early online learning reflected both behaviourist and cognitive approaches to learning. Behaviourism's reliance on uniform learner activity cannot be compared with the CoIF, which features the subjective aspects of human activity. There are some similarities between

[3] Further information about this Group is available at the Community of Inquiry website at: https://coi.athabascau.ca/

cognitivist research and that into the CoIF, for instance, concern for the thinking and intentions of learners, and a focus on active learning. However, cognitivist emphasis on pre-programming learning is at variance to the CoIF's dependence on open-ended interactions.

A third learning theory, *constructivism*, maintains that knowledge-creation is brought about by individuals or in groups, through experiencing the world, and reflecting upon those experiences (Jones 2015). Much online learning research reflects the social constructivist stance, together with a growing belief that ". . . technology is one of the most suitable means of supporting constructivist principles in a learning environment" (Selwyn 2011, p.74).There is considerable resonance with extensive CoIF research in that learning in both is active and situated in interactions between people and their social setting (Jones 2015, p.55).

New 'theories,' with a particular focus on the impact on learning of the ubiquitous internet, have significantly featured in recent research into online learning. They address the dynamic nature of knowledge in a networked world, and the new ways in which knowledge is being produced and externalised (Clarà and Barberà 2013a). *Connectivism* theories, for instance, consider learners as building and traversing networks, finding new information, filtering secondary and extraneous information, changing their understandings and knowledge, which they then share with the network, starting the process again (Jones 2015; Kop and Hill 2008; Downes 2007; Siemens 2006; Siemens 2005).

Connectivism is particularly linked with Massive Open Online Courses, offering "a huge network of connected people and resources, within which each learner can plot their own course where learning is concerned" (Clarà and Barberà 2014, p.198). Participants in MOOCs should all engage in a joint teaching and learning experience, through intense interactions facilitated by technology. This is at variance with Garrison's reliance on the key role of the teacher/instructor in the CoIF.

Noteworthy criticisms emerge from connectivist research, including findings that learners' lack the required self-regulatory skills, and feel lost, confused and without any direction and support. Unlike, for instance, the work of Piaget or Vygotsky (Jones, 2015; Clarà and Barberà, 2014), connectivism lacks explanation of how learners' conceptualisations develop. There are certainly common themes in the CoIF and connectivist approaches, such as encouraging learner autonomy (Kop and Hill 2008), and supporting learner self-efficacy (Anderson and Dron 2011). However, there is considerable difference between the two, notably the focus in connectivism on the open network rather than the closed community in the CoIF. For "Connectivist learning happens best in network contexts, as opposed to individual or group contexts" (Anderson and Dron 2011, p.87). Additionally the products of connectivist learning are usually openly available and accessible on the internet, whereas

the products of a community of inquiry are usually housed within the institutional VLE. Fundamentally the CoIF places more emphasis on scaffolding and structure of which there is little within a MOOC since "...structure is unevenly distributed and often emergent, with that emergence seldom leading to structure that is optimally efficient for achieving learning goals" (Anderson and Dron 2011, p.89).

It is highly debated whether connectivism is indeed a new theory of learning (Harasim 2013), a theory of knowledge generation (Anderson and Dron 2011), an underdeveloped theory (Jones 2015), a sub-set of constructivism, or just an amalgam of ideas already present in well-established learning theories (Lange 2012). I concur that connectivism "... is undoubtedly an important school of thought directly applicable to the use of technology . . ." in learning (Duke et al, 2013,p.8). Nevertheless my overall impression from the literature suggests that the former does little more than rationalise some but not all of the pragmatically developing practice in the latter, without providing a foundation on which further development of the CoIF can be built. For that reason I have not pursued connectivism further in this work.

Although I committed to social constructivist theory throughout my research, I am aware that I need to consider whether other standpoints undertaking research into online may enhance my critical review of learning within communities of inquiry. In particular I identify social network analysis and actor-network theory (ANT). Here I focus upon ANT which integrates material technologies and media into a framework that includes people and machines symmetrically. Thompson (2012a) views web technologies as key network participants. As Jones (2015) explains, they are not aggregated as with other research, but included in her extensive participant list (Thompson 2012a, p.4). Critically she regards both humans and technologies as legitimate participants in the research endeavour, with an equal position (Thomson, 2012b). Consequently, she treats both human and non-human elements of any network with the same emphasis, with both being capable of exerting ". . . force and through their mutual associations they co-constitute the different elements of the network" (Thompson 2012a, p.93).

ANT is becoming popular in education research. New technologies have clearly provided notable examples of the influence of technology on how persons, including teachers and learners, behave. For instance, the use of 'cut and paste' has certainly changed the ways in which many learners, writers and researchers assemble and present their thinking. However, I find that ANT is difficult to pin down (Thompson 2012a), encompassing a wide array of practices and approaches rather than presenting a coherent theory (Jones 2015). Its promotion of the equivalence of technology and persons as actants is certainly challenging

as well as the notion of symmetry which is not without its critics. For instance, Kaptelinin and Nardi (2006, cited in Jones 2015, p.95), argue that although material things can have agency, humans are different kinds of actors because of motivation and intentionality. After detailed discussion of intentionality, Jones (2015) concludes that "equalisation between all actors in ANT fails" (p.96). Currently, there has been little place for ANT in my research to date and that into the CoIF, since there is little emphasis on the study of technologies *per se* and they are certainly not considered with equal weighting. For the future, ANT certainly does hold potential for my work in progress, as discussed later in Chapter three.

Jones (2015, p.57) comments that ". . . learning is too slippery and complex a term to have a single theoretical solution and the addition of networked and technologies only adds to that complexity" (Jones 2015, p.67), My position is that current research into online learning in CoI's is strongly associated with constructivist learning which should therefore influence any research I undertake into the Framework but I accept that other approaches have much to offer. I now turn to a scrutiny of the CoIF and how it informs and guides the development of online learning.

This study

The present investigation of the CoIF draws upon a systematic engagement with educational literature and research, and the application of the CoIF theory and thinking to six of my publications. These publications are drawn upon extensively throughout this narrative, to fulfil two roles. First they are used retrospectively to assist my interrogation of the CoIF. Although these articles were not initially conceived as forming part of a doctorate submission, they were designed to address a common purpose, that of informing and developing understandings of how learning technologies can be implemented to support L&T in tertiary education in the early twenty-first century (C21st) in my UK setting. Second the publications are used as evidence to illustrate my continuing journey as an education researcher. Thus, entering the "contested space" of the PhD by publication (Lee 2010, p.13), this thesis is not an exegesis – a traditional type of meta-narrative encompassing this candidate's publications. This piece sets out to be more "…than the sum of a collection of papers" (Jackson 2013, p.360) since it moves beyond the findings in my publications to create new knowledge and understandings conveyed in this textual representation of my current intellectual position regarding the CoIF.

Research questions

A series of research questions framing this critique is presented in Table A. Additional questions to frame my future work are provided in Chapter Six.

RESEARCH QUESTION ONE *How, and in what ways, can a scrutiny of the Social presence (SP) construct, based upon Oztok and Brett's (2011) framework, advance understandings and signpost areas for future research?*	*Chapter 4.1*
RESEARCH QUESTION TWO *How, and in what ways, can an exploration of the contrasting notions of critical thinking and reflection within my publications and the CoIF inform the development of a more nuanced approach to their application in Cognitive presence (CP)?*	*Chapter 4.2*
RESEARCH QUESTION THREE *How, and in what ways, can an examination of Teaching presence (TP) through the lens of student-centred learning demonstrated within my publications, further understandings about this construct?*	*Chapter 4.3*
RESEARCH QUESTIONS FOUR *What refinements can be suggested to give the Framework "a greater reach within the scientific community on e-learning?" (Jézégou 2010)?* *In what ways can the CoIF, informed by my understandings and conceptualisations, be extended to centre upon educational experience and personal learning?* *What are the implications of the findings from Chapter Four for educational practice when implementing the CoIF, particularly drawing upon my interpretation of student-centred learning (SCL)?* *How can tutors be supported in moving to the new and challenging online environment?*	*Chapter 5*
RESEARCH QUESTION FIVE *How can the Influence blending TP and SP create and maintain trust and a sense of belonging, leading to open, purposeful, and critical dialogue between and amongst the learners and tutors in a CoI?*	*Chapter 5.1.1*

RESEARCH QUESTION SIX *How can uniting TP and CP provide learners with a "cognitive map" with which they can guide themselves as self-directed learners in a CoI?*	*Chapter 5.1.2*
RESEARCH QUESTION SEVEN *How can the Influence between SP and CP support student-centred learners to move between all the phases of the Practical Inquiry Model leading to higher levels of learning?*	*Chapter 5.1.3*
RESEARCH QUESTIONS EIGHT *Where and how do intermental and intramental thinking integrate in a CoI?* *Is there need for a private space within the Framework for private thinking and meaning-making, and if so what is its purpose?* *When, and why, would learners retire to, and immerse themselves in, this private space?* *Where and how do learners engage in self-regulatory learning activities, including metacognition and management of the affect?*	*Chapter 5.2*
RESEARCH QUESTION NINE *What support can be provided to tutors who may be unfamiliar with the new, challenging online environment, requiring them to be subject, pedagogical, and technological experts?*	*Chapter 5.3*

Table A: research questions framing the critique of the CoIF in this thesis

The structure of the thesis

The structure of this work is presented in Figure D. Chapters One and Two introduce the publications and the CoIF. This is followed by an overview of how I have undertaken research, which draws heavily upon the publications as illustrative examples. Specifically situated prior to my interrogation of the CoIF, the third chapter informs the reader about my stance in regard to research which underpins my approach to the exploration of the CoIF. In Chapter Four, I interrogate the three constituent elements or Presences of the CoIF informed by their application in my publications and educational research. My publications are used as a springboard to provide focus and boundaries for this critique. Then, in Chapter Five, I proffer my understandings and conceptualisations of the CoIF, in which I focus upon the

"educational experience" which Garrison's model locates at the heart of the CoIF. First my notions of the CoIF are operationalised, focusing upon the intersections of the CoIF which I refer to as the 'Influences', indirectly citing Garrison. In the second section of Chapter Five, an extension to the Framework is proposed, addressing a perceived omission in the CoIF. Finally, a Tutors' Network is suggested to support tutors in the often new, and challenging, online environment. The thesis concludes with discussions about the new understandings and knowledge emerging from this thesis and provides pointers for future work.

A glossary of key terms and acronyms is provided in A3 in accessible fold-out form at the end of the narrative. The publications are in Appendices 1–6 supported by Information Sheets. The structure of this PhD by publication has been influenced by Steeples (2003) in placing the publications at the end of the thesis but with frequent references to these throughout the narrative. I have made extensive use of footnotes to further illuminate the text, provide illustrative examples, and signpost readings.

CHAPTER	Focus of the chapter	Purpose of the chapter
Foreword	An introduction to the thesis.	This chapter sets the scene regarding online learning in the C21st, and the necessity for models and frameworks to inform implementation. It introduces the CoIF and the key concepts of metacognition, self-regulation, and self-efficacy, as well as reminding the reader of the challenges for tutors and learners when transitioning into online learning. Also, it outlines how my publications are to be used to interrogate the CoIF with the aim of creating new knowledge, and further understandings.
ONE Introduction to the publications	An introduction to the six publications drawn from my research portfolio.	These six publications were undertaken mainly within the context of my work, at Queen Margaret University, and are indicative of my approach to learning and teaching with technologies, and my approach to research.
TWO An overview of the Community of Inquiry Framework	An introduction to the Community of Inquiry Framework.	Before scrutinising this well-known framework, this chapter introduces the CoIF, its rationale and the three Presences. This section discusses emergent research about the CoIF which focuses upon SRL, metacognition and emotion. Critics of the CoIF are also introduced.
THREE A review of my approach to knowledge creation through the inquiry process	A scrutiny of my on-going journey as an education qualitative researcher focusing upon the philosophical, theoretical, and methodological assumptions underpinning my work as typified through my publications.	This chapter clarifies my approach to knowledge creation. I re-visit tensions within my work, and identify, and evaluate alternatives for going forward.
FOUR A critical examination of the three presences in the Community of Inquiry Framework	An interrogation of each of the Presences of the CoIF, calling upon my publications and a wide range of educational sources to illustrate, support or refute the explications of the Presences.	This chapter informs and extends perspectives on the CoIF, developing, corroborating, and sometimes challenging, understandings about the Presences. It helps frame forthcoming proposals in Chapter Five, signposting areas that may enhance and extend the CoIF.
FIVE Two enhancements to the CoIF and a proposal	Two enhancements to the CoIF and a proposal are discussed in this chapter drawing upon the critique of the CoIF in Chapter Four, my developing understandings of L&T, and references to the literature.	This chapter answers the call by the CoI research community by enhancing the CoIF, focusing upon the intersections in the Framework, and extending it to include a learner space for intramental thinking. A Tutors' Network is proposed to develop the abilities of online tutors.
SIX Conclusion	This final chapter re-visits the aims of this thesis, evaluates its contribution to scholarship and practice, and concludes with a short reflective piece about the contested space of the PhD by publication	I use this final chapter to demonstrate that this thesis is more than the sum of my publications, but has produced new knowledge and understandings about the CoIF.
REFERENCES	References within the text of the narrative are presented	
GLOSSARY	Key terms and acronyms. The glossary has been printed in A3 format so they can easily be referred to when reading this narrative.	This have been provided to ease access to the narrative.
APPENDICES	The six publications are found in Appendices 1 – 6. There is an accompanying Information Sheet.	

Figure D: diagrammatic representation of the strucure of the thesis

CHAPTER ONE:
AN INTRODUCTION TO THE PUBLICATIONS

This chapter introduces the publications drawn from my research portfolio. Undertaken mainly within the context of my work, at Queen Margaret University (QMU), these publications are indicative of my approach to learning and teaching with technologies, which I also introduce in this chapter.

1.1 Background to my research portfolio

Published from 2007 to 2014, the six selected works, drawn from my research portfolio, are exemplars of the outputs of my on-going journey as an education qualitative researcher. Indicative of my overall research theme, each of these pieces explores a contemporary, real-world phenomenon: how tutors and students experience, and come to understandings about learning, in technology-mediated learning environments[4]. The aim of my research is to inform and develop my understandings about the complex situation of how, and in what ways, learning technologies can be implemented as facilitative tools to support learning, teaching, and research in specific subjects in tertiary education in the early C21st. The purpose of the new knowledge created through my exploratory research is to inform practice through dialogues between myself, and my Technology Enhanced Learning Team, and academic colleagues, mainly at QMU, about the implementation of technologies to enhance the educational experience for learners and tutors. Also, through my research outputs, I hope to contribute, in a limited way, to current debates within the learning technology communities and, in some cases, within subject disciplines and their respective professional bodies whilst potentially guiding future work. The intended audiences of my publications are academic tutors, learning technologists, fellow researchers, and the funders of the research: the Higher Education Academy (subject centres: Health Sciences and Practice, Dance, Drama and Music) and the Scottish Funding Council.

My publications inform, and are informed by, my approach to research, the context of my work, and my conceptualisations of learning and teaching with technology. I turn to these next, and then offer a summary of each of the publications.

[4] I use the term technology-mediated learning environments to describe one that provides the learner with a range of technologies. Some of these technologies may be institutionally provided such as a Virtual Learning Environment (VLE) and ePortfolio, and/or others including social media such as Twitter and Google Sites.

1.1.1 My approach to research

The six publications selected for inclusion in this thesis are indicative of my approach to knowledge creation through the inquiry process which is broadly social constructionist/idealist/interpretivist. I accept that the knowledge generated through my research is both provisional and transitory, and should be viewed as the best understanding at that point in time (Remenyi 2013, p.5). I conduct case study research with small samples in particular contexts and at a particular time, and use data-generation methods that are interactive and humanistic such as semi-structured interviews, and focus groups. The aim of such an approach is to develop thick, contextually-specific descriptions of the experiences of the participants in my studies. Researcher reflexivity linked to my emergent ethical conscience is essential. Chapter Three reviews my approach to knowledge construction through the inquiry process.

1.1.2 The context of my research

My work is situated at QMU, a small niche university in Scotland, whose 5,000 students take predominantly professional programmes in Health Sciences, Arts, Social Sciences and Management[5]. As a learning technologist, I seek change[6] through inspiring tutors to embed learning technologies in their curricula. With my Team, I am now responsible for an ever-growing suite of learning technologies. Implementation of these as facilitative tools is aligned with institutional strategies, especially the vision for Quality Enhancement for Learning, Teaching and Assessment (QMU 2012).

1.1.3 My conceptualisations of learning, teaching, and technology

Each of the publications has been influenced by my approach to learning and teaching. I outline this approach now, and reference throughout this thesis.

Learning, for me, describes a highly complex process for which there is no generally accepted definition (Illeris 2009, p.1). It includes developing understandings, often but not necessarily, resulting in new or radically revised understandings involving a permanent change for the individual. In some cases, it may lead to a change in perspective, ethics, and values. I consider that learning is related to an individual's ability, an internalised skill, and development, which is the demonstration of that ability. Such development is particularly important in the professional programmes which feature in the publications in this thesis and

[5] Further background information about QMU is available in publication 3, from page 190 onwards.
[6] Further information about Susi Peacock is available at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=78945&type=webfolio. In an article Peacock et al (2009), I discuss the role of learning technologists as change agents especially in supporting e-research.

will be essential for learners in coping with, and adapting to, the constant challenges of their working lives. I use deep learning to describe different levels of the same cognitive demand, as, for example, the difference between a child's reading and evaluation of "Animal Farm" by Orwell (1945) and that of a mature adult. In comparison, I relate higher learning to a taxonomy, for instance, as that in Moon's (1999) map of learning, in which learners move through a series of stages.

As a social constructivist, I consider learning to be both a social and individual activity, relevant and meaningful for learners, building upon their previous experiences and knowledge, leading to modifications and developments in understandings, knowledge, attitudes, skills and ideas (Kehrwald 2008, p.90). Such a perspective, echoing the work of Vygotsky (Nicholl 1998) conceptualises learning originating in the social plane and then, moving on to the intramental, individual plane. However, I acknowledge, in some cases, that individual curiosity and interest in the individual plane may initiate learning activity in the social plane. Learning requires an internalisation by a learner of social interactions such as communication, dialogue, and collaboration occurring amongst, and between, learners in groups and communities. Through internalisation, the individual then transforms the external interactions into a new form of understanding. To convey my developing understandings in this area, I use the terms 'intermental thinking' referring to thinking occurring in the social setting between people engaged in an activity such as group work, and 'intramental thinking' which refers to personal thinking by an individual.

Linked to 'intramental thinking', learners need time to reflect upon their learning, and self-monitor, and regulate their strategies for learning especially in challenging collaborative online learning experiences. For me, a key element of 'intramental thinking' is reflection. Although I do not advocate privileging reflection over all approaches to meaning-making and knowledge construction, I am particularly attracted to reflection's role in learning as articulated in my second publication for this thesis on page 839, lines 12-16. Influenced by Moon (1999, 2001, 2004, and 2005), I maintain that reflection is linked to learning in three specific stages: *meaning-making* when learners are processing new materials; *working with meaning* when new learning is achieved through restructuring and handling of materials, and in *transformative learning* involving an examination of learner beliefs, assumptions, and behaviours (Moon 1999, pp.136-151). I am especially drawn to the two last stages where there is no immediate introduction of new material of learning but rather that ideas learnt in a relatively non-meaningful way are reconsidered in the light of new learning experiences (Moon 2004, p.85). My conceptualisations of reflection are also influenced by Cowan's (2006, pp.33-345) work and his notions of reflection 'for' (preparation for learning), 'in' (reflection during a learning experience), and 'on' (reflection after a learning experience)

action, and particularly the stress he places on the constructive potential of reflection-for-action where learners are planning for future self-development and activity. I find that technologies such as ePortfolio offer a vehicle for the recording of reflections, and easy access to archived materials which may provide the springboard to reflections.

Integral to reflection is emotion and its impact on all activities and domains of learning (Cleveland-Innes and Campbell 2012). Frequently neglected in educational research (Dirkx 2008, p.9), emotion[7] is another frame of reference for my conceptualisations of learning. Particularly important, as noted in the Foreword, is the strong emotional response that some learners have to online learning often as a result of conflict engendered through group work (Dirkx 2008, p.9). Closely linked with meaning-making and knowledge construction (Angelaki and Mavroidis 2013, p.79; Moon 2004, p.54), emotions in learning (both positive and negative) are often as a response to the learning environment, activities, and assessment. Emotions may, in addition, be connected to feelings of anxiety and fear about failure, not meeting expectations of self/others, and of being overwhelmed. Furthermore, emergent work indicates that learner emotion may also be due to receiving too little or too much structure and/or guidance from the tutor (Dirkx 2008, p.10). Recent work is now re-conceptualising emotion from something to be regulated – akin to 'baggage' – to having a more dynamic, constructive, integral role in the learning landscape; thus offering a more holistic way of knowing one's self, and the world (Dirkx 2008, p.7). Embryonic work is exploring emotion and self-regulated learning and self-efficacy (Artino and Jones 2012, p.171); however, it seems likely, as hinted at in the work of Cho and Heron (2015, p,92) and noted in the work of others that: ". . . positive emotions lead to positive outcomes and negative emotions to negative outcomes" (Cleveland-Innes and Campbell 2012).

Underpinning my approach to learning, and the related constructs of reflection and emotion, is student-centred learning (SCL). I subscribe to the model in which *learners* are not only active participants through their interactions such as team learning and teaching with significant others (peers, tutors, advisors, learning support staff) but also pivotal in the defining, shaping and influencing of their learning experiences (Rogers 1983, p.5). In some cases, this may lead learners to become co-creators in the learning and teaching processes (TEAL 2010, p.1). My interpretation of SCL also expects *tutors* to reflect on 'how' and 'why' they teach. Tutors have a guiding and facilitative role, offering as much leadership as possible to students both for subject-specific and learning skills development, with the

[7] I use the terms emotion, affect, and feeling interchangeably in this work focusing as Dirkx 2008, p.11 on their influence on the quality of the educational experience. A workable definition of emotion provided by Dirkx is that emotion is a ". . . neurophysical response to an external or internal stimulus, occurring within and rendered meaningful through a particular sociological context and discourse, and integral to one's sense of self" (2008, p.12).

intention of encouraging development of high-level cognitive skills (see publication three, page 200, lines 16-20). I concur with Beetham and Sharpe (2013) that whilst SCL certainly begins with the learner, tutors in HE have a significant planning and guidance role which is a ". . . unique, skilful, creative and demanding human activity" (p.2).

My module, 'An introduction to technology enhanced learning', which I teach at QMU, is grounded in this approach, as is another module to which I contribute, 'Education in Action'. In this second module, outlined in publication three, case study three, learners are supported to build upon their expertise and experience to enhance their skills necessary to teach effectively (see publication three, page 98, lines 80-82).

I am committed to the view that learning environments, supported by communication technologies, may afford multiple opportunities for interpersonal interaction between tutors, students, and support staff, with the possibility of mutual modification and development of ideas, values, attitudes, potentially leading to deep, reflective intramental learning (Kehrwald 2008, p.90). Online learning environments can provide exciting arenas for learners to construct knowledge and extend understandings through shared participatory activities and experiences in spaces that may be referred to as virtual communities. However, the success of such communities is dependent upon ". . . learners' intrinsic motivation to participate in group learning and sharing of ideas" (Fung 2004, p.136).

1.2 The publications

The following five sub-sections introduce the publications in which I am lead author, and outline their contributions to this thesis. Available in Appendices 1–5, the publications are preceded by an Information Sheet detailing the funded research – the basis for four of the publications – and a diagrammatic representation of the methods employed. Downloads, citations and the impact factor of the journals of publication are also provided on these Sheets, as well as an overview of authors' contributions plus publisher approval for inclusion in this thesis. Throughout the narrative, references to the publications include page and line numbers, for example, P1:218:20 equates to publication 1, page 218, and line 20. A timeline of the publications is provided in Figure 1.1 These publications were written according to the conventions and house style of the respective journals. An additional sixth publication is provided in Appendix 6, and supplementary information about this work is available in a separate sheet. Other research outputs during this period (for instance, my work on online focus groups[8]) were less suited to inform the scrutiny of the CoIF.

[8] I have joint authorship in publications with researchers exploring online focus groups using a VLE's online discussion boards. For example, Williams et al. (2012).

2007

(P1) Publication one: e-learning in physiotherapy education.

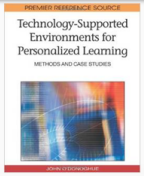
PEACOCK, S. and HOOPER, J., 2007. E-learning in physiotherapy education. *Physiotherapy*. September, vol. 93, no. 3, pp. 218-228.

2010

(P2) Publication two: tutor response to implementation an ePortfolio to support personal development planning and learning.

PEACOCK, S., GORDON, L., MURRAY, S., MORSS, K. and DUNLOP, G., 2010. Tutor response to implementing an ePortfolio to support learning and personal development in further and higher education institutions in Scotland. *British Journal of Educational Technology*. *September*, vol. 41, no. 5, pp. 827-851.

2010



(P3) Publication three: using ePortfolios in higher education to encourage learner reflection and support personalised learning.

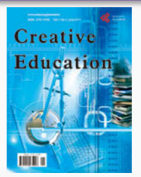
PEACOCK, S., MORSS, K., SCOTT, A., HISLOP, J., IRVINE, L., MURRAY, S. and GIRDLER, S., 2010. Using ePortfolios in higher education to encourage learner reflection and support personalised learning. In: J. O'DONOGHUE, ed. *Technology supported environment for personalized learning: methods and case studies*. New York: Information Science Reference, pp. 185-210.

2012

(P4) Publication four: feedback and ePortfolios to support professional competence in healthcare learners.

PEACOCK, S., SCOTT, A., MURRAY, S., and MORSS, K., 2012. Using feedback and ePortfolios to support professional competence in healthcare learners. *Research in Higher Education Journal*. vol. 16, pp. 1-23.

2012



(P5) Publication five: exploring tutor and student experiences in online synchronous learning environments in the performing arts.

PEACOCK, S., MURRAY, S., DEAN, J., BROWN, D., GIRDLER, S. and MASTROMINICO, B., 2012. Exploring tutor and student experiences in online synchronous learning environments in the performing arts. *Creative Education*. vol. 3, no. 7, pp. 1269-1280.

2014

(P6) Publication six: conceptual interrogation of the potential of the Community of Inquiry Framework to inform faculty implementation of communication technologies in an intensely rich digital learning environment.

PEACOCK, S., 2014. A conceptual interrogation of the potential of the Community of Inquiry Framework to inform faculty implementation of communication technologies in an intensely rich digital learning environment [online]. In: P. BLESSINGER, J. ANCHAN, and B. COZZA, eds. *Proceedings of the 2nd International Higher Education Teaching and Learning Conference: Innovative, Learning-Scapes, e-Scapes, Playscapes and More*. Higher Education Teaching and Learning. [viewed 26 March 2015]. Available from: https://www.hetl.org/wp-content/uploads/2014/05/FINAL2014HETLConferenceAnchorageProceedingsV3.2.pdf

Figure 1.1: timeline of submitted publications

1.2.1 Publication one (P1)

Health practitioners, such as physiotherapists, taking an evidence-based approach to their practice, need to evaluate the potential of rapidly emerging practices to improve patient care. Professional bodies, for example, the Chartered Society of Physiotherapy (CSP), have developed online spaces, such as InteractiveCSP (CSP 2015), to enable practitioners to share resources, pool knowledge and exchange experiences. Thus professional programmes should prepare students for lifelong, often online, work-related learning. This first publication, drawn from two collective case studies, provided detailed comparative analysis of the experiences of pre- and post-registration learners and tutors who were new to using a Virtual Learning Environment (VLE). The VLE had been implemented as a vehicle to familiarise learners and tutors with online learning, in preparation for their lifelong learning. Detailed descriptions of the contextual situation of each of the cases were offered illustrating the different stages of the students' professional journeys and the varied use of the VLE. Although the abstracted findings from this work reported participants experiencing the VLE as a supportive tool for learning (both as a "one-stop shop" and as a vehicle for communication) notable differences existed between the student cohorts. Post-registration students (postgraduates) were considerably more positive about the online discussions in providing support, improving dialogue, increasing motivation and deepening engagement. Pre-registration learners (undergraduates) preferred using the VLE simply as a repository and disliked the online discussions since they did not align with their perceptions of how learning was undertaken at university. A strong tutor presence was noted as essential for learner engagement and motivation in the online discussions. In the conclusion, educational institutions and providers of online networks were encouraged to support tutors in developing and maintaining online environments, particularly addressing issues such as access, induction, time-commitments and the development of staff IT skills and online moderation.

This publication is included in the thesis since it was foundational in the development of my research theme, outlined in 1.1, and my approach to the inquiry process. It was one of the first examples of how I collected, analysed and abstracted data as a qualitative researcher and illustrative of my emergent understandings of the importance of transparency in the decision-making in the inquiry process, and researcher reflexivity. It is also indicative of my approach to working with academic colleagues and using the outputs from my exploratory work to inform and broaden my role at QMU as a change agent. Dissemination was undertaken through the learning technology community and through my co-researcher's work with the CSP.

In the appraisal of the CoIF in Chapter Four of this thesis, I reference the outputs from this work to inform interrogations of the construct “Social presence” (SP) (Garrison 2011, pp.30-41), drawing upon the contrasting student and tutor experiences of online discussions. This publication highlights the impact of media and learner conceptualisations on SP, as well as, the importance of the affective. In addition, illustrative examples are used from P1 to demonstrate differing learner and tutor notions of SCL and the resulting impact on “Teaching presence” (TP) (Garrison 2011, pp.54-62). The importance for learners of facilitated discussion is also drawn upon in the review of the TP construct. In Chapter Five, this publication is drawn upon to support the two enhancements proposed to refine, and extend the CoIF whilst informing the proposed Tutors’ Network.

1.2.2 Publication two (P2)

This is the first of three publications addressing what was, at that time, a research gap – institutional and sector implementation of ePortfolio (systems and processes). P2 focused upon the advantages and challenges of implementing an ePortfolio from the tutor perspective. Based upon a convenience sample, 23 interviews were conducted with tutors in different institutions, sectors (further and higher education) and disciplines across Scotland at differing stages of ePortfolio implementation using various systems. An extensive data analysis, informed by the approach developed in P1, provided insights into tutor experiences of, and comings to understandings about, learning with ePortfolio, resonating with my overall research theme. Tutors were very positive about ePortfolios especially when moving from paper-based portfolios. Linking ePortfolios with progression and employability, tutors wanted to continue to refine implementation by supporting students through their induction. Probing in interviews highlighted how tutors were wrestling with how to implement Personal Development Planning (PDP) and ePortfolio in the curriculum, often due to their limited understandings of reflection. As a result there was frequently a mechanistic implementation of the tools, although staff development guarded against this in some circumstances. Tensions also arose when tutors wanted a more holistic implementation of ePortfolio (focusing on the process as well as the product of learning) but student lack of understanding and engagement, resulted in its use as an electronic storage of artefacts linked to summative assessment (the product of learning). Additional technical and legal barriers were noted in the interviews indicative of ePortfolio systems immaturity at that time. Few of the tutors engaged in PDP themselves or had an active ePortfolio to demonstrate. Time restrictions and initiative fatigue were frequently cited by tutors as individual barriers to engagement. Long-term institutional commitment, protected tutor time and a tutor-support community were proposed for an effective ePortfolio solution.

P2 is indicative of my continuing journey as a qualitative researcher. I built upon the inquiry process developed in P1, applying it to a larger sample drawn from within, and outwith, QMU across sectors and subjects. Drawing on my experiences in P1, I guided the Research Team in the process of data collection and analysis. In this instance, there was less data abstraction associated with the presentation of the findings, reflecting my preferred approach, taking the form of presenting themes linked to current literature. Many of the themes in P2 such as time and staff development resonate with P1, but critical in this work was the emergence of reflection which has subsequently become a key element in much of my work.

This paper informs the appraisal of the "Cognitive presence" (CP) (Garrison 2011, pp.42-53) construct in the CoIF by contributing to discussions about understandings of reflection, learner development and reflection, as well as demonstrating the role of reflection in supporting planning for future self-development and activity. Also, this publication features in discussions about TP, highlighting the impact of tutor skills, knowledge, and perceptions on design of technology-mediated learning environments.

1.2.3 Publication three (P3)

ePortfolios had been implemented, for several years at QMU, as a vehicle to support reflection across disciplines. Earlier work,[9] including P2, had indicated that learners can engage in internal and external dialogues as a means of achieving personal, meaningful and deep self-understanding supported through ePortfolio.

I responded to a personal invitation by Professor O'Donoghue to write a chapter for his book on the highly topical, and political, subject at that time, personalisation. The personalisation agenda had been particularly influential in schools focusing on improving student engagement, achievement and progression whilst removing barriers to education for vulnerable, disadvantaged and disengaged young people (DfES 2006, Miliband 2004). Personalisation in HE was being linked to increased learner autonomy, motivation, self-confidence, and improved engagement with studies (Knox and Wyper 2008, p.5). This chapter examined the potential for new technologies such as ePortfolio combined with reflection to deliver the personalisation agenda in HE whilst maintaining the centrality of learners as individuals responsible for their own development. The publication was based upon an extensive literature review on personalisation and e-learning, and four tutor narratives in health, education and drama. It also called upon JISCinfoNet's (2008) model, to explore how the ePortfolio could be a technological solution encouraging learner reflective

[9] An example of this is PEACOCK, S. and MURRAY, S., 2009. Learners' initial expectations and experiences of ePortfolios: A pilot study. *Brookes eJournal of Learning and Teaching.* vol. 2, no. 4.

practice whilst meeting the multiple goals of the personalisation agenda. The paper concluded that through the judicious implementation of reflection integrated with ePortfolio, the five components of the personalisation agenda could be achieved. Issues, resonating with findings in P2, persisted such as lack of learner engagement with the reflective process; increased tutor time to support personalisation; limited learner access to, and use of technology; plus, the lack of dynamic ePersonalisation. Towards the end of the chapter, concerns were voiced that technological determinism could distract from the complex decision-making required for the fruitful implementation of reflection integrated with ePortfolio (technology) to provide a truly personalised learning experience.

I have included this publication since, at the time of writing, little work had addressed the potential of ePortfolio as a facilitative tool in health sciences, drama, and education to support the personalisation agenda. The chapter is also an exemplar of my evolving approach to knowledge creation compared with that described in P1 and P2 which were based on collective case studies and semi-structured interviews. In this chapter, narratives collected from tutor (informal discussions, textual accounts and modular documents such as handbooks and module descriptors) were used, plus an extensive literature review to inform the piece. Also, for the first time, I called upon a model to frame the work (the five components of personalisation after DfES 2004, and Pollard and James, 2004); this is now my preferred approach to structuring my work. I was also influenced, for the first time, by Moon's (1999; 2005) substantial work on reflection upon which I draw heavily throughout this thesis.

I use the four case studies in P3 in the critique of the CoIF to support my emergent conceptualisations of reflection informed by Moon's (1999) model of learning. Supportive illustrations are also drawn from P3 to demonstrate the impact of emotion and learner cognitive development on reflection, and the role of external dialogues in reflection. I also draw upon this publication in the enhancements to the CoIF proposed in the fifth chapter of this thesis.

1.2.4 Publication four (P4)

This article, addressing the 'contested' space of learner engagement with feedback, was a departure from most of my publications reporting small-scale case studies at QMU as typified in P1 and P2. The foundation of this publication was an extensive literature review on feedback and learners in tertiary education. Findings in earlier work into ePortfolio (as illustrated in P2 and P3) and publications covering working with healthcare students, ePortfolios and feedback (Peacock et al. 2011) were also called upon. In health sciences, failure to engage with feedback may impact on patient care. I developed (with feedback from

my co-authors) a practical approach to ePortfolio implementation as a facilitative tool for active learner engagement with feedback on the product of their learning. Heavily influenced by Nicol's work on feedback (2010; 2011), this approach envisaged learners having more internal and external reflective dialogues about feedback, leading to the development of metacognitive and self-regulatory skills. Figure 1 on page 21 of P4 diagrammatically represents the conceptual underpinnings of this approach, which has three key areas:

- Broadening learner conceptual understanding of feedback
- Supporting learners to re-examine their role in the feedback process
- Develop a fuller awareness of the potential of ePortfolio as a facilitative tool to support broader and deeper engagement with feedback.

To ensure tutors could use the approach, tables were provided in the appendices of this publication with practical ideas for implementing each of the above through a module's lifecycle. To be successful, it was clear that tutors, as well as learners, would need to revisit their understandings of, and role within, the feedback process.

This publication is included since it is an example of transition in my work. I sought to provide a guide for tutors but realised that a 'cookery' book approach would be extremely limited. The process of creating the approach was difficult as I was keen to draw upon learner experiences and the extensive literature on feedback. The approach itself, in retrospect, was too complex and needed further refinement, plus testing. It was a beneficial, if painful, learning experience of developing an approach and it has helped in my understanding of the difficulties that others such as the initial Research Group had in developing the CoIF and their wish to maintain a succinct framework (2011:28).

With regard to the CoIF, I call upon this publication to show that tutors' ideas, understandings, and perceptions have a notable impact on design, which has rather limited acknowledgement in the 2011 version of the CoIF. Illustrative examples are also used from this paper to demonstrate that central to student-centred design is the very varied and differing ideas of learners reflecting their backgrounds, interests, and skills, and the importance of learner guidance in the development of internal reflective dialogue serving as a springboard to self-appraisal.

1.2.5 Publication five (P5)

Social, economic, political, and environmental drivers result in learners and tutors spending significant amounts of time outwith the academic institution especially in vocational programmes. Heavily blended/online learning programmes are used to maintain tutor/learner

contact including the development of supportive learning communities. This paper explored whether audio and video mediated communications such as Blackboard Illuminate and Adobe Connect, referred to as online synchronous learning environments (OSLEs), could be used as facilitative tools to enable appropriate, interactive, educational experiences. Three collective case studies compared tutors using OSLE to provide dissertation supervision, performance feedback, and pastoral support. Data collection methods included using the OSLE for online interviews and for video diaries as well as using the ePortfolio to collect descriptive data through a questionnaire. Data analysis was an iterative and interpretative process (see Figure 3 in P5 on page 7).

The work provided insights into tutor and student experiences of, and comings to understandings about, learning with an OSLE which was considered to be a convenient tool helping to sustain contact since being able to 'see' each other was deemed to be particularly beneficial. To support further abstraction from the themes, I used the CoIF as an evaluative tool. Although tutors believed the use of audio and video in learning environments could lead to high levels of learning, the lack of robustness of the technical system impeded the development of Cognitive presence. Seeing and hearing instantaneously enhanced SP ameliorating the 'disconnect' experienced by students studying away from the institution. However, learner anxiety was linked to video-mediated communication with some students vehemently disliking the video option for communications whilst others considered it to be intrusive. TP raised issues such as tutor preparedness to teach in an OSLE with its differing demands compared with f2f.

Little research, at that time, had been undertaken about OSLEs in the performing arts and yet tutors and students are outwith the campus a significant amount of time. The small research project, the basis of P5, wanted to explore if OSLEs could help lessen the psychological distance between students and tutors. This publication has also been included because it demonstrates how technologies for learning offer potential as research tools building on work using online discussion boards as vehicles for online focus groups, as noted above in 1.2.

From P3 onwards, I had been exploring the role of evaluative tools such as models and frameworks to help guide, understand and interpret findings from my research. For P5, I read de Freitas and Neumann's (2009) work on pedagogical strategies that could be broadly applied to OSLEs. One of the frameworks they considered was the CoIF which I used to structure my own work, helping me to organise the project, and the paper, and demonstrating that learning had been supported when using the OSLE. Nevertheless, limitations of the Framework were identified. Although I had been aware of the CoIF for

some time, it was whilst working on this paper that I decided that this very popular Framework needed further scrutiny. In my appraisal of the CoIF in this thesis, I call upon this publication to support my conceptualisation of SP as evolving and multi-faceted. I use examples to highlight the importance of the visual media in SP for both learners and tutors, and learner attitudes and preconceived ideas about SP. This publication was also influential in the enhancements proposed to the CoIF in Chapter Five, and the suggestion for a Tutors' Network since through the dissemination events, the tutors started to develop their own support network.

After this introduction to the publications, in the next chapter, I provide an overview of the Community of Inquiry Framework.

CHAPTER TWO:
AN OVERVIEW OF THE COMMUNITY OF INQUIRY FRAMEWORK

Garrison asserts that the CoIF represents a "coherent set of articulated elements and models describing a higher educational learning experience" (2011:27) based upon a collaborative constructivist approach to learning (2013:5). At the heart of the visual representation of the CoIF – the Venn diagram presented in Figure 2.1 – is *educational experience.* The CoIF's purpose, Garrison maintains, is the development of an appropriate, quality, generic educational experience in an online community in which learners engage in collaborative educational conversations and activities including discourse, and reflection (2011:54).

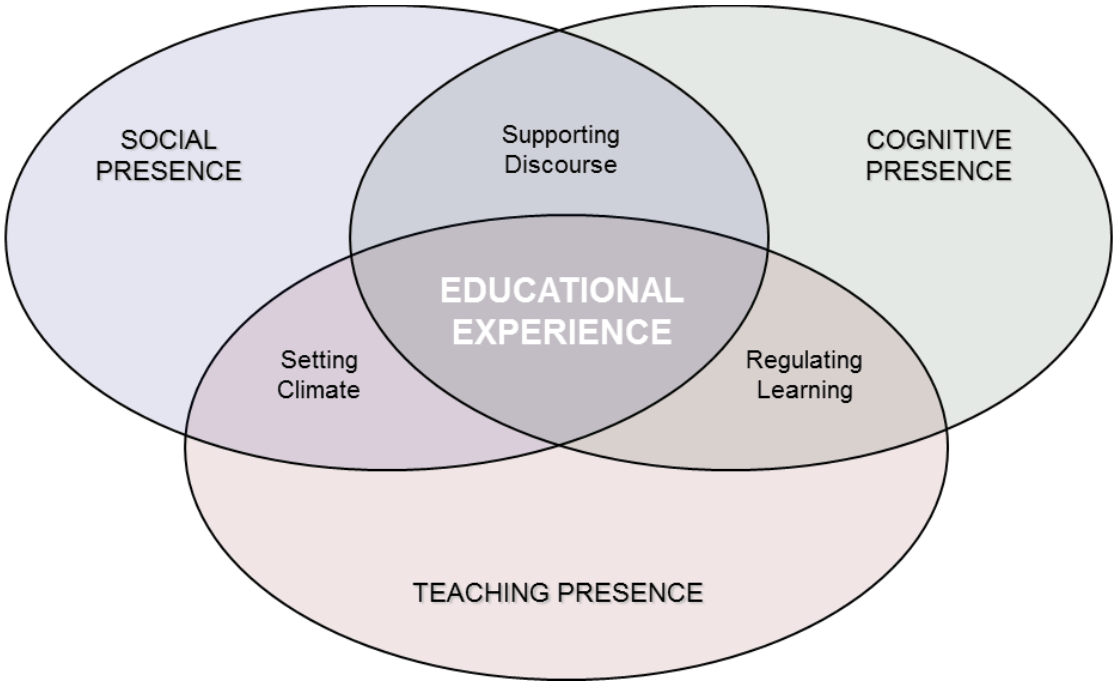


Figure 2.1: Community of inquiry (2011:23)[10]

The particular goal of the CoIF is ". . . to describe a process that is consistent with deep and meaningful approaches to learning" (2011:50) addressing how worthwhile knowledge

[10] Permission was granted by Alex Masulis, senior editor, Routledge on 5 January 2015, for use in this dissertation of Garrison's figure of the Community of Inquiry. Use of this figure is non-exclusive, English language rights only, and limited to this dissertation only when held in print and electronic formats by the University of Stirling, and stored on the University's dissertations database. The figure is entitled in Garrison's book "Community of Inquiry ". The figure is situated on page 23 of the book by GARRISON, D., R., 2011. *E-learning in the 21st Century.* 2nd ed. Abingdon: Routledge.

is constructed. Such an approach rejects "…an objectivist focus on learning outcomes" (Akyol et al. 2009, p.124) which is considered a time-consuming activity doing "…little to inform the teaching and learning processes" (Akyol et al. 2009, p.131). Understanding the nature of educational transactions and processes of learning (Akyol et al. 2009, p.131) is fundamental to the CoIF. However, there is a growing body of work which reports on ". . . the potential and success of the framework to create a learning environment where deep and meaningful approaches are employed to reach higher order learning outcomes" (Garrison and Akyol 2013, p.113). Nevertheless the CoIF is primarily a *process* (rather than *product*) driven model since ". . . it is understanding the process of inquiry that will stay with the student and be of subsequent value in future learning endeavours" (Garrison and Vaughan 2008, p.30).

2.1 A community of inquiry (CoI)

> An e-learning community of inquiry is where autonomy and collaboration are not contradictory ideas but the essential elements of a unified and qualitative shift in how we approach higher education. (2011:4)

A CoI is based on the premise that "Learning in an educational context is a social enterprise" – socially worthwhile and personally meaningful (2013:2). Hence, in his criticisms of distance learning in the late C20th, Garrison dismisses the "assumption that learning is an individual experience and that there is little need to negotiate meaning and confirm understanding" (2011: 30). He rejects any separation of the individual and the society (2011:10), and asserts "An educational experience must be directed to purposeful learning that develops personal meaning while confirming shared understanding and public knowledge" (2013:1). Core to the educational experience is inquiry ". . . a self-correcting process where members of the community challenge beliefs and suggest alternative perspectives for exploration" (2011:43).

According to Garrison, learners are, first introduced to established social knowledge, in the form of academic subject disciplinary materials, in the community (2013:5). Then, the educational experience is deepened through interactions with others (dialogue and negotiation). This stance, resonating with one of the Research Group's earliest work, emphasises the importance of learners and tutors having opportunities for sustained interactions to support the social construction of knowledge (Anderson and Garrison 1995, p.184). In 2013, Garrison re-iterated this approach in his definition of a community of inquiry which ". . . is an environment where participants collaboratively construct knowledge through sustained dialogue which makes possible personal meaning-making through opportunities to negotiate understanding . . ." (2013:4).

For the **individual learner**, participation in a CoI should lead to knowledge (re-)construction and personal meaning-making through critical thinking, and discourse (2013:5). The individual, reflecting the constructivist roots of the CoIF, is responsible for meaning-making from new experiences by building on, and integrating, previous knowledge and experiences (2013:3). Learners then check their emergent understandings through social interaction in the community (2011:9; 2011:21). Learning communities provide intellectual challenge so that individuals can go beyond themselves in terms of depth and breadth of understanding (2013:5). Thus, individual cognitive knowledge construction and understandings are intricately interwoven with relations with others and the ensuing negotiation of shared meaning through social interaction (Fung 2004, p.136). Learning becomes an active endeavour dependent upon the learner galvanising the opportunities presented to build upon, and extend knowledge, by interacting with the learning environment, and others (Jézégou 2010).

For the **group**, the outcome, or "artefact" of the collaborative endeavour, is mutual understanding, and the construction and extension of collective knowledge which, in the longer-term, Garrison asserts may contribute to societal knowledge (2013:5). Inquiry, implicit within this approach, ". . . is a process leading to the growth of human (collective) knowledge" which marries both personal interests and social knowledge (2013:5) involving ". . . a personal quest for meaning, and a collaborative quest for truth" (2013:6).

Such a quest for "meaning and truth" is dependent on discourse which Garrison opines, is a disciplined form of discussion supporting the recognition, clarification and resolution of "cognitive conflict such as ambiguities and contradictions" (2013:6). Problems of understanding, it is stated, should be discussed openly, and critically, in a CoI and, then, through negotiations, may lead to mutual agreement in the grouping. The quality of knowledge construction is dependent upon a specific type of dialogue – purposeful, critical, and inclusive. According to Garrison, such discourse, challenging and testing learners' emergent understandings, requires a particular supportive social environment where divergent ideas and perspectives can flourish, be probed, reviewed, reflected upon, and challenged (2011:22; 2013:3).

Garrison repeatedly asserts that learners must feel a sense of belonging to, and identification with, a collaborative, educational community that is respectful, and where dialogic debates can occur free of intimidation (2013:3). Such a shared social space, it is stated, values rational argument, deliberation, and discussion (2013:6). Collaborative learning is core to such groupings for, as Garrison and Vaughan maintain (2008, p.17) ". . . an educational community is a formally constituted group of individuals whose

connection is that of academic purpose and interest who work collaboratively towards intended learning goals and outcomes . . .” Throughout the CoIF there is an implicit assumption that “When students identify with the group and perceive themselves as part of a community of inquiry, the discourse, the sharing of meaning and the quality of learning outcomes will be optimized” (2011:39). Recently, Garrison has asserted that CoI provide opportunities for slower, more deliberate, rational thinking contrary to fast, intuitive thinking based on feelings and previous experiences which is less reliable (2013:6). He states that “Education should be an environment to slow down, inquire and reflect upon problems” (2013:6). The value of such communities is amplification of learning since “Individuals in such communities are able to grow beyond what is possible in isolation through collaboration and reconstruction” (2013:5). Academic leadership is required in the design of such community-based, collaborative learning experiences, allowing learners to develop “. . . intellectually in a continuous manner” (2013:3). In addition, Garrison envisages an experienced educator monitoring and managing the academic and social development of the community (2013:4).

2.2 Establishing a community of inquiry

Garrison maintains that optimum levels of three distinct interlocking dimensions (Social, Cognitive and Teaching presence) can lead to the creation “. . . of a deep and meaningful . . . learning experience” beneficial for both individual and collective knowledge construction which is socially relevant (2011: 22). Critically, Garrison (2011:26) asserts that all individuals in the collaborative CoI will “manifest each of the presences” with variation according to the individual learner, and/or the tutor, and/or the task. Figure 2.2 details each of the elements (Presences), their associated categories and indicators. Development of each was informed by the literature and “refined within the Community of Inquiry conceptual framework” (2011:25). Indicators consist of key words, phrases or synonyms indicating the presence of an element in online discussions (1999G:88).

The following is a brief introduction to the Presences which are scrutinised in more detail in Chapter Four.

2.2.1 Social presence (SP)

SP links online learners through mediated communication and motivates them to engage in joint meaning-making and confirmation of understanding, leading to a “. . . quality learning

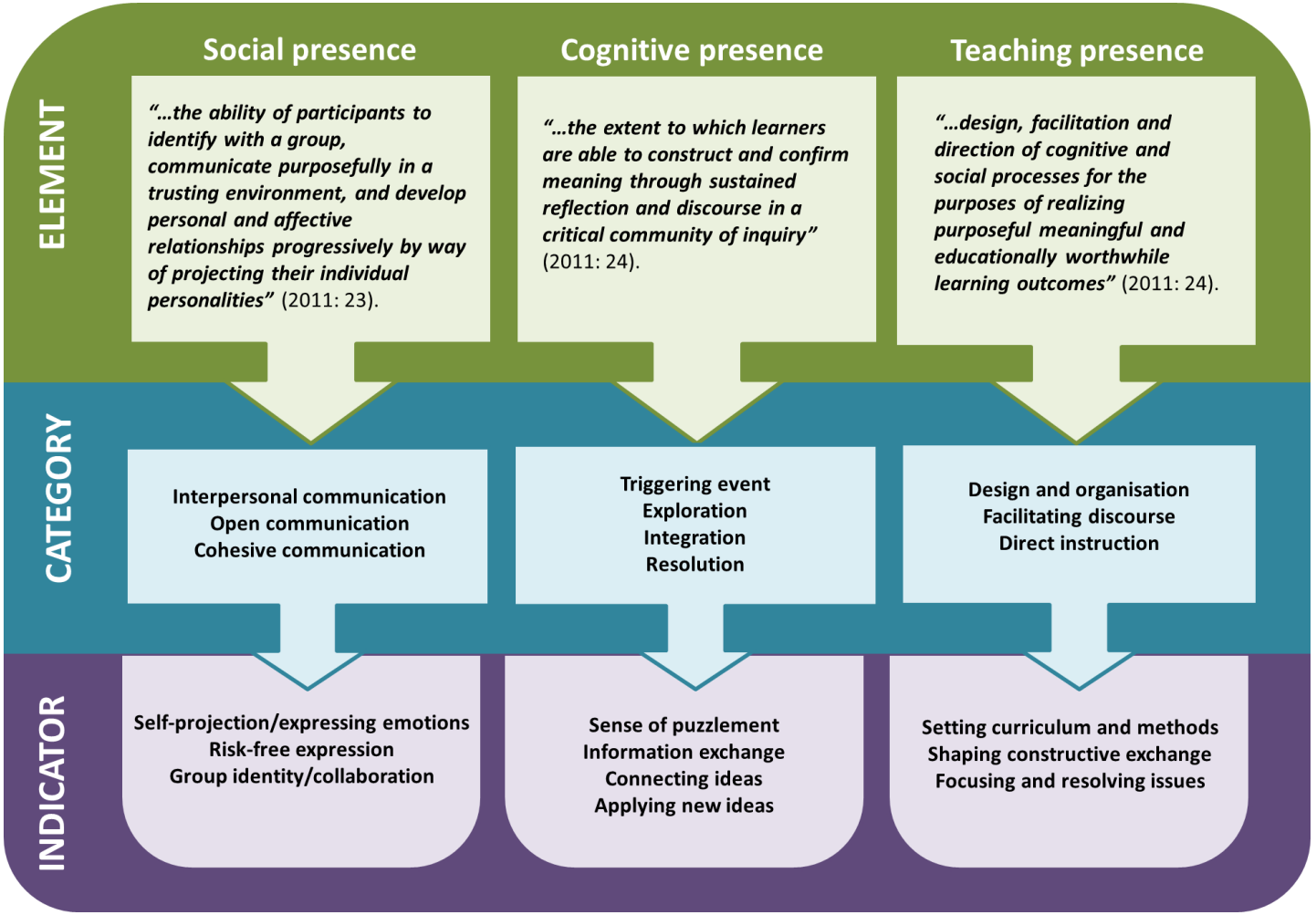


Figure 2.2: categories and indicators of each of the presences in the CoIF, adapted from 2011:25.

experience for each and every student" (2011:40). Initially, the Albertan Research Group in their development of SP focused on refuting communication theorists' assertions, such as those by Short et al. (1976), that linked a media's properties with both its ability to convey social information, and the consequent perception by the user of that media to generate and maintain SP (Leong 2011, p.8). In essence, communication through a media containing video and/or audio approximating the characteristics of f2f communication (the benchmark) would transmit more social cues leading to more social communication thus strengthening SP (Oztok and Brett 2011, p.2). Online asynchronous discussions - a 'leaner' media due to the absence of "visual channels" - would have reduced SP thus impacting negatively on the sense of community amongst learners (Moore 1980, cited in Oztok and Brett 2011, p.4). In his seminal paper, Rourke cites Walther who posits that online discussions can be "hyper-personal" (Walther 1994, p.9, cited in 2001R, p.53) supporting SP in online communities. Hence, earlier definitions of SP in the CoIF, particularly influenced by the work of Gunawardena and Zittle (1995 and 1997), addressed not the medium but the ability of CoI members to project themselves "socially and emotionally as 'real' people", (2003:28-29) regardless of the properties of media by using compensating techniques such as parenthetical metalinguistic cues (including capitalisation, punctuation, and emoticons in messages) to add affective information in online discussions.

By 2011, Garrison had re-focused SP; he stated that sharing socio-emotional feelings may not be the ". . . defining characteristic of SP" (2011:37) as "Group cohesion is the dynamic state that social presence is attempting to achieve …sustain[ing] the commitment and purpose of a CoI" (2011:39). Calling upon the work of Rogers and Lea (2005, p.156 cited in 2011, p.33), Garrison prioritises the development of group identity through open and interpersonal communication bonding learners with the group, strengthening the community and supporting CP (2011:39). Learners as members of the community should have a strong sense of belonging, trust and feeling connected to the group and to the group's purpose as opposed to being individuals within the group, since ". . . group identity takes precedence over personal identity" (2011:37). Garrison asserts developing interpersonal relationships takes time and is not the primary goal for students. He also expresses concern that too much emphasis on relationship building could lead to "pathological politeness" and/or distracting social banter (2011:40), which may impede the development of *group* SP, and, ultimately impact negatively on CP (2011:34).

In the completely re-written chapter on SP in the 2011 edition (pp.30-41), Garrison asserts the SP construct has changed from being largely affective to a "more complex

and dynamic element" (2011:33) since ". . . sharing socio-emotional feelings in a purposeful community of inquiry should not be the primary focus of social presence" (2011:37). This is reflected in the amended definition ". . . the ability of participants to identify with a group, communicate purposefully in a trusting environment, and develop personal and affective relationships progressively by way of projecting their individual personalities" (2011:23). Thus, the three SP categories, see Figure 2.3, were re-framed (2011:40)[11]. The "affective" SP category was renamed to "interpersonal communication," but incorporated an affective indicator. As indicated in Figure 2.3, all three SP categories have been corroborated by others researchers including Kim (2011) and Annamalai and Tan (2014).

2.2.2 Cognitive presence (CP)

The purpose of Cognitive presence is learners' meaning-making and confirmation of understanding through sustained dialogue (including negotiation) and reflection (2011:24). CP is a cognitive activity involving reasoning, evaluation, judgement, creativity, imagination, action, and deliberation (2011:43) being based upon the Research Group's conceptualisations of critical thinking (CT). CT is envisioned as working through a series of stages, representing the cycle and structure of the inquiry process (Akyol and Garrison 2011b, p.186), to find a correct solution – it is about finding truth through logical thinking based on knowledge which is factual or correct (Starkey 2012, p.56). The outcome of CT in the CoIF is resolution – a solution usually involving some type of hypothesis testing proffered to a specific problem resulting in an improvement of thinking, authentication of existing knowledge and/or generation of new knowledge (2011:47).

This notion of CT informs the operationalising of CP in the Practical Inquiry (PI) model (see Figure 2.4). This recursive process seeks to bridge the private and public worlds of the learner with learners moving through four stages (phases) utilising the knowledge gained in one phase to inform the next (Akyol 2013, p.34). The *first* phase commences with learner puzzlement, usually reflecting a triggering event that has been posed in the online discussions, in most cases, by the teacher to arouse student interest and engagement with the problem. Next, in the *second* phase, learners search for, and explore, relevant information individually and in groups. Then, in the *third* phase, information is connected and integrated by learners potentially leading to resolution of ideas/problems. In the *final* stage, a possible solution, developed in collaboration, is proposed to a specific problem usually

[11] The naming of SP's three indicators is emergent. Garrison emphasises the importance of communication in establishing Social presence (2011:22). Thus, I use the three indicators: interpersonal, open and cohesive communication as outlined on p.38 of his 2011 work. These three indicators all lead to group cohesion – the dynamic state that, according to Garrison, SP is attempting to achieve.

The three categories of SP in the CoIF and their indicators as outlined by Garrison (2011)

Interpersonal communication (2011:37-40)

This re-focused category is responsible for setting the academic climate through open, respectful, supportive, purposeful, and meaningful discourse which encourages learners' sense of belonging to the group, and identification with its goals. There are three indicators of this SP category:

- *Affective expression* is conveyed in online text-based communications through the use of conventional or unconventional expressions of emotion such as 'emoticons', capital letters, and repetitious punctuation. These should encourage respect amongst the participants, and help create, and sustain a welcoming environment
- *Self-disclosure* is developed through sharing text-based personal biographies and postings, including details of members' personal lives. Such messages convey vulnerability, and help members of the community to trust each other, and thus, encouraging risk-free expression
- *Use of humor* through postings which tease, and include jokes and irony. Such messages convey 'goodwill' and encourage trust amongst the participants of the community indicating that on a *personal* basis they will not be challenged. Garrison acknowledges that humour can be problematic especially in lean, text-based communications, and suggests limiting its use until SP is established (2011:41).

This SP category resonates with those proposed in Kim's work "Affective connectedness" (2011, p.770, and p.773), and Annamalai and Tan's "Affective" (2014, pp.8-9)

Open communication (2011:38-39)

Garrison opines that collaborative learning requires open, reciprocal communication which is courteous and developed through ". . . a process of recognizing, complimenting, and responding to the questions and contributions of others. . ." (2011:39). A climate of trust and acceptance is required to allow questioning but ensuring self-esteem is protected. Indicators, thus, include: continuing a discussion thread; quoting from other's postings; asking questions of the community; complimenting each other; expressing appreciation and agreement, and referring specifically to other's messages. Open, risk-free communication, Garrison asserts, is fundamental to the development of a CoI encouraging postings that not only express agreement but also those that question and probe which is essential for inquiry (2013:3).

Similarities to this SP category are found in Kim's work "Open communication" (2011, p.770, and p.773), and Annamalai and Tan's "Interactive" (2014, pp.8-9)

Cohesive communication (2011:39)

This category particularly speaks to learners having a sense of belongingness. It begins with participants addressing each other by name in their postings (vocatives) and then with the gradual use of 'we and 'our' (inclusive pronouns). Salutations to the group such as greetings and closure are also indicative of cohesive communication.

Whilst Kim's (2011, p.770 and 773) third category "Sense of community" resonates with this SP in Garrison's work, there is not an equivalent in Annamalai and Tan's research (2014). The two Malaysian authors state that using vocatives, and inclusive pronouns, is not deemed to be culturally appropriate in online discussions. However, in their work, learners made extensive use of phatics, and salutations in their postings (Annamalai and Tan 2014, p.8).

Figure 2.3: an overview of the SP categories accompanied by corroborating research by Kim (2011) and Annamalai and Tan (2014)

involving some type of hypothesis testing. In essence, learners link complex ideas collating evidence to support a judgement (an outcome that is possibly tested); this equates with the development of new knowledge. Cyclical rather than linear, it is accepted by those publishing on the CoIF that due to a variety of reasons such as epistemological orientation of course design, and teaching approach (Garrison and Cleveland-Innes 2005, p.140), not all learners will move through all the stages, and some will not reach the final stage of testing potential solutions (resolution).

2.2.3 Teaching presence (TP)

Teaching presence is the ". . . key to creating and sustaining social and cognitive presence and a community of inquiry" (Akyol and Garrison 2011b, p.185) as demonstrated by the number of citations about this Presence in the seminal article by Anderson et al. 2001 (see Figure B2). As a unifying and guiding presence, TP, Garrison explains, stimulates, then brings together, and aligns, SP and CP in the creation of a dynamic, appropriate, educational experience supporting students in the attainment of their learning goals (2011:25). TP consists of three categories; the first – design and organisation – focuses initially on establishing SP, leading learners to feel a sense of belonging (part of a community) and security, resulting in open communication and group cohesion (Garrison and Vaughan 2008, pp.19-20). Although SP is essential, its role is in supporting CP; hence the Research Group advocate that TP design should always remember ". . . the purpose of establishing social presence is to support and enhance a purposeful critical community of inquiry" (2011: 89) and that "Once established, social presence will recede to the background as academic challenges grow" (2011:89). TP particularly focuses on design of activities that will support learners through the phases of the PI Model, using case-based studies focusing discussions on real-world perspectives and encouraging ". . . students to take responsibility for extracting meaning, and provide opportunities for students to moderate discussions" (2011:90).

Facilitating discourse primarily focuses on the development and maintenance of online discussions between, and amongst, tutors and peers. From the Research Group's seminal papers (2001G:19-21), low levels of interest and participation caused by a perceived lack of structure in, and an excessively democratic approach to, online discussions dominated early TP conceptualisations (2011:24). Hence, in the online discussions, there is a strong focus on the tutor's roles, such as: ensuring all members of the community contribute; modelling critical discourse postings; encouraging appropriate responses, and making links to other postings. It is particularly the tutor's role to ensure learners feel ". . . the discussion is moving

Phase one: a trigger event

An initiation or triggering event is constructed by the teacher to ensure student engagement with the activity and conceptualisation of the problem. Students should be able to relate to the subject-specific issue from their previous experiences/studies, leading to the generation of curiosity and questions. In some cases, this initial event, often ill-structured and intriguing, may even provoke student unease or foster dissonance. Scenarios, case studies, online debates are often used to engage the learner, provoking discourse, problem-solving, and inquiry. Although, in most cases, the teacher initiates this phase, sometimes learners may offer suggestions. Garrison states the teacher will need to judge if learner suggestions are suitable or a distraction. Selection of an appropriate task providing opportunities to create, and then, apply knowledge is essential if students are to move through all phases of the Model.

(After Garrison 2011:46; 48; 51; 53, Garrison 2001G:15, and Hosler and Arend (2013, pp.153-154)).

Descriptors

Recognising the problem
Learners present background information that leads to a question

Sense of puzzlement
Learners ask questions or post messages that take discussions in new directions

Phase two: exploration of issue or problem

Initially this requires students to understand the problem and then seek relevant information and possible explanations. This divergent phase is characterised by group activities such as brainstorming, the offering of supportive or contradictory ideas, the solicitation of narratives of perspectives or experiences, and the elicitation of comments or responses to the value of the shared information or ideas. Individually, it will be undertaken through literature searches which facilitated sharing of resources. Students will move between their individual, private reflective and shared worlds as they try to make sense out of the complex issue, both collaboratively and individually. Teachers monitor discussions, modelling their expectations of a suitable posting encouraging participation and sustaining motivation. Crucially, the teacher ensures the learning community is focused and moves to the next phase of the PI Model since studies have indicated that many online discussions falter at this stage.

(After Garrison 2001G:15, Garrison 2011:51-53, and Hosler and Arend (2013, pp.154 -156)).

Descriptors

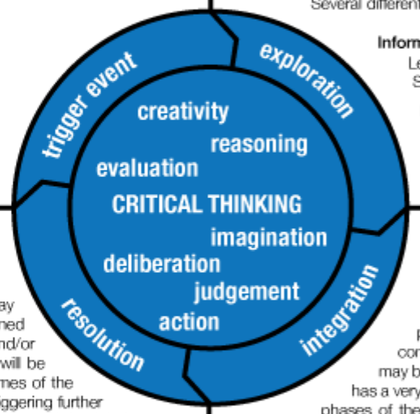
Divergence within the online community
There are unsubstantiated contradictions of previous ideas in learners' messages. Learners will disagree with others but provide little substantive reasoning and evidence

Divergence within a single message
Several different ideas/themes are presented in one message posted by a learner

Information exchange
Learners post personal narratives, descriptions, and facts which are not necessarily used to support a conclusion
Suggestions for consideration Characterised by learner comments such as "Does that seem right?" or "Am I way off the mark?"

Brainstorming
Garrison considers this to be learner comments that add to previous points but do not develop/justify or defend

Leaps to conclusions
Learners state unsupported opinions without justification/evidence for position



Phase three: integration or making sense

This phase requires learners to make decisions about the integration and presentation of ideas in a succinct way to begin assembling a meaningful solution or explanation. This is a more structured and focused phase of meaning-making. In this phase, the learner has both internal (reflective) and external (collaborative) dialogues. Garrison asserts that the benefits of online communication come to the fore, supporting both reflective and collaborative activities in this phase, although he accepts there may be fewer postings since students ". . . become more reflective when they converge on possible solutions" (2011:48). The teacher has a very specific role in probing for understanding and misconceptions, and ensuring that the learners continue to move through all the phases of the Model helped by a metacognitive appreciation of, and the associated challenges, of each of the phases. This phase is characterised by many postings, and a myriad of ideas, the teacher assists in retaining focus, and steers the group towards solutions.

(After Garrison 2001G:16, Garrison 2011:51-53, and Hosler and Arend (2013, pp.156 -157)).

Descriptors

Convergence amongst group members
Previous messages in the online discussions are referred to by learners which indicates their agreement and supports the building on ideas of other learners

Convergence within a single message
Hypotheses are presented within one learner message which are justified, developed and defensible, yet still tentative

Connecting ideas, synthesis
Learners integrate information from a variety of sources and bring them together into a coherent whole

Creating solutions
Learners may explicitly offer solutions

Phase four: resolution

This final phase involves resolving the issues/problems. Learners may create meaningful frameworks or discover a specific solution to a defined problem. In some cases, the proposed resolution may be applied and/or tested, either directly or vicariously, exploring its viability. Learners will be expected to present and defend their suggested resolution. Outcomes of the resolution stage include development of further issues, questions, triggering further inquiry. The teacher's role is to encourage group discussions so learners can defend their decisions such as "So what"?

(After Garrison 2011:47, 52-53, and Hosler and Arend (2013, pp.157 -158)).

Descriptors

Apply/test

Practicalities may limit the opportunities for application and testing but learners may discuss how they would test these and the anticipated outcomes

Defend
Online learners can present their proposed resolution to the problem/issues and defend this through discourse in the online community

Figure 2.4: the Practical Inquiry Model

in a purposeful direction and in a timely manner" (2011:58). Tensions within this category are acknowledged, such as nurturing SP whilst remaining focused on the development of CP; too much or too little tutor presence in the discussions which may be detrimental; and an acceptance that conflict is possible since ". . . respective dissent or criticism" (2011:88) is essential in a CoI.

Whilst the concept of TP is shared amongst all participants, from the first seminal papers it was apparent that the 'teacher's' role is to define goals, select content which is socially relevant, determine curriculum, facilitate discourse, and assess learners (2001A:2; 2011:16 and 54-55). Hence, TP requires "…an architect and leader to design, facilitate, and inform the transaction" (2011:24) providing disciplinary expertise. This "architect" is responsible for the design of the online learning environment, creating a flexible "template" for a programme which reflects the structural decisions made before the course starts, and one that can be adjusted ("organized") according to the learners' needs as they progress through their studies (2011:57). It is envisaged that such an approach supports the gradual sharing of control of, and responsibilities for, the learning environment as students evolve cognitively and socially; thus:

> In an educational experience, both the learner and teacher are part of the larger process of learning. Teaching presence is charged with shaping the appropriate transactional balance and, along with the learners, managing and monitoring the achievement of worthwhile learning outcomes in a timely manner. (2011:54)

2.3 Dissenting voices

Garrison and Akyol (2013, p.113) assert that there has been a high adoption rate for the CoIF, but it has not been without its critics including Annand (2011), Xin (2012), and Morgan (2011) who are referenced in this thesis. Most notable of the few dissenting voices about the CoIF have been Rourke and Kanuka (2009), and Jézégou (2010). Their work has shaped, and continues to influence, the development of the CoIF, and my emergent conceptualisations.

In the first edition of the 2009 *Journal of Distance Education*, Rourke (one of the original Research Group) and Kanuka questioned whether deep and meaningful learning and the attainment of learning outcomes occur in a CoI. Calling upon an extensive literature review, they stated there were few examples of student postings in the CP construct, especially in the later stages of the PI Model. They also asserted that learners rarely challenged each other's misconceptions. In addition, they were highly critical of much CoIF research, focusing on ". . . tangential issues such as student satisfaction with e-

learning . . .” (Rourke and Kanuka 2009, p.20), and highly problematical proxy measures of learning such as self-reporting of perceived student learning. Their article called for further research into the central construct of learning in a CoIF, for the identification of “. . .first-hand instances of deep and meaningful learning . . .”, and for “. . . theorists to respond to the mounting body of disconfirming evidence” about the CoIF (Rourke and Kanuka 2009, p.19).

In the next edition of the *Journal of Distance Education*, those currently researching into the CoIF, led by Akyol, responded to this critique, vociferously (Akyol et al. 2009). The main thrust of their defence was the perceived misrepresentation by Rourke and Kanuka (2009) of the central claim of the CoIF – the attainment of learning outcomes. As outlined above, those currently researching in this area have always emphasised the process-driven nature of the CoIF. The authors further disputed the lack of evidence of student postings in the CP construct, supporting their argument with examples from research whilst also noting that Rourke and Kanuka (2009) only drew upon five studies which addressed the CP construct. They re-stated, that students often do not progress through the PI Model due to TP issues such as inappropriate trigger problems which are either too inductive (focusing on exploration) or too deductive (focusing on ideas or solutions) and thus fail to prompt students to reach the final phases of the PI Model. They also called upon Kanuka et al.’s (2007) work (cited in Akyol et al. 2009, p.130) in which 20% of the contributions were deemed to be at the final stage of the PI Model. This was followed by a detailed defence of research into the CoIF including student self-reporting of learning and satisfaction. They concluded that “. . . it is premature to declare the CoI framework a failure considering the theoretical nature of the framework, the studies that have validated it, the considerable number of studies that found it useful as a framework” (Akyol et al. 2009, p.130).

The criticisms made by Rourke and Kanuka continue to inform the CoIF. In 2011 Garrison noted the difficulties in moving discussions to the last two stages of the PI Model, but cited the research by Shea and Bidjerano (2009b) whose work indicated that learners may move beyond the first two phases. In 2013, Garrison and Akyol confirmed this work re-iterating that when tasks have been designed specifically for the latter stages of the PI Model “integration” and “resolution”, greater activity is noted in these areas in the online discussions (Garrison and Akyol 2013, p.110). In 2011 Garrison also acknowledged “misunderstandings” in the area of learning outcomes (2011:49). Whilst noting that the PI Model had been compared favourably with other taxonomies, such as Bloom’s in the work of Schrire (2004; 2006) to measure learning outcomes, he re-asserted that the CoIF was a process-driven model (2011:50).

Jézégou (2010), responding to Rourke and Kanuka's challenge (2009, p.19), offered an illuminating, critical, and constructive analysis of the 2003 version of the CoIF. Although accepting that the CoIF is conceptually solid and relevant, and one of the most advanced at that time, in her work she called for more elaboration, specificity, and detail about the conceptual, theoretical, and epistemological "anchorings" of the CoIF. In her review, she was one of the first to stress that a CoI relies on each learner being:

> . . . sufficiently motivated to get involved and persevere in the interactions with the others in an effort of collaboration. He [the learner] must therefore be motivated enough to undertake to carry out collective activities, to accept the group's modus operandi or to take into account each person's personality. (Jézégou 2010)

She opined that each learner must have strategies to regulate ". . . the socio-affective, emotional and cognitive aspects of these interactions based on collaboration." In her conclusion states that the CoIF ". . . resonates and integrates the theoretical findings of many lines of research [and that] . . . it appeared to us to be a new reference framework that is heuristically stimulating for research on e-learning" (Jézégou 2010).

In the first chapter of the 2013 co-edited book with Akyol, Garrison responded to Jézégou's work and the theoretical "insufficiencies" identified, stating that the theoretical credibility of the CoIF is essential if it is to grow in use and provide direction in the practice of e-learning (2013:1). Much work is now being undertaken in the area of self-regulated learning, and metacognition, in the CoIF. I now briefly review this and refer to it throughout this piece.

2.4 Emergent work into the CoIF

As noted in the Foreword, research is exploring self-regulated learning, and its related concepts, for successful online learning. Acknowledging such work, CoI researchers are extending the notions of the roles and responsibilities of learners in the CoIF.

Akyol, initially in association with Garrison, integrates metacognition, and especially shared metacognition into the CoIF(Akyol and Garrison 2011b). Metacognition is construed to be a ". . . set of higher knowledge and skills to monitor and regulate manifest cognitive processes of self and others" (Akyol and Garrison 2011b, p.184) which are closely associated with planned, deliberate, specific, goal-directed behaviours. Akyol asserts that the CoIF can guide metacognitive development because it focuses on both internal knowledge construction and collaborative learning. Thus, she takes a very specific stance towards metacognition maintaining that it is socially situated and should not be viewed solely as a private, individual endeavour (Akyol and Garrison 2011b, p.185). For her, as soon as an

individual engages in a CoI, collaborative metacognition emerges and is ". . . core to the learning process" (Akyol 2013, p.38). In their emergent work, Garrison and Akyol indicated that learners who discussed, explained, questioned, clarified and justified their strategies for learning in the community, improved their metacognitive activities. Crucial for Akyol is that the more collaborative, and the more challenging the task, the more evidence of shared metacognition (Akyol 2013, p.38).

She offers a three-dimensional metacognition construct (See Figure 2.5) which centres upon learners taking responsibility, and control, of the construction of meaning and confirmation of knowledge. The first construct can be observed at any time whilst in a CoI. However, the author suggests that the second and third construct are inter-related, in practice, with the second, speaking to the individual world of the learner, and the third, the collaborative. These change particularly according to the nature of the activity.

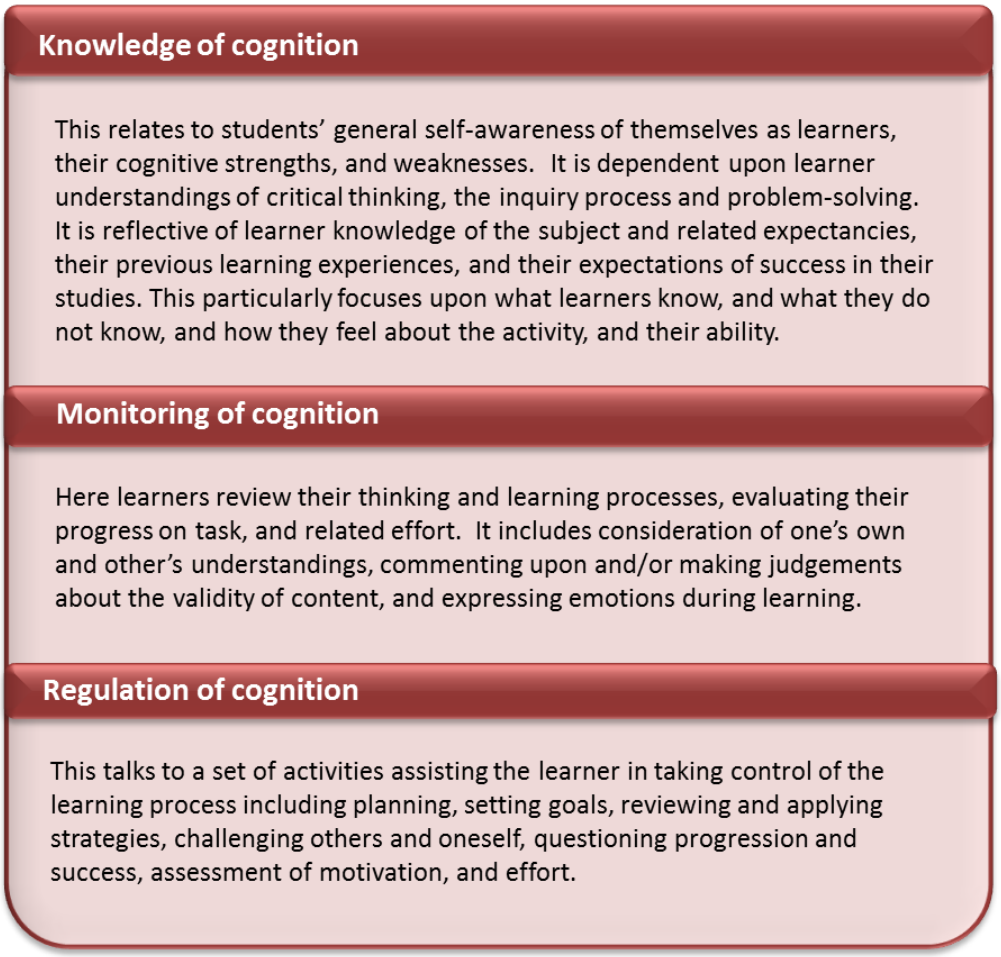


Figure 2.5: Akyol's three-dimensional metacognition construct (Akyol 2013, pp.35-38; Akyol and Garrison 2011b, pp.184-5).

Akyol applies metacognition to all three of the Presences, stating that ". . . the elements of the framework provide the means to operationalize and assess metacognition in online communities of inquiry" (2013, p.33). Specifically, the PI Model, it is asserted, offers a framework to learners through which they can self-monitor, viewing other's perspectives and understanding, which results in learners 'self-correcting' in order to progress through all the phases of the PI Model to resolution (Akyol 2013, p.34). TP instils metacognitive responsibilities for all by encouraging learners to become active in the learning enterprise, and supporting others in the community. SP has a particular role in developing ". . . the frame of references for metacognition. The students in a CoI share a context in which each knows the other's frame of reference" Akyol (2013, p.34). Thus, this supportive learning environment allows for the emergence of shared or social metacognition amongst learners and tutors (Akyol and Garrison 2011b, p.188).

In comparison, to Akyol, Shea, and his colleagues (Shea and Bidjerano 2009a, 2009b, 2010; Shea et al. 2012; Shea et al. 2013; Hayes et al. 2015 in press) have suggested another dimension to the CoIF introducing self-regulated learning which they believe is under-articulated in the CoIF, and appropriate for highly personally directed forms of learning such as online education (Shea et al. 2013, p.445). After analysing student postings, not all instances of learner discourse could be reliably coded within the three Presences. These exceptions often focused on "course logistics" such as collaborative attempts to understand guidance from a tutor, and learner discussions about dividing up tasks, managing tasks, setting goals (Shea et al. 2012, p.90). Shea et al. concluded that these postings could be construed as a set of metacognitive, motivational, and behavioural activities and traits under the control of successful online learners (2012, p.90). It was therefore proposed that these are integrated into a fourth CoI construct "learning presence" (2012, p.90), reflecting ". . . the proactive stance adopted by students who marshal thoughts, emotions, motivations, behaviors and strategies in the service of online learning" (2012, p.90) (as presented in Figure 2.6) – self, shared and co-regulation in collaborative online educational environments (Shea and Bidjerano 2010, p.1723). Hayes and her colleagues (in press, p.7) have helpfully differentiated shared and co-regulation, explaining that co-regulation exists in asymmetrical situations in which one member of a group, having more knowledge and skills than others, assists an/other learner/s. In comparison, shared regulation includes symmetrical situations ". . . where members of a group collectively set goals, track their progress, use strategies, and consider their effectiveness in the service of a shared outcome" (Hayes et al. in press, p.7).

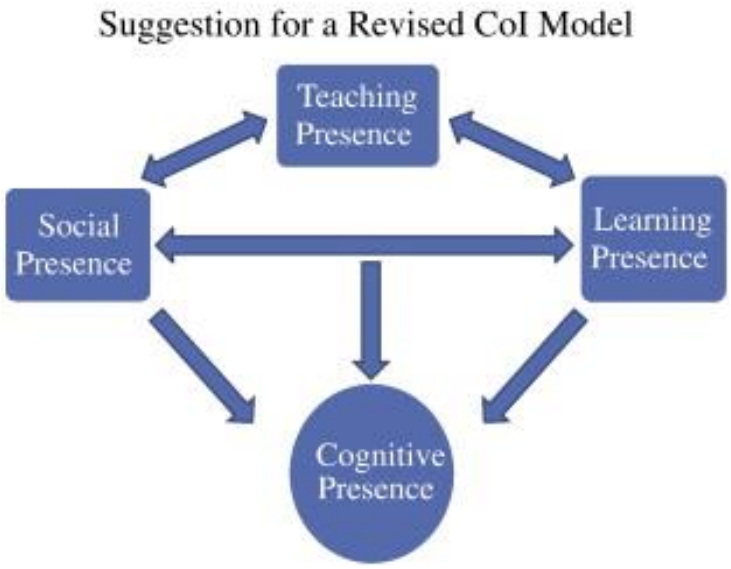


Figure 2.6: suggestion for revised CoI model including learning presence (Shea et al. 2012, p.93[12])

Learning presence is about "agency and control rather than compliance and passivity…" (Shea et al. 2012, p.90) indicated in the coding scheme for this presence focusing on forethought and planning; monitoring, and strategy of performance followed by reflection (see Figure 2.7). However, Shea et al. (2012) are careful to remind their readers that this work does not mean to ". . . diminish the shared instructional roles of progressive collaborative forms of learning" (p.93) merely that there are different learner roles and behaviours, motivations and strategies compared with tutors, "Learners and instructors do not perform identical roles and thus must engage in different behaviors to succeed" (Shea et al. 2010, p.93).

[12] Permission was granted by Elsevier Limited (UK), on 20 April 2015, for use in this thesis of Shea et al.'s (2012, p.93) suggestion for revised CoI model. Use of this Figure is non-exclusive, English language rights only, and limited to this thesis only when held in print and electronic formats by the University of Stirling, and stored on the University's dissertations database. The Figure is entitled in "Revised Community of Inquiry model including "Learner Presence." The Figure is situated on page 93, of the article by SHEA, P., HAYES, S., SMITH, S.U., VICKERS, J., BIDJERANO, T., PICKETT, A., GOZZA-COHEN, M., WILDE, J. and JIAN, S., 2012. Learning Presence: additional research on a new conceptual element within the Community of Inquiry (CoI) Framework. *The Internet and Higher Education.* vol. 15, no. 2, pp. 89-95.

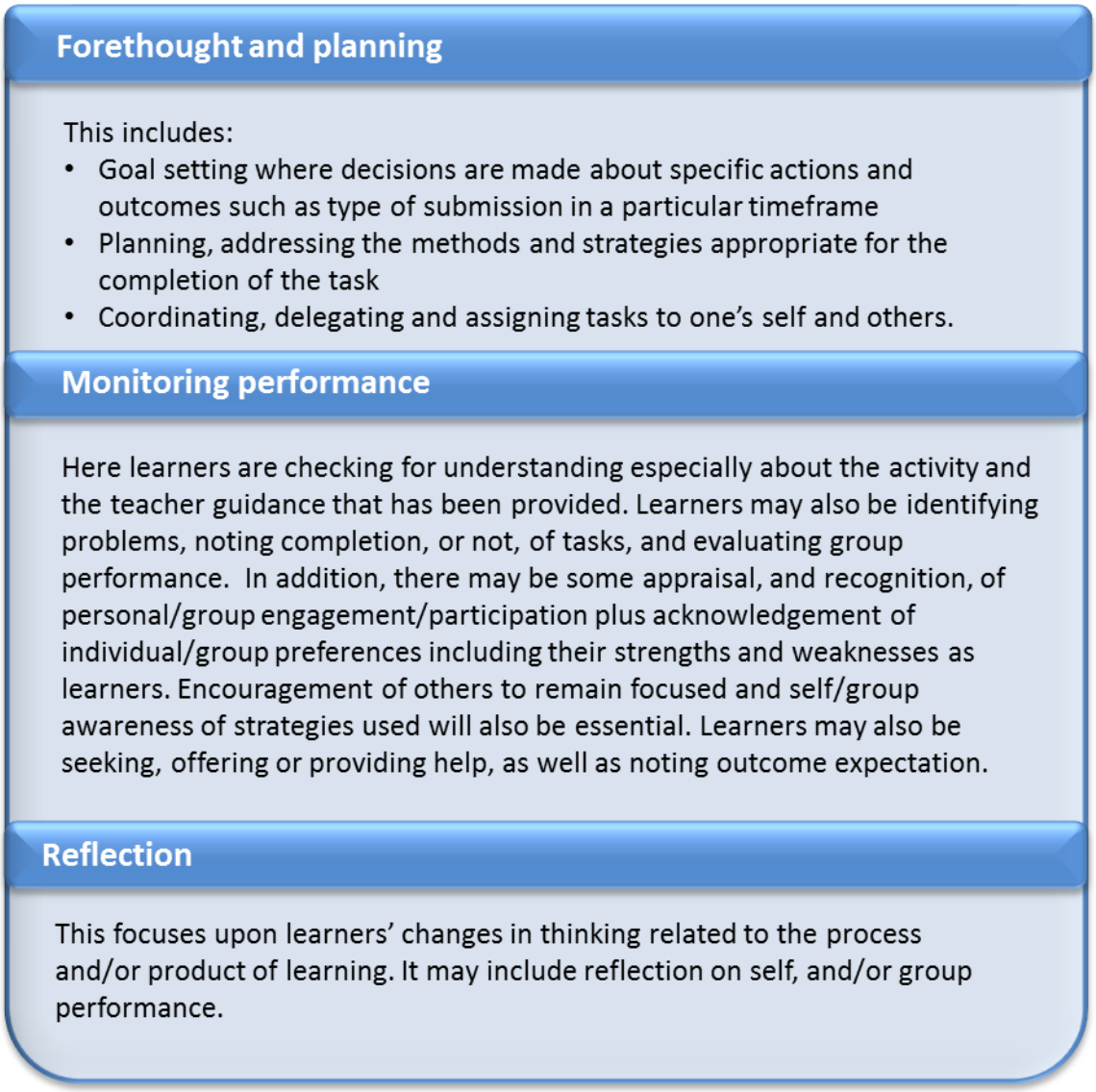


Figure 2.7: summary of learning presence coding scheme (after Hayes et al. 2015, pp.23-25; Shea et al. 2013, pp.429-430; Shea et al. 2012, p.94)

Such a proposal for a fourth presence has caused a schism with the CoIF research community. Akyol dismisses this proposal as a "conceptual leap," (Akyol and Garrison 2011b, p.188) claiming it supports an "individualistic view of learning" contradictory to the main premise of the CoIF – collaboration – ". . . where social regulation cannot be reduced to each community member's individualistic characteristics such as self-regulation" (Akyol 2013, p.38). Whilst Shea et al. conceptualise metacognition as an important component of self-regulation, they consider self-regulated learning to be ". . .the larger and more inclusive conceptual lens through which to investigate the roles of online learners as learners" (Shea et al. 2012, p.93), offering richer sources of guidance about successful online learners as *learners* (Shea et al. 2012, p.93).

I reference this emergent work throughout this thesis, and particularly return to it in Chapter Five.

Linking to, but differing from, this emergent work on SRL, is Cleveland-Innes and her colleague's research into the affect and the CoIF (Cleveland-Innes and Campbell 2012). She opines that emotions cannot be ignored in the learning environment as they are a central element of human experience and thus will exist in online learning. She calls for a unique presence – emotional presence – which:

> is the outward expression of emotion, affect, and feeling by individuals and among individuals in a community of inquiry as they relate to and interact with the learning technology, course content, students and the instructor. (Cleveland-Innes and Campbell 2012)

In her work she places a particular emphasis on the transition for learners into the collaborative, community-based online environment and the resultant learner emotional response. Thus Cleveland-Innes and her colleague Campbell (2012) conclude that "To engage in education innovation with no reference to emotion, and continue to assume learners are little more than dispassionate thinkers, would be to miss a fundamental influence on education."

Before scrutinising the CoIF, I review my approach to knowledge inquiry in the next chapter, seeking to make transparent the underpinning philosophical and theoretical assumptions in my research which will impact on the way in which I review the Framework.

CHAPTER THREE:
METHODOLOGY – A REVIEW OF MY APPROACH TO KNOWLEDGE CREATION THROUGH THE INQUIRY PROCESS

The purpose of this third chapter is to review the philosophical and theoretical assumptions underpinning my research. When undertaking commissioned research, too often there is little time to "unpack" assumptions that have been "injected" into my work since quickly the focus becomes selecting which methods will be used in the data gathering process, how the analysis will be conducted, and how the findings are to be shared (Creswell and Piano Clark 2011, p.38). However, as Crotty states, without clarifying these assumptions "… no one can really divine what our research has been or what it is saying now" (Crotty 1998, p.17). This review is, therefore, of particular relevance since I am using my publications as a springboard for the critique of the CoIF later in this thesis.

The research reviewed in this chapter, covers a period of nearly ten years, during which I have matured as a researcher, learning in, and from, the various experiences I have reported. After having undertaken this review, I have a clearer understanding of my theoretical assumptions, and areas for future exploration, but these have emerged through this work. It would be inaccurate to present these as considered decisions made at the outset of my research, and then influencing my inquiry process. Rather, in this section, I present my stance, emerging during my period of candidature, and which is still on-going, facilitated currently by the compilation of this review, the thesis, and the feedback received by the Panel. In this review, I therefore summarise and attempt to justify my position at the time of writing, with brief consideration of the options which I have considered, rejected or neglected along the way, as well as exploring tensions within my work, and providing an indication of my targets for future development. I accept that research, especially qualitative, is fluid, flexible, and iterative - "messy." In addition, I also acknowledge that throughout the inquiry process reviewed in this section, there has been a myriad of influences affecting my decision-making, often causing tensions in, and misalignment of, my philosophical stance and the research strategies employed.

This chapter is based upon an Evaluative Framework (EF) (see Figure 3.1) to review my approach to the inquiry process in my publications, and the research from which they were drawn. First, the EF is introduced, and then, at the core of the EF, the research questions and topics. Next, the four layers of the EF are addressed, working inwards. The chapter concludes outlining areas for future development. Throughout this chapter, to avoid repetition, a number of acronyms are used which are provided in the glossary.

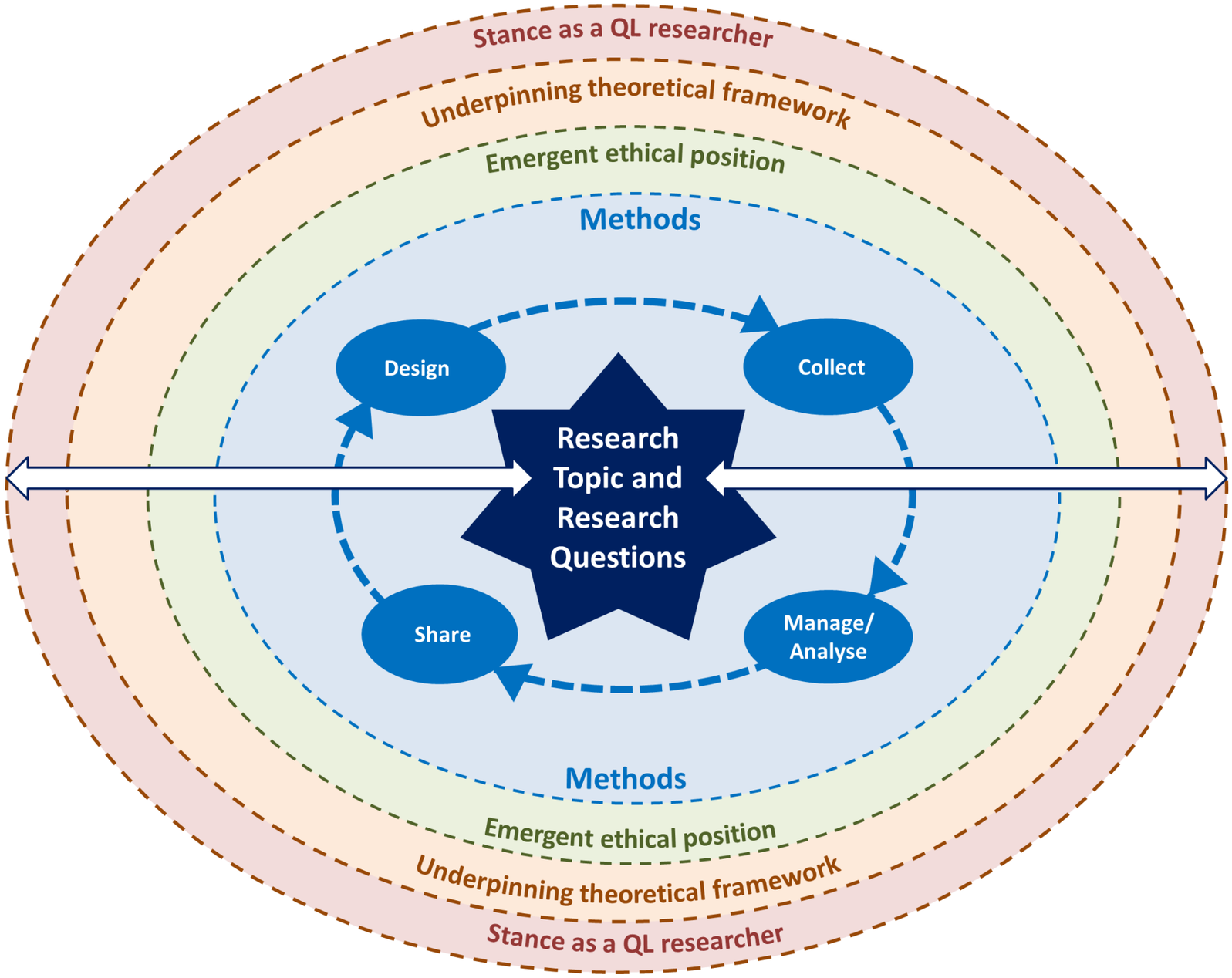


Figure 3.1: the Evaluative Framework (EF)

3.1 Using an Evaluative Framework to review the inquiry process in my publications

3.1.1 Introduction to the Evaluative Framework

An Evaluative Framework (EF) was created to structure this review of my approach to the inquiry process, and is applied to five of the publications. This EF drew upon the work of:

- Blaikie (2007 – chapters 1, 2, and 3)
- Brinkmann and Kvale (2015 – chapters 1, 2, 3, 4, 10, 16, and 17)
- Crotty (1998 – chapters 1, 3, and 4)
- Flick (2014 – chapters 2, 4, and 17)
- Mason (2002 – chapters 1, and 4)
- Ritchie et al. (2014 – chapters 1, 3, 4, 7, 10, and 12).

The **outer layer** of the EF explores my stance as an education qualitative researcher. The **second layer** of the Framework critiques the underpinning theoretical framework scrutinising my ontological and epistemological assumptions and decisions, and methodological choices including a review of my research strategy (logic of inquiry) and research paradigm. The **third layer** considers my emergent ethical position. **The fourth layer** of the framework addresses the *design* of the inquiry process, and the *collection* and *analysis* of data. This is followed by a consideration of how the outputs of the research are *shared* with diverse communities. At the **heart** of the EF is the selection of the research topic, and the associated research questions, which drive the inquiry process. Arrows on Figure 3.1 emphasise the inter-relatedness of each layer.

3.1.2 Purpose of the Evaluative Framework

The Framework allows me to identify and unpack my assumptions about the way I undertake research, addressing my underpinning theoretical framework by:

- Bringing to light the key philosophical, theoretical decisions about, and influences on, my research
- Considering my research strategy and paradigm
- Reviewing my emergent ethical stance

- Critiquing the methods used in the inquiry process (design, collection, analysis and sharing).

Too often little space is available in publications for discussions in this area especially when presenting qualitative research (QLR). In this chapter, I have chosen to appraise particular aspects reflecting their significance in the publications. For example, I have omitted detailed discussion of video diaries since these were only tentatively trialled in P5:1274:20-32. I close the chapter with a brief review of the tensions that have surfaced within my work, and specific suggestions for future development.

3.1.3 The publications

Throughout this chapter I reference the publications in the Appendices and their associated Information Sheets. I also link extensively to the respective project websites for P1, P2, P4 and P5, detailing the research from which each publication was derived. The sister publication to P4 is also referenced, detailing the research upon which P4 is based (Peacock et al. 2011). Such references are added as footnotes, to minimise distraction for the reader. Further details are available on the Information Sheets prior to each of the publications, including a larger-scale diagrammatic representation of the methods employed.

3.1.4 The Research Teams

The research, underpinning the publications referred to in this chapter, was collaborative, and an output of the Research Teams (small groups of education researchers and tutors[13]) that I led. Throughout, we worked as a team, discussing the work, reflecting on the research journey, with regular group meetings being recorded in project blogs. Although in this chapter I discuss my theoretical assumptions, and emergent ethical position, throughout the research, group meetings considered our underpinning theoretical stance, the design of the research, the collection and analysis of data, and sharing of findings. This strengthened our work, drawing upon the multiple perspectives and understandings of the Teams. However, from time-to-time, some of the decisions reached by the Research Teams were at variance with my theoretical assumptions. I note the resulting tensions throughout this chapter but accept that this is one of the outcomes of working in a team.

[13] Details of one of the small Research Teams that I led for the work that resulted in the sister publication to P4 (Peacock et al., 2011), and underpinned P4, are available at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299849&type=webfolio&pageoid=299859

3.2 The core of the EF: the research topic and accompanying research questions (RQs)

This review commences with a discussion about the role, and purpose, of the research topic (RT). In the selection of the research topic, consideration is given to whether the work aligns with my overall research theme, as articulated in 1.1. Four of the publications were based upon funded research. The associated aims and outcomes were detailed in the response to the particular calls[14], but the topics linked to my overall research theme, and reflected a personal interest emanating from "…observing and asking questions about [my] everyday activities" (Merriam 2009 p.57, cited in Lewis and McNaughton Nicholls 2014, p.49) as a learning technologist at QMU seeking to bring about change. For example, in P4:4:33-34, my wish to develop a framework to support learner engagement with feedback in ePortfolio was based upon previous work with a team of researchers (Peacock et al. 2011) indicating that health science students had limited engagement with feedback. Learner failure to engage with feedback may impact on patient care with potentially life-threatening consequences (P4:3:25-30).

To give focus, specificity, direction and boundaries, I develop research questions (RQs) based upon the RT (Jackson 2005, p.67) as opposed to 'hypotheses' or 'propositions' more commonly equated with quantitative research. Research questions are central to the work undertaken with the Research Teams, and hence, their position at the core of the EF similar to Jackson's model of research design (2005, p.5) alongside the Research Topic. The development of RQs is one of the most critical steps in research, and, certainly, one I find very challenging (Yin 2014, p.11). Not only are RQs expected by funders, but also they make the work more manageable and, hopefully, attainable (Mason 2002, p.21). However, there is often a fine balance to be struck when developing RQs for funded work, ensuring that the RQs are appropriate for the bid, and aligned, as well, with the particular area of interest for the Research Team. In P5, in the application for funding from the HEA, the members of the Research Team worked together in the formulation of the RQs, ensuring they would be of interest to the Funder, but in keeping with our on-going work exploring OSLEs as facilitative tools in the performing arts. Inevitably such an approach requires an 'accommodation' by all that the accepted RQs and the resulting direction and approach to the research may not be the 'ideal' for all.

[14] Further information about the funders of the research underpinning the publications is provided in the Information Sheets prior to the publications in Appendices 1, 2, 4, and 5.

In most cases, primary and secondary RQs are developed that are invaluable in focusing the inquiry process. Usually the primary questions are over-arching, whilst the secondary are more provisional[15]. Of the three typical RQs (what, why, and how) (Blaikie 2007 p.2), I use predominantly WHAT questions. Figure 3.2 details the research questions underpinning P4, including two WHAT questions[16]. Here, I was hoping to collect descriptive data about student engagement with feedback through the use of ePortfolios. A similar approach was taken in the development of RQs conceived for P5 [17]. These WHAT questions often made implicit assumptions about the answers sought. For example, in P4, assumptions were made about learner engagement with feedback, although they were informed by earlier work in Peacock et al., 2011. Sometimes the outcomes of the work reflect more than just WHAT questions, and may address (perhaps implicitly) HOW questions which were not included in the original bid. For example, in P5, the outcomes are: "How can tutors use the OSLE as a facilitative tool?" This reflects the iterative and flexible nature of qualitative research which needs to be accepted by the researcher.

[15] P5 is an example of the use made of primary and secondary questions to ground, and bound my work. These are accessible online in the project's final report on p.40 located at http://www.qmu.ac.uk/palatine/documents/OSLE.pdf
[16] The research questions for P4 are available online at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299849&type=webfolio&pageoid=299856
[17] The primary and secondary RQs for P5 are available on the project's website at: http://www.qmu.ac.uk/palatine/overview.htm which provides further information.

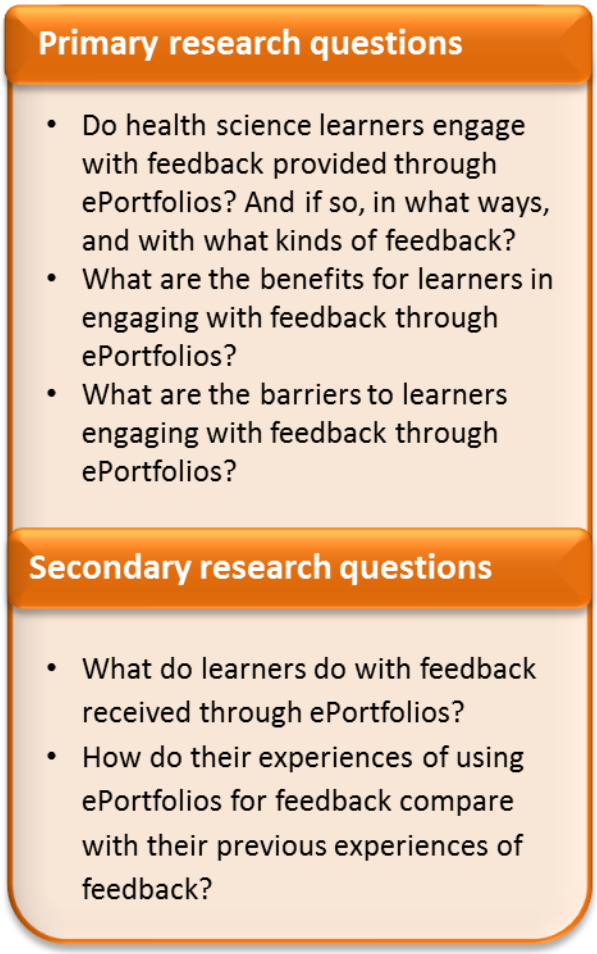


Figure 3.2: primary and secondary research questions for P4

3.3 The outer layer of the EF – my stance as an education qualitative researcher

My stance has not changed in principal since that originally articulated in my first publication[18]. I have undertaken, and continue to, undertake small-scale QLR, grounded in the lives of learners and tutors, drawn from specific subject groupings such as drama, health, and education. The overall research theme of this submission, as exemplified in the six publications, is an exploration of how these tutors and students experience, and come to understandings about, learning in a particular context, namely technology-mediated learning environments, in tertiary

[18] On page 15 of the final report for publication one, my stance to QLR is discussed. It became the basis for my approach to the inquiry process, and is available at: http://eresearch.qmu.ac.uk/view/people/Peacock=3ASusi=3A=3A.html. This final report is listed as Peacock, S. and Hooper, J. (2005) *How do diverse groups of learners in the health sciences respond to a new virtual learning environment?* Project Report. Queen Margaret University College, Edinburgh.

education, in the early C21st. In such studies, there is little intention to formulate general theory or generate universal, generalisable knowledge. Rather, I conduct small-scale case studies, an approach common in e-learning research, to broaden understandings and explanations, and perhaps to inform future research in these areas.

Aligned with my understandings of QLR, which is discussed in more detail in 3.3.1, a range of methods such as semi-structured interviews and focus groups are used producing subjective data concerning peoples' feelings, experiences, opinions, and attitudes to provide insights into situations that are not sufficiently understood (Hancock 2002, p.2). I aim to gather thick and relevant descriptions obtained from learners and tutors participating in my data collection process. Like Polit and Beck (2010), I consider thick data to be ". . . thorough descriptive information about the research setting, study participants, and observed transactions and processes" (2010, p.1453) involving all types of key information such as demographic information, study context, and information about the area under study[19]. How 'thick' thick data should be is a compromise between collecting sufficient data to inform transferability (discussed in 3.6.1.3), and asking for extensive data (which may be unnecessary) from participants (considered in Figure 3.3) or inappropriate since they cannot be shared due to anonymity concerns (discussed in 3.6.1.3) In the planning process, how much and which data should be collected is discussed in Research Team meetings prior to submission of ethical consent from QMU. This is a collective decision, again, often a compromise between the ideal and the possible due to resource constraints and project deadlines.

After collection, these descriptions are analysed to address research questions and inform understandings about the particular educational research topic under scrutiny (Creswell 2014, p.189). Throughout the inquiry process my focus is on learning the meanings held by my participants (learners and/or tutors) about an identified research topic, not those brought to the research by myself, or by the Research Teams (Creswell 2014, p.186). The aim of my qualitative research is to provide contextualised understandings of my learners' and tutors' experiences through ". . . the intensive study of particular cases" (Polit and Beck, 2010, p.1452).

My researching role in the inquiry process, as the primary instrument of data collection, impacts on the outputs of research[20]**.** I cannot be neutral or detached from the knowledge that is being

[19] In P5, information about the programme of studies, and the location of learners, and tutors, was provided in addition to details about how the OSLE was used (P5:1274:Table 1).
[20] In the publications, for instance, P1:220:49-58 and P2:836:10-19, bibliographic details about the researchers, and their backgrounds, are provided. The purpose in sharing such information is to allow readers to determine their

generated, especially since much of my work is situated in my own working environment, and with tutors who are interested in trialling different technologies in the learning environment. Consequently, researcher reflexivity is essential for self-awareness of my cultural, social, linguistic and ideological assumptions (Patton 2002, p.66). Throughout the inquiry process, therefore, the Research Teams kept reflective notes on our work which become data in their own right (Flick 2014, p.17). Project blogs are essential for sharing, and exposing to comment, on-going reflections and their impact on decision-making**.** Furthermore, I concur with Mason (2002, p.66) that the researcher should not underestimate the "…challenge posed by analysing your own role within the research process" especially in the face of resource constraints, and a myriad of competing demands since these reflect the essential 'messiness' of qualitative research[21].

Before progressing to the second layer of the EF, I provide here some background to my stance as a qualitative researcher. I address my perspectives of qualitative and quantitative approaches to research, considering their impact on my selection of methods, which are scrutinised in more detail in section 3.6 in the discussions therein about the inner layer of the Evaluative Framework.

3.3.1 The background to my stance as a qualitative researcher and my selection of research methods

In this section, I first outline my understandings of quantitative research, providing examples of how quantitative research outputs have been used in this thesis. I then discuss my perspective of qualitative research, and its key characteristics, which inform my research and selection of methods. I conclude by rejecting that, unlike like Creswell (2014), I do not see both approaches to research as on a spectrum. I see them as distinct.

In most cases, quantitative research aims to measure and quantify phenomena, separating cause and effect. Usually quantitative research, and its associated methods, is selected when a researcher wants to measure an occurrence and/or make direct comparisons when a change is made in what is then considered to be an independent variable. Research designs are created which are based on hypotheses and methods, selected to allow the generalisations of findings leading to the formulation of general laws (Flick 2014). Objectivity, neutrality, rationality, and

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potential influence on the research, especially the interpretations of the findings. Such information seeks to support reader generalisation as discussed in 3.6.1.3

[21] In P2, approximately half-way through the project, one of the Research Team had to return to teach in her subject area. Attempting to provide alternative researchers whilst ensuring consistency was a challenging task (P2:831:2-4).

abstraction are valued in this type of work. Observed phenomena are usually classified on their frequency and distribution, where the conditions under which the phenomena and relations are studied, are controlled as much as possible. Procedures which are well-defined and formulated, such as experimental or survey research are used (Creswell 2014); objectivity is key (Flick 2014).

In my work, I often call upon the outputs of quantitative research which has measured and reported on a specific phenomenon. For instance, in Figures B1 and B2 in the Foreword, descriptive data were presented about the number of citations for four of the papers that were presented by the original Research Team. I maintain that these demonstrated continued interest in the CoIF through the period 2003-mid-2013, and particularly in Teaching presence. In my published work, I aim to provide descriptive data on the age of participants, and their number, such as in P5:1274, Table 1, which reports the number of tutors and learners that have engaged in the research, and thus, I hope, assists in establishing the transferability of my work as discussed in 3.6.1.3. My use of quantities is in providing informative descriptions.

In most cases, as stated previously in 1.1.1 and 3.3, I take a qualitative approach to research. QLR is, however, particularly difficult to define (Flick 2007) with no theory or paradigm that is particularly its own. Ormston et al.'s (2014) assert that QLR encompasses a very "broad" church of approaches and methods. Flick (2014) notes, its conception and adoption are often considered to have arisen as a result of disillusion with quantitative research and an acknowledgement that new approaches to empirical study were required in a more pluralistic world.

At the heart of qualitative learning research are human beings; its focus is therefore in accepting their complexity whilst recognising the influence of the context in which they are set – the world 'out there' not the laboratory (Flick 2014). There is an acknowledgement that it is almost impossible to study most phenomena and human behaviour in isolation, unlike quantitative research. Hence in QLR ". . . the object under study is the determining factor for choosing a method and not the other way round" (Flick 2014, p.15). Silvermann (2011 cited in Ormston et al. p.3) has reminded me, however, that QLR should not be defined simply as *not* being quantitative research, since this could lead to an over simplistic and negative view. Thus, calling upon the work of Flick (2014 and 2007), Creswell (2014), Ormston et al. (2014), and Marshall and Rossman (2006), I summarise below some of the key characteristics of my understandings of QLR, which have influenced my selection of research methods, such as interviews.

Qualitative research, for me,

- captures individuals' experiences, reactions, needs and attitudes through specific non-standardised, data-generation methods such as semi-structured interviewing
- accesses experiences, interactions and documents in their natural context
- creates an account or description within which measurements would often be meaningless
- values rich descriptions and data that are, in-depth, detailed, and complex
- uses multiple methods that are interactive and humanistic
- is emergent and fundamentally interpretive
- relies upon text and writing such as researcher notes and transcripts
- in its analysis, retains complexity and respects the uniqueness of each participant
- expects the outputs to provide detailed descriptions of the phenomena being studied grounded in the perspectives and accounts of the participants
- acknowledges the role and perspectives of the researcher; thus researcher reflexivity is critical.

I particularly depend upon QLR when the feature being studied is not meaningfully quantifiable, as in research into areas of self-efficacy, motivation, self-regulated learning, reflection and metacognition as discussed in the Foreword.

Qualitative research and its associated methods, in essence, are appropriate for my work when I am exploring how humans (tutors and students) experience, and come to understandings about, learning in a particular *context*. The particular contexts for me have been, and are, technology-mediated learning environments, in tertiary education, in specific subjects, in the early C21st. As Creswell (2014) explains in his preliminary discussions about the selection of a research approach, QLR is about exploring and understanding ". . . the meanings individuals or groups ascribe to a social or human problem" (p.4). Thus I use research methods such as semi-structured interviews and focus groups, as noted in 3.3, to assemble subjective data concerning tutors' and students' feelings, experiences, options, and attitudes as in publications one and five. I want to ". . . unpick how people construct the world around them, what they are doing or what is happening to them in terms that are meaningful and that offer rich insight" (Flick 2007, p.x). My work is driven by RQs rather than hypotheses or propositions more common in quantitative research.

In comparison, I acknowledge the insights that quantitative research, and its associated methods, may offer when the research has a different type of purpose - for instance when wanting to make stark comparisons, summarise, and/or quantify. For instance, Shea and Bidjerano in 2014, used socio-demographic data from over 16,000 US students beginning distance and non-distance education in community colleges. Their work was very precise, controlled, and replicable; it indicated that there was an over-representation of students originating from a nationally-accepted at risk category who participated in online and distance education during the period under study. This research revealed an urgent need for action.

Consequently I cannot agree with Creswell (2014) that "Qualitative and quantitative approaches should not be viewed as rigid, distinct categories, polar opposites, or dichotomies" (p.3), and nor that they are, as he continues, at different ends of a continuum. A continuum ranges from one extreme to another. I do not see such a gentle variation in the range of distinct research methodologies described in the literature, which I separate as attempts to *quantity* and attempts to *understand*. Since most of my research concentrates upon trying to understand learning experiences, it tends to be qualitative. The crux of the matter, for me, is in what I am trying to do in my research, which is always driven by the research questions, as discussed in 3.2. However, as Creswell (2014) maintains, a holistic examination of qualitative and quantitative research requires an exploration of the researcher's theoretical and philosophical assumptions. I address these in the next section of this review of approach to the inquiry process, followed by discussions on my emergent ethical position.

3.4 The second layer of the EF – my underpinning theoretical framework

I now address in turn the ontological and epistemological positions that feature in my theoretical framework as a qualitative researcher, and their impact on the way that I have addressed the generation of new knowledge (Blaikie 2007, p.13). This brief, introductory, exploration of my ontological and epistemological choices is followed by a review of the research paradigm (interpretivism), and the research strategy (inductive logic) which inform my work. I return to this section in the conclusion to this chapter, highlighting tensions within my work that have become apparent in this review.

3.4.1. My ontological standpoint

An idealist perspective has consistently informed my qualitative work. I have always believed that social reality (the social constructed world in which individual lives occur (Blaikie 2007, p.13)) cannot exist independently of the activities of humans. Reality is only knowable through the human mind and through socially constructed meanings (Ormston et al. 2014, p.5). I concur with Blaikie that whatever ". . . is regarded as being real is real only because we think it is real; it is simply an idea that has taken on the impression of being real" (2007 p.16). In P5, the three specific case studies provided insights into the realities created by the tutors and the students when using an OSLE. The discussions section in this publication highlighted not only the advantages of such endeavours as with Tutor, Case Study 1 (P5:1274:82-85), but also the frustrations caused by the technologies as articulated by Tutor 3, Case Study 3 (P5:1277:55-57).

As I work with learners and tutors, my work has identified such multiple, socially constructed realities especially in the case for example, of learners' notions, and understandings of, feedback (P4:3:6-16). At this time, I consider:

> … all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context. (Crotty 1998, p.42)

I seek to explore the multiple realities of the learners, and tutors in my work, and the way in which they constitute and come to know their world (Potter 1996, p.98, cited in Blaikie 2007 p.17), since " Social reality consists of the shared interpretations that social actors produce and reproduce as they go about their everyday lives" (Blaikie 2007, p.17). In P2, for example, there was no expectation that meaning and meaningful reality could exist independently from the tutors' beliefs about it (Ormston et al. 2014, p.5); the Research Team was exploring the multiple realities of the tutors implementing ePortfolio. No distinction was made between the way the world is, and the meaning and interpretation of that world held by those tutors. Hence the varied responses and the differing opinions provided an insight into the way these tutors within the tertiary sector, with their students, had constructed their own social realities in a technology-mediated environment.

My stance is contrary to, for example, a realist perspective in which truth and meaning reside in objects independent of any consciousness and experiences (Crotty 1998, p. 8). A more

nuanced approach to the realistic/idealist split has been offered by Blaikie (2007) and Ormston et al. (2014). Blaikie (2007, pp.13-18) outlines categories of realism ranging from shallow through to deep. This, although accepting that a social reality independent of human conceptions/interpretations may exist, generally acknowledges the influence of the human in coming to know and understand such a reality. Thus, for instance, critical or subtle realists such as Ormston et al. (2014) maintain that reality is ". . . only accessible through the perceptions and interpretations of individuals" (2014, p.21). This perspective-based approach to reality recognises that knowledge, and knowledge about reality, is based on individuals' assumptions, is usually cultural, and is a human construction. Abandoning the notion of independent and knowable phenomena (Hammersley 1992 cited in Blaikie 2007 p.17), such an approach offers much that is attractive for me and is something which I review on a regular basis (Blaikie 2007, p.17). In my own case studies I set out, like Ormston et al. (2014), to explore tutor/student perceptions/interpretations of their worlds, rejecting the notion that these can be independent and knowable, and accepting that they will additionally be influenced by my own cultural assumptions and understandings. In contrast, adopting a realist approach would have obliged me to accept an external reality, even if it is as diverse and multifaceted as Ormston et al. (2014) believe it to be.

Consequently I have always preferred an idealistic position aligned with my approach as a qualitative researcher regarding the external 'world' as 'simply' appearances with no independent existence apart from humans' thoughts (Blaikie 2009, p.14). However, as stated at the beginning of this chapter, my philosophical stance, including my ontological standpoint, is fluid and will continue to be so after my period of candidature.

3.4.2 My epistemological standpoint

Aligned with my ontological stance, and my perspectives of QLR outlined in 3.3.1, I reject the assumption that the 'world' can be observed objectively and that knowledge can be represented accurately, simply through the use of appropriate, scientific methods (which allow the researcher to be objective). I have therefore consistently followed a social constructionist approach, holding that knowledge of the 'world' is rather individually dependent upon human engagement with what is considered the physical 'world' and with other people, plus one's interpretations of actions and experiences of oneself and others (Blaikie 2007 p.22).

Crotty (1998) and Blaikie (2007) present social constructionism, as an epistemological stance addressing the nature and scope of human knowledge, which I find attractive. Social reality,

according to Blaikie, is the result of the meaning-giving activity of humans in their everyday lives (Blaikie 2007, p.23). An example is in P3 which focused on students' and tutors' reported perceptions as they were interacting with an ePortfolio to facilitate reflection - seeking to explore how, and in what ways, it could support their personalised learning in HE. Crotty points out that, from a constructionist perspective ". . . because of the essential relationship that human experience bears to its object, no object can be adequately described in isolation from the conscious being experiencing it, nor can any experience be adequately described in isolation from its object" (Crotty 1998, p.45). Subject and object are always united, and from a constructionist perspective, meaning is constructed rather than created, and such construction requires ". . . something to work with" (Crotty 1998, p.44). Hence constructionist researchers study the multiple, multi-layered and complex realities constructed by their participants, and the implications of these constructions for their participants, and for those around them - with no consideration of whether these perceptions are 'wrong' or 'right' (Patton 2002, p.96). In P5, for example, the Research Team wanted to explore the different perspectives of learners and tutors on using an OSLE. These became apparent in the sometimes negative responses to video communication from some learners seeing it as an intrusion (P5:1277:58-71), compared with others who relished the opportunity to communicate with fellow learners, sharing current experiences (case study 1, P5:1277:20-27), and discussing issues with their tutors.

Sometimes learners will hold internally contrary opinions such as in the case of post-registration learners, who were positive about online discussions (P1:224:1-4), but simultaneously found them challenging regarding anonymity (P1:223:Table 1). Consequently, many activities are not reducible to simple interpretations; hence 'thick and relevant descriptions' are necessary to represent the complex situations (Cohen et al. 2007, p.21).

Creswell (2014, p. 8) neatly and helpfully summarises the social origin of meaning maintaining that the way individuals engage with and make sense of the 'world[22]' must be set in a historical and social context. This again echoes the work of Crotty who states "For each of us, when we first see the world in meaningful fashion, we are inevitably viewing it through the lenses bestowed upon us by our culture. Our culture brings this into view for us and endows them with meaning" (1998, p.54). In my own case, the tutors and students whose experiences I am exploring actively construct meaning and understandings in their different ways, reflecting their backgrounds even when they are addressing the same phenomenon. Their culture will have

[22] 'world' is presented between apostrophes reminding the reader that for me, at present, I regard the external 'world' as 'simply' appearances with no independent existence apart from humans' thoughts.

impacted on such constructions (Crotty 1998, p.54). This is why the post-registration students in P1 viewed online discussions in different ways to the pre-registration students – their experiences differing due to their being influenced by their experiences of working as physiotherapists, as opposed to the undergraduates who had more limited experience in the clinical setting (P1:222:16-20 and P1:224:1-23). In P2, there were very differing views of the assessment of ePortfolios, with some tutors disinclined because of the personal nature of the ePortfolio whilst others accepting that assessment would be required for learner engagement (P2:841:15-30). Such differing approaches may have reflected the different culture experiences of the tutors particularly in regard to their subject specialism, and the sector within which they were working.

Crotty reminds his readers that it is through the interplay of humans engaging with their notions of the 'world' that meaning is constructed (Crotty 1998, p.45). I, too, have constructed my own interpretations and notions of the 'world', flowing from my personal, cultural and historical experiences. This impacts on the way in which I find meaning in the phenomena I am studying and, about which I wish to have more knowledge – my reaction to the research (Creswell 2014, p.8). I do not expect to discover meaning already existing in the phenomena I am researching. Neither do I expect to be objective and to represent knowledge accurately. As Blaikie states:

> Constructionist social scientists argue that because it is impossible for fallible human beings to observe an external world – if one exists at all – unencumbered by concepts, theories, back ground and past experiences, it is impossible to make true discoveries about the world. There can be no "theory-free observation or knowledge" (2007 p.23).

For instance, the first publication presents the varied experiences, and perspectives of a small group of physiotherapy learners, and tutors, when using a VLE for the first time (as discussed in 1.2.1). There is no assumption that a 'true' portrayal of these learners' experiences could be uncovered, or conveyed, just an insight. This links to my stance as a qualitative researcher, and my awareness of the influence that I, together with the Research Teams, have in a lot of my research on the emergent findings.

3.4.3 Research paradigm: interpretivism

Research paradigms (RPs) reflect ontological and epistemological assumptions (Blaikie 2007, p.3); hence their position in the EF. Blaikie considers a RP to be "Broad philosophical and theoretical traditions within which attempts to understand the social world are conducted" (Blaikie 2007, p.3). Throughout my research, I have tried to adopt, and adhered to, a RP that is

broadly aligned with my stance as a qualitative researcher, and which resonates, to some extent, with my ontological and epistemological positions. Compared with other more traditional RPs, interpretivism rejects the application of the methods of natural sciences to social sciences, claiming that ". . . because of the qualitative differences of their subject matters, a different approach is required" (Blaikie 2007, p.109). So, whilst nature is studied externally, social phenomena are to be studied from the 'inside' (Blaikie 2007, p.132). Thus, social science needs ". . . an understanding of the social world that people have *constructed* . . ." (Blaikie 2007, p.124). Ormston et al. (2014) note that interpretivism is often associated with constructionism, with both placing ". . . emphasis and value on human interpretation of the social world and the significance of both participants' and the investigator's interpretations and understanding of the phenomenon being studied" (Ormston et al. 2014, p.11).

I accept the view that humans are constantly involved in interpreting, and re-interpreting, their social 'world', other people's actions within that 'world' and their own actions – before any researcher arrives. As Blumer states:

> The first premise is that human beings act towards things on the basis of the meanings that things have for them…The second premise is that the meanings of such things is derived from, or arises out of, the social interaction that one has with one's fellows. The third premise is that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he (sic) encounters (Blumer 1969, p.2 cited in Flick 2014, p.82).

Hence, before I interviewed the tutors in P2, they had already been interpreting how the ePortfolio was being responded to by their students, and its use, for example, as a tool to support reflection as demonstrated in the comment from Tutor 1 (group 2) "It's been difficult for some students to cope with-they've never done anything like this before. . ." (P2:839:23-24).

Blaikie (2009, pp188-189) has succinctly summarised notable criticisms of interpretivism such as its assumption that participants in a study are checking their own intentions and reasons for their actions. Giddens (1984, p.282, cited in Blaikie 2007, p.188) states that this is often not the case, and that it is only when retrospectively re-visiting their actions that such participants' reflections actually occur. Giddens further asserts that "Routine . . . is the predominant form of day-to-day social activity. Most daily practices are not directly motivated" (1984, p.282, cited in Blaikie 2007, p.188). Whilst this is a notable concern, individual and group interviews, as well as video diaries, do provide opportunities for participants to reflect upon their actions.

Another concern, resonating with social constructionism, is the potential conservatism within this RP. Crotty (1998, p.159) notes that ". . . most interpretivists are content to adopt a professedly uncritical stance vis-à-vis the culture they are exploring - indeed, may demand such a stance - criticalists insist that the culture and the accounts it informs be radically called into question." As noted previously, this risk is something to be returned to and reflected upon regularly in the future when continuing my journey as a qualitative researcher.

Blaikie offers a variety of research paradigms (RPs), some of which, he states, attempt, in some way, to apply the methods of natural sciences to the social sciences, whilst others reject such an approach, totally or partially, as does interpretivism which is prevalent in my work (Blaikie 2007, p.109). For the purpose of this review, I examine two as a foil to my chosen RP. Firstly positivism, a classical RP, embraces an ordered reality in which evidence is collected about specific events leading to truth based upon human observations ". . . that are uncontaminated by any theoretical notions" (Blaikie 2007, p.112). Value judgements are excluded from scientific knowledge and therefore ". . . anything that cannot be verified by experience is meaningless" (Blaikie 2007, p.113). Positivism is often aligned with realism, and objectivism. My research has not encountered absolute truths in my field of study, so positivism is an inappropriate paradigm.

An alternative, and yet another classical RP detailed by Blaikie (2007, pp.113-116), is critical rationalism. This accepts that the natural and social sciences are different in content, but are both based on deductive logic. More aligned with cautious realism, it is often referred to as 'post-positivism'. This approach is aligned with the hypothetico-deductive method in which theories are tested against an independent, external 'reality' (Blaikie 2007, p.113). Popper is commonly associated with this approach. He maintained that the researcher must develop theories and then test them by making a number of observations, consciously seeking the existence of counter-examples. If the collected data does not confirm to the theory, the theory should be rejected, or modified, and then similarly re-tested. Hence his view of social science is to be trying out tentative solutions to issues, working from a theory but accepting that all solutions, if not temporary, are certainly open to challenge (Popper 1976, pp.89-90 cited in Blaikie 2007, pp.115-116). In my research field that does not offer generalised theories that can be tested and confirmed, this paradigm, too, is not deemed appropriate for my work that is broadly interpretivist.

I now turn to the research strategy which identifies how the RQs will be addressed. Blaikie (2007, p.2) considers research strategies as a process (a logic) through which RQs can be

solved to construct knowledge akin to a type of problem-solving. He claims they offer a starting-point through which the 'why' and 'what' RQs can be answered (Blaikie 2007, p.8).

3.4.4 Research strategies: the logic of inquiry

I follow an inductive approach[23] to my research strategy (RS) with meanings being generated from the data collected and its analysis. I have taken a 'bottom-up' approach to knowledge generation, although this is often under-articulated in my published work due to space limitations. Through a range of data collection methods, I have explored student and tutor experiences of, and comings to understandings about, learning in technology-mediated learning environments. Then, using iterative data analysis, themes are built, and the data organised into increasingly more abstract units leading to the generation of thick detailed descriptions addressing the RQs. P1 is an example of this. The process of data analysis is outlined in this publication followed by an overview of the key themes (P1:220 – 226). In the discussions section, thick descriptions of tutor and student experiences are presented, based on data abstraction.

Issues do persist, nevertheless, with my limited use of inductive logic. Remenyi (2013, p.5) refers to inductive logic as a type of intellectual process through which the researcher moves from data to theory. As stated previously, I do not seek theory generation from my small-scale work. Also, a tenet of inductive logic is to explain patterns derived from data collection through generalisations. I discuss issues pertaining to generalisation in more detail in 3.6.1.3, but usually, there is no attempt to generalise from my work.

Abductive logic presents an interesting alternative, being associated with the interpretivist research paradigm together with idealist ontological and constructionist epistemological perspectives (Blaikie 2007, p.204). Inherent is the belief that research is never completed, and iterative. Brinkmann (2013, p.56) asserts that abductive reasoning is used in situations of uncertainty as in my work exploring innovative approaches to learning and teaching in technology-mediated environments. Blaikie (2007, p.90) proposes an adapted three-stage model of abductive logic emphasising participants' language, meanings and accounts in the context of their everyday lives and activities – their social world. My work as qualitative researcher resonates with that description. There is a strong focus on uncovering why people do what they do and opening up ". . . largely tacit, mutual knowledge, the symbolic meanings,

[23] In Peacock et al., 2011, the authors state that "An inductive and interpretive process of analysis was employed." See: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299849&type=webfolio&pageoid=299857

intentions and rules . . .” (Blaikie 2007, p.90). Many students and tutors have a taken-for-granted and unreflective approach to learning which permeates their interpretations, understandings of, and responses to, learning in technology-mediated environments, as noted in my first publication (P1:225:10-43).

To direct my research strategy, I have followed a limited type of inductive logic, accepting that it has a number of anomalies but, like Remenyi, I believe it to be an acceptable approach (2013, p.7). However, I am nowadays attracted to abductive logic, because of the importance specifically placed on differentiating between the language used by the participants, and the technical language I use to describe my abstractions from the data, plus the focus on “uncovering” tacit knowledge. Both have been implicit in my work, but abductive logic has re-emphasised these for me. Due to space limitations, I have restricted my exploration of abductive logic in this work accepting that some contend it is a sub-set of inductive logic (Remenyi 2013, p.65) whilst Brinkmann concludes that qualitative researchers often combine a mixture of inductive and abductive logic (2013 p.56).

3.5 The third layer of the EF: my emergent ethical position as an education qualitative researcher

Ethics usually includes “. . . principles and guidelines that help us uphold things we value” (Johnson and Christensen 2012, p.99) and also, involves consideration of procedures required for protecting participants (Schenll and Heinritz 2006, p.17 cited in Flick 2014, p.49). My primary ethical driver is, thus, concern for the individual participant. I attempt “… to stand in the shoes of potential study participants, to consider from their perspective how they would want to be treated” (Webster et al. 2014, p.83). Clear, and detailed, guidance to ethical approaches to the inquiry process are set out by BERA (2011), Economic and Social Research Council (ESRC) (2015), and QMU (2010). However, there may be complex problems when general guidelines are applied to particular situations wherein privacy, confidentiality, and non-maleficence are at variance with the general benefit sought in undertaking the research. Examples might include student group interviews about peers’ postings to discussion boards, asking for views on their effectiveness, or not, from fellow students. In such cases, it is relatively straightforward to determine if the activity might be to the detriment of individuals. In other cases, it is more complicated, and less easy to predict whether such investigations will cause embarrassment, hurt, or another negative emotion, and it is even more difficult to decide if, and thus, how, the approach to data collection should be changed. Therefore, careful forethought in planning the

inquiry process is essential, even before seeking ethical approval, since if an individual has cause to complain of damage after the event, it can seldom be 'undone' or rectified. Figure 3.3 details non-maleficent ethical issues to be addressed at each stage of the inquiry process, illustrated with examples drawn from my publications and references to project websites/blogs where ethical decision-making has been made transparent to the learning technology community.

Through this review, I have re-visited my ethical responsibilities as the lead researcher to the co-researchers who are within the Research Teams, drawing upon the writings of Webster et al. (2014), Brinkman and Kvale (2015), BERA (2011), ESRC (2015) and Flick (2014). BERA (2011, p.5) and ESRC (2015, p.2) emphasise the importance of respect for all participants, which should apply to both participants and researchers. Regular team meetings[24] provide opportunities for debriefing and discussion where concerns are voiced by all, and addressed as practically as possible. Brinkmann and Kvale's work has reminded me that:

> . . . interview research goes beyond a technical mastery of the interview craft to include professional reflection on interview practice and on the value of the interview-produced knowledge, with an awareness of the epistemological and ethical issues involved (Brinkmann and Kvale 2015, p.329)

All research conducted at QMU requires ethical approval (QMU 2010)[25]. An extensive form including risk assessment (accompanied with examples of consent forms, participant information sheets and interview schedule[26]) must be presented to an Ethics and Knowledge Exchange Panel[27]. Qualitative research with its evolving data collection methods and creation of video and audio files may be challenging for such panels (Johnson and Christensen 2012, p.115) resulting in such processes becoming rather lengthy. To guard against viewing applications for ethical approval as an administrative exercise, I treat such procedures as a springboard to inform ethical planning and decision-making in which I draw upon the experiences of my fellow researchers. Webster et al. (2014, p.79) propose a situational approach to ethics whereby each case is appraised in accordance with guidelines (in my case, BERA) plus examples drawn from the learning technology community. Universalism and utilitarianism could provide alternative ethical philosophical bases but, in accordance with my

[24] Notes from team meetings are available on project websites/blog. For example, notes from the team meetings for P5 detailing decision-making after Team discussions from September 2009 to July 2010 are available at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=132235&type=blog

[25] It should be noted that for P1 ethical approval was not necessary, at that time (2003) but I discussed the research with one of our ethical supervisors in health sciences and asked participants to sign a consent form (P1:220:36-37).

[26] For P5, the project blog details papers submitted for ethical approval. https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=146313&type=thought.

[27] Ethical approval for this work was granted by the University of Stirling.

approach as a qualitative researcher, and my underpinning theoretical framework, contextual decision-making informed from a wide range of sources is preferred. Working collaboratively provides ready access to divergent ethical perspectives, and informs decision-making. For example, in P4, concerns were raised about a conflict of roles within the Research Team. One of the researchers was also a tutor on one of the programmes; Creswell (2014, p.188) refers to this as conducting 'backyard research'. To ensure the study was conducted as ethically as possible, this tutor neither collected nor analysed data from her students.[28]

In conclusion, in my professional practice, ethics in the research process has been dependent upon the qualitative researcher making on-going, informed, non-maleficent decisions aligned with theoretical assumptions underpinning the work. I accept that despite detailed consideration of ethical issues, it is impossible to predict how any situation is going to affect a person. Thus, as Creswell has reminded me (2014, pp.93-94), I must be prepared to address ethical issues as they arise during the inquiry process informed by ethical guidelines, and ethical theories; but I concur with (Brinkmann and Kvale 2015, p.97) that "In the end . . . the integrity of the researcher - his knowledge, experience, honesty, and fairness - is the decisive factor". Webster et al. (2014, p. 107) exhort all researchers to develop an ethical conscience, ensuring that ethical decision-making is more nuanced, more reflective, and less formulaic whilst accepting of the complexity of social research. Like them, I use the term 'emergent' since I have found that ". . . the more experienced a researcher becomes, and the more confident they are about tackling complex and emotionally laden topics, the more they will encounter ethical dilemmas" (Webster et al. 2014, p.108).

[28] Further information at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299871&type=webfolio&pageoid=299875.

Figure 3.3: an overview of non-maleficent ethical issues to be addressed at each stage of the inquiry process with examples from the publications

3.6 The inner layer of the EF: methods

In this section, corresponding to the inner layer of Figure 3.1, I scrutinise the design of the inquiry process, examine how data is collected and analysed, and critique the manner in which the outputs of my research are shared with different communities. Reflexive, ethical, decision-making occurs at each of these stages (as detailed in Figure 3.3), being a quality indicator of QLR (Flick 2007, p.8). Included in this section is consideration of how the findings are extracted from my work, as well as discussion about issues of 'procedural reliability', and 'validation'. Throughout I note tensions in my work which, in some cases, have led to some misalignment between my theoretical stance as detailed above and the research strategies employed. I discuss such issues in the conclusion of this chapter.

3.6.1 Design of the inquiry process

Research design is envisaged as following a logical model or blue print, safeguarding that I learn from the participants in the study about the problems/issues identified in the research topic in order to address the RQs (Yin 2014, p.29). In my qualitative research, such design addresses the processes of collecting, analysing and interpreting findings. However, as indicated in P5[29], design is emergent, flexible and iterative, being (re-)considered throughout the study, and not only at the outset (Creswell 2014, p.186). In the initial design process, the Research Team plans to have sufficient time for both collection, and analysis of the data. This, again, is a difficult balance to maintain, and one that is constantly returned to by the Team.

In this review, due to space limitations, I focus on case study definition, and sampling strategy. Both of these, through the identification of data sources and selection of participants, shape the inquiry process, impacting on the quality and appropriateness of data collected, the resultant analysis, and ultimately on the knowledge generated.

3.6.1.1 Case studies

In case study research, the primary driver is *understanding* the case itself. I select, and focus upon in-depth particular complex, and notable examples, whilst taking into account the context of the situation (Flick 2007, p.xi). Figure 3.4 details the case studies in the publications. For example, in P1, the selection of two physiotherapy student groups enabled a comparison to be

[29] An example of the design process I take is available in the final report for the research project for P5, available at: http://www.qmu.ac.uk/palatine/documents/OSLE.pdf. Section 3 (pp.40-50).. Page 44-45 of this report. Table 7 is noteworthy detailing methods, rationale for selection, design choices and data handling and analysis.

made of their experiences of learning through a VLE (P1:219:36-62). In comparison, in P5, three cases were purposefully chosen in the performing arts, whilst two further examples were discounted as not matching the selection criteria (P5:1273:45-53). To ensure specificity, my chosen case studies are bounded by a particular contemporary time and context - learning in specific subjects in tertiary education in the early C21st. The availability of funding may influence the selection of case studies as it may determine the subject specialisms using the technologies. For example, the HEA Health Sciences and Practice in P4 limited the cases to those within the health sciences.

Case studies are often compared with other types of social research such as surveys, and experiments. In surveys, in my work, as in P5, there is no intention of focusing on a few features in a large number of cases; they are just a tool for collecting descriptive data quickly. Another alternative is experimental design; this focusses on cases where there is a direct control of key variables. However, in my studies the boundaries between the context and the phenomenon under study are not clearly evident (Yin 2014, p.16). For instance, in P2 when exploring tutor attitudes to ePortfolio and PDP and reflective learning, the context is HE and FE, but it is not clear how the different context will impact on how the ePortfolio could be used as a tool to facilitative PDP and reflective learning.

There are frequent criticisms of case studies for being insufficiently rigorous and requiring unmanageable level of efforts (Yin 2014, p.20). However, case studies help to explore "what it is like" to be in a particular situation from multiple perspectives in order to catch the close up reality. They generate thick descriptions of participants' lived experiences in the natural world which may lead to *understandings of* how students/tutors operate within their world, and the technologies introduced into it (Stake 2000, p.21). In the final report for P5, the selection of case study design is explained as enabling "…a holistic examination of each case to take place and support[ed]ing access to a deeper understanding of learner and tutor experiences and perceptions of using an OSLE within three very different learning and teaching contexts" (Peacock et al 2011, p.30). Robson (2002, p.180) asserts that case studies are not a flawed experimental design but "… fundamentally a different research strategy with its own design."

[30] The final report for the research project for P5 is available at: http://www.qmu.ac.uk/palatine/documents/OSLE.pdf. See page 40.

3.6.1.2 Sampling

After having defined the case study, a systematic, non-probabilistic approach to sampling is taken by purposively selecting participants who have: the appropriate experiences and knowledge; the capability to reflect and articulate; an understanding of the subject; time to be asked, and are prepared to participate (Creswell 2014, p.189). For instance, in P5, the sample comprised students/tutors who had used the OSLE, were able to reflect and discuss their experiences (through video interview/diaries), understood what the OSLE was trying to achieve, and were prepared to participate as indicted through their completion of consent forms (P5:1273:35-53 – P5:1274:1-53).

Sampling in my qualitative research is relatively small-scale (as indicated in Table 3.1) and does not seek to develop generalisations based on statistical statements, such as a precise estimate of what percentage of a population behaves in a certain way as with quantitative research. A small number of interviews and focus groups are conducted to provide thick, contextual information forming the basis of the detailed contextual-specific descriptions which are the outputs of my research. Both Marshall and Rossman (2006, p.63), and Flick (2014, p.178) advise that sample size should link to the RQs – is the sample appropriate in order to inform the problems identified in the RT? For example, in P1, the aim was to compare the experiences of pre and post-registration health students who had not used a VLE previously. The sample was drawn from students/tutors enrolled on the two modules in the subject specialism, since they could help answer the RQs about student/tutor experiences and their comings to understanding about learning online (P1:220:9-30). Two learner focus groups were undertaken in P1 consisting of eight, and three participants respectively plus five learner interviews. Four tutor interviews were also undertaken[31]. In hindsight, more learner interviews, and focus groups would have been preferred, but no students were forthcoming. In comparison, 23 tutors were interviewed in P2 (P2:832:3-10); it is questionable how much more significant data were collected in phase 2, and if this impacted on the "robustness" of the work.

Student recruitment is highly problematic, as stated in P5:1278:53-54, and reflected in all the publications. Initially incentives (other than refreshments) were not provided since this may impact on the trustworthiness of findings, as noted by McDowell and Marples, 2001 (P1:220:17-

[31] Page 23 of the final report for the research, from which publication one is derived, provides details of the participants in the study. This is available at: http://eresearch.qmu.ac.uk/view/people/Peacock=3ASusi=3A=3A.html

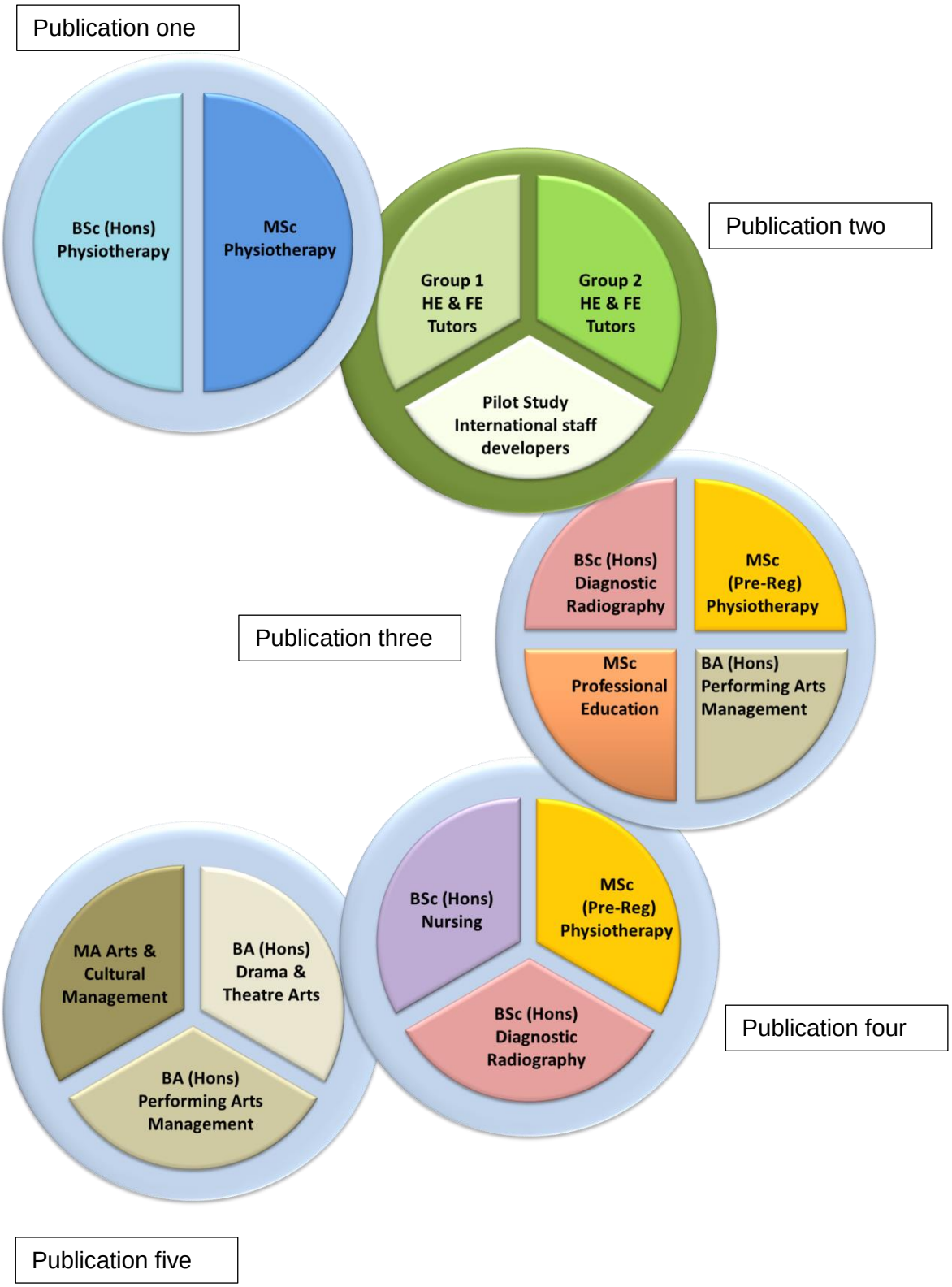


Figure 3.4: an overview of the case studies in five of the publications

19). However, by P4, offering a book token (under £10) increased participation in the study[32]. Participants were reminded that should they decide to withdraw from the focus groups at any stage, they would still receive the token (ESRC 2015, p.30).

Often convenience sampling is used because of ease of access to the students in the studies, and the practical constraints of the small-scale funded research that I undertake (Johnson and Christensen 2012, p.230). With less limited resources, undertaking purposive sampling would be a preferred option (Ritchie et al. 2014, pp.113-114). Convenience sampling has limitations (Berg and Lune 2012, cited in Ritchie et al. 2014, p.116) since it is often unclear from which study population a sample is drawn. To address this, the characteristics of the sample and, sometimes, the hypothetical population which most corresponds to the convenience sample,[33] are described. In P5, detailed information was offered about the sample including context, cohort size and programme/level of study, purpose of use of the OSLE (P5:1273: 33-53 – P5:1274:1:53[34]). In the sister publication for P4, extensive information was provided about the use of the ePortfolio (Peacock et al. 2011, p.35-36). Nevertheless as noted in the publications, and concurring with Polit and Beck (2010, p.1454) such an approach to sampling has particular limitations, as stated above, and is a recurrent problem of small-scale funded research.

Before addressing data collection, I address the issue of extracting valid and relevant findings from my work, and the related concepts of reliability, and validation. I have been aware that these areas present specific, and on-going, tensions in my research.

3.6.1.3 Extracting valid and relevant findings from my work

My case study reporting resonates with Hammersley and Gomm (2000, p.3) who state that the aim of case study research should be ". . . to capture cases in their uniqueness rather than to use them as a basis for wider generalization or for theoretical inference of some kind." This also echoes Brinkmann and Kvale's (2015, p.64) discussions about semi-structured interviews in which they state "Knowledge obtained within one situation is not automatically transferable to, nor commensurable with, knowledge within other situations." In accordance with my qualitative stance, phenomena can only be understood within the context in which they are studied, and cannot be applied to others (Patton 2002, p.98). In

[32] This is discussed in more detail in the final report for P4, in the discussions/limitations section at https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299789&type=webfolio&pageoid=299795
[33] In Table 2 in P2 (pp.833-835) detailed information is provided about each individual participant in the sample detailing gender, sector, personal use of ePortfolio, student use of ePortfolio and technological ePortfolio solution such as BlackBoard or an open-source solution.
[34] Further detail about the sample, from which publication five is drawn, is provided on the project website at: http://www.qmu.ac.uk/palatine/OSLE_using.htm.

	Interviewer notes	Researcher reflections	Student face-to-face focus groups	Student face-to-face interviews	Tutor face-to-face interviews	Tutor telephone interviews	Tutor online interviews	Tutor face-to-face focus group	Tutor video conference focus groups	Student online interviews	Student video diaries	Tutor video diaries	Online student questionnaires	Online tutor questionnaires	Student paper questionnaire	Tutor narratives
P1	✓	✓	N = 2 (1 pg; 1 ug) Pg = 8 Ug = 3	N = 5 Ug = 2 Pg = 3	N = 1 ug	N = 3 pg									N = 30 (Ug = 21 Pg = 9)	
P2	✓	✓				Pilot N = 8		Pilot N = 1 (3)	Pilot N = 1 (3)							
	✓	✓				Group 1 N = 8 (6 FE 2 HE)										
	✓	✓				Group 2 N = 15 (9 FE 6 HE)										
P3	✓	✓														N = 4
P4 (S)	✓	✓	Pilot N = 1 (3) Study N = 6 (24 ug; 7 pg)											N = 3		
P5	✓	✓					N = 4			N = 5	N = 4	N = 3	N = 5	N = 4		

Table 3.1: an overview of the methods employed in five of the publications with details of the sample size of the case studies

essence, the knowledge generated through the small case studies in my work is idiographic, and is thus found in the particular[35] (Polit and Beck 2010, p.1452).

Nevertheless, having been provided with detailed, contextual information, readers[36] can make informed decisions about whether or not the findings can be useful in other settings (Patton 2002, p.41) [37], and/or inform the development of future research questions in different situations[38]. Referred to as transferability by Lincoln and Guba (2000, p.40), essentially:

> . . . the reader decides whether the concepts have wider analytical or explanatory power by looking in detail at both the setting of the initial study and the other settings where the findings might be applied, by comparing these contexts, and by judging whether the analysis and interpretations found in the initial setting can help make sense. . (Spencer and Pahl 2006, p.6)

Fittingness is defined by Lincoln and Guba as the "…degree of congruence between sending and receiving contexts" (2000, p.40). To aid the transfer by readers, thick descriptions of the research are required, including detailed information about research participants, and the Research Teams. The purpose of such descriptions is to ". . . transport readers to the setting" (Creswell 2014, p.20). Although transferability is then the responsibility of the reader and consumer of the research, support is offered in helping to discriminate whether the findings are 'a good fit' by the provision of common contextual features as advocated by Polit and Beck (2010, p.1454-6) such as in P2:833:Table 2. One of the key barriers to this approach is the limited amount of space provided for qualitative research articles in journals (Polit and Beck 2010, p.1454). To overcome this constraint, project blogs and websites are made available with extensive information about the inquiry process such as that for P4[39].

Recently, reflecting the work of Polit and Beck (2010, p.1455), and responding to requests from the Research Teams, I have tried, in a small, and tentative way, supported by the Research Team, to build upon the provision of thick detailed descriptions, using these as a springboard to address issues more conceptually, including the development of a theoretical

[35] In the publications, small numbers of participants in the case studies are noted as a limitation of the work, for example, P5:1278:53-54. Often the learners are drawn from a sub-set of a particular group (a year of a programme) but as noted above, this qualitative research focuses upon the production of particular knowledge.
[36] P2:833-835 (Table 2) offers detailed information about each of the participants, their context (discipline and sector), personal experience of ePortfolio, and student use. The purpose of the Table was to allow readers to determine if the results could be extrapolated to their contexts (P3:833 and 834).
[37] In P2:848:26-33, in discussions about the rigour of the work, a female, FE bias was noted with many tutors working in vocational programmes in non-research-intensive institutions. This was noted so readers could decide if this bias would influence the applicability of the work to their context.
[38] In Peacock et al. 2011, the authors suggest that the findings from the work could help inform more longitudinal studies to be undertaken, charting the development of a more complex learner understanding of feedback and its role in learning, and the potential for the ePortfolio to support this. See: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299789&type=webfolio&pageoid=299795
[39] See project website and blog for P4 at: https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=299879&type=webfolio

perspective. In P4, a practical framework was developed to address issues of learner engagement with feedback. As stated in 1.2.4, the approach was too complex and needed further refinement, and testing, but it was my first effort at progressing in this way, and will inform future work although it created a tension in my work by digressing from Hammersley and Gomm's work (2000, p.3).

I am constantly seeking to ensure the alignment of this area of my work with my philosophical stance, and my perspectives on QLR, as well as being responsive to external requests, such as those from Funders, who require work that can readily 'seen' to be 'generalisable.' In conclusion, generalisation ". . . is a thorny, complex, and illusive issue" (Polit and Beck 2010, p.1452) and one that I will continue to explore.

3.6.1.4 Procedural 'reliability' in my qualitative work

In quantitative research, reliability is associated with the replicability, stability and consistency of the inquiry process; the driving question is, "if the research was repeated again, would the results be the same?" (Flick 2014). Funders often ask for my research to demonstrate reliability. Such an approach is at variance with my stated philosophical stance outlined in sections earlier in this chapter.

For me, Yin (2014, pp.48-49) and Flick (2014) offer an alternative for my qualitative research - procedural reliability. This requires the researcher to document her procedures followed in the inquiry process, ". . . so that an auditor could in principle repeat the procedures and hopefully arrive at the same results" (Yin 2014, p.49). This policy is adhered to in my work through the provision of thorough documentation on project websites and blogs so that readers can, for instance:

- Review how the data was collected[40]
- Scrutinise the data and check if it is what the participant said or if it was an interpretation by the researcher[41]
- Investigate how the interviews were transcribed. For example, in P2, two researchers analysed the tutor interviews in NUDIST, and then a third researcher independently reviewed the analysis (P2:836:7-9)[42]

[40] In P2, after the pilot phase, the interview guide was amended and refined after the Research Team had listened to, and discussed, the recordings. This was repeated after Group 1 interviews, and recordings P2:830:Figure 2.
[41] In P2, the quotations from the participants were clearly differentiated textually, and coded, for example, Tutor 14, group 2. The narrative is readily identifiable and informed from the literature. An example is P2:840-841 which discussed the participants' views of assessing ePortfolio, and compared this with the literature in this area.
[42] P1:220:40-46 details how the interviews were transcribed, and checked.

- Critique how the analysis was undertaken and the discussions between members of the Research Team[43]
- View field notes and determine if they are verbatim or paraphrased by researcher[44].

For the future, additional checks to enhance procedural reliability such as funding for peer debriefing (an individual who is not involved in the research in order to discuss the research) and an external auditor who can review the entire project, and offer an alternative perspective on the research (Creswell 2014, p.202). I have considered if such suggestions imply that I take a more positivist philosophical stance, but their implementation would focus on improving procedures for data collection, analysis, and sharing.

Ultimately, in my qualitative work, I adhere to Flick's notions of reformulating 'reliability' in qualitative work in the ". . . direction of checking the dependability of data and procedures . . ." and making this is as transparent as possible to my readers.

3.6.1.5: Validation of my work

Validity, like reliability, has become a highly contested area in QLR (Angen 2000). Wishing to move away from the term's positivist associations with 'correctness' and notions of measurement of validity and internal/external validity, qualitative researchers have explored a variety of alternatives (Cho and Trent 2006). For instance, Guba and Lincoln (1994, p.112) move from the concept of validity to "authenticity", addressing whether the data:

- Represents a range of different realities
- Assists others to develop more sophisticated understandings
- Helps others to appreciate different viewpoints
- Leads to action.

This resonates with some of my work in which I seek to, "…describe a phenomenon in rich and authentic detail and in ways that reflect the language and meanings assigned by participants" (Lewis et al. 2014, p.357) although my work is not so political, as is perhaps the case in some social constructionist/interpretivist work as noted previously in 3.4.2 and 3.4.3. However, one of the outcomes of publications is to encourage debate within learning technology communities which may inform future research.

Recently I have become interested in the concept of validation as an alternative to validity; however, this too is problematic. Flick (2007, p.18) suggests validation has a twin focus:

- The transparency of the inquiry process as a whole

[43] P1220:59-98 outlines the analysis process, and the discussions between the two researchers.
[44] Project blogs provide minutes of meetings.

- An appraisal of how well participants' meanings have been captured.

The first of these resonates, for me, with my preference for procedural reliability as outlined above. The second point highlights another tension within my work.

I have used member validation, often referred to as "member checking," in my work to address how well participants' meanings have been captured (Lewis et al. 2014, p.358). For many researchers, this involves taking back draft reports and initial findings to those involved in the research and checking if the meaning assigned is confirmed by those who contributed (Flick 2007, p.356). I use a more limited version of this in which participants are asked to check on the 'accuracy' of transcripts[45]. I was introduced to member checking by a fellow researcher and had continued its use in my work. It is very popular with members of the Research Teams, and funders.

After feedback from the Panel, I reviewed my use of this mechanism, and its underpinning assumptions, particularly with reference to the work of Cho and Trent (2006) who usefully differentiate between two approaches to validity. The first, *transactional*, focuses on a range of techniques which encourages active interaction between the inquiry and the research participants with the aim of achieving higher levels of accuracy by revisiting facts, feelings, and, experiences. Alternatively *transformational* approaches, they acknowledge, may question the very notion of validity, even if it is an ideal.

Member checking is typically associated with the transactional approach in which ". . . informants are engaged in making sure their realities correspond with the interpretations brought forth by the researchers" (Cho and Trent 2006, p.322). As noted by these authors, such an approach implies a quest for *accuracy* which is at variance with my philosophical stance outlined above. Cho and Trent (2006) continue by offering an inclusive dialogue to validity proposing a model which incorporates both approaches asserting that "Transformational approaches seeking ameliorative change can and should be combined, when deemed relevant by the researcher(s) and/or participants with more traditional trustworthiness-like criteria" (p.333). This conceptual "bridge" provides me a potential avenue to continue, like the authors, using member checking but offers a practical framework to inform discussions with my Research Teams. For instance, I hope that rather than sending participants a copy of their recordings, we would send draft reports for feedback, inviting them to determine ". . . the image presented of themselves" (p.336).

[45] In P2:832:34-38 copies of transcripts were sent to all the participants and those in the pilot study as advocated by Krefting (1991, p.219).

Ultimately, like Cho and Trent (2006), I do not view any validity technique as a "magic charm[s] of assurance" (p.333), but like Angen (2000) return to the etymological roots of "valid" and thus concur with her that ". . . validity does not need to be about attaining positive objective truth, it lies more in a subjective, human estimation of what it means to have done something well, having made an effort that is worthy of trust . . ." (p.392). Through making my work as transparent as possible, I hope that those working with, and reviewing that work, can make informed judgements of how far that work is "worthy of trust". I now turn to data collection.

3.6.2 Collection of data

A range of data was collected from the case studies including textual transcripts, interviewer notes, and researchers' reflections. In some cases, this is supplemented with preliminary, contextual background data collected through online questionnaires such as in P5 (1273:47-52) when tutors were asked to anticipate the use of OSLEs, and details of prior use. This saves time in the interview and, in the case of P5, provided sufficient detail for two case studies to be rejected. See Table 3.1.

Based on my qualitative stance, I subscribe to Lave and Kvale's view that ". . . the only instrument that is sufficiently complex to comprehend and learn about human existence is another human. And so what you use is your own life and your own experience in the world" (Lave and Kvale 1995, p.220, cited in Brinkmann and Kvale 2015, p.72). Thus, in the data collection undertaken by the Research Teams, there is preference for semi-structured interviews, and focus groups (as detailed in Table 3.1) because the capturing and retaining of individual and group points of view may provide meaningful insights into the area of social reality under exploration through the RQs (Mason 2002, p.63). In the next two sections, these two methods for collecting data are discussed; first interviews, and then, focus groups. Due to space limitations, these considerations are somewhat brief but underpinning their use is the understanding that through these tools, meaning is not discovered, but constructed (Crotty 1998, p.42).

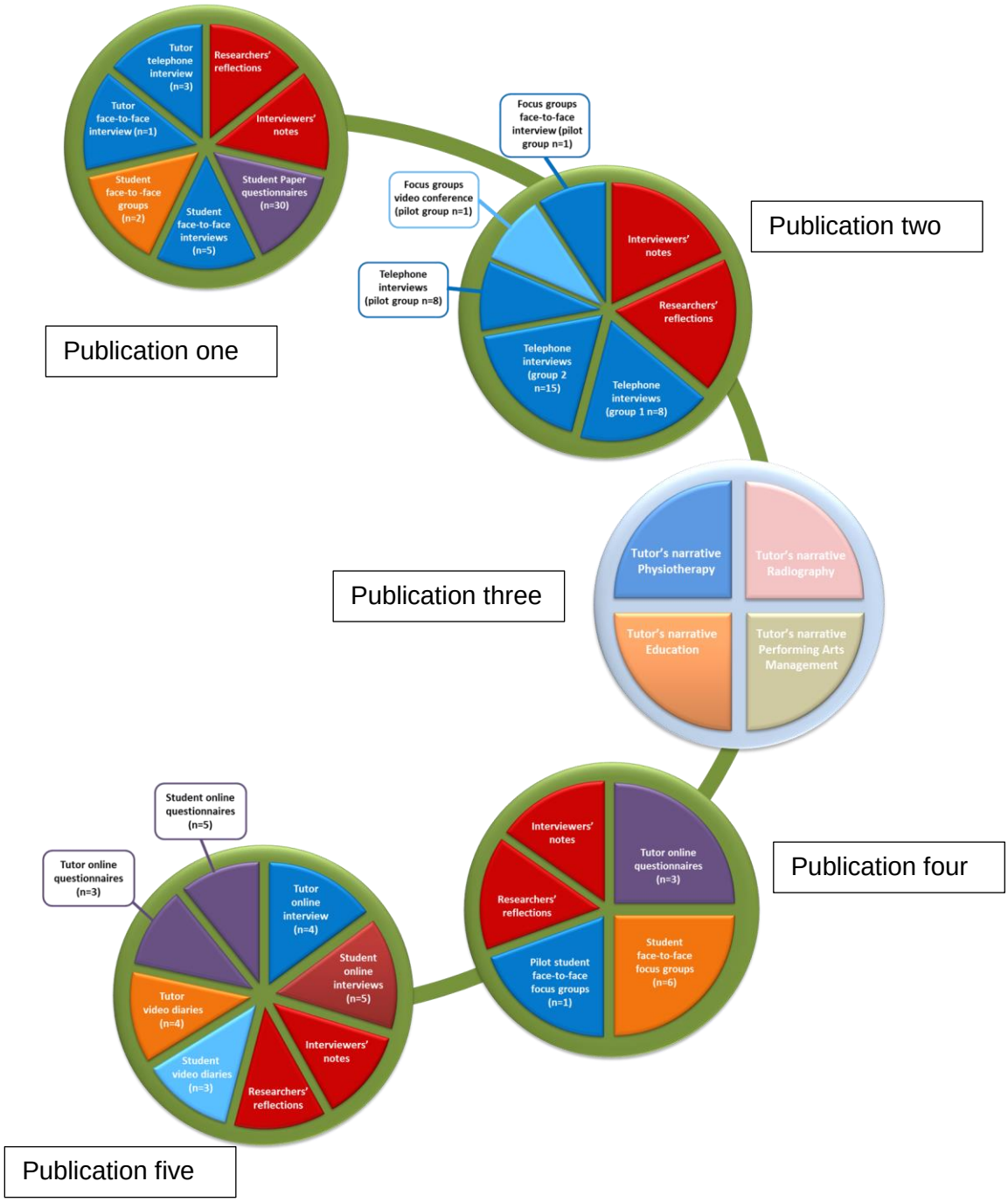


Figure 3.5: a diagrammatic overview of methods employed in each publication

3.6.2.1 The semi-structured interview

The purpose of interviews is to inform understandings about the research theme and to address RQs, as in P2 when 23 individual tutor experiences of, and comings to understandings about, learning with ePortfolios were captured to inform the RQs (P2:829:6-10). As a Team, we set out to "unpick" how these tutors, individually, made sense of using ePortfolio as a facilitative tool to support learning - exploring phenomena "from the interior."

The interviews allowed the capture of the tutors' perspectives and the development of detailed descriptions which were shared with various communities. In P1, eight individual f2f interviews were undertaken with students, and four telephone and f2f with tutors. In this instance there was desire to capture the different learner and tutor perspectives of learning with a VLE (P1:219:21-29).

My conceptualisations of interviews have been heavily influenced by the work of Kvale (1996), Kvale and Brinkmann (2009), Brinkmann and Kvale (2015). These authors consider interviews to be similar to conversations but less open, and with more specificity. An interview is certainly, from my perspective, neither a tape recording of an informal chat nor the collection of long, unwieldy unfocused narratives. These professional conversations, characterised by careful questioning on specific themes and active listening, are descriptions of the participants' lived world from which the researcher can discuss the meanings of the described phenomena in the analysis (Brinkmann and Kvale 2015, p.31) as in the findings section in P2 (836:30-848:20).

Kvale and Brinkmann's notion that an interview is not a monologue but a co-construction of knowledge between the interviewer and the interviewee - human, personal, interaction in the interview produces knowledge – encapsulates the ontological/epistemological stance to which I aspire. In their approach, an interviewer is a traveller on a journey where she enters into specifically focused conversations. The interview is the production site of new knowledge, and the process of its creation impacts on the researcher as well as those being interviewed (Brinkmann and Kvale 2015, p.63). This approach to interviewing echoes other qualitative writers such as Mason (2002, p.68) and Donalek who stated ". . .a qualitative interview is a shared journey. The resulting description is not simply the participants' elicited recall of past experiences but a co-created work emerging from the interaction of the researcher and participant" (2005, p.124).

An interview guide is developed by the Research Team to guide such conversations. Usually refined through the inquiry process[46], the guide consists of key themes, and outlines for potential questions. An on-going tension for me is balancing the requirements for an interview guide which must be submitted to the QMU Ethics and Knowledge Exchange Panel, requests by some members of the Research Team for a detailed guide and my philosophical stance which would prefer a less prescriptive document. In some circumstances, we may have made the guide too 'tight,' in seeking to balance these competing demands and wishing to make each interview as similar as possible, to aid the analysis process. In some cases, (for example, P2:831:Table 1) the guide is more akin to a survey interview than a qualitative interview and certainly has too many closed questions. The development of this guide was very much influenced by the Research Team and some of the interviewers who requested a detailed document. I acknowledge that this is an area that I will return to in future work as it is at variance with my stated philosophical assumptions and seems almost to imply an almost realist perspective to social reality.

After the interviews, researchers generate notes and reflections. In P2, there was debate in a team meeting about how closed a guide should be, especially since participant responses may require, on occasions, an interviewer to deviate from the guide. This is something for on-going review in the design process with future Research Teams.

Interviews have been heavily criticised at the macro level for being characteristic of the interview society prevalent in the C21st (Brinkmann and Kvale 2015, p.15). In my research, I have found them to provide valuable insights into student/tutor experiences of, and comings to understandings about, learning in technology-mediated learning environments which might otherwise have been inaccessible. I accept that that they are time-consuming, and offer perspectives that are filtered through the participant's views. Procedural criticisms also exist, including being dependent on the co-operation of the participant (especially when exploring uncomfortable/sensitive subject areas in interviews), whilst not all participants are as articulate as others (Brinkmann and Kvale 2015, p.332; Creswell 2014, p.191). Nevertheless, the risks and criticisms of interviewing appear to have been overplayed (Yeo et al. 2014, p.182). In the future, I hope to explore further the potential of video interviews which may provide an alternative to the traditional face-to-face interviews. I accept, as in P5:1278:54-56, that such tools are cumbersome and not necessarily aligned with my text-based qualitative stance but may have a role, for example, in helping in pilot interviews and

[46] P2 is a typical example of the iterative approach taken to interviewing. First, pilot interviews were undertaken with staff developers internationally. Then, two rounds of interviews were conducted with the tutors recruited through the Individualised Support for Learning through ePortfolios (ISLE) project. Each time the interview guide was refined through researcher discussions (P2:830:Figure 2)

sensitising interviewers in the Research Team to the importance of body language (Brinkmann and Kvale 2015, p.205).

Another data tool used in the publications is group interviews, hereafter referred to as focus groups; these are used in P1, and in P2 as part of the pilot (see Table 3.1). The following section contrasts this tool with individual, semi-structured interviewing.

3.6.2.2 Focus groups

Usually consisting of up to eight participants, the purpose of a focus group is to obtain data in ". . . a social context where people can consider their own views in the context of the views of others" (Patton 2002, p.386). Focus groups offer a more natural environment than interviews as participants in their learning environments will have their ideas, perceptions and attitudes influenced by others as much as they will influence others too (Kreuger and Casey 2000, p.11).

In the six focus groups undertaken in Peacock et al. 2011, the purpose was to encourage learners to share and discuss their views of feedback facilitated through an ePortfolio – to identify and discuss differences within the group, and clarify ideas. It was hoped that by hearing each other's comments they would not only offer their own thoughts, but also build upon those offered by fellow students as described by Patton (2002, p.386). Sometimes this process improves the data quality since participants can provide checks on other's statements; this was certainly the case in the focus groups in P1 where one student reminded others of the advantages of the VLE. This links to another known advantage of focus groups - facilitating 'group remembering.'

Interaction and spontaneity are hallmark features of focus groups (Watson et al. 2006, p.551) since "In responding to each other, participants reveal more of their own frame of references on the subject of study" (Finch et al. 2014, p.213). The quality of the data produced is determined by the level, type, and amount of group interaction; to improve this, techniques such as ranking lists, or ordering preferences have been used to stimulate discussions. For example, in Peacock et al. (2011), learners were asked to rank the advantages of accessing feedback through an ePortfolio. On other occasions, possible scenarios are presented to learners, asking for their response, such as, "If you were presented with audio feedback, how would you respond?" These were used as stimulants to the group discussions at the start of focus groups, and often facilitated lively discussions.

The role of a moderator in focus groups requires a fine balance between formal direction (control of the agenda), topical steering (ensuring the areas required to address the RQs are

considered in sufficient depth and breadth), and participant contribution (checking that all participants are involved in the discussions) (Flick 2014, p.243). Active listening, and asking questions, as with semi-structured interviews, are both required, but also, the moderator must promote a comfortable and permissive environment in which she is not seen to be in a position of power or influence which may discourage self-disclosure (Kreuger and Casey 2000, p.7). In focus groups, the researcher and note-taker are present, but no tutors. Refreshments and a warm environment are provided away from teaching rooms, to encourage a more informal atmosphere. Focus groups have been found to be very challenging, especially when video-conferenced. In P2, a group of staff developers offered to be included in our pilot interviews, but only as a focus group. It was an enthusiastic encounter, based on the initial interview guide, but the moderator had to ensure that the outcome of such a focus group is the construction of knowledge about a specific topic under consideration, even when coping with emergent group dynamics (Flick 2014, p.249)

Particular notable challenges of focus groups have included side discussions, in which some participants talk to others at the same time as the main conversation proceeds (Finch et al. 2014, p.226). Sometimes it is necessary for the moderator to stop these, being a distraction from the main conversation. As a moderator, I have always tried to return to those in the focus group whose side discussions I have had to curtail, and encouraged them to discuss in the full focus group. Recording has also been problematic, with transcribers finding difficulty in differentiating between voices of the participants. Although a second researcher has attempted to record the different contributions, this has proven challenging. In the future, it is hoped that online focus groups, an area where I have published with other researchers, can be incorporated into my work, when researching into online learning (Watson et al. 2006; Williams et al. 2012).

In conclusion, I concur with Ormston et al. (2014, p.22) that quality in my research is determined by selecting the right research tools for the task, rather than confining myself to one tradition since as Crotty states “As researchers we have to devise for ourselves a research process that serves our purposes best, one that helps us more than any other to answer our research questions” (1998, p.216). Nevertheless, by adopting research tools such as semi-structured interviews, and focus groups, I endeavour (but do not always succeed) to align the use of these tools, through meticulous planning, training and practice, with my theoretical framework. For the future, I would like to experiment with interviews and focus groups throughout a programme of study to chart changes of attitudes, and perceptions. Also, after conducting interviews and focus groups, summaries of key findings from a small sample could be presented in Likert statements to a larger group of students in a f2f setting, using mobile clickers to gather their views.

Having collected interview data, the next challenge for the qualitative researcher is the analysis of that data in a rigorous and systematic manner.

3.6.3 Formal analysis of the data

The collection of data creates an extensive research database including textual transcripts, fieldnotes, interviewer notes, interpretations, survey data, and researcher reflections as presented in Table 3.1. Access to this database, as noted in Figure 3.3, is limited to the Research Team. Interpreting this ". . . mass of collected data is messy, ambiguous, time-consuming, creative and fascinating" (Marshall and Rossman 2006, p.154). In this review, two elements of the procedures I follow in the analysis of textual data collected in the semi-structured interviews have been selected.

3.6.3.1 Transcribing semi-structured individual and group interviews

For Brinkmann and Kvale (2015, p.204) transcribing is transformation of the oral interview into the written text required for analysis. This yields "… impoverished, decontextualized renderings of the live interview conversation". In most cases, interviews in my research were recorded[47]. Prior to transcription, I discussed issues with the professional typist who was to transcribe all the interviews verbatim (P2:832:33-34). These included the judicious use of punctuation, inclusion of repetitions, 'Ahs' and laughter, textual indicators indicating gaps, and the use of textual markings such as dots in brackets when words are unclear. After transcribing, one member of the team listens to the interviews whilst reviewing the transcript. Meaningful use of punctuation is crucial, and subsequent discussions within the Team can ensue especially when words are ambiguous or are not readily distinguishable in the recording.

On reflection, I take a rigorous but somewhat procedural, pragmatic approach to transcription. Although authors such as Ritchie et al. (2014) ignore the process completely, Marshall and Rossman (2006, p.110) and Brinkmann and Kvale (2015, p.203) have stressed that "Rather than being a simple clerical task, transcription is an interpretive process, where the differences between oral speech and written texts give rise to a series of practical and principal issues." In future work, I would address, in even more detail, the impact of the series of interpretations and judgements on the way from oral to written language, and ensure that this is conveyed to the Research Teams linked to my notions of procedural reliability. I would also seek to provide more guidance to the transcriber, for example, offering an example transcription and accompanying table with all notions such as capitals

[47] In P5, transcripts were made of the video interviews and notes from the video diaries. Further details are available in pages 48-50 in the final report at http://www.qmu.ac.uk/palatine/OSLE_using.htm

for shouting, underlining for some form of stress, inclusion of sighs and different notions for short or more prolonged pauses whilst emphasising the importance of line numbering.

3.6.3.2 Analysing interviewing transcripts from the semi-structured group and individual interviews

Figure 3.6 details my iterative, "bottom-up" approach to data analysis,[48] from transcript to the summary of each theme with supporting quotations. This approach certainly draws upon the toolbox of Grounded Theory (Remenyi 2013[49]), but is more akin to thematic analysis as proposed by Spencer et al. (2014, pp.269-293) whilst resonating with Creswell's work in this area (2014, p.197). In essence, I focus upon "what the text says" (Spencer et al. 2014, p.272), limiting as much as possible my 'thoughts/understandings', and encouraging those working with me to take such an approach. To illustrate this section, I reference P1 which contains a detailed account of the way in which I undertook data analysis with my fellow researcher. It was the first publication in which there were discussions about the process of analysis, and is the basis upon which currently I conduct data analysis. However, the approach taken today has significant refinements after team reflections, feedback from reviewers and further engagement with the emergent literature as demonstrated in later publications, such as P5:1275: Figure 3.

At all stages of the analysis procedure, I return to, and am guided by, the RQs, since these should always ". . .frame how the text is viewed and ultimately determine which themes are worth the effort of tagging, defining and coding" (Guest et al. 2012, p.65). Frequent re-visiting of the transcripts, and the interview guides[50], is also essential. Working with a team of two or three experienced researchers for data analysis guarantees that checks are applied, such as safeguarding that emergent themes are drawn purely from the data, and not superimposed from readings of the literature. A team approach to analysis also encourages a balanced coverage of all the data (for it is all too easy to become focused on a noteworthy area in the analysis, but especially with small samples, all data must be included in this process), and ensures that within and between case searches are instigated. The use of analytic and reflective memos is also extremely helpful, especially when recording decision-making in lively team meetings discussing approaches to analysis[51] (Marshall and

[48] This resonates with my research strategy as outlined in 3.4.4.
[49] In November 2013, I attended a workshop run by Remenyi on Grounded Theory. After conversations with Remenyi, using the phrase "drawing upon the toolbox of Grounded Theory" was considered as most apt for the approach taken in P1:220:39-98.
[50] In P2 the interview guide played a significant role in the data analysis (P2:836).
[51] For P4, several of our team meetings discussed the analysis of the data and abstraction of data. Further details are available at https://eportfolio.qmu.ac.uk/viewasset.aspx?oid=79666&type=blog

Rossman 2006, p.161). This process is resource-intensive, but it ensures an adequately rigorous engagement with the database.

Figure 3.6 is a very general guide to the data analysis procedure used in my research. I often deviate from this broad-brush approach, reflecting my experiences at the time, the RQs, context and resource constraints. Two examples of such deviations are detailed below, from P1:

- In the initial familiarisation stage, the two researchers started to apply codes before developing the matrix together (P1:220:59-68). In retrospect, this was because we were trying to adhere to the Grounded Theory approach to data analysis. In actuality, this wasted a considerable amount of time because, at our first meeting, changes in the themes were made which impacted on the matrix. Coding then had to be re-started based on the changed matrix.
- After initial readings of the data, it became apparent that there were differences between the student cohorts taken together with their respective tutors. To explore this, a refined matrix was developed with separate columns for each cohort with their tutors. Coded phrases were not only added to each theme/sub-theme, but also associated with each cohort. This helped enormously in comparisons made in the data abstraction stage (P1:220:59-68).

Levels of data abstraction vary in qualitative research. In the research supporting the publications, summaries developed through the analysis are very detailed descriptions of the phenomena being studied (see P1:223–224). Some qualitative researchers stop at this stage of the inquiry process, accepting ". . . the more interpretive the analysis becomes, the more tenuous are the outcomes and assertions based on the analysis. As the analysis moves closer to the realm of pure interpretation, it becomes increasingly removed from the actual data" (Guest et al. 2012, p.68). Others contend that this would mean that the full power of qualitative research has not been exploited. I have preferred to provide, in a limited way, tentative explanations for the patterns that have emerged in the data, as an accompaniment to the summaries. I do not progress to theory construction because my samples are small, perhaps sub-sets of a group of students such as in P5, and the purpose of my exploratory work is to inform understandings, encourage and, perhaps, guide future research (Spencer et al. 2014, p.274).

Presentation of data abstraction has been a problematic area for me and one that I am continuing to explore and develop. The discussions section of P1 provides example of the abstractions which were drawn from the key themes I made in collaboration. For each

theme, we reviewed all the extracts and summaries, considering the range of views and experiences of the students and tutors. This was an iterative process, involving many meetings comparing and contrasting the data for each theme, and for each group (students and staff) and then dividing them into categories. These were presented in the discussions (P1:221-226). With hindsight I note that no explanation was provided in the article about how the abstractions were made. This was an oversight on my part, partly, but not wholly, due to the space limitations. In comparison, in P2, where there was less data abstraction, I reported the themes with accompanying quotations, and linked them with the current literature. Meticulous care was taken in this linking to the literature to ensure it could not be confused with the actual reporting of the data analysis (P2:838:6-35[52]). A different approach was used in P5. After the initial reporting of themes, I used a pedagogical framework, the CoIF, as the basis for abstraction while noting its lack of consideration of multi-modality as one of its limitations (P5:1272:99-104 and P5:1278:64-83).

After having analysed the data, sharing the new knowledge generated through the IP with diverse communities is essential. I now discuss my approaches to dissemination.

3.6.4 Sharing the outcomes of the inquiry process

The Information Sheets, introducing the publications, detail how, and in what ways, the outputs of the research from publications 1, 2, 4 and 5 were disseminated. When sharing research findings, a fine but equal balance must be struck between detailing the method (‘*how one has come to know*’), and the findings (‘*what one has come to know*’) (Brinkmann 2013, p.111), as well as addressing the ethical challenges outlined in Figure 3.3.

[52] On page 838 in P2, I present tutor perspectives on the potential role of an ePortfolio in supporting personal development and encouraging reflection. Most of this page reports tutors’ views but towards the bottom of the page, I link this to literature on ePortfolio. However, considerable time was taken to ensure the reader could differentiate easily between my linking to the literature (as indicated through referencing and wording) and the tutor perspectives.

STAGE ONE:

Familiarisation with the transcripts, and development of topics and subtopics

The Research Team is immersed in the entire database (the transcripts, the notes, the observations, descriptive data). We are looking for topics of interest in relation to the RQs, and which appear across the database. Each researcher creates a list of topics. During this time, some of the Research Team not only read the transcriptions but also to listen to the interviews.

Throughout this stage and the entire analysis process, the Research Team repeatedly re-visit the RQs and interview guide.

See: P1:220:69-75

STAGE TWO:

Creation of the first matrix

Researchers share their lists of key topics in regular team meetings. The combined lists need to be reduced into a single manageable but comprehensive list. This forms the basis of the first matrix. Namings of themes, at this stage, are usually very fluid but are as descriptive as possible. To help the review process, the themes are assembled in a hierarchical order.

See: P2:837:Table 4.

STAGE THREE:

Re-visiting the data

Guided by the first matrix, the researchers, re-visit the data, checking the themes and exploring sub-themes. This is helpful since it is easy to become rather obsessive at this stage of the process, struggling with text that cannot be coded because it is too obscure. Researchers need to remind themselves that "It is a rare interview or focus group where every statement contains useful information" (Guest et al. 2012, p.63).

See P1:220:69-75

STAGE FOUR:

Development of second matrix with enhancements to themes and subthemes

At another team meeting, a second matrix is created with themes and sub-themes being presented hierarchically to help with the coding of the data.

STAGE FIVE:

Re-visiting the data

This second matrix is then used as the basis to re-visit the data and start coding. In some cases, this will simply involve underlining a part of the data with the appropriate colour and assigning a unique code reflecting the case and the quotation number. In other work, we used NUDIST (P2:836:1-9).

The researchers take each coded phrase/section and sort them into their respective theme/sub-theme in the matrix. A completed matrix shows a sub-theme with quotations from each case clearly identifying where the theme.

The coding operation is divided amongst the researchers. To help speed the process, a special code for ambiguous areas is used; these are then addressed in team discussions. In P1, one researcher coded the postgraduate and another, the undergraduate transcripts.

STAGE SIX:

Review of the matrix, coding and application to subgroups

At the next team meeting, we review the completed matrices produced by each researcher. Sections of coding are checked amongst the team. In P1 this is referred to as cross-checking (P1:220:91-94).

In some cases, sub-themes are merged as in P1, when the nine subheadings for the theme: future developments were combined (P1:227: Appendix A: Matrix). Guest et al. (2012, pp. 67-70) refers to this as 'winnowing' the themes.

STAGE SEVEN:

Summaries of each theme with quotations

In the last stage, a summary of each theme is developed which is supported by appropriate quotations. An abridged version of this is presented in Table 1 in P1:223

Figure 3.6: an iterative approach to data analysis from transcript to summary of each theme with examples from the publications

When sharing work, in the *methods* section of any publication, I hope to convey the precision and rigour with which the inquiry process has been undertaken, such as that in P2:829-832. In the *findings* section of the publications/reports, I seek to explain how the RQs have been addressed, drawing upon the themes developed in the analysis. I balance commentary with inline quotations (P1 223-224: Table 1; P2:836:30 – P2:848:20; P5:1274-1278) to ensure that thick descriptions provided in the findings of my publications are grounded in the perspectives of the participants.

Such an approach to the presentation of qualitative research and the extensive use of quotations is not without its critics. All too often, as Brinkmann and Kvale report (2015, p.303), reports are criticised, and sometimes justifiably, as boring collections of unstructured interview quotations. In my publications I use quotations to exemplify and substantiate the main text as I want the participants' voices to sound out in the reporting, sharply differentiated from my own, as stated in 3.6.1.4.

Procedurally, two areas are notably problematic in the use of quotations in the presentation of my findings. The first is the selection of quotations. Spencer and Pahl (2006, p.221) contend that readers often have no means of judging how the quotations have been selected, and if they have been "cherry-picked." Research Teams meetings discuss such issues, ensuring that there is a mix of contra-examples such as in P1 where the mixed learner response to online discussions was presented in the findings (P1:223: Table 1). Furthermore, due to space restrictions, I have often been obliged to use quotations without including the interviewer prompt question. This leads to decontextualized quotations which fail to acknowledge, the interviewer, as the co-creator of knowledge in the interview process. In the future, in project blogs, more detailed explanation of my approach to quotation selection will be provided.

A second tension reflects the use of ordinal values in reporting of qualitative research. I describe "scenes" creating an in-depth, detailed and complex account without quantification such as in P2:832:3-32. Outputs are detailed descriptions of the phenomena being studied, grounded in the perspectives and accounts of the participants (Ormston et al. 2014, pp.3-4). Hence, my qualitative stance, excludes quantification in reporting of interview data believing this to detract from the nature of my work. Nevertheless, some readers find counts of the occurrences of a phenomenon helpful. Brinkmann (2013, p.115) suggests using phrases such as 17 out of 24 said or 'xx said' which can provide some precision to the text, but does not mean that the researcher has "bought into" quantitative research. I prefer to use phases such as "many", "some" "all" as in P2:838:6 where I use "All the tutors agreed", and in P2:839:21 where "Some of the tutors reported." However, I acknowledge that qualifiers such

as ‘many’ and ‘some’ can have dangerously different meanings for readers discussing professional judgements (White et al. 2014, p.379).

Although the Research Team’s work is available on websites and in journals, on reflection, insufficient effort was made to contact participants who may have left the institution at the time of dissemination. For example, in P1:220 by the time the paper was published most, if not all of the students, had left QMU. In the future, strategies for this need to be in place so participants can review the finished work, comment, and see that their input has led to further understandings of the research topic (Creswell 2014, p.100).

3.7 Conclusions to Chapter Three

In my work I have sought to align my research strategies and paradigms with my ontological/epistemological assumptions. Blaikie (2007, p.26) states that idealism and constructionism are closely linked with interpretivism. For me, all research is interpretive since “There is no clear window into the life of any individual. Any gaze is always filtered through the lenses of language, gender, social class, race and ethnicity. There are no objective observations, only observations socially situated in the world of the observer and the observed” (Denizen and Lincoln 2005, p.21). Hence the criticality of researcher reflexivity has been emphasised throughout this account as it will be in my review of the CoIF, in the next chapter, and in the proposed enhancements to the CoIF in Chapter Five. I accept that just as my stance as a qualitative researcher impacts on the research I undertake, it too will impact on the way I have undertaken this review, and the findings I derive from it.

Whilst reviewing this chapter, I have noticed a number of ‘slippages’ in terminology, indicating a potential tension between my stated philosophical position in section 3.4 and some of the research strategies that I have employed. In the text, such as in section 3.6.1.5 regarding member checking, I have noted these and explained their selection, such as Research Team decisions, and/or influence of funders. Whilst I acknowledge that qualitative research is always messy, and resource limitations have a significant impact on research strategies, I have always relished the challenge of balancing my stance as a qualitative researcher and the day-to-day ‘business’ of conducting research and meeting deadlines with financial constraints. I accept, however, that these ‘slippages’ may provide pointers to my philosophical orientation which has been emerging throughout the development of my thesis. At the commencement of 3.3, I asserted that “My stance has not changed in principal since that originally articulated in my first publication” which with regard to QLR that is certainly the case, as noted in 3.3.1. However, whilst reviewing this chapter, I see now that there has been a subtle movement in my philosophical positioning and would warrant a closer

interrogation of critical realism, which has, for some time, been associated with educational research (Tikly 2015) and is the underpinning approach in one of the key texts that I have called upon in this chapter "*Qualitative research practice*" edited by Ritchie et al. (2014). Jones (2015) too, who has been highly influential in my understandings of online learning and research, notes the ". . . the need for at least some provisional stability and a notion of reality independent of the researcher . . . " (p.95). Critical realism would also provide avenues for me to explore abductive logic, mixed methods, and triangulation (Modell 2009). For the future, this is an important avenue of future work that I intend to pursue.

As Badley (2009, p.340) predicted, interrogating my decisions and assumptions about the whole research process framed by the Evaluative Framework has been an vital part of my candidature. This account of my approach to knowledge creation through the inquiry process (as typified in the publications) has allowed me to make explicit to myself, as much as to others, the tacit knowledge, and assumptions, that I have used in the research enterprise and which will guide my future work. In Figure 3.7 I have listed areas for on-going investigation, whilst Figure 3.8 identifies specific developments to future practice. My aim is to undertake rigorous research drawing upon philosophies, theories, and guides which inform my decision-making, but I accept that judgment calls are also based on experience, and reflection. I concur with Brinkmann and Kvale that it is often not possible to "solve" all dilemmas within the inquiry process, but that it is important to ". . . remain open to the dilemmas, ambivalences, and conflicts that are bound to arise throughout the research process" (2015, p.92). Ultimately, of course, educational communities will decide on the appropriateness and relevance of my work through peer review and citations, and if, in some way, my work will contribute to understandings of, and coping with, ". . . the world in which we find ourselves" (Brinkmann and Kvale 2015, p.65).

In the next chapter, I commence the interrogation of the CoIF which is undertaken through the lens of a social constructionist/interpretivist education qualitative researcher.

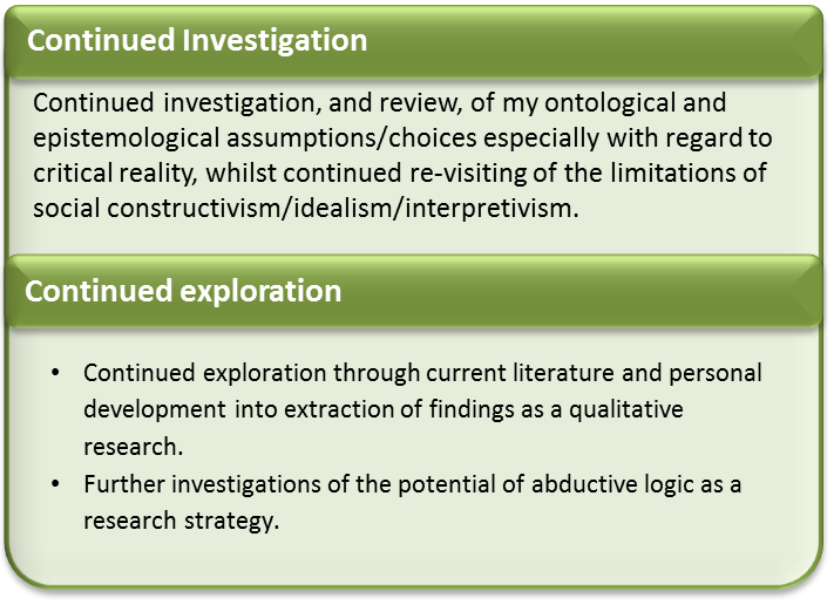


Figure 3.7: areas for on-going investigation on my journey as a qualitative researcher

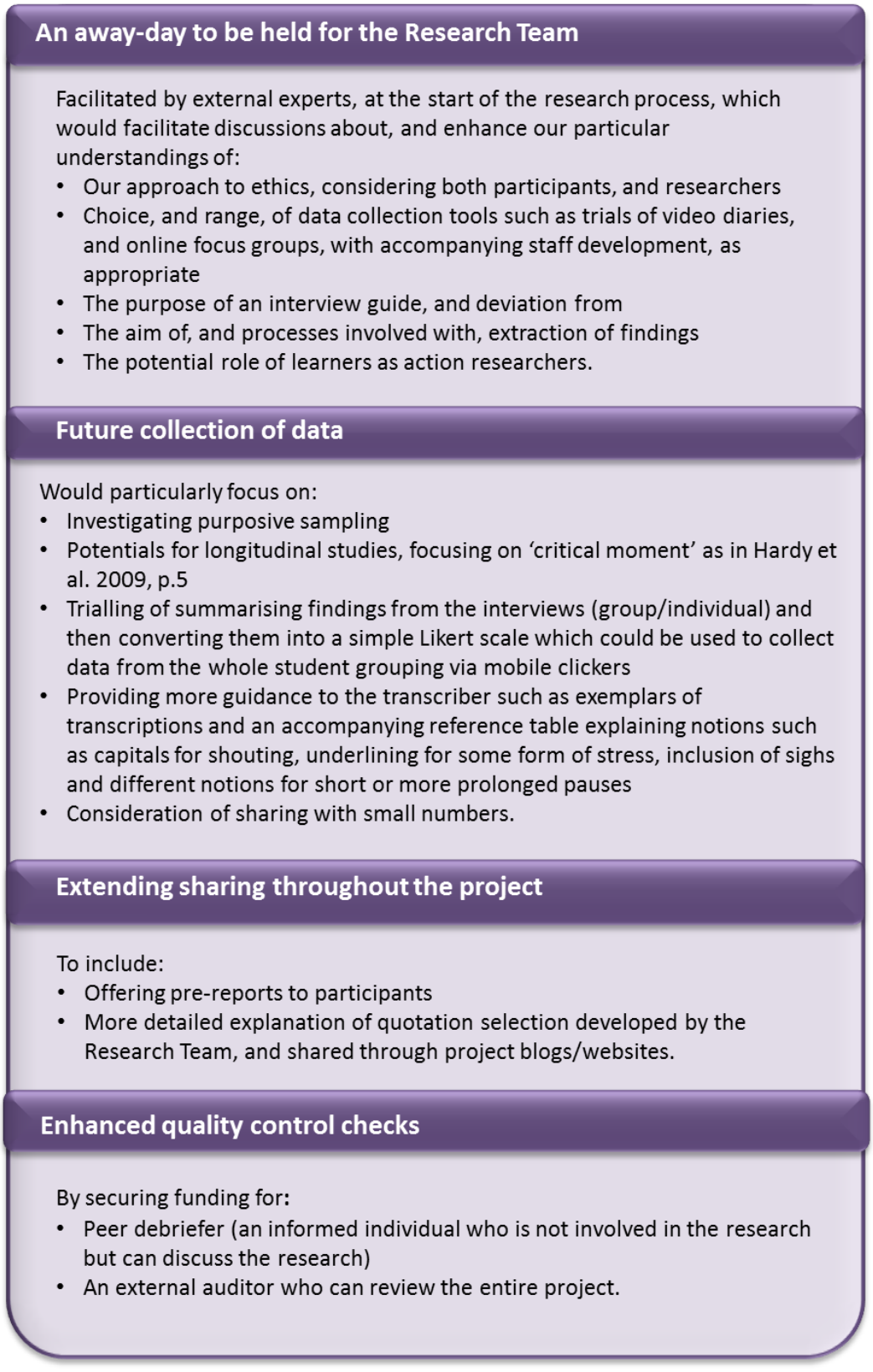


Figure 3.8: identification of specific developments to enhance my future practice as a qualitative researcher

CHAPTER FOUR:
A CRITICAL EXAMINATION OF THE THREE PRESENCES IN THE COMMUNITY OF INQUIRY FRAMEWORK

The purpose of this chapter, resonating with the aims of this thesis, is to inform and extend perspectives on the CoIF, developing, corroborating, and sometimes challenging, understandings about the Presences. One of the most important contributions of the CoIF is that it has provided the three dimensions of presence (Jézégou 2010); this section seeks to contribute to further understandings of the presences through a constructive, analytical review, echoing Jézégou's (2010) approach and answering the call by the Research Group for debate about the CoIF (Akyol et al. 2009, p.123). This chapter additionally helps to frame my forthcoming proposals in Chapter Five, signposting areas that may enhance and extend the CoIF. Since consideration of each Presence in isolation may lead to an oversimplification, how, and in what ways, the presences overlap, and the impact of that interaction, is addressed in the next chapter.

This chapter, divided into three sections, scrutinises the constituent elements of the CoIF: social, cognitive and teaching presence. It is the correct balance of these three distinct but interlocking core elements that leads to the creation of a community of inquiry (2011:22). The term presence is defined in the CoIF as ". . . a sense of being or identity created through interpersonal communication . . ." (2011:22). As stated in 2.3, all participants of a CoI will demonstrate each of the Presences, in varying amounts according to the learner, the tutor, and the specific activities being undertaken. There is little discussion about how each Presence emerged, for example, in the case of SP a ". . . theoretical analysis of the literature as well as the analysis and coding of computer conferencing transcripts" were undertaken (2011:37). It is assumed that a similar process was undertaken in the development of the other two Presences. As Jézégou (2010) notes there is also limited conceptual exploration of the term 'presence' except that certain types of interaction create and sustain a presence. However, it is an unsurprising perspective on the term considering the context in which the CoIF was originally created since the Research Group wanted to demonstrate that the absence of the *physical* presence of tutors and peers could be addressed through communication technologies (2011:31).

In this chapter, I interrogate each Presence in turn, specifically using my publications to further illustrate, support or refute the explications of the presence. To frame and bound my interrogation of each presence, I have selected a specific focus drawn from my publications. In reporting and discussing my conceptualisations of SP, I focus on the impact of media and

the learner which are prominent in my publications. I use the work of Oztok and Brett (2011) to structure this interrogation. My scrutiny of CP foregrounds reflection, critical thinking and the interface between these two concepts – again, this displays my particular interest in this area. My interrogation of TP is then through the lens of student-centred learning (linking with my approach to learning and teaching noted in 1.1.3), focusing upon the role of the learner and tutor in relation to the CoIF accompanied by an examination of design and the facilitation of discourse. The chapter summarises my position regarding the three Presences which, drawing upon Cowan (2006), is used as the basis for proposed enhancements and extensions to the CoIF in Chapter Five.

This critique also draws upon diverse educational sources including learning technology publications and subject specific journals over the last forty years. These originate from extensive, systematic literature reviews in databases such as ERIC, ProQuest and COPAC using key words including community of inquiry, social/cognitive and teaching presence. Due to the extensive amount of literature published about the CoIF (as discussed in the Foreword), this review does not intend to be exhaustive but rather indicative of current work in the area. A specific challenge of this interrogation has been the evolving nature of the published materials surrounding the CoIF, reflecting developing conceptualisations but which introduce inconsistencies especially in the co-authored papers. In parallel to this, my own emergent understandings and development as a qualitative researcher, as discussed in Chapter Three, have introduced further complications.

Throughout this chapter I link to my approach to learning and teaching, articulated in the Foreword, to the introduction to the Presences in 2.2, and my Research Questions in Table A. I acknowledge that my approach to learning and teaching, and research, as articulated in Chapter Three, influences the manner in which I have undertaken this investigation and how I have come to view the CoIF.

4.1 Social presence

In this section, initially Social presence (SP) in online learning is introduced. This is then followed by an interrogation of the notion of SP through its occurrence in my publications, and also to links with on-going research. The section concludes by suggesting a broader, more balanced conceptualisation of SP, and suggesting areas for future research. This section is informed by Research Question One in Table A pertaining to Social presence.

SP has been extensively researched since its identification as a crucial component of online learning connecting students and tutors, supporting information exchange, and motivating individuals to take an active role in knowledge construction and meaning making in

community-based collaborative activities (Kehrwald 2008, p.89; Oztok and Brett 2011, p.2; Fung 2004, p.137). Educational research into SP usually addresses how learners and tutors experience each other in technology-mediated environments through interpersonal interactions and social processes, because such mediated[53] communications may introduce social and psychological distance (Kehrwald 2010, p.39-40). SP is often linked with online learners developing a sense of connection alleviating feelings of loneliness or isolation ". . . it enhances learners' experiences of online learning by allowing them to cultivate and maintain productive relations with others in the online environment" (Kehrwald 2008, p.98). Kehrwald's insightful work demonstrates students associating SP with a learner's 'sense' of being connected with other sentient beings who are actively 'listening' and prepared to respond. The sense of 'other' is conveyed through 'visible contributions' such as online postings readily identifying the sender as a '*real*' human with emotion, and personal history, as noted in P6, and also signalling that the other is '*present*' – available to engage in dialogue (Kehrwald 2008, p.94-96). SP is commonly associated with students' positive perceptions of their learning and may be a strong predictor of overall learner satisfaction; Gunawardena and Zittle (1997, p.8) asserted that SP explained about 60% of variance in overall learning satisfaction. Others working in this area including Boston et al. (2009, p. 76-77), Kim (2011, p.765), and Swan and Shih (2005, pp.128-129) have also linked student retention, and satisfaction, and SP, resonating with a quotation from a postgraduate physiotherapy student in publication one:

> I have really enjoyed having WebCT as a tool. The other modules I've done have been . . . one day a week but with WebCT you've got this continuous sort of connection with the other people on the module. (P1:223:Table 1: section 2.1.1)

4.1.1 A scrutiny of Social presence informed by Oztok and Brett's model (2011)

To structure my interrogation of SP in the CoIF, I have selected Oztok and Brett's (2011) work. Drawing upon Oztok's doctoral work, these two authors provide a three-phase cumulative model which conceptualises SP as evolving through several phases (or 'eras') as a response to emergent educational practices and technological developments. Critically each era builds on, and draws upon, the previous ones, continuing to address issues raised therein. Also, each era can feature early on, as well as later, in the growth of an online community. The eras focus upon, respectively, but in my opinion not necessarily consecutively:

[53] The term 'mediated' is used in this work, as in Kehrwald's work, to differentiate between direct experience when learner/tutor are physically in the same location compared with communication through some type of 'media' (Kehrwald 2008, p.40).

1. The impact of media on SP
2. The effect of the individual learner/tutor (perceptions, skills, confidence) on SP
3. The individual in the group (community) and SP.

Like Oztok and Brett (2011, p.2), my aim is not to provide another interpretation of SP but to scrutinise the concept of SP in the CoIF, advancing understandings, and signposting areas for future research. As stated in 2.2.1, SP in the CoIF has evolved over the last decade and now focuses on the development of group identity through open and interpersonal communication (2011:39). Emergent work, such as Kim (2011, p.774), and Annamalai and Tan (2014, p.5) have corroborated Garrison's three SP categories, as noted in Figure 2.3. Therefore, I concur with Jézégou[54] (2010) that although there is limited explanation of the theoretical background of the SP categories and their indicators, they do seem to resonate with those found in the work of others.

4.1.1.1 The impact of media on SP (Oztok and Brett's first era)

Since the mid-1970s, most models of SP, echoing the work of Short et al. (1976), include some consideration of the richness or otherwise of media in creating the 'illusion of reality' (or direct experience) in participants' perceptions of mediated situations (Kehrwald 2010, p.40). Oztok and Brett (2011, p.2) refer to this as the first era of SP. As stated in 2.2.1, Rourke (2001R:53) and Garrison (2011:32) question whether media (video, audio, online discussions) and its constituent properties affects SP. However, this has not been corroborated so equivocally in my publications, for example, in P1 and P5, where there are differing, and often strong, student reactions to particular media and their ability to reduce the perceived distance of online learning through social communications.

In P1, the postgraduate physiotherapy students were working at a distance using online discussions to develop a learning community, share ideas and develop joint understanding (P1:223:Table 1:2.1.1). They particularly valued the virtual social café as an online place to meet and discuss, as one student stated "Seeing that other people felt the same as you at certain stages helped a lot" (P1:324:6-7). This was their group space where they had introduced themselves, met for social chats about their studies and their lives as physiotherapists – demonstrating examples of the first SP CoIF category "Interpersonal communication". In most cases their communications were open and, it is most likely (although there are no specific examples of this in the publication) that they addressed each other by name evoking the third category in SP "Cohesive communication".

[54] With reference to the 2003 version of the CoIF, in her article, Jézégou (2010) notes the lack of "theoretical contributions" to substantiate the indicators which describe the categories. However, she then continues by citing numerous works that do corroborate the Indicators in the Presences.

Concurring with Garrison (2011:32), the leaner medium of asynchronous communication was not noticeably perceived to be a barrier for all of these post-registration students, supporting social communications leading to SP.

In comparison, other students and tutors in P1, particularly pre-registration, disliked the perceived paucity of the online discussions without non-verbal cues. The use of emoticons and parenthetical metalinguistic cues, such as repetitious punctuation, conspicuous use of capitalisation, as described in Garrison's first category of SP (Interpersonal communication) can convey social information for some, but these students did not find this to be the case. They, and their tutor, could not envisage how the text-based media of online discussions could impart information about students' self-image, attitudes, moods and reactions; they wanted to meet f2f for non-mediated communication to develop SP (P1:224:Table 1:3.1). This echoes the work of Shea and Bidjerano (2009a, p.551) and Baxter (2012, p.115) which emphasises the importance of learner comfort with online discussions for SP.

In contrast, the affordances of an alternative medium (OSLES such as Wimba), when explored in P5, through which students and tutors can 'see' each other synchronously as 'real people' was welcomed by some tutors and students as a channel for social communication leading to SP:

> We felt good about the session – it was certainly good to connect and see each other and speak to each other. In a way it was like a phone call, but was a wee bit more personal if you like. (Tutor 1, Case Study 1. P5:1277:12-15)

In this quotation, the tutor was referring to the perceived richer, more intimate f2f communication identified in Short et al.'s (1976) work. He continued by stating that after the session, there was a feeling that a connection had been made and that there was "… a certain amount of intimacy there at a distance if you like …" (P5:1274:82-85).

The opportunity to hear and see differentiated the OSLE from other text-based communication media, as a postgraduate student explained from Case Study 1 ". . . he [the tutor] can use the letter, but when he speak to me and we seeing faces, with the smile, then it's more . . . we're close and its helpful using Wimba with the movie" (P5:1277:37-40).

Nevertheless this particular media could also impact negatively on SP, due its lack of robustness, as articulated by Tutor 2a, Case Study 2:

> You don't want to be looking at blurry images or not be able to make out half the words, to struggle to hear what your colleagues or lecturers or the performers in the space are saying or doing, makes the whole exercise somewhat redundant. (P5:1277:50-54).

Garrison opines that the case for viable SP through mediated communication such as asynchronous online communications has been won (Garrison and Vaughan 2008, p.20; Akyol and Garrison 2011a, p.23). My research, in P1 and P5, does not so readily concur, highlighting that any conceptualisation of SP needs to address the impact of the specific medium and its respective properties on social communication particularly as perceived by the learner. I return to this outcome of my review, in Chapter Five.

4.1.1.2 Learner and tutor communications, and online SP (Oztok and Brett's second era)

As well as considering the impact on SP of the particular attributes of the medium in which learners and tutors are communicating, others have extended notions of SP to include a relational perspective as outlined In Oztok and Brett's (2011, p.2) second era, and reminiscent of Garrison and Anderson's (2003) first definition of SP (2003:28-29). Such a perspective focuses, in addition, on the individual learner and tutor notions of SP and their ability/inclination to project SP online. Individuals' preconceived ideas about online SP will impact on their anticipated and actual specific experiences and perceptions of online SP. Usually, such preconceived notions of SP will, in turn, affect individuals' abilities to make themselves known as real social actors in an online environment (how they use SP cues to project themselves socially and emotionally in the mediated environment), and the extent to which they can see or 'read' others' SP cues situated in text-based messages (Kehrwald 2008, pp.96-8). Such abilities will also reflect an individual's confidence with, and understandings of, the communication media (Kehrwald 2008, p.96). These findings are noted in the work of Swan and Shih, who reported:

> . . . students perceiving the greatest [social] presence of others in online discussions also consistently projected more of their own presence into them, and that they did this in specific ways: by sharing something of themselves with their classmates, by viewing their class as a community, and by acknowledging and building on the responses of their peers. (Swan and Shih 2005, p.124)

I turn again to P1 and P5 to provide illustrative examples and further explore this perspective of SP. Publication 1 demonstrated that some of the postgraduate physiotherapy tutors and students became adept at using the online communication – projecting themselves online – discussing their feelings and creating their own SP despite some nervousness (P1:223:Table 1:2.1.2). They would acknowledge messages from others, often use/respond to humour and irony, to project, and to provide examples of self-disclosure. This is reminiscent of Gunawardena and Zittle's work (1997) wherein students projected their personalities in online discussions, feeling ". . . the presence of others" whilst ". . . creating conventions and norms that bind them together . . ." (p.11). In the second case study in P5,

the drama and theatre arts students were prepared to adapt and work with the technology to continue, and develop, their social and cognitive links with their tutors when not co-located. They spent time understanding the technology and circumventing the 'clunkiness' of the tool, much to the surprise of the tutors. Even as early as Short et al.'s work (1976) it was apparent that individuals experience and respond differently to the way in which SP is conveyed in the online environment – "a mental set towards the medium" (Short et al. 1976, p.65). Gunawardena and Zittle's work demonstrated those who perceived a high level of SP in their online communications wanted to improve SP and looked for alternative forms of socio-emotional expression – "a kind of "rich-get-richer"" (Gunawardena and Zittle 1997, p.22) – whilst they also noted that those who judged SP as low did not seek alternative modes of expression. Hence the tutor in my first case study talked about the new skills-set he was learning; he was prepared to be challenged, accepting that to galvanise the opportunities afforded by the technologies for SP, he would have to practise to use them to their fullest (P5:1278:33-40).

Some students in both P1 and P5 specifically elected not to experiment with mediated communication. In P5, a number of students refused to participate in the study and others vehemently disliked the video as a vehicle for social communications. Tutors speculated this might reflect preconceived ideas that OSLE communications would be too intrusive, for example, by entering, the private space of the learner bedroom (P5:1277:66-71). However, it also hinted at a resistance to experiment with alternative ways of communicating by working with and accepting the limitations of the media. In P1, some students and tutors did not want to communicate online, believing it to be easier, to have informal, unstructured meetings with peers and tutors f2f (P1:222:17-20). For those students and tutors, their individual perceptions are perhaps indicative of how they would respond to developing SP online since "SP is dependent on the actors involved in a communicative exchange" (Kehrwald 2008, p.99). However, it may also be linked with their confidence in mediated learning environments and their level of computer and keyboard skills such as, for example, the undergraduate in P1 who felt safer having paper copies to read (P1:224:Table 1). In essence, an individual's perception of SP presence and their related abilities became as important as the medium's capabilities in transmitting that presence (Oztok and Brett 2011, p.3). I return to learner resistance and confidence in using computers in Chapter Five.

The current CoIF has re-focused SP from the *individual* to the '*individual in the group'*, however again my work, illustrated through my publications aligned with the literature, reinforces that learners' abilities, understandings, and particular perceptions of online SP, are just as important as the medium's capabilities of transmitting that presence (Oztok

and Brett 2011, p.3). Thus, each era builds, and draws upon the previous, with issues raised therein continually needing to be addressed.

4.1.1.3 The individual in collaborative community-based online learning spaces (Oztok and Brett's third era)

The third era, which can feature early on in the growth of the community, broadens notions of SP by investigating how individuals interact, project themselves socially and emotionally, and build inter-personal relationships online with a group of peers and tutors (potentially a community) (Kehrwald 2010, pp.40-41). There is a strong emphasis on how individuals become part of an online learning community, and develop an online 'space' in which collaboration and discourse occur, resulting in the sharing of meaning (Oztok and Brett 2011, pp.5-6). Ke's work (2010, p.816) is particularly insightful here with learners expressing a strong sense of community emerging from the online courses in her research.

P1 hints at the potential of SP in online groupings to support the development of a community. In this case, the post-registration students logged on frequently to their online space and discussed their professional lives, building camaraderie and developing group cohesion as individuals within the group. For example, a learner compared positively the ". . . continuous sort of connection with others ". . . through the online discussions with the one-day a week face-to-face meeting in other courses (P1:223:Table 1:2.1.2). Such a vibrant, flexible link provided opportunities to develop social connections helpful in solving problems posed by the tutors, and enabling learners to feel they were working in a safe and secure environment so they could draw upon their lived experiences of being a physiotherapist, as articulated by the postgraduate tutor "I think it [the online discussions] engaged the students in their pre-readings; it gave them a sort of impetus to read it and to then have to relate it to their practice . . ." (P1:225:44-47). In P5, due to the small student numbers, there was less potential to explore and develop SP in the group. In the first case study, in P5, the tutor and students met and discussed their individual experiences, of rioting in Greece and of New Year in South Korea creating a type of group bond (P5:1277:24-27). However, as noted in the section addressing the limitations of this study, this work could ". . . only hint at the possibility of the role of an OSLE in supporting a group of learners . . ." (P5:1278:61-63).

My work also provides a few glimpses of the potential barriers to the development of SP in online groupings, most notably in P1 in the postgraduate case study. Here learners expressed frustration and annoyance with others who read postings, but did not contribute to

the online discussions. Referred to as “spongers” by one of the postgraduate tutors, learners were aggrieved that due to the lack of an assessed component for online discussion engagement, those who did participate were not given any credit (P1:223:Table 1). Echoing much work in this area, and as summarised in Figure A in the Foreword, group work, particularly online, provokes a strong emotional response which can impede the development of SP. Smith’s (2008) work, which I return to in Chapter Five, furthers understandings in this area. She opines that group learning requires individuals to balance two competing fears. First, the fear of ‘deindividualisation’ (fusion with group) whereby the company of others will require conformity and suppression of individuality, and may ultimately lead to dependence. Second, the fear that self-expression will lead to alienation, isolation and “. . .estrangement from the group” (Smith 2008, p.36). She maintains this is particularly the case in online groupings where “The nature of online communication exacerbates this struggle between the individual and the group and frustrates learners’ ability to deal with conflict. Even when the group member wants to challenge one another’s contributions, they are often not sure how to do so through text” (Smith 2008, p.38).

In the CoIF, Garrison has re-interpreted his third phase of SP from the ‘individual within the group’ to the ‘group within the individual.’ This re-focusing stems, as noted in 2.2.1, from his concerns that too much focus on the affective in SP may be detrimental to the development of CP. Garrison posits “The primary reason students are there [in a CoI] is to learn about a specific subject, not necessarily to develop personal relationships” (2011:33). He states that SP is enhanced when learners identify with a group as opposed to connecting with specific individual members. To support such an approach he draws upon the work of British SIDE (Social Identity model of DEindividuation Effects) psychologists, Rogers and Lea (2005) who stated:

> If the intended result of social presence is to confer on the group greater capacity to communicate and collaborate, then the group will work more productively to the extent that group members identify with the group, thus making the group more cohesive. The group will then have greater influence over its members. (Rogers and Lea 2005, p.153)

While space limitations here preclude a review of Rogers and Lea’s (2005) work in detail, I summarise some of their findings based on a re-conceptualisation of SP in the virtual world no longer limited by a necessity to emulate f2f interactions in SP. In their study of 20 groups, in two case studies, they supported the premise that SP is enabled by focusing upon shared social identity at the level of the collaborating group as opposed to the creation of personal relationships. They asserted:

> . . . the focus throughout the development of the group should be on the shared group identity that bonds the group together, thus ensuring that each group member holds salient in their mind the cognitive representation of the group. (Rogers and Lea 2005, p.154)

Such a focus helps alleviate the lack of visual cues in the online environment since group information can readily be communicated through text-based messages as opposed to interpersonal relationships often requiring a rich medium. According to Rogers and Lea (2005, p.156), interpersonal communication may in fact undermine group interaction particularly at the early stages of group interaction. Critical is the associated belief that groups online perform best when there is a strong purpose for the group to communicate with which individuals can identify.

Rogers and Lea's (2005) work provides an insightful perspective on the development of SP in the group, contrary to my approach to SP which commences with a strong emphasis on the affective, and the individual developing interpersonal relationships alongside an affiliation to the group in the professional programmes at QMU. Although many models such as Salmon (2011) would not necessarily conform to Rogers and Lea's (2005) approach, and may refute the de-emphasising of the development of personal relationship-building, and the affective; this work, drawn initially from crowd behaviour and anonymity, provides further insights into the complex, illusive and evolving nature of SP. It has reminded me yet again of the difficult balance to be struck between the social and cognitive in online learning, as exemplified in the work of Baxter and Haycock (2014, pp.32-34), and Ke (2010, p.815) where some learners considered social postings to discussion fora to be inappropriate in an academic context, and a distraction at best.

Before leaving this review of SP, I turn to the work of Annand (2011) who questioned the necessity for SP *at all* in the development of CP, and deep and meaningful learning. In his particular reading of research into SP and the CoIF, such as Shea and Bidjerano (2009a), and Ke (2010), he asserts that SP is of "questionable value." He notes for instance the ambivalence in Ke's students towards SP, considering it as a bonus but not ". . . something that you have to have to be a successful online student, not something that I expected" (Ke 2010, p.816). Annand interestingly proposes that:

> . . . structured learning materials, timely, non-contiguous, one-to-one instructor-learner communication, and a teaching focus that enhances individual learner attributes and effort may be the best prescriptions for effective online learning in higher education. Limited group-based collaboration may be able to uniquely develop certain interpersonal skills . . . but it may not be necessary to synthesize knowledge or achieve other valued higher-order learning outcomes. (Annand 2011, p.49)

Again, this provides another focus on the highly complex, and multi-faced nature of SP.

4.1.2 Conclusion to SP

The purpose of this section has been to explore the nuances and subtleties of SP in the CoIF, drawing upon key themes within my publications and referencing germane literature whilst addressing Research Question One in Table A. With Kehrwald, I hope that online learners will continue "…to have success with mediated social processes, including participating in highly interactive online courses, engaging in productive collaboration, and being members in online learning communities" (Kehrwald 2008, p.92). In so doing, I am somewhat 'at variance' with Garrison's current position. In 2011, Garrison decided to re-frame SP, prioritising the development of group over personal identity (2011:39), and drawing upon the work of Rogers and Lea (2005). In this re-focusing of SP, Garrison preferred not to foreground SP with affective factors, unlike much current work into SP (Cleveland-Innes and Campbell 2012).

My present scrutiny of SP has been framed by Oztok and Brett's (2011) three-phase model, and features a multi-faceted, evolving concept reflecting emergent technological advances, and educational practices. Whilst each of the eras furthers understandings about SP, there is an implicit acceptance that the issues raised in previous eras still need to be addressed. Thus, whilst Garrison's view of the CoIF refutes the impact on SP of media (which he considers an exogenous variable, as stated in 2011:28, and noted in the Foreword of this thesis), my work, in accordance with others in this area, contests this. Within much educational discourse and in my own publications, there is an implicit acknowledgement of the significant impact of media on SP, and a recognition that SP in mediated environments should have much in common with that in f2f learning. For, concurring with Swan and Shih (2005), and Kehrwald, SP presently reflects the ". . . quality of people in online environments, conveyed through their use of language, media, and communications tools" (Kehrwald 2008, p.99), as noted in era two of Oztok and Brett's model. Finally, whilst group identification is certainly essential in the development of SP in community-based online learning, it is only one element. I take the position that the de-emphasising of the affective matters, and the development of intellectual personal relationships, are of particular relevance in view of the way that current research, as outlined in Figure A, stresses learners' frustrations with online groupings, which may be appeased through personal affiliations.

Throughout this critique of SP, it has, I hope, been apparent that SP is a highly complex and contested concept for which there is still no shared understanding, despite it having been explored from many different perspectives (Oztok and Brett 2011, p.5). The literature too often presents an 'unproblematised' notion of this important aspect of the field. The lack of shared understanding of SP may impact on SP development in mediated environments

supporting learning and teaching, since “unexplored assumptions” are made by tutors and researchers (Kehrwald 2008, p.89). Further research is required to progress understandings about students' interactive online behaviours, and especially to discover why some learners interact more or less – and more or less effectively – in community-based, collaborative online learning, and why some learners want more social communications, and some less, and why some learners deem SP essential and others a ‘bonus’ (Ke 2010, p.816). I conclude, like Boston et al. 2009, p.77, along with others researching in this area, that how learners interact online has changed “. . .dramatically in a relatively short time” and relatively little is known about SP’s important facilitative role in the creation of social ties or interactions within a community (Oztok et al. 2013, p. E203).

I return to the issues which I have raised here in Chapter Five, particularly in discussing the relationship between SP and the other presences, and how it contributes to a worthwhile educational experience and meaningful learning.

4.2. Cognitive presence: reflection and critical thinking

The CoI brings together the private (internal) and public (external) worlds of the learner, rejecting any form of dualistic thinking – society and the individual cannot exist alone and neither is a subset of the other (2011:10). The purpose of a CoI is to facilitate the private, personal experience of individual knowledge (re-)construction and meaning-making in a supportive social environment. The CP construct speaks to the development of an intellectual environment based upon the Research Group’s conceptualisations of critical thinking (CT) in which reflection, as a sub-set of CT, partners discourse (2011:43). Reflection links to the private world of the learner and discourse to public activity.

Pivotal to my critique of CP are contrasting notions of CT and reflection within my work, illustrated through my publications, in relation to the CoIF. I present my conceptualisations of reflection, which I consider to be a separate cognitive activity but intimately linked to CT, plus related constructs of the learner and their emotions. This critique deconstructs the concepts of reflection and CT in the CoIF and highlights the lack of specificity around the reflection construct in the CoIF. My purpose here is to encourage the development of a more nuanced approach to reflection and CT, as distinct but inter-related concepts, which can be embraced within the CP construct to facilitate individual, and group, construction of meaning and confirmation of understanding through the PI Model. Clarity and guidance about the purposes of each is required for learners to assist them in linking their private and public worlds of learning in a community of inquiry whilst moving through the PI Model. I return to

the issues raised here in Chapter Five. This section addresses Research Question Two in Table A.

Before exploring conceptualisations of critical thinking and reflection in the CoIF, I now consider background influences underpinning my understandings of reflection. I explore first the *purpose* of reflection, drawing on Dewey (1933) and then Schön's (1983; 1987) work on *professional epistemology*. For John Dewey, reflective thinking involves "turning a subject over in the mind and giving it serious and consecutive consideration" (1933, p.3).There is a particular emphasis on examining the problematic situation through experimentation, and testing of ideas, and by acting in a deliberate and intentional fashion (Dewey 1933, p.100). Reflection, replacing impulsive actions with rational, scientific alternatives (Akbari 2007), is:

- *focused*, addressing one particular subject
- *thoughtful,* seeking to find a justification for one's stance based on evidence/proof, involving ". . .turning a topic over in various aspects and in various lights so that nothing significant about it shall be overlooked—almost as one might turn a stone over to see what its hidden side is like or what is covered by it" (Dewey 1933 p.57)
- *methodological,* with learners starting in a state of doubt and then proceeding to explore potential solutions amassing a number of facts and ideas which are analysed before reaching a conclusion.

This resonates with the CoIF's notions of CT and the PI Model, and has influenced models, such as Cowan's (2006) upon which I draw in section 4.2.1, where reflection must have a purpose.

However, concerns have been raised with Dewey's conceptualisations of reflective thinking which space precludes me from addressing in more detail. I focus on one aspect that has shaped my thinking of reflection and the focus on the 'self' and reflection as articulated in 4.2.3.1. For Dewey, reflection begins with ". . . a shock or an interruption needing to be accounted for, identified, or placed" (Dewey 1933, p.9) - a state of double, hesitation, perplexity in which thinking originates. It is the demand to solve the problem that ". . . is the steadying and guiding factor in the entire process of reflection *(*Dewey 1933, p.11). Although in many instances, in my personal experiences, this may be the case, however, ". . . objects or situations that neither beget doubt nor call for a moment of pause amidst the routine" (Hébert 2015, p.364) such as boredom are not particularly acknowledged as a stimulant to reflective thinking. There is, in addition, little consideration of values in Dewey's work unless they are specifically supporting the learner in finding an appropriate solution (Ecclestone 1996). Thus in my conceptualisations of reflection and the 'self', I accept that reflection usually originates in uncertainty and doubt but this will be driven by the learner and personal

prioritisation; this could, for instance, focus on the routine of professional practice and most likely will include scrutiny of ethics, and values.

I now turn to Donald Schön's work which has been extensively cited in professional programmes such as those at QMU, and is apparent in the examples in P3. It has also been highly influential in Cowan's work (2006), particularly "reflection-in-action" as noted in section 4.2.3.2. Schön is highly critical of Dewey's belief that ". . . knowledge can be attained through systematic study . . ." (Hébert 2015, p.363), and considers a positivist approach to knowledge only suitable for tackling simple problems (Eraut, 1995, p.10). Reflection, for Schön, is intuitive and personal (Akbari 2007). Schön's work has reminded me of the tensions between espoused theory - 'accepted theory' by the professions - taught to novices and theories in use which represent the patterns learned and developed in the professionals' daily work. Schön identifies the "special expertise" or "artistic, intuitive processes" that professionals develop through practice (1983, p.49), considered to be more effective for them than scientific knowledge, and used in ". . . unique, uncertain and conflicted situations of practice" (Schön 1987, p.22). Many professions, according to Schön (1987) and Moon (1999), appear to cope well without any espoused theory but use a kind of ". . . knowing though different in crucial respects from our standard model of professional knowledge. It is not inherently mysterious; it is rigorous in its own terms "(Moon 1999 p.41). Practitioners do not draw so much on espoused theory when they act, but on context-specific theories developed in use (Moon 1999). Schön continues by differentiating between research-based professional knowledge and knowing-in action, stating that

> the knowing-in-action characteristic of competent practitioners in a professional field is not the same as the professional knowledge taught in school; in any given case, the relationship of the two kinds of knowledge should be treated as an open question (Schön 1987, p.40).

Knowing-in-action is a type of automatic practice (Eraut 1995); Schön compares it to publicly observable physical performances like riding a bike or private actions like the instant analysis of a balance sheet – such actions are typically difficult to make explicit verbally (Schön 1987, p.25) Developed through experience, often tacit knowledge-in-action allows a practitioner to respond appropriately to a situation "on an intuitive feeling" (Hebert 2015, p.364). Nevertheless, there are incidents, often in ill-defined situations, when "what may have begun as a routine situation comes to be perceived as problematic" (Eraut 1995 p.13). It is at this juncture when practitioners bring their awareness to their action during the performance of the action (Schön 1987, p.29) that reflection-in-action occurs.

Schön's work has been heavily criticised especially his notions of reflection-in-action (Canning 2010, p.610-611). Here I touch upon a few of those critics which have informed my

thinking of this eminent scholar's work. Schön, amongst others, criticised the temporal aspect of Dewey's work which appears to divorce reflection from action. In Dewey's model, Schön asserted, it seems as if the learner experiences a moment of doubt, stands back and then reflects, before returning to the situation. In contrast, Schön's reflective practitioner appears to reflect during action, in what Schön referred to as "action present" (1987, p.26) which is a ". . . period of time, variable with the context, during which we can still make a difference to the situation at hand – our thinking serves to reshape what we are doing while we are doing it" 1987, p.26). In many occasions in professional practice, there is no time to leave the situation, and reflect, and then return. Wilson (2008, p.179) provides examples such as unexpected discoveries during a medical operation, or a barrister responding to new evidence. As he helpfully continues "Rather than responding intuitively, there should be some conscious consideration of what is happening, how effective the behaviour is, and whether there might be alternatives" (Wilson, 2008, p.179). However, I wonder like Bleakley (1999) if it is always possible for a practitioner to reflect whilst actually engaging in action. I find Eraut's work particularly helpful in explaining reflection-in-action, drawing upon examples in the classroom. He does not consider when a teacher making an immediate response to a situation in a classroom as reflection, but more akin to metacognition. In comparison, a shorter pause, perhaps observing children in a classroom, similar to time out, would allow for reflection. He concludes that ". . . the more reflection assumes a critical function, the less appropriate it becomes to describe it as being in the action" (p.14 Eraut 1995). Whilst I find such discussions illuminating, my conceptualisation of reflection-in-action are aligned with Cowan's (2006) who states that reflection-in-action is about 'catching thinking at the time' or just after an incident has happened as described in 4.2.3.2

Although I accept that reflection is a contested term, I take a pragmatic approach to its definition as an activity that is purposeful, focused, and deliberate, associated with a sophisticated form of thinking and learning involving an evaluation of frames of references, the nature of knowledge and the process of learning. Often it is precipitated by a shock and/or something out of the ordinary, but in some cases, it may just be the routine of life. Schön's work is influential in my work since the case studies within my publications are drawn from professional programmes where there remains a tension between 'espoused theory' and the theories developed by professionals in practice. I now continue with an exploration of CT and reflection in the PI Model.

4.2.1 An exploration of the conceptualisations of critical thinking and reflection in the CoIF operationalised in the PI Model

Critical thinking (CT) is considered by the Canadian Research Team as a cognitive activity involving organisation of thoughts, synthesis, reasoning and judgement to establish truth through logical thinking as mirrored in the PI Model (2011: 24; 2011:43). Broader conceptualisations of CT are hinted at in the 2011 edition; for instance, Garrison refers to the "critical spirit" (2011: 45), evoking wider interpretations of CT presented in Garrison's earlier work such as in 1991, when CT was concerned with "insight and the development of emancipatory reason" (Garrison 1991, p.290) and in 2001, which included consideration of values and ethics. In his later work with Akyol, Garrison asserts that CT also includes thinking about thinking and so is related to metacognition (Akyol and Garrison 2011b, p.184). However, such broader and more complex notions of CT do not have the same emphasis in the Framework as articulated in either the 2003 and 2011 editions of the book.

Reflection, in the CoIF, seems to be part of the individual's private world leading intramentally to meaning-making, after which, in some cases, tentative ideas are discussed and negotiated in the public world in the CoI leading to individual and mutual confirmation of understanding. However, there is limited specificity in the CoIF about reflection's role and purpose in such meaning-making, except that, since it is maintained that discourse and reflection cannot be separated and are consumed into the CT concept "Critical thinking is viewed . . . here as an inclusive process of higher-order reflection and discourse" (2011:43). According to Garrison, all phases of the PI Model (see Figure 2.4), will include both discourse and reflection but emphasis will vary (2011:43), usually towards the former. For example, there seems to be little consideration in phase one of reflection as opposed to discourse. Other references to reflection in the PI Model include those in its phase two where learners are exploring the nature of the problem. Garrison asserts that, at this stage, learners will move ". . . between the reflective and shared worlds as ideas are explored collaboratively and individuals try to make sense . . . " (2011:47). Phase three is considered to be a highly reflective phase in which students construct meaning moving between intermental collaboration and intramental reflection to enhance their convergence on a solution (2011:47-48). Phase four of the model, resolution, focuses on the provision of a logical argument to support a judgement. Occasionally, such references evoke, for me, Cowan's reflective model (see Figure 4.2) with its constituent elements of 'reflection for', (preparation for learning), 'reflection in' (reflection during a learning experience) and, 'reflection on' (reflection after a learning experience). I discuss this in more detail in 4.2.3.2

Specific references to reflection in the CoIF, in general, are sparse, generic and 'low-key' such as:

- Ensuring there is sufficient time for reflection when designing learning activities as opposed to overloading students with too much content (2011:91)
- Providing opportunities for discourse which will guide and stimulate reflection (2011:95).

Reflection is often 'associated with' other types of cognitive activity resulting in its 'morphing' with CT such as in Garrison's assertion that "Reflection is consistent with the ability to think critically" (2011:24). One of the seven principles of the CoIF is to plan for critical reflection and discourse (2011:15). Unlike CT and discourse (as demonstrated in discussions in 4.3.4 about TP facilitating discourse), little detail and specificity is provided about reflection in the 2013 edition, with no specific sections dedicated to consideration of its conceptualisation, active operationalisation, and how it interfaces with CT. So, in general, it remains ". . . slippery, continually wriggling free of a clear and consistent meaning" (Rose 2011, p.1[55]).

4.2.2 Reflection and my publications

Having explored the constructs of reflection and CT in CP, and the CoIF in general, calling upon examples from the 2011 text, I now address my conceptualisations of reflection as a foil to those within the CoIF. I also introduce the related constructs of emotion, and the learner, which are central to my understandings of reflection.

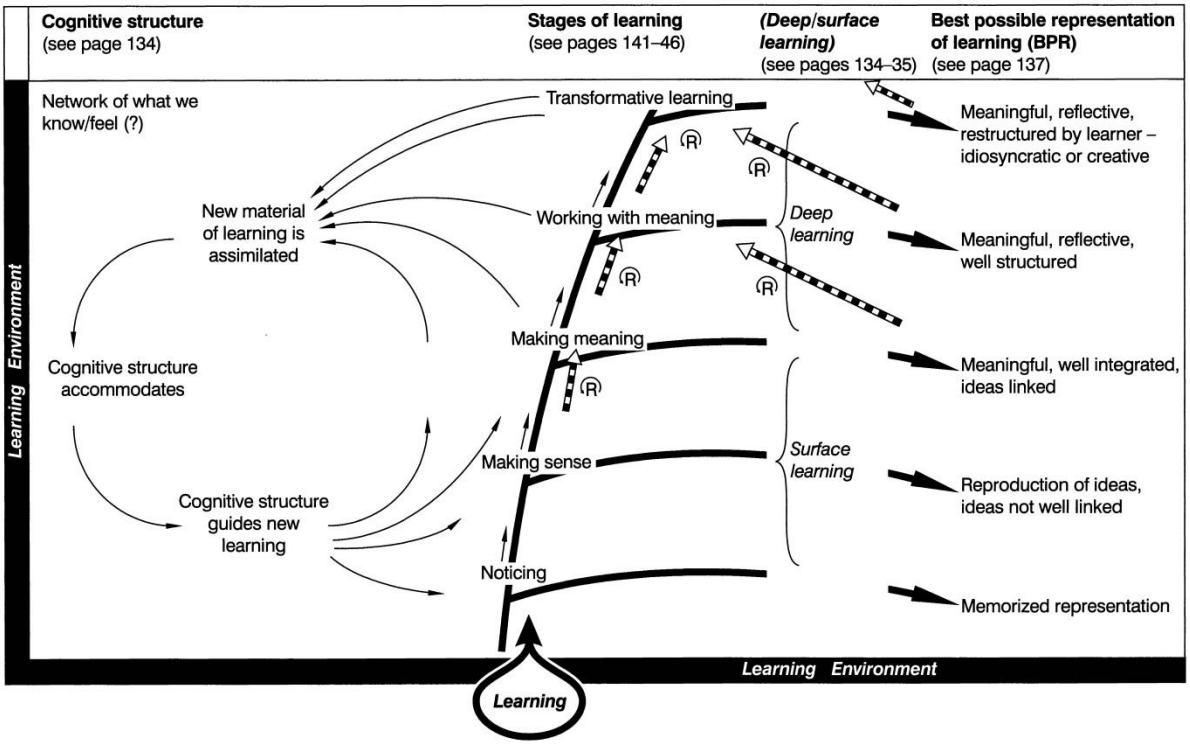
As part of my on-going ePortfolio research, I have been influenced by Moon (1999, 2004, 2008), Cowan (2006) and Rose (2013). Consequently, my conceptualisations of reflection, its role in learning, its outcomes and operationalisation, are in sharp contrast to those in the CoIF, as illustrated in publications 2 – 4. Although accepting CT and reflection have an intimate association, I consider reflection to demand a different form of mental processing from CT which is used specifically:

> . . . to achieve some anticipated outcome. It is applied to relatively complicated or unstructured ideas for which there is no obvious solution and is largely based on the further processing of knowledge and understanding and possibly emotion that we already possess. . . (Moon 2001, p.2)

For me, as articulated in my third publication, reflection is strongly associated with ". . . deep learning, encouraging learners to synthesise and integrate their learning from a wide range of personal experiences and sources and to contextualise their learning" (P3:188:81-189:5).

[55] This quotation is taken from the introductory chapter on reflection by Rose (2013), but I use it here to illustrate the lack of specificity and elaboration about reflection per se in the CoIF.

Evoking Moon's work and her five-stage model of learning and reflection (see Figure 4.1), I consider reflection to involve a sophisticated form of thinking and learning in which self-questioning learners start to manipulate meaning which ultimately leads to learners evaluating their frames of references, the nature of their own knowledge and the process of learning (Moon 1999, p.153). To further comparisons between my notions of reflection in learning and the CoIF, I have contrasted each of the different stages of Moon's model (stage 3–5) with the PI Model plus illustrations from my publications[56]. See Table 4.1.



[57]Figure 4.1: Moon's five-stage model of learning, and reflection (Moon 1999)

I find Moon's work on deepening of learning through reflection particularly relevant for professional programmes at QMU. In these cases, learners are using reflection as a vehicle to re-consider ideas, thoughts, and understandings that may have been learnt in a piecemeal, often unconnected way, to deepen their learning. A specific episode or experience (perhaps in the clinical setting) may have precipitated returning to ideas learnt at an earlier stage, possibly in the University, to 'mull over' initial learning (Moon 1999, p.149).

[56] The first two stages of Moon's model of learning focus on ordering, organising and linking materials typically associated with surface learning and hence, are not included in the comparison.

[57] Permission was granted by Taylor & Francis Books (UK), on 16 December 2014, for use in this dissertation of Moon's figure of her five-stage model of thinking, and the role of reflection. Use of this figure is non-exclusive, English language rights only, and limited to this thesis only when held in print and electronic formats by the University of Stirling, and stored on the University's dissertations database. The figure is entitled in Moon's book "Figure 12.1. A map of learning and the representation of learning and the role of reflection." The figure is situated on page 154, of the book by MOON, J., 1999. *Reflection in learning and professional development*. Abingdon: Routledge.

In the second case study, in P3, the postgraduate physiotherapy students are required to keep a blog during their two years of study. In their final assessment, they must re-visit their reflections, and identify and plan outstanding learning requirements for the first-year of future employment (P3:192:Table 1:see levels 1 and 2 case study for MSc pre-registration). In some cases, learners use this assessment to bring together a myriad of unrelated ideas, experiences, formative and summative feedback, learning, and then use this to deepen their understandings and identify areas for future development (P3:198:33-39). Such an exercise typifies my understandings of reflection in which the learner is focusing on understanding for them, as learners, usually in a particular context, and originating from doubt and uncertainty.

Cognitive housekeeping – revisiting knowledge and understanding – is an essential ingredient of such a process, as is what Cowan (personal communication December 12 2014) now proposes to call "composting reflection". As in the originating metaphor, “composting reflection” for the learner entails ‘digging around’ what they already have, turning it over, letting in some fresh air, and then bedding it down to see how it develops. Like the other three forms of reflection, composting reflection begins from a specific trigger with a vague question in mind. In “composting reflection”, as Cowan postulates it, the trigger is simply awareness of, or perhaps a re-encounter with, an outstanding collection of experiences, ideas, issues and possibilities upon which the learner may already have reflected, but which they may never have adequately followed up.

I now turn to two related constructs, with illustrations from the publications, which inform my understandings of reflection, and receive little consideration in the 2011 version of the CoIF.

4.2.2.1 Emotion and reflection

As stated in 1.1.3, emotion has only recently been addressed to any great extent in educational research. In the PI model, learners work towards developing a justifiable solution to a problem with little consideration of the self and emotion. However, strong cases have been made for the linking of emotion and reflection (Boud et al. 1985, cited in Moon 1999, p.95). Emotion may potentially steer the reflective process, act as a trigger, or be an outcome of reflection (Moon 1999, p.95). In the second case study, in P3, physiotherapy students reviewed their emotions after their first clinical visit; this provided a springboard into reflection (P3:197:44-48). Other examples in my work illustrating the link between emotion and reflection include case study 4 in P3 where learners described the ‘fear of the blank

Stage of Moon's model of learning (see Figure 4.1 of Moon's five-stage model of learning, and reflection (1999)**)**	**Illustrative example from my publications**	**Links to the CoIF** (see Figure 2.4 outlining the PI Model)
Stage three: making meaning New materials of learning are assimilated by the learner into current understandings. Reflection will play a minor role in supporting this type of learning. (Moon 1999, p. 139, p.143, and p.153)	*P3, first case study* In the first case study in publication three: BSc (Hons) in Diagnostic Radiography, the students are required to use the tools within the ePortfolio to construct and organise their evidence of learning. They collate selected blogs, action plans, records of clinical activity (as exemplified in Figure 6 (P3:195)), and records of meetings and then integrate these within a wider narrative of their learning in clinical practice. This narrative demonstrates their emergent understandings (making meaning) based on new materials and experiences encountered throughout their studies. Reflection will support this process of meaning making (P3:192 Table 1).	In the PI Model, this could be equated to the second phase "exploration" where learners are working with new, often contradictory ideas presented in the online discussions by co-learning and comparing and contrasting them with their own understandings.
Stage four: working with meaning Learners are involved with working with meaning to explore, organise and make better meaning – referred to by Moon as 'cognitive housekeeping'. Learners work with currently understood materials – thinking over things until new learning is achieved. Reflection plays a key role supporting learners to re-visit, re-	*P3, fourth case study* The performing arts students develop a personalised commentary enabling their thinking, decision-making, design and actions to be made transparent. (P3:192:Table 1).	In the PI Model there are some limited opportunities for learners to work with meaning, most notably in phase three "integration" of the PI Model. Here learners make decisions about the integration and presentation of ideas in a succinct way to present a meaningful solution or explanation – a type of

structure, summarise, integrate and handle ideas and materials. This stage will often involve a marshalling of facts and ideas as evidence in an argument. (Moon 1999, p.139, p.143, p.145, and p.153)	*P3, third case study* In the third case study in publication three, learners call upon a wide variety of evidence to justify their choices and decisions in relation to their particular learning context such as their subject area. Learners mull over their readings, re-structure and integrate new ideas, demonstrate developing knowledge of educational theory and engagement with scholarship to support their decision-making in their teaching/learning context (P3:199:19-32).	cognitive housekeeping
Stage five: transformative learning This stage involves learner evaluation of their frames of references, the nature of their own and others' knowledge and the process of learning and knowing itself (Moon 1999, p.146). In this case, the learner's representation of knowledge demonstrates their critical overview of their knowledge and their functioning in relation to it. Clearly this phase is asking the learner to further explore and develop their assumptions, beliefs, behaviours, and personal experiences and links to the work of Fook and Gardener (2007) as referenced in my research (P3:189).	In the case studies provided, this stage of reflection is more implicit than explicit. *P3, third case study* Case study three is asking learners to reflect upon their frames of references regarding models of learning and the nature of their own and others knowledge especially their students. The webfolios submitted as part of their assessment are ". . . completely personalised in that they refer only to the learners' perspective, values, strategies and critical evaluation of themselves" (P3:200:50-53). *P3, second case study* Master physiotherapy students are asked to reflect on their half-day of shadowing an undergraduate student. This is the first experience for these typically science learners in the	There is very little discussion in the 2011 version of the CoIF about this final transformative stage

(Moon 1999, p.146, and p.153).	practice setting and they are encouraged to use reflection to explore their assumptions and personal experiences precipitated by this first visit to a clinical site. (P3:197:39-41).	

Table 4.1: a comparison between Moon's (1999) stages of learning and reflection with illustrative examples from my publications compared with the Practical Inquiry Model in the Community of Inquiry Framework (CoIF)

sheet' when reflecting and were scared to share reflections about an experience that was not successful (P3:201:47). In P4, internal reflective dialogue is proposed as one way through which learners may objectify feedback and limit the impact on their negative feelings (P4:5:43-44). The Deweyian perspective of reflection is often criticised for its lack of consideration of emotion (Boud et al. 1985, cited in Moon 1999, p.13). Unsurprisingly, there is little mention in the CoIF of emotion and representations of learning such as learning journals and blogs (P3:201:47-202:3 which include emotion and reflection) – the focus is on collaborative, and implicitly logical, discourse linked to CT in asynchronous online discussions (2011:43).

4.2.2.2 The role of the learner and reflection

Stemming from my approach to L&T, as articulated in 1.1.3, I accept that learners' individual experiences, approaches to, and engagement with, reflection will vary significantly. As stated in P2:839:6-9 not all learners naturally engage with reflection, especially those with less confidence and experience, as illustrated by this quotation from tutor 2, group 1:

> . . . it's been difficult for some students to cope with – they've never done anything like this before you know they've never reflected on who they are and what they're doing you know and they look at me sometimes as though my lights have gone out . . ." (P2:839:23-26)

Other examples exemplifying this point, drawn from my publications, include case study 1 in P3, where it was noted the quality of reflection improved with the level of the learner. Level 2 radiography learners tended towards descriptive reflection with incremental development of reflection over time. In some cases, students never 'got it' whilst others were 'natural' reflectors from day one (P3:196:63-65). In P3, some of the students did not possess the skills and ability to be reflective (P3:205:47-50) whilst others did not enjoy the reflective process and often only started to understand the purpose of reflection and its role in continuing professional development, after they had completed their studies (P3:205:71-76). Throughout the publications, guidance, exemplars, templates and tutor support were required to support, encourage and maintain reflective dialogues (P3:208:4-7). Hence in P4, it was accepted that learners needed guidance in how to develop an internal reflective dialogue about feedback which would serve as a springboard to self-appraisal (P4:5:39-41). In Table 5 from this publication, the blog feature in the ePortfolio is advocated as a tool to provide structured guidance on how to reflect upon feedback and objectify it (P4:18:Table 5). In some cases, learners would avoid reflection or, at best, engaged superficially. Although I did not acknowledge this in the publications, I support Moon who asserts that learner engagement may indeed be related to their epistemological development (Moon 1999, p.173) since, in some cases as noted above, learners only fully acknowledge the benefit of

reflection after their studies. The CoIF is very 'quiet' on how learners may respond to the need for reflection in the PI Model.

4.2.3 Reflection and critical thinking in the CoIF

My conceptualisations of reflection, as illustrated in the publications, contrast to those espoused in the CoIF. However, concurring with Rose (2013, p.33), I agree it is disingenuous to view critical thinking and reflection as separate, unrelated cognitive activities; there is certainly an overlap, especially when learners are engaging in deep CT or deep reflection with both encompassing working to a justifiable solution to a problem, often ill-structured and/or challenging. Certainly many of the activities and outcomes when engaging in reflection including learning; synthesis and review; theory-linking and building; reasoning and justification of some form of action linked to decision-making, are considered to be similar in both cognitive activities, if a broader conceptualisation of CT is accepted (Moon 2004, p.84; Moon 2008, pp.128-129). Notable CT examples from the publications include the year 3-4 diagnostic radiography students in the first case study (P3) who had to defend their decision-making requiring them to demonstrate their ability to link theory with practice in resolving uncertainties in the clinical environment (P3:192:Table 1 and 194:1-4). Another example, from the third case study in the same publication is where learners on the professional education programme justified, with supporting evidence, their choice and decisions in relation to the teacher/learner context about rationales, applications, tools and materials which they use drawing upon a wide range of reviewed sources, linking theory to practice (P3:199:26-29).

However, for me, there remain some very specific differences which problematise the CP construct and differentiate reflection from critical thinking. I now address two of these supported by examples from my publications. Such differences inform my thinking about reflection, and are returned to in Chapter Five to support proposed enhancements and extensions to the CoIF.

4.2.3.1 Reflection and the 'self'

Reflection usually originates for me, as with the CoIF, in uncertainty and doubt but crucially, it is driven by a question for which the *learner* has, as yet, no answer but desires one. There is, in my interpretation of reflection, a determination to understand with a very specific focus on the *self* with individual learners in their private world making and working with meaning (P3:189:6-12). Such an emphasis, where group problem-solving and evaluation through CT is the norm, is not present in the CoIF. My conceptualisations of reflective discourse is imbued with personal prioritisation and learner ownership allowing the student 'voice' to

shine through (P3:189:4-5): the learner wants to understand something that is personally relevant and thus, the resolution, often meaningful learning, is particularly and individually germane. Hence, in case study three in P3, portfolio was selected as an assessment vehicle allowing students to 'tell their own story' – a personalised, customised reflective portfolio of practice focusing on what mattered to them, their problems and concerns in their journey in their developing understandings of their role as tutors in HE.

4.2.3.2 Reflection and planning for future self-development

Secondly, in my interpretation of reflection, as noted in publications 2 to 4, *planning for future self-development and activity* is also an essential ingredient and outcome. My conceptualisations here are heavily indebted to the work of Cowan (2006, pp.33-45) and his notions of reflection 'for' (preparation for learning), 'in' (reflection during/or shortly after a learning experience), and 'on' (reflection after a learning experience) action (see Figure 4.2). I now illustrate these with examples from my publications.

Reflection-for-action calls on the learner to focus on the challenges which they are about to encounter. They need to consider how they will identify and select and explore the implications of these personally identified challenges. In publication three, at the end of their first year, the postgraduate physiotherapists are asked to plan for future self-development after their first clinical placement. In their last assessment, they are required to focus on their skills, learning and development in relation to a post-qualification job outline. Figure 7 on page 199 of this publication provides an example of where a student has identified personal learning needs, learning outcomes and an action plan for their first year of employment (P3:197:44-48 and 198:31-39).

Reflection-on-action focuses on long-term development requiring learners to consider what they are taking from recent experiences which will inform them in dealing with challenges in the future more effectively than they would have otherwise done. It focuses upon the question *"What have I learnt from recent events which will help me to do better next time?"* Hence, in publication four, there is expectation that students will use inner reflective dialogues about their feedback as a springboard to identify areas for development and planning of future learning opportunities without which professional identity and competence will not be realised (P4:3:40-42). In publication three, case study 2, the physiotherapy students used blogs as facilitative tools for internal dialogues to relate theoretical learning within the institution with these clinical experiences, with the implicit expectation that this would result in learning informing decision-making, and some form of justifiable future action (P3:197:60-64). In publication two, reflection is frequently linked with PDP and sometimes

used as a stepping stone with learners first collating personal experiences before reflecting on these and using them to plan for future learning activities (P2:838:7-20).

Cowan's *Reflection-in-action*, influenced by Schön (1987, pp. 22-40 cited in Cowan 2006, p.36), focuses on 'catching thinking at the time' or just after an incident has happened to a learner. In case study four in publication three, the performing arts students are encouraged to keep a blog in which they reflect upon their learning experiences on their industry-based placements. They use the blog to record critical events as soon as possible afterwards and to start internal dialogues about what has happened. The tutor anticipated this would be a type of 'mental gym' for the students where they could 'workout' almost in real-time, reflecting and planning for future activity (P3:201:10-26). The app for the ePortfolio was particularly helpful for this.

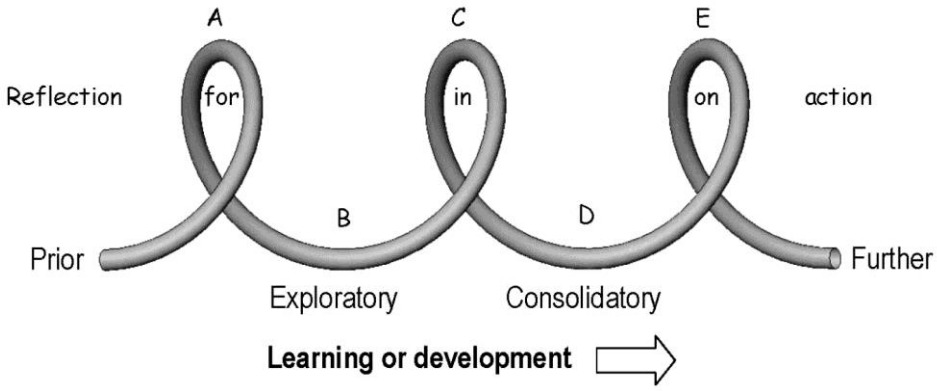


Figure 4.2: Cowan model of reflection[58]

4.2.4 Conclusion to CP

This critique, in addressing Research Question Two in Table A, has problematised the notions of CT and of reflection in the CoIF, drawing from my interpretations of the multi-faceted nature of reflection illustrated in the publications. The purpose of this critique is to encourage the development of a more elaborate, nuanced approach to reflection and CT, as distinct but inter-related concepts which can be embraced within the CP presence to facilitate individual and group learning within the PI Model. I have argued, like Rose (Rose 2013, p.35), that reflection and CT are similar but distinct cognitive activities; neither is a sub-set of the other, since viewing reflection as a subset of CT infers wrongly that it draws

[58] Permission was granted by McGraw-Hill Education on 6 January 2015, for use in this dissertation of Cowan's figure of his model of reflection. Use of this figure is non-exclusive, English language rights only, and limited to this thesis only when held in print and electronic formats by the University of Stirling, and stored on the University's dissertations database. The figure is entitled in Cowan's book "Model 4.4 The Cowan Diagram ". The figure is situated on page 52, of the book by COWAN, J. *On becoming an innovative university teacher.* 2006. Maidenhead: Open University Press.

on fewer higher-level cognitive abilities and supports those who consider reflection, at best, as a nuisance to intellectual endeavour.

4.3 Teaching presence through the lens of student-centred collaborative learning

The purpose of this investigation is to inform understandings of TP, and suggest areas for further exploration and/or development. TP is comprised of three categories: direct instruction; design and organisation; and facilitating discourse (see Figure 2.2), which have been substantiated elsewhere (2001A:3-5). Each of these categories is addressed throughout this scrutiny of TP.

In this section, first, I address the roles and responsibilities of the teacher and learner, as outlined in TP, contrasting them with that within the student-centred learning (SCL) literature and in my publications. Next, design of online learning environments is considered comparing the approach and principles advocated in the CoIF with that in my publications. Finally, there is an exploration of facilitation of internal and external discourse and TP. I interrogate TP in relation to SCL since this is a key influence on my approach to L&T, as articulated in 1.1.3, and frames my third Research Question in Table A.

4.3.1 Introduction to student-centred learning

Student-centred learning (SCL) requires not only tutors but also learners to examine their roles and responsibilities in learning interactions. This approach is advocated in much educational literature including the personalisation agenda, as noted in P3:186:31-39, and reflected in QMU strategic policies (QMU 2011). Core to SCL is the design of a learning environment that ". . . will support the centrality of the learners as individuals who are responsible for their own learning and skills development…" (P3:188:76-78) resonating with approaches to feedback advocated in my fourth publication (P4:2:1-7). SCL necessitates learners becoming active participants in their own learning, interacting with others through communication and collaboration rather than as 'stand-alone' learners in the pursuit of individual knowledge acquisition (Sfard 1998, p.6). Consequently, less emphasis than before is placed on tutor performance (Di Napoli 2004, p.5). Terms proposed by Beard (2009, p.1), "educator, designer, architect, choreographer, animateur, trainer, and facilitator", are now common in educational discourse to describe the tutor role in SCL as well as the aphorism 'guide on the side' as opposed to the 'sage on the stage" (King 1993). Particular emphasis in SCL is placed on acceptance that learners have different styles, approaches, abilities and skills. Advantages of SCL include increased: student engagement; motivation; confidence; and collaborative learning (Ch et al. 2013, p.129; TEAL 2010, p.2). Intermental and intramental dialogues are fundamental in supporting SCL.

Response to, and subsequent online implementation of, SCL in HE has been varied, often embodying tutor and learner approaches to L&T as exemplified in my work in P1 and P5. In the first publication, the first-year undergraduate tutor took a somewhat didactic approach to L&T which did not exemplify tutoring for SCL as understood nowadays. This approach influenced the design and implementation of the learning outcomes, the learning environment and the assessment, contrary to the aims of facilitating peer and independent learning (P1:219:39-40). For example, the VLE was used as a repository of tutor-checked materials with student-constructed summaries of lectures having to be reviewed by the tutor before being posted in the general discussions area on the VLE. The emphasis was on the tutor providing teaching content to be acquired by the students – a distinctly tutor-centred approach to learning (P1:219:46-47). In direct comparison, within the same publication, the postgraduate tutors – all of whom were practising professionals like their students – wished to design an environment which would support learners in co-constructing their own knowledge and confirmation of meaning which would mirror their future engagement with InteractiveCSP (CSP 2015). The postgraduate tutors had a distinct role in stimulating student and staff dialogue and subsequent engagement with the learning materials, but such interactions were directed by the students (P1:224:Table 1). A similar approach was taken in the second case study in P5, where the tutors specifically wished the students to take responsibility for their feedback sessions, resulting in the students organising the online space whilst the tutors were in Italy, and the students in Scotland. Those students had determined in what way they would run the session, and how they would use their tutors as resources for their group and individual learning (P5:1275:41-50).

Although tutors may advocate learners taking responsibility in the design and organisation of their learning, such an approach requires a role-change which is not necessarily, or readily, embraced by all learners (Akyol 2013, p.30). As demonstrated in P1, some learners, especially the undergraduates, were conservative about their expectations of higher education and e-learning, viewing higher education as an information-gathering exercise (Saunders and Klemming 2003, p.85). This was demonstrated in P1 where learners were keen to use the VLE as a ‘one-stop shop’ for access to information but, echoing Swan and Shih’s work (2005, p. 128), were less enthused about the online area as a tool for peer interaction unless first endorsed by tutors (P1:225:73-82). In P3, not all students understood the role of reflection in higher education and wanted, and expected, a more didactic approach to L&T. This was notably the case for those in the physiotherapy postgraduate pre-registration programme who were particularly challenged by the demands of their studies (P3:205:51-54).

Such examples typify the diverse responses to SCL in the HE sector. I now scrutinise how TP has responded to, and entered the 'contested' space of SCL, first through an examination of the tutor and student roles in TP.

4.3.2 An exploration of teacher, tutor and learner roles in Teaching Presence

4.3.2.1 The tutor and learner roles in TP in SCL

The consideration of the tutor role in my publications and in the CoIF reveals stark discrepancies within the profession about approaches to, and practices in, learning and teaching in the C21st. It is asserted by some that it posits a crisis of identity (Beard 2009, p.1).

The role of the tutor in SCL originates from the beliefs, declared over 50 years ago, by another North American educationalist, Rogers, in his publication in 1969 *Freedom to Learn*. He recruited a generation of teachers committed to the adoption of radically changed roles in the pursuit of SCL, and a decade later they would evidence the effectiveness of that change (Rogers 1983). Rogers maintained humans have a natural propensity to learn and that significant learning occurs when students perceive the subject matter to have relevance for their specific purposes. He opined that learning is facilitated when the student participates responsibly in the learning processes, selecting their own directions, discovering their own learning resources, formulating their own learning problems, deciding their own courses of action, and then, accepting the consequences of these decisions. The learning that ensues – independence, creativity, and self-reliance – are all intertwined with self-criticism and self-evaluation. The facilitative tutor, for Rogers, has much to do with setting the initial climate of the group experience, helping to elicit the purposes of individuals and of a group, endeavouring to organise and make available the widest possible range of resources for learning and regarding themselves as a flexible resource to be utilised by the group. Increasingly, the tutor becomes a participant learner. Such an approach is at variance with Garrison's stance. Rogers' (1983) work has been influential in my understandings of the tutor role in SCL and the derivation of it from his principles of meaningful learning. For me, his work has helped articulate the tutor role to which I aspire in the *Tutoring presence* in any community of inquiry for which I may have some responsibility. Throughout this chapter, I therefore distinguish between Tutoring presence[59] in SCL, and Teaching presence in the CoIF as determined by Garrison.

[59] In my fifth publication, I referred to "Tutor presence" not "Teaching presence." Although this was a typographical error, it may subliminally have reflected my interpretation, at that stage of TP (P5:1127:71/72)

4.3.2.2 The teacher role in TP in the CoIF

As outlined in 2.2.3, and particularly in response to criticisms of online learning environments with limited student engagement (2011:24) Garrison asserts:

> The instructor is an ever-present and key person, managing and monitoring the process. There is always a need for an instructor, or facilitator to structure, shape, and assess the learning experience, if it is to be more than an informal or fortuitous learning experience. (2011:83)

Garrison rejects the term learner-centred learning and vociferously refutes the concept of "guide on the side" (2011:59). He believes this approach, common in learning technology literature, denigrates the role of the teacher, leading to "the potential distortion of an educational experience that has become pathologically focused on student-centeredness to the exclusion of the influence of a pedagogical and content expert" (2011:60). For successful educational outcomes he maintains there must be an "architect" who informs the transactions by providing disciplinary direction and expertise:

> TP is not possible without the expertise of an experienced and responsible *teacher* [60] who can *identify* the ideas and concepts worthy of study, *provide* the conceptual order, *organize* learning activities, *guide* the discourse, *offer* additional sources of information, *diagnose* misconceptions, and *interject* when required. These are direct and proactive interventions that support an effective and efficient learning experience. (2011:60)

Garrison criticises those who pass responsibility and control to the learners; he fears it will "violate the intent and integrity of the educational experience to facilitate a critical and constructive learning process" (2011:54). Preferring the term "learning-centred teaching", he emphasises that the focus must be educationally and socially worthwhile learning, heavily influenced by the teacher not "just what the learner capriciously decides" (2011:54). Thus, he asserts "Educational communities are distinguished by its formal leadership, that is the academic and social development of the community must be monitored and managed" (2013:3).

Indicative of this approach is Garrison's third TP category – direct instruction – which in the first seminal work was described as encapsulating the "…ultimate teaching responsibility" (2000G:101). Direct instruction goes beyond a facilitation role by providing scholarly leadership and sharing subject knowledge: a subject expert is required who pro-actively diagnoses problems and resolves misconceptions. Consequently, although research suggests that two of the TP indicators, facilitating discourse and direct instruction, could be combined (Shea et al. 2005, p.70), Garrison rejects this. He postulates that although the

[60] Italics added to this quotation for emphasis.

educational experience must encourage full and open participation, the tutor must provide disciplinary expertise, lest a "proper educational and intellectual climate" (2011: 59) is lost. However, mirroring the tensions within much of the sector, he also inconsistently concludes that "Teaching presence must be an integral aspect of a community of inquiry and not an external authority function. To ensure a true inquiry-based approach, teaching presence responsibilities must be shared by all participants to greater and lesser degrees as the course of studies progress" (2011:86).

4.3.2.3 The learner role in TP in the CoIF

The role of the learner in TP is problematic in the CoIF[61]. The Research Group has consistently, and repeatedly stated that Teaching (not tutoring presence) presence involves the active participation of all members of the Community (2000G:89) with learners influencing, what and how they are studying in a CoI. Thus Garrison opines "If e-learning is to be a collaborative constructivist process, then students must have some influence in what is studied and how it is approached" (2011:57). Garrison frequently asserts, TP is not an "external authority function" (2011:54) but one in which some of the participants take shared responsibility to "greater and lesser degrees as the course of studies progress" (2011:86). However, from the first paper it was also stated that this Presence was ". . . most directly under the control of teachers . . . " (2001A:3). The teacher makes structural decisions in the design of the CoIF prior to learning commencing allowing sufficient flexibility for changes to be made as learners progress through their studies (2011:57).

A careful scrutiny of the TP's specific indicators (see Figure 2.2), and the guidance for practice about TP in chapter nine (2011), offers limited examples of how the student presence is particularly incorporated into TP. There is little mention of the student per se. All the somewhat limited examples of indicators for TP are indicative of typical teacher postings – although potentially two or three of these examples could be sent by students. For instance, a post establishing time parameters for which the example is "*Please post a message by Friday."* Students could post such a message when working in groups online reminding each other when group work needs to be completed. Another indicator addresses establishing 'netetiquette,' with an example of "*Keep your messages short*." Again, a student might post such a message to peers exhorting them to be succinct. Possibly two or three indicators for facilitating discourse might be sent by students such as "Drawing in participants" which has an example of "*Any thoughts on this issue?"* This could be sent by

[61] Interestingly, some of those researching into the CoIF implicitly assume that TP is about the 'teacher' role. For example, Rourke and Kanuka (2009, p.21) refer to "The responsibilities of the instructor . . . called teaching presence."

the group leader encouraging other students to enter the discussions online. No specific examples are provided in the 2011 text.

Current work undertaken by Akyol and Garrison (2011b) on metacognition, as outlined in 1.3.2, and presented in Table 1.2, offers some further insights into the potential role of the learner in TP. They opine ". . . each participant in a community of inquiry is expected to assume teaching presence responsibilities and those responsibilities include contributing knowledge, monitoring the inquiry process and actively regulating the progress of the inquiry" (p.186). The second of Akyol and Garrison's shared metacognitive constructs, monitoring of cognition, focuses on learner consideration of the thinking and learning processes. Learners review not only upon their learning processes but also their assessment of the tasks, progression and effort. "Taking responsibility for teaching presence enables students to reflect on each other's contributions and their contribution to the developmental progress towards the intended goals while they are engaged in discourse" (Akyol and Garrison 2011, p.184). Although such emergent work focuses more on student management of learning than on student-centred or directed learning, it does, nonetheless, provide, in a limited way, some specificity into the role of the learner in TP.

4.3.3 Designing and organising online learning environments in TP

In the CoIF, design and organisation is one of the key TP categories; it is considered extensively in pages 56-58 in the 2011 edition, and also in chapter nine of the same publication where Garrison turns to the practical implications of the "paradigm shift" in how the "teaching and learning transaction plays out" (2011:86) (see Figure 4.3 for a diagrammatic representation of "design and organization" and its impact on SP and CP). Garrison differentiates 'design' referring to the decision made by teachers before a CoI commences from 'organization' which focuses upon the decisions (primarily made by the teacher) during the educational transactions (2011:57). At all times, Garrison, with co-authors Vaughan and Cleveland-Innes (2013), assert that ". . . the instructor ultimately has control and responsibility for the design and delivery of an educational experience" (p.19). However, how, and, if so, in what ways, does design in TP incorporate SCL? I use my own approach to design as a foil to that in the TP in the CoIF.

Core to the design of SCL provision in online environments is learners' varied and differing ideas, preferences, backgrounds, abilities, interests, skills, motivations, and personal and subject-specific experiences (especially of learning online) which they bring to technology-

enabled learning environments[62]. Thus consideration of the emotional aspects of online learning when designing a learning environment, as noted by Zembylas et al. (2008 p.108) is essential. As Beetham states: "…accessibility, inclusion and widening participation favour a design ethos that takes learner differences as a starting point rather than an inconvenience" (2013, p.36). Thus design models for online learning, such as those proposed by Beetham (2013), typically include, in the early stages, tutor activities to reflect upon learner differences and their implications for design[63]. This featured in publication four, where the primary driver for the proposed approach to encourage engagement with feedback was an acknowledgement of the very varied learner conceptualisations, preferences, and experiences about feedback, as reflected in the cited illustrative quotations from earlier work (P4:6:5-16).

My approach to design is influenced by Laurillard's work in which she uses the term "designing for learning" thus maintaining the focus on the learner compared with other usages such as "instructional design" and "teaching design." I agree with her that tutors should seek to "…create the environment and conditions within which the students find themselves motivated and enabled to learn" (Laurillard 2012, p.66). Thus, a design for SCL typically starts with guided activities for learners encouraging them to set their own goals within a chosen field with support from tutors; this is specifically apt for learners undertaking professional programmes at QMU. Learners take on responsibility for organising content, generating examples, posing questions and solving problems. The postgraduate case study in P1 is a typical example of this, with the tutors framing questions and then encouraging students to pose their own questions (P1:223:Table 1). In the third case in P3, learners are from very diverse professional backgrounds and cultures. The module is ". . . grounded in the dynamic process of supporting individuals to build on their expertise and experience, to enhance skills necessary to teach effectively in a complex changing educational environment. . . " (P3:198:82).

Whilst design for SCL foregrounds the learner, design models such as Laurillard's (2012, p.65) also depict a raft of additional contextual factors shaping design including: course aims; intended learning outcomes; and logistics. My work illustrates how tutor skills, experiences, knowledge, and perceptions have a notable impact on design. Although many tutors are willing, and wanting, to embrace affordances offered by technology in learning, their ability to implement SCL in technology-mediated learning environments will be related

[62] In her most recent work particularly, Akyol has started to acknowledge the importance of teachers being aware of their learners' weaknesses, and strengths. Although focusing on her work on metacognition, this is an interesting, and different perspective than that espoused in Garrison's 2011 work (Akyol 2013, p.39).
[63] In Appendix 4, Beetham and Sharpe (2013) offer a checklist for tutors to reflect upon their knowledge of their students' ICT use with the aim of prompting thinking about how this will inform the learning design.

to their individual skills, understanding, perceptions and confidence, as exemplified in the quotation from tutor 1, group 1 in P2:

> …the older you get these kind of IT things become harder to learn and its fine for us who are you know sort of ….that's kind of part of life, but for people who perhaps not quite as ready to embrace technology I think it's probably harder … (P2:846.8-11)

Further examples include how limited tutor technical skills may exacerbate concerns about technology, such as robustness; in P2, some tutors would use an ePortfolio with a paper back-up (P2:843:12-13). Some tutors not only lack skills and confidence in the technical use of learning technologies but also in the approaches underpinning them. In P2 tutors were encouraging students to reflect using an ePortfolio but they had not used ePortfolios themselves due their limited understandings of reflection (P2:839:16-17). This lack of knowledge, as noted by tutor 11 in group 2, may lead to tutors viewing implementation as an onerous task and one which the tutor asserts, may not necessarily be the case (P2:845:22-25).

Designing as part of the Teaching presence in the CoIF has similarities to that outlined above. There is an acknowledgement, in the 2011 edition, that teachers may find it more demanding to re-design the learning environment based upon approaches which may be very different from their traditional f2f approaches to L&T, especially including technology (2011:56). There is also an acceptance that the new online environment will be challenging for learners, and so time will be required to adjust to the prevalence of written communication, the new requirement to participate in an online CoI, and a more collaborative approach to L&T (2011:86). Hence, Garrison asserts that "Not all students will feel comfortable in an e-learning environment and they will need to know the rules and etiquette" (2011:89). Nevertheless, design, in particular, focuses most attention on what the *teacher* does prior to the learning event: the development of tasks, selection of curriculum, and decisions about activities as illustrated in Figure 4.3. There is a strong emphasis on selection of appropriate learning activities such as group work, judged by the teacher as appropriate for the specific cognitive activity, and which hopefully encourage learners to take more responsibility in the discussions (2011:90). The following quotation provides further insights into the tensions within the TP role "If e-learning is to be a collaborative constructivist process, the students must have some influence in what is studied and how it is approached" (2011:57).

There are similarities in the approach to design in my work and that advocated in the CoIF. In both, there is an acknowledgement of the difficulties faced for tutors and learners in moving online, and an acceptance that both will need technical support (2011:87-88).

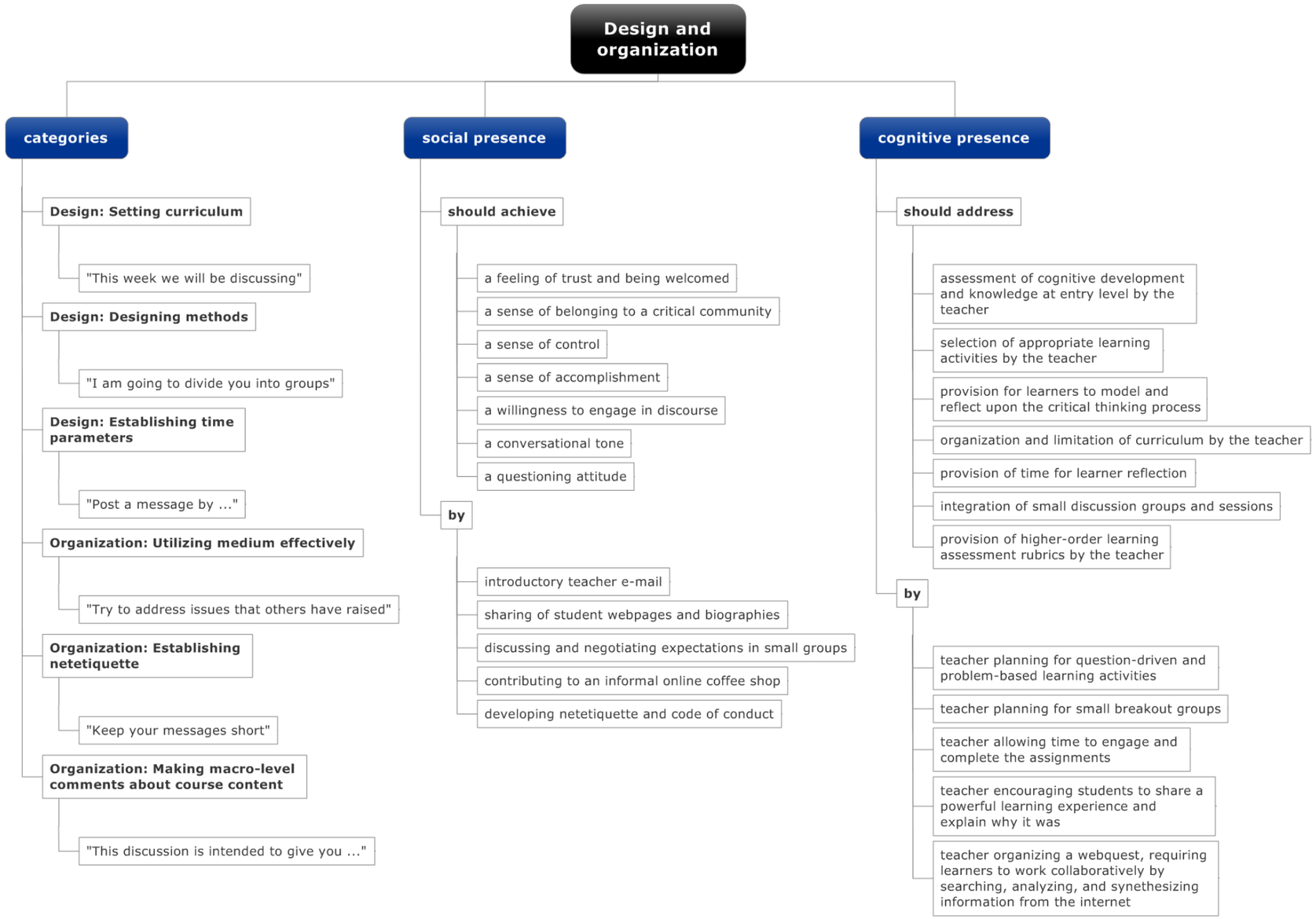


Figure 4.3: the impact of TP category ‘design and organization’ on SP and CP adapted from Garrison 2011: 56-58; 86-92.

However, the starting point for me in design is the learner, who receives less emphasis in the CoIF. In the CoIF, there is some determination to involve the learner by empowering them through group activities, but the focus is to ". . . establish and sustain the learning community to ensure progression toward intended educational goals"(2011:58). The design is according to the *teacher's* purpose, but does not have at its core the learner, who is the *tutor's* concern in designing for SCL.

4.3.4 Facilitating discourse

The importance of a guiding and influential facilitative role in the online discussions is generally acknowledged (Jézégou 2010; Shea and Bidjerano 2009, p.551), and exemplified in a quotation from a postgraduate student in publication 1 in which the learner stated "the role of the tutor is critical because the quality of the discussions are changed perceptibly by the questions posed by the facilitator" (P1:223:Table 1). Such a perspective concurs with Ke's (2010) learners who considered quick feedback essential for online learning, and a perfect instructor to be one that "Never sleeps – posting on Saturday night, on Sunday morning . . ." (p.814).

The third TP indicator focuses upon the facilitation of discourse in an online community. The teacher is presented with guidelines in developing online discussions that will create and maintain SP leading to the development of CP (see Figure 4.4). Akyol and Garrison opine that there must be a TP who assesses ". . . the nature of the discourse continuously and proactively . . ." shaping it to follow the PI Model (Garrison and Akyol 2013, p.110). At all times the teacher is responsible for maintaining quality contributions to the fora which are focused and appropriate (2011:58). Figure 4.4 presents examples of how SP can be facilitated by the teacher with examples from the 2011 publication.

Researchers suggest that the degree to which learners engage in online fora can be indicative of their capacity to progress within their studies (Baxter and Haycock 2014, p.21). Akyol and Garrison assert that effective sustained discourse, as outlined in 2.1, and echoing much work in this area, is critical to maintaining interest, motivation and engagement, enabling the construction of personal meaning as well as shaping and confirming mutual understanding through negotiation (2011b, p.186). The quality of consequent knowledge construction is dependent upon a specific type of dialogue – purposeful, critical, and inclusive, for high quality learning. For the postgraduate students in publication one, facilitated discussion in the online environment was essential in providing support, increasing motivation and deepening engagement with learning materials (P1:224:1-4). Tutor presence in SCL, particularly in role-modelling online discussion engagement, and ensuring students

do not feel overwhelmed by the number of messages[64], is clearly fundamental as is introducing learners to the language of the discipline (Shea and Bidjerano 2010, p.1722). High or low tutor engagement is often linked with students' perceptions of the role and value of online discussions including their peers' postings, and may be indicative of student satisfaction and perceived learning (Swan and Shih, 2005, p.115, and p.124). As early as 1999, Hara and Kling (1999) noted that lack of immediate feedback from instructor and ambiguous instructions are a main cause of student frustration. However, research indicates that there is underrepresentation of the tutor effort required in facilitating online discussions (Shea et al. 2010,p.1722) resonating with tutor concerns in P1 (P1:224:Table 1). A further complication as Dirkx (2008, p.10) notes is that too much TP may precipitate as strong a learner emotional response, as too little. However, as noted in P1, learner and tutor frustration is more apparent regarding 'lurkers' as noted above. For the tutor, facilitating discussions requires constant fine-tuning.

For Garrison, facilitation speaks to both discourse and reflection[65] since, as stated in 4.2.3, they are both part of his critical thinking construct and cannot be separated. However, most of TP's indicators, as presented in Figure 4.4, focus on the role of the teacher ensuring the learners move through all the phases of the PI Model. Although, as already mentioned in 4.3.2.3, some of the messages could be ascribed to learners, many of them, especially in the early stages of an online community, clearly emanate from the teacher. There is, also, little specificity in Garrison's writings about the facilitation of reflection, despite the assertion that "One constant in this process [TP] is the need for discourse to stimulate and guide reflection" (2011:95). Garrison suggests that reflection is undertaken privately by students in small groups without the facilitator, and that afterwards the learners report to the class.

In my work, I refer to both internal and external dialogues which are core to SCL. Internal dialogue, at least for me personally, is associated with my emergent understandings of intramental thinking, and is an essential ingredient in my conceptualisations of reflection as outlined in P3. Internal dialogue is "…an opportunity for quiet introspection which can provide another useful route to self-examination" (P3:190:15). I concur with Rose (2013, p.31) that pausing the "frenzied activity of everyday life" in C21st life is not wasted time; it is a time in which to allow the synthesis of new information, reflecting on current knowledge, and the development of new questions and possibilities[66]. Change may be good or bad but

[64] In P1, postgraduate students and tutors felt overwhelmed by the time required to participate in online discussions and wanted guidance on the amount of time that should be devoted to reading and responding to messages (P1:225:98-P1:226:2).
[65] In chapter one of *Educational Communities of Inquiry*, one of the sub-headings is "Unity of discourse and reflection" (2013:2).
[66] As noted in 2.1, Garrison, in his most recent work, has started to discuss education as an environment ". . . to slow down, inquire and reflect upon problems. . ." (2013:6) enabling rational thinking.

needs space for contemplation; “reflection then action” allows for the generation of a worthwhile alternative, if appropriate (Rose 2013, p.31). An example of this is from the second case study in P5 where the students reflected upon a recording of their rehearsal and then developed a reflective diary; the tutor muses that this should help students to conceptualise their work as ‘work-in-progress’, “They have to develop their work in solitude. They’re in a sort of loneliness which provides the chance for them to grow independently, so we need to look at that material afterwards . . . (P5:1276:52-54).”

However, I disagree with Rose’s exclusion of external dialogue since, as stated in P3:190:3-4 (concurring with Brockbank et al. 2002, p.85), I consider that external dialogue in the form of nudging or prompting by trusted others, strengthens reflection especially as a “… means of achieving meaningful and deep self-understanding” (P3:189:33-34). Discussions on reflections with friends, colleagues, tutors, and professional mentors may stimulate learning, further reflection, and potentially transformational learning (Brockbank et al. 2002, p.85). Learners, however, do not always avail themselves of potential opportunities for external dialogues about reflective activity itself, since this is a highly personal and intimate act involving deep emotions – as illustrated by student and tutor concerns in P2 about the security and privacy of ePortfolio systems (P2:844:6-8). Similarly in publication three, in the diagnostic radiography programme (P3:195), students were shown how to share their reflective blogs with peers, although not many of the students engaged in this activity. Other options have included students developing ‘blogging buddies’ (P3:208:10-12), or sharing with clinical supervisors (P3:204:27-28). Again, such opportunities have not always been grasped by learners. In many cases, as in P3, case study 4, students will trust only tutors for external dialogues on a one-to-one basis about their reflective activities (P3:202:10-13). In the CoIF, there is little discussion about supporting students in private individual reflective inner dialogues. Again, this review of the third TP category has highlighted tensions regarding the role, and responsibilities of learner and tutors in a CoI. Issues raised here will be revisited in Chapter Five.

4.3.5 Conclusion to TP

Throughout my work and echoed in the literature, the importance of the role of the tutor in the design, and facilitation of learning is clear. Shea’s work emphasises its impact of learners attaining higher levels of CP (Shea and Bidjerano 2010, p.1723), as well as student satisfaction. Ke (2010) asserts that “. . . to create a community of inquiry for adult students, we should first generate an effective teaching presence with supportive features to reinforce the emerging of cognitive and social presence in an online learning environment” (p.818). However, as Garrison states few studies have addressed TP (2011:61).

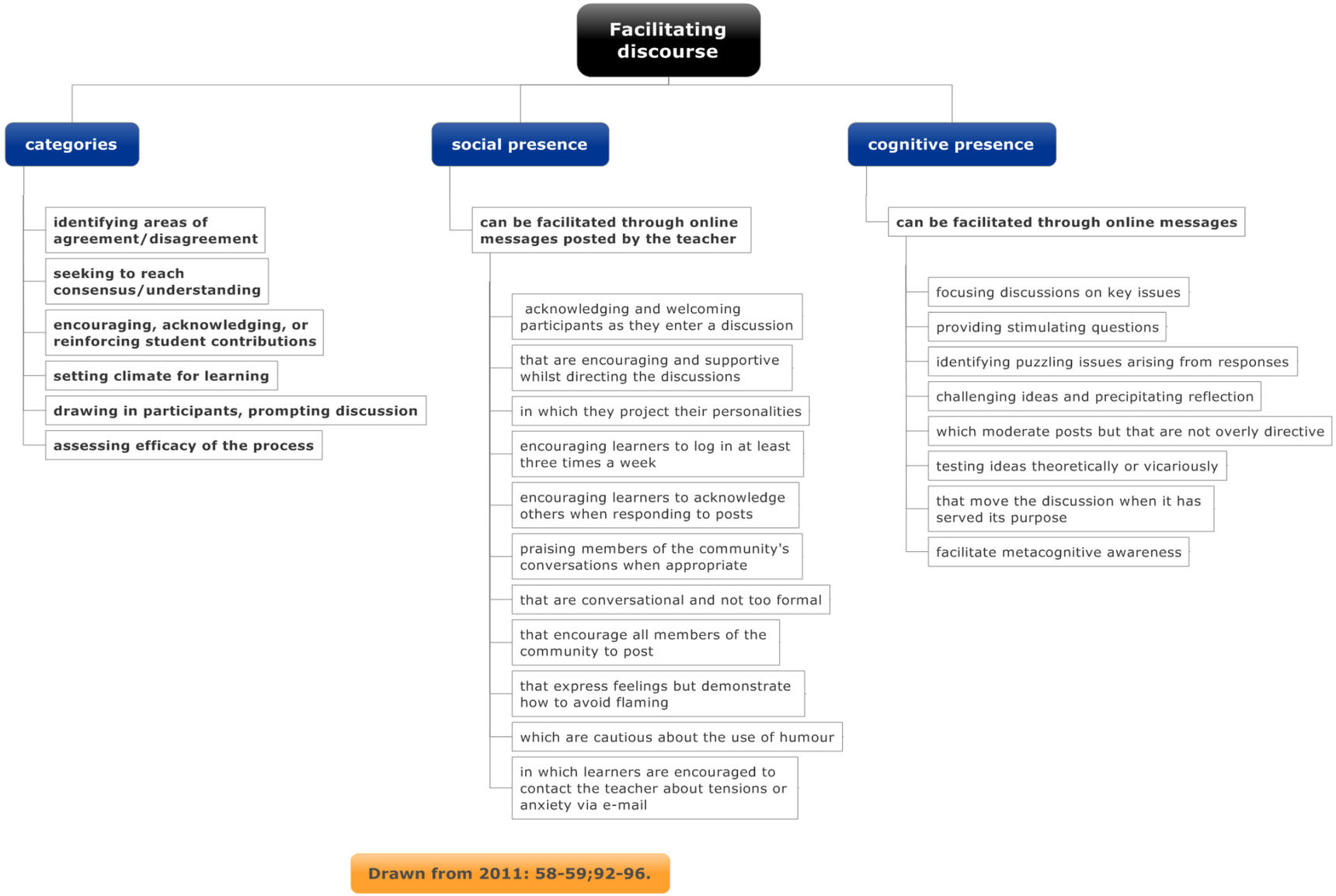


Figure 4.4: the impact of TP category ‘facilitation discourse’ on SP and CP

In this section, I have used SCL as a framework to inform my third Research Question and guide my own exploration of TP which I describe as Tutoring Presence in the Community of Inquiry. From my interpretation, it appears that there is a significant difference between Garrison's teacher in the classic CoIF in 2011, and the Rogerian tutor in SCL portrayed in some of my publications. Consequently, and less obviously, there is a notable difference between the role of the learner in classic CoIF, and SCL. Such differences resonate through design of the learning environment, and facilitation of discourse.

4.4 Conclusion to Chapter Four

The purpose of this critical examination of the presences, based on the Research Questions in Table A, has been to contribute and further understandings of the Presences through a constructive, analytical review, responding to calls from the CoI community (Akyol et al. 2009, p.123).

From this interrogation, SP has been shown to be a highly complex and multi-faceted construct. Although Garrison privileges the importance of group identity in the development of SP, my review indicates that all elements such as the impact of the media, and individual learner skills, understandings and perceptions of SP are of equal importance in the development and maintenance of SP especially in professional programmes. Also I would contest the de-emphasising of the affect in the CoIF since much emergent work indicates a strong learner emotional response to online learning, especially collaborative. Whilst metacognition may help ameliorate this, self-regulated learning has a major role to play too.

The emphasis on group, rather than individual, learning features again in the review of CP. CP is based on the Research Group's understandings of critical thinking which is dependent particularly on group interactions, and discourse. Reflection is a sub-set of CT for which there is little specificity. In contrast, my understandings of reflection focus upon its role in learning particularly originating from the self, and for future self-development. The affect and learner notions of reflection are essential components of reflection. A broader conceptualisation of CP could accommodate both CT and reflection as distinct but inter-related concepts encouraging both individual and group learning, and encouraging SRL.

Framed by my understandings of SCL, I have interrogated the tensions within the TP construct. Although Garrison advocates learner-centred learning, throughout there is a strong teaching presence with little specificity about the role of the learner in all three categories of this construct. Planning for discourse is core to the CoIF and particularly

focuses upon supporting intermental thinking; but for me, internal discourse (moments of quiet intramental thinking) are vital especially in collaborative, online learning.

I now return to Cowan's (2006) model and particularly the notion of "reflecting-on-action" to frame Chapter Five. The purpose of this thesis is 'constructive', and hence, in the next chapter taking forward the findings from this chapter, the literature, and my publications, I seek to enhance and extend the CoIF addressing issues raised in this chapter. Throughout I highlight how my perspectives differ from those in the CoIF, but also draw, and build upon those currently working in the Research Community.

CHAPTER FIVE:
TWO ENHANCEMENTS TO THE COMMUNITY OF INQUIRY FRAMEWORK AND A PROPOSAL

This chapter presents two enhancements to the CoIF, drawing upon my developing understandings of L&T articulated in 1.1.3, the critique of the CoIF in Chapter Four, and references to the literature. The following questions, whose importance has been emerging in the previous chapters, and already noted in Table A, therefore frame this chapter:

> *What refinements can be suggested to give the Framework "a greater reach within the scientific community on e-learning?" (Jézégou 2010)?*
>
> *In what ways can the CoIF, informed by my understandings and conceptualisations, be extended to centre upon educational experience and personal learning?*
>
> *What are the implications of the findings from Chapter Four for educational practice when implementing the CoIF, particularly drawing upon my interpretation of student-centred learning (SCL)?*
>
> *How can tutors be supported in moving to the new and challenging online environment?*

These questions, responding to the call by Rourke and Kanuka's (2009, p.19), as noted in 2.3, focus upon the centre and heart of the CoIF – the educational experience. In answering them I draw upon and return to prominent researchers into the CoIF, featured in earlier chapters.

First, I operationalise my notions of the CoIF, focusing upon the intersections of the Presences in the CoIF which I have referred to as the 'Influences'. As stated in Chapter Four, much research has addressed the individual Presences; but, as accepted by Garrison (2011:27), the consideration of the dynamic interplay between the interwoven Presences, and the resulting impact on the educational experience has, until recently, been limited. Each Influence bringing together two Presences is now addressed in turn, outlining its purpose in the educational process, and its impact on the educational experience. See Figure 5.1.

In the second section, I argue that each learner should organise and use a personal learning space at the heart of a community of inquiry regardless of whether this is, or is not, explicitly featured in the programme's planned activities. This proposal addresses a perceived imbalance in the CoIF, which was highlighted in Chapter Four. Although a CoI is a bringing together of the private and the public aspects of the learning experience, the Framework focuses predominantly on the public interactions where learners and tutors meet and collaborate online through discourse. This second enhancement seeks to redress this imbalance, extending the CoIF by

recognising and acknowledging the private space and intramental activity required in all learning before and after entering, and prior to leaving, a CoI.

In the third section, I propose a Tutors' Network to advance understandings, knowledge, and practice of online collaborative, community-based learning in general, and in particular, of communities of inquiry in an institution. This Network will specifically develop the abilities of online tutors with the aim of improving the educational experience and facilitating research and scholarship into the CoIF. Consisting of online spaces, the Network will support the sharing of resources, pooling of knowledge, and exchanging of experiences. Tutors participating in the Network will also have therein a quiet 'thought space' akin to the learner retreat for intramental thinking and reflecting based upon learner and tutor dialogue and feedback. Institutional support will be critical in the Network's success.

As stated in the introduction to this thesis, the purpose of this fifth chapter is constructive, presenting proposed enhancements to the CoIF to make it ". . . increasingly fruitful in describing and explaining online learning" (Shea et al. 2012, p.94). I specifically build upon the work of Akyol (2013) on metacognition and the CoIF, and of Shea and his colleagues who maintain that the learner role in the CoIF has been under-articulated (Shea and Bidjerano 2010, p.1723). I consider both issues of particular importance in light of the increasingly diverse international learners, from a range of differing cultures and with varying abilities, embarking upon online learning since such a mix could prove an impediment to the growth of online learning (Anderson 2013, p.100).

Throughout this section, while drawing upon others' work, I highlight where my interpretations and perspectives differ from those in the CoIF and the publications of the CoIF research community, and offer justifications for those differences.

5.1 The 'Influences'

The purpose of the CoIF, as articulated in Chapter Two, is the development of an appropriate, quality, generic educational experience that is consistent with deep and meaningful approaches to learning and development (2011:50). Although the Presences contribute to this individually, it is the interweaving of these three Presences, and the impact of this interweaving, rather than the presences *per se*, that supports educational experiences, leading to group knowledge construction and personal meaning-making. I selected the title 'Influence' as a reminder that the educational experience occurs in the central section of the CoI diagram, responding to

influences from outwith that core activity. It also echoes the work of Xin (2012) who reminds her readers that the Presences are an analytic abstraction of the "real thing" just like a rainbow, she continues:

> The frequencies of the light in a rainbow are on a continuum; any attempt to name specific colors of the light misrepresents [of] the thing. That being said, the colors have their function. They provide a way of describing the rainbow and locating different areas within it. In online forums, the social, teaching and cognitive aspects are mingled together in a continuous flow (Xin 2012)

To date, the purpose and focus of the intersections of the Presences have received little attention[67]. As Garrison et al. (2010) note, in their retrospective review, that ". . . the dynamic relationships among the presences could have been emphasized to a greater extent" (p.6) in the original presentation of the CoIF. Garrison continues in 2011 (p.27) by stating that much research into the CoIF has focused upon defining the individual presences rather than the relationship between them. Nevertheless he opines "Understanding the dynamics of a community of inquiry helps to understand the community as a whole and the validity of the framework . . ." (2011:27). Emergent work has explored relationships between the Presences, but often this focuses upon the *relationship* between two Presences, or all three Presences (Shea and Bidjerano 2009b; Garrison et al. 2010); such work rarely considers how the Presences function *in unison*.

Underpinning this first proposed enhancement is an assumption as noted in Shea and Bidjerano's work (2009a, p.551) that the "skilful marshalling of teaching and social presence" will create pathways to CP. For example, some research has suggested that low TP may be compensated for by high SP, and vice versa. Nevertheless, concurring with Shea and Bidjerano (2009b), I accept that the ". . . highest levels of CP are evident when students rate both teaching and social presence most highly" (p.213). This perspective also features in Akyol and Garrison's work, which emphasises that, whilst each of the presences is essential, the purpose of SP and TP is to support the creation of a community which provides emotional and leadership support, sustaining CP (Akyol and Garrison 2011a, p.26). In other words, the authors noted above maintain that the existence of CP is dependent upon the supportive presences of SP and TP (not one or the other, but both).

[67] This is indicated, for example, in 2003, when the intersection between TP and CP was not provided with a title. In 2013, Akyol (p.37) intimated that these intersections could have a role in supporting metacognition. I seek to build upon this work and throughout this section I draw upon her research.

From my perspective, concentrating on the intersections between the Presences, which I have named "the Influences",[68] provides an opportunity to address some of the issues raised in Chapter Four. The Influences are envisaged as the purposeful uniting and dynamic enriching of the individual Presences to provide an appropriate educational community-based, collaborative learning experience promoting a social-constructivist approach to learning and knowledge creation, and the development of abilities. All members of the CoI should play a proactive part in the Influences. In particular, each Influence (especially meaning-making) will provide vital feedback sustaining the constructive role of TP as the course is progressing. It is accepted, of course, that each Influence operates in different ways in different communities, according to the learner, tutor, task, subject, level, and the media used to develop and sustain the CoI.

The Influences may thus in their different ways:

- Ease learner transition into the new, online learning environment
- Support individual meaning-making, and group understanding
- Extend learners' notions, and awareness, of the role of critical thinking, inquiry, dialogue and reflection in their learning, as individuals and members of a community.
- Facilitate collaborative and co-operative learning
- Guide learners moving between their private learner space and the collaborative area (this is discussed in more detail in 5.2)
- Improve learner understanding of, and skills in, social communication
- Encourage the group, and individuals, to engage in self-regulatory and metacognitive activities including the management of their emotional responses to collaborative learning.

[68] No name has been provided by the Research Team for the critical interwoven areas between the Presences. I am suggesting naming them the “Influences” as they have the potential to impact reciprocally and dynamically.

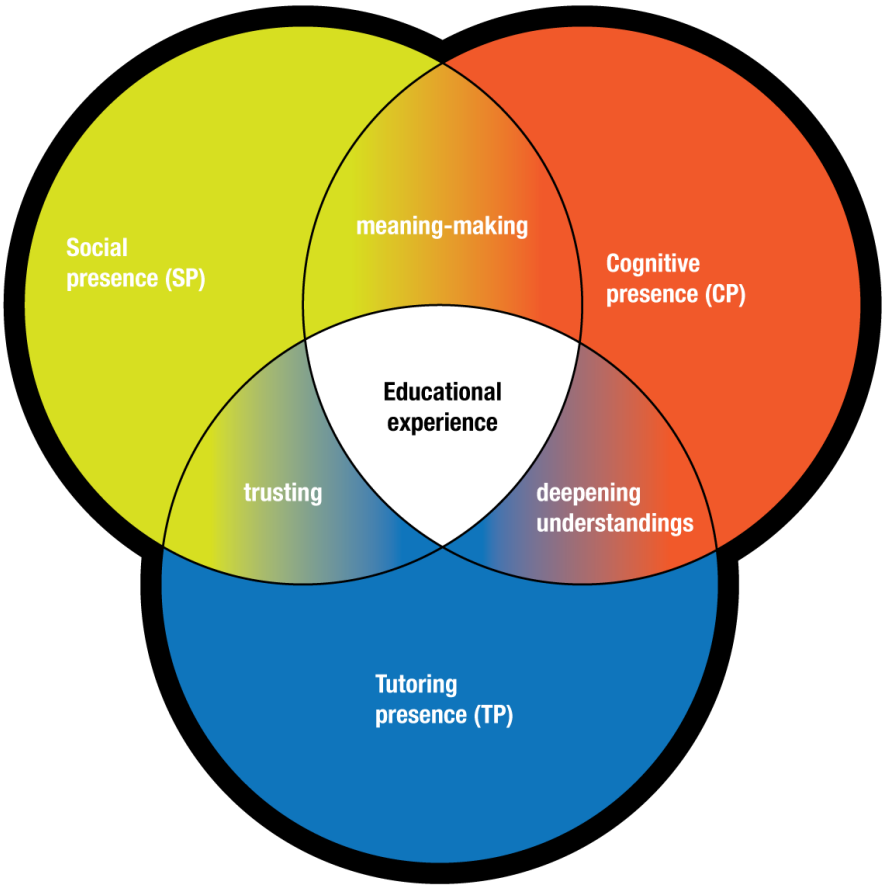


Figure 5.1 the Influences

5.1.1 TP and SP – trusting

This section is framed by the following question:

> *How can the Influence blending TP and SP create and maintain trust and a sense of belonging, leading to open, purposeful, and critical dialogue between and amongst the learners and tutors in a CoI?*

This Influence is generated by the development of trust amongst the participants (including tutors) in a CoI which is based upon social communications. If the online discussion format is to support learner progression through collaborative relationships (Shea and Bidjerano 2009a, p.551), then, as noted in P6, learners need to feel safe and comfortable with whom they are working in an online community (Akyol 2013, p.39). This is specifically the case in professionally accredited programmes such as at QMU, where learners are required to communicate

purposefully, negotiate meanings, confirm understandings, challenge misconceptions, and resolve ". . . cognitive conflicts" (2013:6). As early as 2009, Shea and Bidjerano were reporting that a major influence on CP was learners' comfort in online discussions, and their feeling of a sense of belonging in the course (2009a, pp.549-550). Boston et al. (2009, p.77) also commented that learners who perceive they are part of an online social learning community have more positive perceptions of learning online, and are more likely to persist.

Garrison refers to this area in a CoI as "Setting Climate" (see Figure 1.2), I have re-named it as "trusting", partly resonating with his assertion that learners must feel a sense of belonging to, and identification with, a collaborative educational community that is respectful, where dialogic debates can occur free of intimidation (2013:3), and where help is available, when required (Akyol 2013, p.39). Garrison and Akyol (2013, p.114) assert that SP ". . . should focus on creating trust and respect that will not discourage skepticism and constructive criticism." However, this is only a preparatory stage of climate setting in developing an intellectually thriving community, as demonstrated in the SP indicators in Figure 4.4. Developing deep and creative intermental dialogue subsequently calls for trusting, and positive regard for the thoughts and feelings of others. Shared wrestling with challenges and difficulties calls for open exchanges, with a trusting expectation of appropriate responses. And so as the work of a community progresses, the trust which holds peers and tutor[69] together is more, and more important.

The tutor and learners undertaking facilitation associated with TP therefore have a very specific role in this Influence, guiding discussions about, and helping in, the maintenance of SP. Learner and tutor dialogues can usefully address a range of issues regarding SP. Fundamental, as stated above, will be learner comfort in the online discussions perhaps, as noted in 4.1.1.2, related to their confidence with using computers. Shea and Bidjerano (2009a p.551) suggest asking learners to inform initial discussions by reflecting and sharing their levels of comfort at the start of a programme. Rather than seeing this as only an introductory activity, I would continue its use and return to it throughout the lifetime of a CoI. Contrary to Garrison's assertion (Garrison and Vaughan 2008, p.20), I would focus upon the impact of media on SP, as discussed in 4.1.1.1 with regard to publications one and five. In addition, learners and tutors may usefully progressively share how they perceive media, and different types of media, potentially impacting negatively on SP. In the ensuing debates, tutors may challenge learners'

[69] In this chapter, I use the term 'tutor' in the singular for consistency, but, in many cases, a CoI may have more than one tutor.

notions of SP based on f2f interactions (echoing the work of Rogers and Lea (2005)). Developing skills in how to project themselves socially in an online environment and reading other SP cues in messages, as discussed in 4.1.1.2, should also be encouraged, and nurtured by tutors, and peers. Contrary to Garrison's re-focusing of SP, the affective would be acknowledged as having a vital role in developing, though sometimes hampering, SP as illustrated in student responses in my publications throughout section 4.1.

In particular**,** this Influence will be concerned with the effective handling of the emotional issues surrounding online learning as noted by Cleveland-Innes and Campbell (2012) and particularly in online group work, including the promotion of positive self-efficacy. As Panitz (1999) stated, students need extensive preparation when working collaboratively in online groups, especially to overcome the commonly mentioned negative associations of this mode of study. Students' negative emotional responses to collaborative learning, as discussed in the Foreword to this thesis, and summarised in Figure A, can be very strong, prove an impediment to progress, and potentially lead to student attrition. Emergent reports of self-regulation of learning provide insights into how students may manage their emotional responses when working collaboratively. Xu et al.'s (2013) work is particularly helpful here. These authors offer guidance on how learners can manage the affective in online group work, recommending the development of coping mechanisms such as increased awareness and utilisation of different avenues for support (Xu et al. 2013, p.7). These may be tutor, peer or online resources. They continue that the tutor will

> . . . want to promote a culture of help seeking, encouraging students to learn how to ask for assistance from multiple sources (for example, the instructor, peers and friends) through multiple channels (for example, email, web chat, and video conferencing) when they confront personally challenging tasks and perceive the need for help." (Xu et al. 2013, p.7)

SP will fluctuate over time in a learning environment, affecting each individual's sense of connection with others, impacting on learning – and hopefully maturing and deepening in so doing. Garrison seems to disregard this progression, as demonstrated in his consideration, presented in Figure 4.3, of how SP should be achieved. He contends that although SP is highly desirable, and that it is essential in *creating* a CoI, its purpose and sustenance are often secondary and essentially a preliminary. However, from the evidence of my publications, tutors need to give particular attention to SP in its establishment, as outlined above; and then (differently but equally importantly), in its maintenance, and maturation. This is supported by the comments of postgraduate students in P1 who wanted regular tutor postings (P1:223) to sustain

SP in their online discussions. This also concurs with Ke's findings in which a strong tutor SP throughout a programme of studies is linked to learner satisfaction (2010, p.818).

The relevance of this Influence is that, through it, learners develop cognisance of all others in the community, trusting that their postings are read, considered, responded to, and may be challenged as appropriate. They should have growing awareness of the impact of media on SP, how to project and read SP through postings, and have coping mechanisms for the emotional challenges of group work online. This Influence plays a key role in inducting learners into the world of online learning, helping them to form friendships and feeling comfortable about expressing their thoughts, and feelings (Hung et al. 2010, p.1088), and in sustaining their learning throughout their studies in the online community enabling and supporting CP.

5.1.2 TP and CP – deepening understandings

This section is framed by the following question, influenced by Garrison and Akyol (2013, p.116):

> *How can uniting TP and CP provide learners with a "cognitive map" with which they can guide themselves as self-directed learners in a CoI?*

This Influence invites, encourages and locates productive discourse between, and amongst, learners and tutors, enabling learners to progress their studies in the working environment of a CoI. My defining of this Influence draws upon the work of Jézégou (2010), Shea and Bidjerano (2009a and 2009b), and Akyol (2013, p.37), as well as building upon the 'Design and Organization of CP' presented in Figure 4.3. I envisage a cognitive map as something which assists learners in planning cognitive journeys, by helping them to identify where they have reached at any point in time, and where they are going

In 2011, this Influence was renamed by Garrison as "Regulating Learning" addressing how learners interacted, or not, with the activities initiated, in most cases, by the teacher who is guided by the PI Model. I have modified this title to "deepening understandings" since, from the perspective of my publications and tutorial experiences, this Influence focuses upon persistently deepening learners' conceptualisations of their thinking, of the role of reflection and inquiry in their learning, and of the benefits of collaborative, community-based learning. Constant attention to all of these is essential if learners are to benefit fully from, and interact consistently with, a CoI. Resonating with Garrison and Akyol (2013, p.116) this Influence certainly provides learners with a "… cognitive map within which to learn how to learn and become self-directed, cognitively

autonomous learners." However, I find this description somewhat restricted since it denies the further interactive maturation by learners who have already learnt the basics of how to learn in communities online and have already experienced self-direction. In subsequent CoIs they would still be influenced, and supported, to make further progress.

In a CoI featuring an SCL approach, this Influence focuses upon how a tutor and peers, prepare and support each other in working collaboratively online and offline, leading to personal and group meaning-making and knowledge construction for all participants, as suggested by Akyol (2013, p.39). It prompts learners to work interdependently, accepting responsibility for their own learning. This Influence recognises that the tutor is not the central authority in the classroom, as hinted at in the postgraduate case study in P1 (P1:223: Table 1). Some learners can certainly have distinctly positive experiences of learning communities, which assist them in going beyond themselves in terms of depth and breadth of understanding (2013:5) and well into their Zone of Proximal Development (Nicholl 1998). However, as reported by Baxter and Haycock (2014, p.35), noted by Richardson and Swan (2003, p.78), and demonstrated in both the undergraduate case study in P1 and in the reported learner response to reflection in P2, learners often struggle to understand the constructivist premise upon which the promotion of online forums and collaborative work are based. They will benefit from some facilitative assistance from time-to-time concurring with Baxter who found the tutor to be highly influential in ". . . convincing the student that it was worth investing time and energy into learning these new ways of working: becoming part of an academic community" (2012, p.116).

This Influence will be dependent upon tutors creating opportunities for discussions about online learner roles and responsibilities, as outlined in 4.3.1, so that all learners can become active participants in a collaborative educational process rather than being individuals in pursuit of their own individual knowledge acquisition (Sfard 1998, p.6). Smith (2008) has provided examples for tutors of collaborative and co-operative work that can usefully be shared and discussed with learners. In some groups, she found that individual responses might not be volunteered, with individuals either holding back or retreating to avoid tension. This leads to the outcome of a group project becoming akin to a "garden salad", in which individual contributions are distinct and evident (Smith 2008, p.37). In comparison, other groups' discussions may address the need for individual members of the group to let go of their desire for the preservation of their individual voice to enable a new product reflecting the group to emerge. In such instances, the group

product is a coalescence which could be described as a "ratatouille[70]". Reviewing research into the purpose of community and online learning may also be helpful, for “Online learners who have a stronger sense of community and perceive great cognitive learning should feel less isolated and have greater satisfaction . . .” (Rovai 2002, p.328).

Clarity and facilitative guidance about critical thinking and reflection will be required to assist learners in linking their private and public worlds whilst moving through the PI Model and the inquiry process. Garrison maintains that, although inquiry is core to the educational experience, its requirement for learners to challenge each other’s beliefs and suggest alternative perspectives for exploration is not readily adopted by all learners (2011:43; 2013:6). Parkes et al. (2015, p.8) corroborate this in their work on student preparedness for online learning, particularly noting that online learners having weak understandings of the critical rigour and depth of critical thinking. It is then important to progress beyond the notion that critical thinking merely centres on finding fault. Hence, through activities based on learners articulating and coming to share and reasonably widen their understandings of critical thinking, the PI Model and reflection will be at the core of this Influence informed by models outlined in 4.2. There is an expectation that learners will critique others’ notions of such concepts when they are expressed in postings, blogs, and videos, and potentially develop a shared, negotiated understanding and justification of these. The tutor may, for example, facilitatively offer examples of critical thinking demonstrating wider conceptualisations in the subject specialism. Tutors may also initiate discussions of how learners can avail themselves of opportunities for intramental thinking, as outlined in the forthcoming section 5.2, when individual learners can tentatively construct knowledge and meaning-making through critical thinking and reflection, before testing and refining their emergent ideas intermentally in the community. Learners will benefit from discussing the role of online discussions as facilitative prompts to personal reflection, through providing peer feedback and ‘feedforward’. As Jézégou (2010) states, facilitation in this area is one of the most challenging aspects of the CoI. However, learners' understandings of the benefits of collaborative, and yet self-regulatory learning are essential for a successful CoI, especially if it is to progress through all the stages of the PI Model.

For an online group to function optimally, self, shared and co-regulation of learning, as defined by Hayes et al. (in press, p.7) and discussed in 2.4, is crucial. In this Influence learners should be encouraged by the tutor to explore their “knowledge of one’s knowledge, processes, and

[70] Smith 2008, p.37 compared co-operation to a ‘garden salad’, prompting Cowan (14 January 2015) to suggest likening collaboration to ‘ratatouille.’ I have recently been exploring these analogies with my students who have found them particularly useful.

cognitive and affective stages" (Akyol 2013, p.31), related to their previous learning experiences. Tutors may facilitate discussions about learner conceptualisations of how they learn collaboratively online, particularly exploring the implications of the group of experiences leading to the type of negative emotional responses outlined in Figure A. Examples of how to engage with 'self', 'shared' and 'co-regulation' can be shared amongst learners (for instance using examples provided in Hayes et al.'s work (in press)), emphasising the need to develop help seeking strategies which may alleviate negative emotional feelings of working online, as noted by Xu et al. (2013, pp.4-5). The tutor role is particularly important since, as Shea and Bidjerano (2010, p.1727) state, all students, but particularly weaker ones, will need support to engage in SRL. This is, of course, even more demanding in SCL, which for the tutor is about facilitating the self-development of such skills and abilities, rather than deciding, explaining and managing the use of appropriate strategies.

Many tools, such as the "Motivated strategies for learning questionnaire" (Pintrich et al. 1993) and/or the "Online Readiness Survey" (Hung et al. 2010, pp.1086-1087) could be adapted and offered to learners to self-assess their SRL maturity, self-efficacy, and preparedness for online learning. Such evaluations could be used as a springboard for group discussions about the multi-faceted concept of self-efficacy and its relationship to level of performance, for instance. Videos of learners who had completed the programme of studies articulating their approach to SRL could also be used to inform discussions. Such resource would provide opportunities for social comparison, helping learners to reflect and interpret the experiences of others who are successful online (Shea and Bidjerano 2009, p.1724). Underpinning this is the work of Parkes et al. (2015, p.8) which conclude that it cannot be assumed that all students are well-prepared for online learning and that, even for postgraduates in professional programmes such as at QMU, support is required beyond that of discipline-specific help.

Although some of these discussions will take place at the early stages in the development of a CoI, learners will also need repeated opportunities for continued dialogue about these concepts in groups, with peers, and the tutor, as they are 'nudged' through the PI Model by themselves, their peers and their tutor. Monitoring motivation and promoting self-efficacy will be a key area so that learners believe they can successfully undertake the work. In P1, the postgraduate student café helped students to share their concerns, and to realise reassuringly that others shared similar worries (P1:224:6-7). In particular, attention can usefully be given to facilitating the learners' closing processes of review and reflection on learning.

The output when CP and TP are brought together is that prepared learners should have developed and will continue to refine support strategies, to work collaboratively in the online environment. They are informed in this by their emergent understandings, and conceptualisations, of CT, reflection, inquiry, and collaborative learning since ". . . metacognitive understanding of critical thinking and practical inquiry greatly supports the development of cognitive presence" (Garrison and Akyol 2013, p.110). Learners' cognisance of their responsibilities, not only to themselves but, to others in the community, grows. Through this Influence, they are provided with a set of tools and strategies, including their use of a personal 'learner space' for 'time out' for personal reflection and metacognition (as discussed further in 5.2), and coping with the affective aspects of online learning.

5.1.3 SP and CP – meaning-making

This section is framed by the following question:

> *How can the Influence between SP and CP support student-centred learners to move between all the phases of the Practical Inquiry Model leading to higher levels of learning?*

This Influence speaks to cognition, monitoring of co-cognition, and learners' joint management of opportunities for and impediments to, cognition, supported through social communications. This Influence builds upon Garrison's original titling of "Supporting Discourse." Again, I call on Akyol's assertion that metacognitive activities occur at the intersections between SP and CP (Akyol 2013, p.37).

Learners should engage in collaborative, task-based activities through sustained, purposeful, critical discourse, with the aim of working through all the phases of the PI Model. As learners share their emergent understandings, evidence-based reasoning and developing concepts, using the discourse of their discipline, discussion should focus on challenging, probing and testing, and then, through negotiation, lead to resolution. Prompter questions, for instance based on the work of Hosler and Arend (2013, pp.165-167[71]), can help guide learners in moving through the activities together. Such questions, posed, critiqued, and responded to, by all members of the community, will require open, group and interpersonal communication – constructive social presence – if the collaborative endeavour is to lead to mutual understanding. For example, discussions can usefully focus initially on clarification of the activity in hand followed by all members of the community asking probing questions such as "*What other*

[71] In the Appendix to their work, Hosler and Arend (2013, pp.165-167) provide exemplars of the type of questions that might be used at each stage of the PI Model.

options are there?" or "*What would be the implications of that?"* encouraging consideration by all of the relevance to them of the topic under discussion. Tutors may provide examples, analogies, illustrations and explanations, as suggested by Shea et al. (2010, p.133).

The emphasis in this Influence is on the cognitive activities outlined in the discussion of the PI Model in 4.2.1. However, learners will also be using tools, and strategies provided through the TP/CP Influence, to engage in self, shared and co-regulatory activities, identifying and dealing with impediments to, and affordances for, learning, and with the generation of creative thinking. Learners will need to be motivated to ". . .carry out collective activities, to accept the group's modus operandi or to take into account each person's personality" and to have strategies to regulate ". . . the socio-affective, emotional and cognitive aspects of these interactions based on collaboration" (Jézégou, 2010). Akyol and Garrison (2011b, p.185) emphasise the importance of sharing metacognitive activities, such as pair problem-solving where students are clarifying their thinking, and discussing useful strategies for learning; whilst additionally, Järvenoja and Järvelä (2009, p.465) argue that the "regulation of emotion, at both the individual and group level, is critical for successful collaboration." Calling upon the work of Shea et al.'s (2012, pp.90-94), learners in this Influence should engage in shared discussions in the setting of appropriate challenging goals, and then on a regular basis to support group review of:

- Progress to date on tasks
- Anticipated plans and proposed strategies for success
- Barriers and gaps to success
- The amount and quality of contributions to the online discussions
- The co-ordination and management of tasks
- The constructiveness of interactions between members
- Motivation.

Discussions should then lead to decision-making about further action required, the probing of other's contributions, and suggestions for alternative perspectives for explorations. The tutor's role is to support and facilitate.

Critically this Influence addresses how learners respond to, and learn from, inbuilt and on-going feedback provided by tutors, peers, and external providers such as clinical educators. As noted in publication four, too often learners have a limited, one-dimensional understanding of feedback and a passive view of their engagement with feedback (P4:6:1-5). In this Influence, learners should take the opportunity to discuss how to use feedback as a springboard for their future reflections, action and self-regulation in their chosen professions.

From time-to-time, tutors may remind learners to take time-out in their sanctuaries to engage in reflective activities, acknowledging as highlighted in P2 and P3 that many learners need the occasional 'nudge' to reflect on a regular basis.

As discussed in 4.3.2.2, tutors in SCL have a specific role in this Influence in the design for, and facilitation of, cognition and metacognition. Activities should encourage learners to take the role of peer-facilitator as exemplified in Shea et al. (2013, p.432). Modelling of (meta)cognitive activities in the discussion postings will be particularly important, encouraging the defence and questioning of other's ideas as well as the articulation of self-regulation (Akyol 2013, p.40). However, the tutor's primary purpose will be as a flexible resource, especially in providing regular feedback, for their student-centred learners.

SP is often presented in the classical CoIF as the "stepping stone" to CP with its role diminishing as the focus of the learning community moves to CP. According to Garrison ". . . once [CP is] established, social presence will recede to the background as academic challenges grow" (2011:89). However, in my experiences and publications SP is essential throughout online work, and particularly in professional online programmes. Differing from Garrison's work, and in accordance with SCL, I consider SP as a core presence if professional learners are to work collaboratively, discussing in ever greater depth their emergent understandings of complex issues related to their professional activities. As the tutor shares with learners more and more of the responsibilities for direction, they need to feel safe and comfortable as they explore collaboratively with their online peers their concerns, frustrations, seeking to improve their professional capabilities. Tutors and peers, as suggested by Xu et al (2013, pp.4-5), will be providing on-going support, acknowledging and encouraging all through prompt responses, and helping to alleviate feelings of isolation, frustration and anxiety, ensuring that they do not become an impediment to learning.

5.2 The learner 'retreat – the learner's personal space for intramental thinking and self-regulatory activity

In this section, a significant, original and practical enhancement to the CoIF is outlined, bringing together findings from Chapter Four plus emergent work on learner self-regulatory activities in the CoIF as outlined in Chapter Two. This addition to the CoIF addresses a perceived imbalance in the CoIF highlighted in Chapter Four and returns to Garrison's quotation first noted in Chapter Two:

> An e-learning community of inquiry is where autonomy and collaboration are not contradictory ideas but the essential elements of a unified and qualitative shift in how we approach higher education. (2011:4)

This section is framed by the following questions:

- *Where and how do intermental and intramental thinking integrate in a CoI?*
- *Is there need for a private space within the Framework for private thinking and meaning-making, and if so what is its purpose?*
- *When, and why, would learners retire to, and immerse themselves in, this private space?*
- *Where and how do learners engage in self-regulatory learning activities, including metacognition and management of the affect?*

Garrison maintains that education is a bringing together of the private and the public spaces of learning (2011:10), with education thus developing both personal meaning and shared understanding (2013:1). However, the CoIF focuses particular attention on the public space where learners meet and collaborate online through discourse, but ultimately the deepest and most meaningful learning activity occurs in an individual mental space private to the learner. In my work, as demonstrated in publications two, three and four, reflection is a critical element of learning; yet it does not particularly feature in Garrison's collaborative CoIF, being a personal, intimate act, however it is initiated. Garrison does assert ". . . communities of inquiry involve questioning, a personal quest for meaning, and a collaborative quest for truth" (2013:6). But there is limited consideration by him, or by the CoI Research Community, of how and in what ways learners progress this critical "personal quest" in order to harness its outcomes in their learning and development.

The additional feature in the CoIF that I here propose recognises the location where the learner engages in intramental thinking (in his/her 'private space') related to intermental thinking (the collaborative interaction) in a CoI. I identify a learner room, now referred to as a 'learner retreat', offering a 'quiet, safe place' for the private (internal) world of the learner, as a foil to the shared collaborative space in the CoIF (the external world). In this 'room', there is a very specific focus on the *self* – with individual learners in their private worlds prioritising and taking ownership of their learning whilst making, and working with, meaning. This proposal resonates with a quotation from Tutor 2b, in case study 2 (P5) noted previously, where she articulates the need for the performing arts students to have ". . . a sort of loneliness which provides the chance for them [learners] to grow independently . . ." (P5:1276:52-54). Underpinning this second proposed

enhancement is the acknowledgement stated throughout this thesis, that the new online environment will be challenging for learners, so that time will be required to enable them to adjust to the prevalence of written communication, the new requirement to participate in an online CoI, and a more collaborative approach to L&T (2011:86). This proposal fully accepts that learning is usually a social activity and that, through involvement in learning communities, individuals can go beyond themselves in terms of depth and breadth of understanding (2013:5). It also agrees that individual cognitive knowledge construction and understandings are intricately interwoven with relations with others and the ensuing negotiation of shared meaning through social interaction (Fung 2004, p.136). However, in wishing to extend the reach of the CoIF, this enhancement, drawing on the findings from Chapter Four, offers an extension focusing on the individual learner and personal learning, in line with much of the findings of Shea, and his colleagues (2009a, 2009b, 2010, 2012, and 2013).

This enhancement speaks explicitly to my basic understanding of "intramental thinking", as outlined in 1.3, in which learners use time ('headspace') to reflect upon their learning, engaging in internal, self-questioning discourse through which they manipulate meaning by evaluating their frames of references, the nature of their own knowledge and the process of learning (Moon 1999, p.153). Here conclusions reached intermentally in terms acceptable to all concerned can be sharpened and crystallised for storage in images and concepts particularly meaningful to the individual learner and the development of their abilities in their professional roles. In essence, this 'time out' is where learners engage in internal dialogues offering ". . . an opportunity for quiet introspection which can provide another useful route to self-examination" (P3:190:15) and particularly where learners can synthesise and integrate learning from their wide range of experiences. As highlighted in publication three, learners, especially on professional programmes, have to bring together a myriad of unrelated ideas, experiences, formative and summative feedback, and learning, and then use this to deepen their understandings and identify areas for future development (P3:198:33-39). Learning journals may provide one technical tool as a springboard for such internal discussions with self.

It is also within this 'retreat' that a learner decides if, and more particularly with whom, they will share and discuss their emergent understandings, learning, and reflections. It is a space where learners consider their actions, or abstentions, within all three interwoven Presences of the community framework – to share, to negotiate, to challenge, or not. Time is required before launching into online debates, as witnessed in the student and tutor concerns about time in P1:223:Table 1. Such a proposal responds to Garrison's latest thinking and his new focus on

slow, purposeful and effortful thinking, articulated in chapter 1 of the 2013 work where he states that “Education should be an environment to slow down, inquire and reflect upon problems.” He then points out that textual communication provides a vehicle for such “thinking”, and differentiates the CoI from other online groupings (2013:6).

This space also provides opportunities for learners to engage in self-monitoring and regulatory activities, which are particularly relevant when studying in challenging, emotionally-charged, collaborative online learning, which is often unknown territory for learners and encountered with the aid of few maps. As discussed in 5.1.3, learners may well engage with peers in co-regulatory and shared metacognitive activities. However, the ‘learner space’ provides their only opportunity for uninterrupted self-reflection on progress to date, review of learning strategies, consideration of self-motivation, and nurturing of self-efficacy. Individual probing of the affect will involve an examination of the emotions of oneself and others, consideration of how to respond effectively and appropriately, and evaluation of one’s own and other’s handling of the affect. This is particularly important after receiving feedback or comments that may not be as positive as anticipated.

Learners may retreat to their personal space at any time during their period of studies, moving easily from intermental to intramental thinking. For example, as learners are moving through the PI Model, they can be moving in Phase 3 between intermental collaboration in the community and intramental reflection to enable them to contribute to subsequent enhancement of the group’s convergence on a solution (2011:47-48).

Using Cowan’s model (2006) as articulated in 4.2.3.2, I outline three types of situation when this space may provide ‘safe harbour’ for learners. Initially learners may want to take time in this space to **reflect-for-action**. As stated in 4.2.3.2, this is when learners focus on the challenges which they are about to encounter. They should identify all relevant options and consider how they will identify, select and explore the implications of possible responses to their chosen personally identified challenges. In addition, this is an opportunity for learners to reflect constructively upon the potential of their own cognitive strengths especially when working online collaboratively. Akin to Akyol’s first stage (2013, pp.35-36) “Knowledge of Cognition,” as outlined in 2.4.5 in Figure 2.5, it enables learners to reflect-on their previous approaches, successful or not, to learning, while preparing for the forthcoming task. Tutors may encourage learners to use this time to record anticipatory reflections and thoughts that can be returned to, and updated, during their studies. In publication three, the physiotherapy students may have

been reflecting on their experiences of learning prior to undertaking their first placements (P3:197:28-48).

There may be shorter sojourns in the personal retreat when learners are catching 'thinking at the time' in the midst of group action – a mental gym as anticipated by Tutor 4 in case study four in publication three, lines 10-26. This is Schön's **reflection-in-action**. In this instance, learners may be reflecting upon a 'flash of insight' during a very recent, or more likely an on-going, learning event – an insight whose relevance needs to be captured before it fades. In the context of learning online, it relates to learners taking control by reviewing on-going progress and experiences, preparing to challenge others, reflecting on effort by one's self and others, and assessment of motivation. It is similar to Akyol's regulation of learning (2013, pp.36-37) but also resonates with Shea et al.'s work (2012).

Finally **Reflection-on-action** focuses upon learners addressing their consolidation of learning and of long-term development, drawing upon recent or all learning within the community. As Jézégou asserts (2010) learners need to conduct a ". . . critical examination of the knowledge acquired by the way of this collaborative experience, to look back on the cognitive processes he used and to evaluate them." They should identify what they have learnt from this experience and can carry forward to something similar in the future. This can be structured by the tutor, in discussions with learners, as part of the assessment process such as in the P3 examples when students are asked to present their plans for PDP as part of a final assessment. Such plans, of course, will have originated in private reflections in the retreat, leading to something suitable for public exposure and assessment.

5.3 A Tutors' Network

As noted throughout this thesis, tutors, like learners, may be unfamiliar with the new, challenging online environment, requiring them to be subject, pedagogical, and technological experts. Most will struggle, especially when adopting a social-constructive approach to L&T in accordance with SCL. Tutors may be challenged by such an epistemological shift, and the additional technological skills required of them for successful tutoring online, as discussed in 4.3.3. In addition, tutors will need to support learners in adjusting to the online environment, and often must cope with the accompanying strong emotional responses as discussed in the Foreword. Hence the continued interest in Anderson et al.'s seminal article in 2001 on TP as noted in the citations for this paper in Figure B2.

A Tutors' Network, similar to the ePortfolio Community suggested in P2:848:1-5, is proposed as the means of advancing understandings, knowledge, and the practice of online, collaborative, community-based learning in general, and in particular, of communities of inquiry. This should specifically develop the abilities of online tutors with the aim of improving their learners' educational experience whilst encouraging research and scholarship into the CoIF. Such a Network should almost certainly be available at an early stage in their appointment as online tutors. Open to all with a specific interest in online learning, the Tutors' Network will be particularly relevant to online tutors, support staff such as from Library, Information Technology, and Learning Technologies, and educational researchers. Recognition of the need for this interactive relationship is an acknowledgement of the importance of tutors in student-centred online learning as highlighted in P1:223:Table 1 and resonating with the work of Shea et al. who found that the 70% of CP is most likely attributable to the tutors' fostering TP and SP (Shea et al. 2010, p.127).

The purpose of the Network will be similar to the InteractiveCSP (CSP 2015) run by the CSP, as discussed in P1:218:25-32, which provides a space for physiotherapists to exchange experiences and resources. The Tutors' Network will provide online spaces for the sharing of resources, pooling of knowledge, exchanging of experiences and constructive analysis. Based on an overarching and generalised version of the CoIF methodology and philosophy, a Tutor's Network will focus upon resolving current issues, as well as planning future online offerings accepting the importance of design as noted in 4.3.3. Such a grouping will offer networking support for individual members through discussion fora, as well as encouraging members to develop 'critical friendships' potentially, but not necessarily, within their own subject specialism. Such support will be particularly apt as tutors seek to find efficient mechanisms to smooth the transition for learners into the new learning environment (2011:56). As the Network matures, the formation of special interest groups may be appropriate, covering, for example online assessment, or issues of multi-modality as raised in P5:1278:66-77; these groupings may be of interest to some, but not all, members of the Network. An area for on-going discussions will certainly be the internationalisation of the curriculum and limitations of the CoIF for the very diverse, international online learners as noted by Morgan (2011).

A staff development unit, or equivalent, with an interest and experience in online learning, will facilitatively provide a type of 'tutoring presence' for this space. A strong community input will ensure there are clearly formulated and generally accepted and relevant aims and objectives guiding the development, and maintenance of the Tutor Network. Explicit agendas featuring

both the development of the processes supporting online learning, such as institutional buy-in, and of the individuals themselves, such as online moderation as noted in P1:223:Table 1, will be essential for the successful implementation of the Network and its continuation.

The Network will hold regular a/synchronous events and discussions including presentations from guest researchers, and learners in communities of inquiry. Tutors will be invited to share technological experiences, and 'hints and tips', recognising, as in P5:1277:105-109, the frequent lack of tutor technical preparedness for online learning and its resultant impact on design, and the online educational experience as noted in 4.3.3. Blogs, links and postings will update tutors on a regular basis about forthcoming events and latest scholarship about online learning, enabling them to raise pertinent matters and needs for collegial attention. The Network will acknowledge that staff development is on-going (Chatterton 2015, p.12-13) since "Teachers will have to do more than simply learn to use currently available tools they also will have to learn new techniques and skills as current technologies become obsolete" (Mishra and Coehler 2006, p.1023 cited in Shea and Bidjerano 2009a, p.544).

At the same time, tutors engaged in an active CoI will almost certainly be finding occasions and needs to reflect on the affairs of that particular community, and hence to engage in intramental thinking in a retreat similar to that of their students from which may emerge their thinking and reflections – primarily relevant to that Community, but which they might subsequently share with critical friends and/or the Network. Nevertheless it is important to recognise that whilst being a reflective practitioner is often professed to be essential in the professions (Winchester and Winchester 2011, p.120), in publication two it was reported that few tutors had engaged in reflective type activities on a regular basis and/or could demonstrate an active ePortfolio despite genuinely promoting this activity to their students (P2:839:9-11). Akyol (2013) suggests, constructively and pointedly, that metacognitive activities should be expected not only of learners but also of tutors, since "Teaching metacognitively enables teachers to reflect on their own teaching such as instructional goals, students' characteristics and needs, content level, teaching strategies and how their teaching will activate and develop students' metacognition" (p.38).

Tutors' reflections on their online modules will be informed initially by interactions with their learners, and perhaps most often and usefully with the more metacognitive of their learners. Often online tutors will focus on asynchronous discussions, but tutors through the Network will be encouraged to reflect on all communications with learners (synchronous communication,

email, and others). Learner feedback might take the form of the findings from self-evaluation tools provided by tutor such as adaptations of the “Motivated strategies for learning questionnaire" (Pintrich et al. 1993), and/or the “Online Readiness Survey” (Hung et al. 2010, p.1086-1087). The outputs from these tools and resultant discussions with learners can provide a wealth of information, feelings, queries and suggestions upon which the tutor can reflect, and plan for future action. Winchester and Winchester (2011, p.120) suggest using the VLE on a weekly basis as a tool for learners to engage in reflection-on-action supporting tutors' reflecting-for-action. Alternatively, as in P5, some of the learners may use OSLEs, as reflective diaries (P5:1276:39-55). Online learners may be encouraged to share their on-going thoughts, and reflections on the online provision as quick, short videos created on mobile devices. Such invitations requesting effort on the part of busy community learners may, of course, be more likely to achieve useful responses, if sparingly requested. Responses can be shared with tutors at specific stages of the module, and again tutors may chose, or not, to consider these with critical friends and/or the Network, or reflect alone.

Long-term institutional commitment including protected tutor-time for involvement in such a Network, as noted in publications one and two (P1:225:95-98; P2:849:13-16), will be essential for its success. Formally endorsing a Tutor Network not only acknowledges the challenge for tutors in moving to the online environment, and their critical role in facilitating learning, but also underlines the need for them to reflect on an on-going basis about “. . . the process of teaching rather than about a simple evaluation of teaching, questioning why we do something rather than how, and most important of all, learning by this process” (Kuit et al. 2001, pp.130-131).

Such a proposal for a Tutor Network may formalise on-going staff development for learning with technologies, as would be the case at QMU where support for online learning is on an ad hoc basis. Such a Network would also build upon tutor groupings. For example, the authors of P3, whilst reviewing their sections about the ePortfolio, read others’ contributions; this resulted in staff development events with case studies being used as a springboard for tutor discussions. In P5, the tutors shared their experiences, especially technical skill development and their role as a tutor, amongst themselves on using an OSLE, and then in their departments.

The specific features proposed for this Tutor Network is based upon the belief that there is commonality between the principles and practice of a CoIF for learners, and this Network for tutors who are anxious to develop their facilitative skills and understandings of online collaborative, community-based learning.

5.4 Conclusions to Chapter Five

My proposals in these sections call upon Akyol (2013) and Shea and his colleague's work (2009a, 2009b, 2010, 2012, 2013) on the further articulation of the roles and responsibilities of online learners. Akyol's (2013) work on metacognition is extremely illuminating but, like Shea, (2012, p.92), I consider metacognition to be but one vital aspect of the broader term self-regulated learning, essential in online learning. Shea and his colleagues acknowledge the importance of SRL, and have combined a range of regulatory actions into a new and additional "learning presence". Although there is much to commend their work especially in regard to learner agency, I conceive of learning as being essentially at the heart of the educational experience in a CoI and hence located at the centre of the diagram. Also I agree with Akyol that adding a new presence could be problematic, especially in confusing the focus of the CoI – collaborative rather than individualistic – since, from my perspective, the focus is *both* of these (Akyol 2013, p.37). Hence, to build upon their significant work, I have offered a three-dimensional extension to the CoIF which, accepting the importance of SRL and metacognition, nevertheless returns to the purpose of the CoIF – the educational experience – and in so doing draws upon the critique of the Presences in Chapter Four.

The three sections above are based on my interpretations of the CoIF, drawn from the preceding chapters of this thesis, and the publications. Such conceptualisations will, in part, differ from those in the Research Community due to my particular focus on reflection, on the affect especially in online collaborative community-based learning, and especially on student-centred learning, as outlined in 1.1.3. Section 5.1 seeks to operationalise my emergent understandings of the CoIF by amplifying the contribution of the Presences, to facilitate a worthwhile educational experience. The development or recognition of the key role of a learner retreat redresses the perceived imbalance in the CoIF by providing the individual learner with a private, personal, reflective space. The Tutors' Network, informed by the CoIF, acknowledges the critical and challenging role for tutors often new to online learning.

This enrichment and definition of activity in the central space in the CoIF redresses the imbalance of Framework that focuses on collaboration and neglects the individual learner and their learning. The Influences support this 'enrichment' and the development of a community, accepting the challenges of working online collaboratively, and the necessity of individual, and group, regulation of learning. The learner retreat acknowledges the importance of reflection, and of the affect which have less emphasis in the Research Community's work to date. The Tutors'

Network considers yet again the demands placed on online tutors, and the need to take a SCL approach in such online spaces.

It is hoped in the future this developing work can be shared with the CoI Research Community for feedback, and further enhancement.

CHAPTER SIX: CONCLUSIONS

This thesis provides a constructive, conceptual analytical review of the CoIF, gaining deeper understandings and creating new knowledge about the role of the CoIF in supporting online learning and teaching in tertiary education. This final chapter re-visits the aims of this thesis, evaluates its contribution to scholarship and practice, and concludes with a short reflective piece about the contested space of the PhD by publication.

6.1 The Community of Inquiry Framework

As outlined in the Foreword, and concurring with the work of Rovai (2002, p.300), online learning presents both opportunities and risks, especially as learners become more discerning, and less tolerant of, poor quality online offerings. Theoretical models and frameworks are needed to inform the design and implementation of online learning, supporting its continued growth (Shea and Bidjerano 2009, p.543). In this thesis, I have set out my intellectual position, based upon my publications and informed by a systematic engagement with the literature, regarding the frequently cited, and well-known model, the CoIF. I have also sought to answer the Research Community's call for constructive debate by identifying problems, weaknesses and directions for future study (Akyol et al. 2009, p.123) based upon the Research Questions identified in Table A.

From the extensive collection of publications on the CoIF, it would appear that a considerable number of studies have found the CoIF useful (Shea and Bidjerano 2009, p.551), offering insights into the complex educational situation of online learning, despite those, noted throughout this piece, who have criticised it (Rourke and Kanuka 2009; Jézégou 2010; Annand 2011; Xin 2012, and Morgan 2011). Like Jézégou, my findings suggest the CoIF ". . . resonates with and integrates the theoretical findings of many lines of research . . ." as noted in 4.1. One of the most important contributions of the CoIF is that it has provided the three dimensions of presence (Jézégou 2010). It is certainly more extensive than many guidelines and suggestions about conducting online learning which, as noted in the Foreword, too often take a cookbook approach focusing solely upon ". . . disparate methods for ensuring participation" in online discussions (Garrison and Akyol 2013, p112).

Although, like Akyol et al. (2009, p.130), I would agree that ". . . it is premature to declare the CoI framework a failure . . .", the critique of the Presences in Chapter Four, framed by the Research Questions, has presented significant areas for development and refinement to the CoIF. Critically, there is a lack of shared understanding about SP, which is a highly complex and multi-faceted construct. Garrison privileges the importance of group identity in the development of SP, but my review indicates that many elements such as the impact of the media, and individual learner skills, understandings and perceptions of SP, are of equal importance in the development and maintenance of SP especially in professional programmes. Also I contest the de-emphasising of the affect in the CoIF since much emergent work indicates a strong learner emotional response to online learning, especially when it is designed to be collaborative. Chapter Four also highlighted the lack of specificity about reflection in the CoIF. Whilst reflection is a sub-set of CT in CoIF, in contrast, my understandings of reflection focus upon its integral role in learning particularly originating from the self, and for future self-development. Further clarification is also required about the problematic role of the teacher/tutor in the TP presence, and in student-centred learning. In my interpretation of Garrison's TP, there is a strong teaching presence with little specificity about the role of the learner in all three categories of this construct.

Stemming from this review, two enhancements to the CoIF have been outlined in Chapter Five together with a proposal for a Tutors' Network. The first enhancement I based on my emergent understandings of how the CoIF may be operationalised, focusing upon the intersections of the Presences in the CoIF which I have referred to as the 'Influences'. Second I proposed a personal learning retreat at the heart of a community of inquiry, addressing a perceived imbalance in the CoIF highlighted in Chapter Four. This learner 'space' offers a 'quiet, safe place' for the private (internal) world of the learner, as a foil to the shared collaborative space in the CoIF (the external world). Finally a Tutors' Network is suggested as a vehicle for advancing understandings, knowledge, and the practice of online, collaborative, community-based learning in general, and in particular, of communities of inquiry.

It is hoped that such developing ideas outlined in Chapter Five can be progressed within the CoI Research Community. The following questions are posed to frame my own priorities for future research. They focus particularly upon moving forward from issues generated by the notion of the personal retreat and the Tutors' Network:

1. When do learners visit, and re-visit, their learner retreat? What occasions withdrawal from the CoI? What length of time do learners typically spend in the learner retreat?
2. How, and in what ways, do learners utilise their reflections in the learner retreat to support their online learning activities? What form does that private thinking take? Is it ever recorded, even for personal purposes?
3. How much if any self-evaluation of development and reflection-on the CoIF experience happens during the CoIF activity?
4. What potential has a learner retreat in alleviating or accentuating negative learner response to working online, and in collaborative groupings?
5. To what extent do learners draw, and build upon, their learning experiences, from one CoI experience, and/or other online learning experiences? Can they pinpoint examples of this transfer?
6. What significant learning and development do tutors gain from their experiences of the Tutor Network?
7. What evidence could tutors offer to substantiate claims of learning and development?
8. What specific institutional support could be offered to tutors to support their regular engagement in the Tutor Network?

Such suggestions are linked to developments to enhance my future practice as a qualitative researcher, outlined in Figures 3.7 and 3.8. Thus such work may include:

- Longitudinal studies, focusing on 'critical moments' as outlined in Figure 3.7
- Use of video diaries to record privately or for publication learner reflections in their personal retreat as stated in Figure 3.8.

As noted throughout my work, this constructive conceptual, analytical review is framed by my conceptualisations of learning and teaching, as outlined in 1.1.3, and my approach to knowledge construction, as discussed in Chapter Three when reviewing my research. Underpinning my work, as that in the CoIF, is a social constructivist approach to learning and teaching. However, others take a different stance. For instance, Mayes and de Freitas (2013, p.17) maintain that there is no one model of learning that is exclusive to online environments since there are 'e' versions of general learning theories made possible in technology-mediated learning environments. In comparison, others suggest alternative models and frameworks upon which to base online learning. For instance, authors including Siemens (2005) and Harasim (2012, p.83-84), proffer models specifically for a digital society in the C21st, dismissing many prevailing learning theories, such as social constructivism, that were developed in the C20th,

which they consider to be no longer appropriate. Furthermore, embedded within my conceptualisations of, and approach to, L&T online is the integral role of collaboration and community-based learning. Although much work referenced throughout this thesis, for instance that of Rovai (2002) and Palloff and Pratt (2007) suggest the benefits of such an approach, it too is not without its critics. Annand (2011), for example, is heavily critical of this perspective of online learning, with its focus upon interactions between and amongst learners and tutors. He questions how much co-construction of knowledge occurs in online communities, and asserts that such a standpoint limits learner accessibility to online education, is resource-intensive, and costly. Thus Anderson and Dron (2011, pp.86-87) raise issues of scalability of collaborative, community-based online and wonder if such a perspective may provide temporal restrictions. I accept, and have sought to make transparent to readers throughout this work, that my values and understandings impact on my interpretation and review of the CoIF.

This thesis has been bounded by my publications which predominantly focus on professional programmes, in the context of my work at QMU. Hence vital areas in the educational experience such as assessment, and the internationalisation of the curriculum have only been hinted at in this work, such as in the Tutors' Network, and certainly are worthy of future consideration. I have also specifically chosen to focus on online learning, rather than blended, since as noted in the Foreword this is the area where greatest expansion of learner numbers is anticipated, and is an area of strategic importance for my institution. Finally, in the development of this thesis, I have been aware of a specific focus on the pedagogy of online learning whilst almost de-emphasising the technology. In the Tutors' Network I have attempted to redress this since, as stated in P5 (P5:1276:96-97) the technology will also certainly have an impact on the educational experience of all, and as stated in the Foreword can often be introduced as a gimmick or on a whim.

6.2 Appraisal of the thesis: evaluation of contribution to scholarship and practice

I present three tables with illustrations from this work, providing evidence of this thesis' contribution to scholarship and practice. Table 6.1 focuses on the publications and Tables 6.2, and 6.3, the narrative. Addressing Badley's (2009, pp.337-339) concerns about PhD by publication, they are pointedly structured according to the REF according criteria for originality, rigour, and significance. A short discussion follows, offering my interpretation of these three problematical and highly contentious terms, linking to the three tables.

6.2.1 Originality

Park (2005 p.198) considers originality as a “thorny problem” that is difficult to define being highly dependent on the subject specialism. According to the generic REF criteria for education, originality is “. . . understood in terms of the innovative character of the research output” (REF 2012, p.66). Badley (2009, p.337) asserts that the term includes some notion of the construction of new knowledge. Accepting this interpretation, in my publications, there is some originality. Often I address a gap in understandings, such as in P2, where there was limited research reviewing ePortfolio institutional implementation, particularly from the tutor perspective. In some cases, my approach to a topic in a specific subject area may be considered to be original, such as in the case of P5 where little research had been undertaken regarding the role of OSLEs in the performing arts.

There have been very few constructive, critical reviews of the CoIF, as noted in 2.3, and this thesis has sought to address this gap. First, it has offered in Chapter Four an extensive critique of the Presences, informed and guided by the publications; the outputs of this review are summarised in the conclusion to that chapter. Second, in Chapter Five two enhancements to the CoIF are presented, addressing issues raised in Chapter Four and set in the context of SCL. The Tutors' Network, also proposed in the fifth chapter, focuses upon the preparation and on-going support for those facilitating learning online.

Finally, the presentation of this thesis, as noted in the Foreword, using the publications as a basis for the critique of the CoIF, also offers an alternative style of PhD by publication to the more usual meta-narrative approach. This is discussed in more detail in 6.3.

6.2.2 Rigour

The REF (2012) definition for rigour for education Sub-panel 3 is “. . . intellectual precision, robustness and appropriateness of the concepts, analyses, theories and methodologies deployed within a research output” (p.67). All the publications were informed by an extensive literature review, ensuring that the work was related to current research into the particular area. P5 was notably challenging in this area with little work to draw upon and use as a basis for the research. In the thesis, as stated in Chapter Four, systematic literature reviews were undertaken in order to address the vast amount of published materials on the CoIF.

Working with the Research Teams enabled discussions about the robustness and appropriateness of the chosen methods and analysis of data to be used in the research

informing the publications. P1 was the first approach to a type of thematic analysis undertaken to analyse the data. For the future, alternative methods such as video diaries will be explored. Working collaboratively also provides access to divergent perspectives which inform the ethical decision-making throughout the inquiry process.

6.2.3 Significance

The aim of this thesis is to consider how the CoIF can help develop and maintain an appropriate quality online educational experience which will help "the millions" of online students, and those predicted to become online learners (Shea and Bidjerano 2012, p.316).

In Table 6.1, areas are identified where the publications have made some contribution to current debates within the learning technology communities and, in some cases, within subject disciplines and their respective professional bodies. Two of the publications have a small number of citations, and they have been accessed and downloaded by readers of the journals. P1 was used, by my co-author, to inform discussions with her professional body. P2 was the basis for work with JISCinfoNet's on the development of an ePortfolio guide.

Publication has been one avenue to open work to public scrutiny and gain feedback. Feedback from reviewers was positive and illuminating, helping to inform developments for each of the publications. Detailed in the Information Sheets, sharing of the findings from the work is ethically important. The Research Teams and I, have been aware that the work reported is an exploration to be continued, and in, for example, P5, indicates avenues for further work.

I have specifically not included a column for significance on Tables 6.2, and 6.3 since the thinking in this thesis, such as that for P6, has only been shared with a limited audience.

6.3 My growth as a researcher

Undertaking this PhD study has been a significant educational experience for me. In the years since I enrolled, I judge myself to have further developed a number of graduate abilities including:

- Commitment to building upon reflection as a bridge between educational experiences and continuing professional development, for both myself and my students
- Systematically and constantly updating extensive and essentially critical literature reviews.

This personal progression has been particularly evidenced in my activity since formal submission of the first version of this document. During that period I have combined my reflection-on the work in the PhD with reflection-for future publications. This has already led me to initiate writing on draft submissions to refereed journals, such as *Internet and Higher Education*, arising from the way this work has addressed at least some of the research questions, as noted, and covering:

1. The need to include provision for individual retreats within the educational experience in the CoIF (drafted) (RQ4; RQ8)
2. The primary role of what I have called Influences, rather than Presences, in facilitating these educational experiences (outline complete; drafting in progress). (RQ1; RQ2; RQ3; RQ5; RQ6; RQ7)
3. Alternative concepts of Tutoring presence, to incorporate more consistently CoIs featuring student-centred or student-directed learning (outline drafted) (RQ3; RQ4)
4. Adapting SP in the CoIF: enriching the three categories of SP to include the impact of the media, the affect, and personal development in a CoIF (RQ1).

6.4 Reviewing the research questions

I now return to the nine research questions (RQs), posed in Table A in the Foreword, which were used to shape this review of the CoIF. Figure 6.1 outlines the outcomes of each RQ and signposts areas for future research studies by myself and/or others. Additional comments address limitations and I conclude with a personal evaluation of progress to date in addressing the particular RQ.

The first *three* RQs informed the structuring and focus of my critique of the three Presences of the CoIF in Chapter four. The outcome of each of the first three RQs within the thesis was an in-depth critique into specific aspects of each of the Presences, often addressing identified gaps, and furthering understandings of the Presences, as already outlined in Table 6.2. This work should serve as the basis for the enhancements to the Framework, outlined in Chapter five and will be used in due course in further publications as noted above. The other *six* RQs were addressed in Chapter five, where they were used to shape and guide the articulation of the two enhancements to the CoIF, and the rationale for the establishment of a Tutors' Network.

There are limitations to the scope of any interrogation. For instance, I undertook an extensive literature review of SP; but although I have called upon much of this, it was not feasible to

include it all without losing focus and depth. Similarly there are many models of reflection but I have included only those which inform and are noted in the publications. Teaching and tutoring presence needs further refinement, and more examples. The enhancements can only be introduced generally and will then need to be explored in future pilots, featuring more substantive research. I would like particularly to provide more conceptual clarity around these spaces. Publications which, in the case of the learner retreat, are soon to be submitted to peer review, and will provide an avenue for further development.

RQs are ". . . like a door to the research field under study" (Flick 2014, p.145). My RQs have provided focus, specificity, direction, and boundaries, making my work more manageable. In this thesis, the RQs were not framing research to be undertaken, as in my publications, but were used to structure the review of my work, sharing with the reader my planning for future directions. As demonstrated in Figure 6.1, they provided me with an avenue along which to review progress to date, and thus provided signposts for future research.

6.5 The contested space of the PhD by publication

An additional aim of this thesis, alongside informing understandings about the CoIF, has been to offer an alternative perspective on the PhD by publication, contributing to current debates about the artefacts submitted for doctoral work (Robins and Kanowski 2008, p.1). According to Lee, the PhD is "changing and metamorphosing rapidly into a wide variety of different forms of output and different 'routes' to the attainment of doctoral qualification" (2010 p.13), leading it to becoming a "contested space" engendering debates about the role, purpose, and content of a PhD.

A PhD by publication is often viewed as a candidate's ability to ". . . provide a convincing critical narrative about their overall intellectual position unifying the submitted articles" (Badley 2009, p.335). Hence, the typical structure of a PhD by publication is a number of selected publications plus exegesis in which the candidate "knits together" the range of articles to develop new knowledge and understanding. Francis et al. (2009, p.98) assert that the PhD by publication achieves the same goals as a PhD ". . . together with the added outcome of tangible scholarly additions to the contemporary body of knowledge . . . generated through the period of candidature." Yet issues persist with an uncertainty about the award (Powell 2004, p.22) and ". . . the perception that this is a qualification of a lesser standard than the 'traditional PhD' . . ." (Brien 2008, p.8). Most notable criticisms focus on contributions to new knowledge, quality, coherence, structure, and co-authorship. I have addressed some of these issues below.

Firstly, Lee's (2010, p.17) substantive work in this area has informed the development of this particular PhD by publication. She reminded me that originality in the form of new knowledge, ". . . living in the public arena through publication. . ." is one of the key criteria for a PhD. Although my publications were available to the learning technologies community, I wanted to build upon these, using them as the basis for generating new knowledge and understandings, and thus move beyond a synthesis. Lee (2010, p.15) asserted that if this was accepted, then ". . ..new and flexible forms of knowledge products can be developed to represent graduates' achievements of research capabilities as well as tangible or concrete forms of their doctoral output." Niven and Grant's (2012) exposition of their PhD by publication, in which they describe the 'traumas' of attempting a synthesis as a ". . . complex, iterative process which at times appeared illogical and downright impossible." (p.108), further dissuaded me from this approach. Hence, my deviation from the more common approach to PhD by publication. As opposed to the more typical meta-narrative encompassing the candidate's publications, in this thesis I offer a textual representation of my intellectual position in relation to the CoIF. As a consequence of taking this approach, and to improve the coherence in the presentation of the critique of the CoIF, it was decided that my publications would be situated at the end of work with extensive, and precise, referencing to them throughout the narrative. As noted in the Foreword, this decision was influenced by Steeples' work (2003).

The publications, as stated in the Foreword, have had a dual purpose in this thesis. First, they were used to illustrate, support or refute the explications of the Presences, as well as providing focus and boundaries. Secondly, in Chapter Three, they were used to illustrate my emergent knowledge/skills of the inquiry process, drawing upon formal training whilst matriculated as a doctoral candidate, and prior to this time in my professional practice. Journal requirements demand succinct submissions and provide little space for in-depth discussions in these areas; Chapter Three offered an opportunity to critique this, and to list areas for future development. The publications were written before and during my candidature and could be considered as the textual representation of my research endeavour – viewed, as Denzin and Lincoln (1994, p.548) state, as ". . . cobbled stones . . . which help us and others to understand how and why we did what we did, and how it went wrong". Chapter Three aided in the continuing refinement of my overall research theme, the construction of an evaluation framework, and sought, in some way, to show the developing capability of this candidate. There is continuing international debate about how doctoral capabilities are demonstrated at doctoral

level (Lee and Boud 2009, p.13). In Chapter Three I sought to address this, balancing both the need for product (the dissertation) plus competence (process) (Park 2005 p.199).

It is hoped that this approach to a PhD by publication will contribute and inform discussions about this method of accreditation, and potentially, inspire other doctoral supervisors and students. Ultimately, however, I would concur with Roberts that:

> . . . the product that the PhD researcher creates is not the thesis – vital though that is to their subject area through the creation of original knowledge – no, the product of their study is the development of themselves. (Roberts 2007, p.ix)

Table 6.1 Review of publications for contributions to the learning technology community illustrating originality, rigour and significance in publications

	Originality	Rigour	Significance
P1	At the time of undertaking this work there was little literature focusing on student experiences of e-learning especially in health sciences (P1:219).	As addressed in 3.6.3.2, the analysis I undertook in this research was detailed and thorough.	My co-author used this publication, and the research underpinning it, to inform discussions with her professional body, CSP, and also with other physiotherapy tutors. Citations: 9 Journal: impact factor of 2.106 It ranks 12th out of 63 journals in the rehabilitation subject listing in Journal Citation Reports (data provided by QMU librarian).
P2	This publication addressed two research gaps, at that time. First, it explored ePortfolio implementation across institutions and sectors. Secondly, it explored the tutor perspective to inform understandings about the advantages and challenges of ePortfolios.	23 tutor accounts of ePortfolio implementation in the learning environment through individual interviews were collected. The data were collated and analysed with a third researcher checking themes.	This publication sought to inform others and contribute to the developing evidence base about ePortfolios. Citations: 6 Journal: impact factor of 1.394 and ranks 37 out of 219 journals in the education and research category in Journal Citation Reports (data provided by journal: British Journal of Educational Technology). This work informed my work with JISCinfoNet on ePortfolios, at a national level, including the development of an ePortfolio guide.

	Originality	Rigour	Significance
P3	This chapter examined the potential of ePortfolio combined with reflection to deliver the personalisation agenda. There were few studies, at that time, which had taken this approach to ePortfolios.	This publication was based upon an extensive literature review on personalisation, and e-learning plus the four tutor narratives.	This work was one of the few publications at that time that linked ePortfolios and the personalisation agenda.
P4	There is little guidance to inform the use of ePortfolio as a facilitative tool in the health sciences, especially to facilitate learner engagement with feedback. This approach sought to increase learner engagement by broadening conceptualisations of feedback amongst learners and tutors. It also hoped to encourage learners to become active agents in the feedback process.	The foundation for this publication was an extensive literature review on feedback and learners in tertiary education. I also called upon findings in earlier work into ePortfolio and healthcare.	The research project was commended by the HEA Health Science, and the reviewer stated it was ". . . well-written, provides an introduction that is sensitive to an international audience, and in places, is quite inspiring." The second reviewer commented ". . . the narrative was interesting and thought provoking." In both cases, the reviewers provided insightful feedback which helped strengthen the work. Citations: 5 Journal: impact factor of 1.141 and ranks 55 out of 219 journals in the education and research category in Journal Citation Reports (data provided by QMU librarian).
P5:	Little research had been undertaken regarding the role of online synchronous learning environments (OSLEs) such as Blackboard Illuminate and Adobe Connect in the performing arts in HE.	An extensive literature review was undertaken. Three collective case studies compared tutors use of OSLEs. Data collection methods included online interviews, and video diaries. Data analysis was iterative and interpretive. The CoIF was used as an evaluative tool to support further levels of abstraction.	OSLEs are now becoming more commonplace in the HE setting. The paper sought to assist the adoption of OSLEs from initial enthusiasts to institution-wide implementation (P5:2). Citations: 2 Journal impact: Google impact factor of 0.49 (data provided by journal: Creative Education).

	Originality	Rigour	Significance
P6	As stated previously in 5.1, the intersections of the Presences have received little attention. In this work, I was exploring the potential of focusing these on collaboration. Also, I was noting a perceived imbalance in the CoIF regarding the private space of the learner, and discussing the importance of Social presence.	This work is evidence of the on-going literature review which is drawn upon in this thesis and the linking to my publications.	Through the presentation, colleagues, working with Peter Shea in New York and researching into the CoIF, wish to collaborate after the thesis has been completed.

Table 6.2 illustrating originality in this thesis

Originality
Despite calls from the Research Community, there have been few comprehensive critiques of the CoIF. This work has sought to address that gap especially in the review of the Presences which furthers understandings, and presents new interpretations of each of these.
The review of SP challenges its re-focusing in the CoIF. Based upon Oztok and Brett's model (2011), SP appears to be a highly complex and multi-faceted construct embracing the impact of media, individual learner/tutor skills, confidence, and perceptions of SP, as well as affiliation to the group. Garrison's stance in de-emphasising the affective seems at variance with current research reporting the strong student emotional response to working online, and particularly in collaborative, community-based groupings.
There has been little consideration of, and specificity about, reflection in the CoIF. The critique of CP informed by my understandings articulated in the publications has addressed this gap. The critique of CP proposes that reflection and critical thinking are distinct but inter-related concepts.
The review of TP was informed by my emergent understandings of SCL. An adaption to the naming of TP is proposed from 'Teaching Presence' to 'Tutoring Presence.' As noted by Garrison, of all the Presences, this has received the least attention. In section 4.3, I have sought to address this by furthering understandings and perspectives of TP.
As stated by Garrison, there has been little work on the intersection of the Presences. Section 5.1 speaks to Garrison's call, (re) naming the 'Influences' and addressing the output of the interweaving the Presences.
Akyol (2013) and Shea and his colleagues (2009a, 2009b, 2010, 2012, 2013) have attempted to refine and extend the CoIF. Drawing upon their work, I have focused my enhancements upon the educational experience, addressing a perceived imbalance of the CoIF and suggesting a learner 'retreat.'
A Tutors' Network is proposed based upon the principles of the CoIF, and its associated needs and potential.
An alternative approach to the PhD by publication has been used to facilitate this critique of the CoIF. Rather than completing a meta-narrative, an innovative approach was taken to use the publications as a springboard and focus to enable the scrutiny of the Framework leading to the construction of new concepts and knowledge.

Table 6.3 illustrating rigour in this thesis

Rigour
This work has been informed by a systematic engagement with the literature on the CoIF. Accepting that there is a vast, and somewhat contradictory, amount of literature on the CoIF, I have drawn upon key authors, working and publishing on the CoIF, to inform my work.
Diverse educational sources including learning technology publications and subject specific journals over the last forty years have informed this review.
The development of the analytical, evaluative framework in Chapter Three has not only assisted in the critique of my approach to the inquiry process underpinning the publications, but will also inform future research endeavours. Areas for on-going investigation and identification of specific development to enhance, and guide, my future practice as a qualitative researcher have been identified.
Throughout my conceptualisations of learning, teaching, and technologies, and my approach to research as a qualitative researcher based on an idealist/social constructionist stance have been noted, and their influence on the way that I have undertaken the review of the CoIF, and the findings derived from it.

Figure 6.1: review of research questions

RESEARCH QUESTION ONE

How, and in what ways, can a scrutiny of the Social presence (SP) construct, based upon Oztok and Brett's (2011) framework, advance understandings and signpost areas for future research?

Outcomes

- SP is a more complex and multifaceted construct than in its 'unproblematised' presentation by Garrison in 2011
- SP has been extensively researched, and some of that work corroborates the three SP categories in the CoIF
- I am at variance with Garrison's current position regarding the prioritization in SP of the development of the group over personal growth, the de-emphasising of the affect (in which I find support from others researching into SP and the CoIF), and the lack of acknowledgement of the impact of media on SP

Suggestions for future research

- The impact of media on SP, following ANT
- The influence of affective on educational experiences in a CoI
- A holistic review of the three SP categories in the CoIF, building on my use of Oztok and Brett's work to do this, demonstrating challenges within SP in the Framework, and identifying needs for future research.

Additional comments

- The illustrative quotations taken from my first and fifth publications were useful in exploring two aspects of SP. Unfortunately fewer examples were available from my publications for the third aspect addressing the individual in the community and SP; nevertheless, Smith's work (2008) has offered further insights in this area.
- My interrogation of SP highlighted differences between my perspective on SP and those within the CoIF. As noted in 6.4, I intend to work on such emergent ideas as the genesis for a publication suggesting an enhanced perspective of SP. Due to space limitations, such ideas were not expanded in the thesis.

In this critique, I could only address certain aspects of SP in-depth; however, the outcomes challenge understandings of SP and were used to inform the Influences in Chapter five.

RESEARCH QUESTION TWO

How, and in what ways, can an exploration of the contrasting notions of critical thinking and reflection within my publications and the CoIF inform the development of a more nuanced approach to their application in Cognitive presence (CP)?

Outcomes

- Critical thinking and reflection are distinct but inter-related concepts; both of which need to be addressed in the CoIF
- In the CoIF, there is little consideration of, and insufficient specificity about, reflection
- The two problematic areas that are mentioned above with regard to reflection are core to my conceptualisations of reflection, are not addressed in the CoIF; their inclusion would provide a more nuanced and elaborate approach to reflection and critical thinking, supporting a broader and richer conceptualisation of Cognitive presence.

Suggestions for future research

Student-led inquiry into the role of reflection by learners in their retreats, according to self-determined criteria.

Additional comments

- There is a paucity of discussion about reflection in the CoIF. My review addressed this gap, suggesting two specific areas for inclusion.

This scrutiny highlighted a lack of consideration and specificity about reflection and its role in CP especially in relation to critical thinking. Table 4.1 provided some particular useful examples. This work informed the development of the CP/TP Influence and will be prominent in the second forthcoming publication about the Influences.

RESEARCH QUESTION THREE

How, and in what ways, can an examination of Teaching presence (TP) through the lens of student-centred learning demonstrated within my publications, further understandings about this construct?

Outcomes

- An in-depth examination of the teacher and learner roles in the CoIF, indicating gaps, limited specificity and inconsistencies, in the 2011 Framework
- Re-naming of Teaching presence to 'Tutoring presence' to cover the data in my publications, firmly linked to the concept of the facilitative tutor.

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Suggestions for future research

- Radical restructuring of the design and facilitation of SCL in a CoI, already begun in the drafting of one of my further publications

Additional comments

Due to space limitations, the focus of this section was an examination of the tutor and learner role with appropriate supporting quotations from the publications regarding SCL. The two other aspects of TP were dealt with at somewhat shorter length. In future work, I will develop these areas in the design and facilitation of CoIs which feature SCL.

There are many different perspectives of SCL and how it influences tutor and learner roles. This critique prompted me to explore these and suggest a modification which is more aligned with my conceptualisations of the role of the tutor and learner.

RESEARCH QUESTIONS FOUR

What refinements can be suggested to give the Framework "a greater reach within the scientific community on e-learning?" (Jézégou 2010)?
In what ways can the CoIF, informed by my understandings and conceptualisations, be extended to centre upon educational experience and personal learning?
What are the implications of the findings from Chapter Four for educational practice when implementing the CoIF, particularly drawing upon my interpretation of student-centred learning (SCL)?

Outcomes

Detailed development of the three enhancements

Suggestions for further research

- Action-researching by learners of their use of retreats
- Course team blogging of design and facilitation based explicitly on Influences
- Self-evaluation of the outcomes of a Tutors' Network.

Additional comments

As noted in 6.4, this chapter is the basis for publications in progress. Ultimately its impact will be determined by peer review, as noted in 6.2.3. Although many have offered enhancements to the Framework, these often merely complicate Garrison's parsimonious model, making it less accessible. My enhancements aim to keep the succinctness of the Framework but address and resolve in some way the issues raised in the critique of the Presences in Chapter four.

RESEARCH QUESTION FIVE

How can the Influence blending TP and SP create and maintain trust and a sense of belonging, leading to open, purposeful, and critical dialogue between and amongst the learners and tutors in a CoI?

Outcomes

- A re-naming and re-framing of the intersection between SP and TP to *trusting* with an acceptance that this
    - should be nurtured throughout the lifetime of the CoI
    - strongly features the affect
- Recognition of the importance of self-efficacy for successful collaborative learning online, linked to guidance to learners regarding their development of coping mechanisms for online group work. Guidance for tutors and learners about preparing for the pro-active impact of media on SP, and coping mechanisms for the emotional challenges of group work online.

Suggestions for future research

- Action researching of the effectiveness of discussion fora, by students and tutors on a future programme that is designed to enhance the effectiveness of student-directed and monitored interactions

Additional comments

- There had been little consideration of this area by those working on the CoIF. From my experiences of tutoring online, the findings in much educational research, and the publications, it is apparent that learners are often uncomfortable in contributing to online fora and with online group activity. Discussions are often superficial and limited, and many learners avoid online group work. However, in professional programmes, learners need to negotiate meaning, and confirm understandings. The critique of SP had emphasised how much lack of trust could inhibit contributions to online discussions. I addressed this explicitly in the development of this Influence.
- In my forthcoming publications, which call upon this section of Chapter five, more specific guidance and suggested activities will be offered.

For some time, I have been aware of the need to encourage learners to engage in more lively and searching debate. Often there has been reluctance to do. Developing this Influence enabled me to address this issue. More specificity about this space will be provided in the coming publications.

RESEARCH QUESTION SIX

How can uniting TP and CP provide learners with a "cognitive map" with which they can guide themselves as self-directed learners in a CoI?

Outcomes

- An explanation of how and why my proposal for this Influence differs from Garrison's
- An overview of the purpose of this Influence
- Suggestions for tools and strategies that tutors may share with learners.

Suggestions for further research

- Action-researching by learners of their self-direction as demonstrated in their construction and use of cognitive maps, however they may name these.

Additional comments

Learners and tutors often grapple with notions of reflection and critical thinking. This Influence urges explicit discussion in these areas, teasing out conceptualisations and providing guidance.

The section covers much ground and occasionally tries to include too much. In the second collaborative publication, diagrams and tables will be used to provide more clarity.

RESEARCH QUESTION SEVEN

How can the Influence between SP and CP support student-centred learners to move between all the phases of the Practical Inquiry Model leading to higher levels of learning?

Outcome

An embryonic suggestion for a third enhancement that will support individual learner making and group understanding.

Suggestions for further research

Before undertaking further work in this area, I must re-visit the thinking in this section, clarifying and focusing my initial ideas.

Additional comments

This is the least developed and probably weakest of the three Influences, lacking the focus and detail of the other two spaces. It had the most number of revisions, and is still lacking the substance of the other two.

RESEARCH QUESTIONS EIGHT

Where and how do intermental and intramental thinking integrate in a CoI?

Where and how do learners engage in self-regulatory learning activities, including metacognition and management of the affect?

Is there need for a private space within the Framework for private thinking and meaning-making, and if so what is its purpose?

When, and why, would learners retire to, and immerse themselves in, this private space?

Outcomes

An enhancement to the CoI F linking both inter and intra- mental thinking but which draws upon much recent research into the CoIF.

Suggestions for further research

Student-led inquiry into the self-evaluated use of their retreats by learners, according to self-determined criteria.

Additional comments

I wanted to draw upon the current work being undertaken in the CoIF by both the Canadian and American research communities to inform this enhancement. This space could be used by learners for both metacognitive and self-regulatory activities, and it seemed an ideal opportunity to unite this insightful work. The quotations from P3 and P5 were particularly helpful.

I was particularly pleased with this section, not only uniting work from those currently exploring into the CoIF, but the kernel of the work being informed by Tutor 2b in P5, and the numerous discussions with my mentor, and my colleagues.

RESEARCH QUESTION NINE

What support can be provided to tutors who may be unfamiliar with the new, challenging online environment, requiring them to be subject, pedagogical, and technological experts?

Outcomes

An outline of a Tutor Network for those new to online learning informed by the CoI F.

Suggestions for further research

Gathering of staff feedback on the potential for and development of a pilot Network.

Additional comments

Too often staff development opportunities are provided on an ad-hoc basis, with tutors attending the occasional one-off session. Being an online tutor requires much more than mastering the technology and being a subject expert. Also expertise and experiences are not often shared within an institution. In this section, I wanted to explore how the CoIF thinking could be used to help support staff with this particular online development.

The original idea was based upon the work that I had been involved with during P2 and the ISLE Project and the CSP in P1.

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GLOSSARY

C21st	Twenty-first century
C20th	Twentieth century
CoI	Community of Inquiry
CoIF	Community of Inquiry Framework
CP	Cognitive presence
CT	Critical thinking
EF	Evaluative Framework. This is the basis of the review of my approach to knowledge construction in the inquiry process in Chapter Three
f2f	face-to-face
HE	Higher education
L&T	Learning and teaching
OSLE	Online Synchronous Learning Environment
P1, P2, P3, P4, P5 and P6	References to each of the specific publications submitted as part of this thesis. P1 thus refers to publication 1. In most case, it will be accompanied by page and line numbers. P1:218:20 equates to publication 1, page 218, line 20
PDP	Personal Development Planning
PI Model	Practical Inquiry Model
QLR	Qualitative research
RQ	Research question
RS	Research strategy
RT	Research topic

SCL	Student-centred learning
SFC	Scottish Funding Council
SP	Social presence
SRL	Self-regulated learning
TP	Teaching presence
VLE	Virtual Learning Environment