

**Knowledge building via
Academic Reading Circles on an
English for General Academic
Purposes pre-sessional course.**



By

Susie Cowley-Haselden

PhD

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Knowledge building via Academic Reading Circles on an English for General Academic Purposes pre-session course.

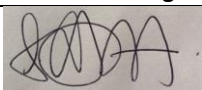
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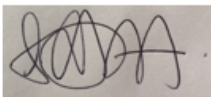
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Certificate of Ethical Approval

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Project Title:

Strengthening the classification of generic pre-sessionals for postgraduates: A Systemic Functional Linguistics and Legitimation Code Theory analysis of the semiotic mediation of threshold concepts.

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

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Abstract

The field of English for Academic Purposes (EAP) focuses on the teaching of academic language and skills to enable access to and success within higher education. In the UK context EAP courses are primarily either in-sessional (taught alongside academic studies) or pre-sessional (taught before academic studies commence in order to satisfy an institution's language entry requirements). Whether teaching in- or pre-sessional courses, there exists in EAP a tension between teaching EAP for specific or general purposes. This study is concerned with the latter. However, neither strand of EAP addresses the acquisition of academic knowledge as an essential element for enabling students, especially postgraduate students, to succeed in the higher education context.

In order to explore how EAP could include this element of knowledge acquisition, this thesis explores the enactment of Academic Reading Circles (ARC) for the purposes of acquiring *theory knowledgeability* on an EGAP pre-sessional course for postgraduate students. *Theory knowledgeability* is defined as the ability to not only know what theory is and how it is used in postgraduate study, but to gain this knowledge through the learning of a specific transdisciplinary theory. *Theory knowledgeability* is identified in this study as a threshold concept. As such, the process of acquiring *theory knowledgeability* will be uncomfortable for students as it will require a transformation of knowledge and knower practices.

Through triangulation of ARC discussion data, learner diaries, and semi-structured interviews, this study reveals that a carefully constructed series of ARCs are a purposeful way of cumulative knowledge building and afford students the opportunity to acquire the kind of knowledge and to become the kind of knower valorised in most UK master's level studies. The data are analysed using the Legitimation Code Theory dimensions of Specialization and Semantics. Specialization enables the uncovering of knowledge and knower practices as postgraduates progress through the ARC series. Semantics affords insight into the knowledge practices that enable successful acquisition of *theory knowledgeability*.

This study then considers the implications for the future of EAP pedagogy.

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In memory of my father, Brian Cowley – herein lies the extent of Baldrick's cunning plan...

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List of abbreviations

ALL – Academic Language and Learning (an umbrella term from the Australian context, which combines EAP with other fields that teach academic language and literacy, for example, learning developers and librarians – these are distinct communities in the UK context).

ARC – Academic Reading Circle

BALEAP – Originally the British Association for Lecturers of English for Academic Purposes, but given the more international face of this endeavour, the acronym now stands for: The Global Forum for EAP Professionals.

CBI – Content Based Instruction

CLIL – Content and Language Integrated Learning

DL – Disciplinary Learning

EAL – English as an Additional Language

EAP – English for Academic Purposes

EGAP – English for General Academic Purposes

ELT – English Language Teaching

EMI – English Medium Instruction

ESAP – English for Specific Academic Purposes

ESP – English for Specific Purposes

HEI – Higher Education Institution

HESA – Higher Education Statistics Agency

LCT – Legitimation Code Theory

LSP – Language for Specific Purposes

MLs – Multi-lingual learners

PG – Postgraduate

PGR – Postgraduate Research

PGT – Postgraduate taught (more likely Master’s level programmes)

PSE – Pre-sessional English course

QAA – Quality Assurance Agency

SFL – Systemic Functional Linguistics

SoTL – Scholarship of teaching and learning

TEAP – the Teaching of English for Academic Purposes

UG – Undergraduate

List of LCT abbreviations

EC epistemic condensation

(EC+) higher epistemic condensation

(EC-) lower epistemic condensation

ER epistemic relations

(ER+) stronger epistemic relations

(ER-) weaker epistemic relations

ESD epistemic semantic density

SD semantic density

SG semantic gravity

(SG+) strengthened semantic gravity

(SG-) weakened semantic gravity

SR social relations

(SR+) stronger social relations

(SR-) weaker social relations

TD translation device

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CHAPTER 1 – INTRODUCTION: setting the scene

This thesis is a reimagining of the teaching and learning of English for Academic Purposes (hereafter EAP). A vision of EAP where the knowledge learnt from a text is as important as the skills used to acquire that knowledge and the language used to express it. Some will rail against this notion, arguing this is not the remit of EAP. However, I hope to show the value in foregrounding the acquisition of knowledge in EAP and the potential this has in developing and empowering EAP students.

This chapter will provide the contextual terrain of this thesis, firstly providing insight into the origins and modus operandi of EAP before highlighting important tensions within the field that this thesis aims to address. The research problem will then be introduced along with the aims of this study. Finally, this chapter will outline the significance of this study and provide an overview of the structure of this thesis.

1.1 The Field of EAP

1.1.1 Origins

This introductory chapter will give a very brief history of EAP, outlining its lineage and descendants. Understanding where EAP has come from enables some understanding of where it is now and the problems within the field that this thesis addresses. The teaching of English to ‘others’ in English speaking countries (and beyond) has existed since the early 20th century, with the British Council coining the term English Language Teaching (ELT) in 1946 (Howatt & Widdowson, 2004). Up until the 1960s in the UK there was no systematic teaching of English to university students who did not speak English as a first language (Jordan, 2002). The 1970s saw a coming together of professionals contending with the demands of ELT in a university context and EAP was born. As Ding and Bruce (2017, p. 55) observe, this was the age that saw “the development of specialised streams of ELT in response to the needs of professional and academic contexts that were considerably more diverse than those of the previous era”. The specialised streams of ELT of most concern here are English for Specific Purposes (ESP) and EAP. ESP is often considered to be the parent of EAP (Ding & Bruce, 2017; Hyland & Hamp-Lyons, 2002). Seminal works that have had a significant impact on EAP (and influence the practice to this day) have come under the banner of ESP (see for example the work of Swales & Feak, 2000; Dudley-Evans & St John, 1998). As its name implies, ESP focuses on *specific*

purposes, and is often (at least outside the US context) occupational in nature whereas EAP operates specifically within the realm of academia. The notion of specificity is a divisive one in EAP and has caused a deep-rooted dichotomy to take hold between the descendants of EAP; English for *General Academic Purposes* (EGAP) and English for *Specific Academic Purposes* (ESAP). This dichotomy will be explored further below.

1.1.2 Defining EAP

Although its roots are within English Language Teaching (ELT), EAP has its own distinct identity. Bruce (2011, p. 6) provides a widely accepted definition of EAP as

[...] the study of English for the purpose of participating in higher education. This study will be centred on the texts (spoken and written) that occur in academic contexts and will include the discourses and practices that surround and give rise to such texts.

EAP's *raison d'être* therefore is to prepare students for whom English is not their dominant language for their academic studies and the main vehicle used to enable this is the text. EAP practice does go beyond mere language tuition to also acculturate students into their respective academic tribes (Becher & Trowler, 2001) through the use of academic texts which are dissected in order to gain an understanding of academic language and practice. As EAP students will go on to study a wide range of subjects in all manner of disciplines and EAP practitioners are in the main language teachers who often have an academic background in the humanities it is essential that curriculum planning within EAP "needs to be grounded in knowledge of the more general assumptions, values and practices of universities as well as understandings of the more specific differences that can occur among different subject areas" (Bruce, 2011, p. 35). In order to achieve this, Hyland and Shaw (2016, p. 3) identify four principles of EAP: authenticity, groundedness, interdisciplinarity, and relevance. Authenticity, they highlight has been inherited from ESP, where "classroom texts and tasks should be as close to the real academic world as possible" (Hyland and Shaw, 2016, p. 3). Groundedness refers to EAP's "commitment to link pedagogy and research", for practice to be grounded in theory. Hyland and Shaw (*ibid*) argue that "a research base underlies materials and instructional practices" in EAP. Yet, this is an aspiration, not common practice as many who work in EAP are unaware of the research base that underpins their practice and the materials they are required to enact in the classroom (Cowley-Haselden & Monbec, 2019). Interdisciplinarity is a key feature of EAP as "EAP is not itself a theory or a methodology but employs an eclectic range of theories and methods" (Hyland & Shaw, 2016, p. 3). Arguably the majority of these

theories and methods are from the field of Applied Linguistics so interdisciplinary is perhaps a rather grand term to use. One key aspect of EAP, and what ensures authenticity and relevance, is a focus on needs analysis. Through needs analysis we can ensure linguistic and contextual relevance in our classes. However, and somewhat ironically, Hyland and Shaw's definition of EAP is not grounded in any research, there is no empirical evidence cited that EAP is all these principles *in practice*.

Hyland and Shaw (2016) acknowledge the commonly cited limitations of EAP, including the subservient role of EAP within the academy, the ethnocentric nature of EAP in its focus on western academic conventions and language, as well as issues around power and critical pedagogy which problematize EAP's role in the mass production of academic automatons. These are all valid criticisms of the field, however, these are not the problems addressed in this thesis. This thesis is concerned with the problem of 'knowledge blindness' (Maton, 2014a) in EAP. 'Knowledge blindness' refers to a phenomenon within educational research which "reduces knowledge to knowing" (Maton, 2014a, p. 3) and as a consequence the forms and effects of knowledge are overlooked (an idea that will be unpacked in more detail later in the thesis). In theory, EAP is expected to enact Hyland and Shaw's four principles when in practice EAP often fails to engage with the knowledge presented within the authentic texts analysed in the classroom. EAP also rarely engages with knowledge of the research and theory on which EAP practice is grounded (Cowley-Haselden & Monbec, 2019). Neither does EAP, in practice, often explicitly engage with the knowledge it employs from other disciplines. While all these aversions to knowledge are problematic, the knowledge blindness that is central to this thesis is how engaging with texts without a focus on the knowledge contained within can be any kind of authentic or relevant academic experience.

1.1.3 Tensions

Hyland and Shaw's (2016) principles of authenticity and relevance are at the centre of a tension within EAP which has existed since the 1980s (Bodin-Galvez & Ding, 2019). This tension is between two strands of EAP: English for General Academic Purposes (EGAP) and English for Specific Purposes (ESAP). It is within this debate that this thesis aims to make the greatest contribution.

For Hyland (2002, p. 385) whether or not we deliver EGAP or ESAP "resolves into a single question: are there skills and features of language that are transferable across different disciplines and occupations, or should we focus on the texts, skills and language forms needed

by particular learners?” Hyland (2002, p. 385) argues that “our inability to reach an answer weakens our potential effectiveness as teachers, causes uncertainty about our role, and creates confusion about the goals of ESP itself”. ESAP is often considered to be the pinnacle of EAP practice and is therefore afforded greater legitimacy in the field. Indeed, ESAP is the literal pinnacle of Jordan’s (1997, p. 250) EGAP – ESAP pyramid. The most cogent argument that ESAP is of more value to students is concerned with the “multifarious differences between disciplines. These differences are seen as so fundamental that they preclude any satisfactory generic approach to teaching EAP” (Bodin-Galvez & Ding, 2019, p. 2).

Bond (2020) is rather ambitious in her claim that the EGAP/ESAP debate has been resolved, in theory at least, implying that we only resort to EGAP due to external pressures forcing us to embark on this less than useful alternative to ESAP. This is unhelpful, as for many, EGAP is a practical reality, despite some dismissing reasons for teaching EGAP as excuses as people cite logistical constraints resulting from “contextual exigencies” (Hyland, 2016, p. 23), for example, student numbers or institutional finances. Hyland (2016, p. 17) states that the notion of ‘general linguistic competence’ as introduced by Hutchinson and Waters (1987) is a particular feature of pre-sessional courses, suggesting then that pre-sessionals, with a more EGAP persuasion, are dated.

Some argue that it may be a pedagogical belief that EGAP is more beneficial, where these arguments do exist is mainly in quite dated, yet still often cited, literature (see for example, Bloor & Bloor, 1986; Hutchinson & Waters, 1987; Spack, 1988). EGAP is characterised by general academic skills, or a common core (Hyland, 2018; Monbec, 2019) that can be applied to any discipline, whereas ESAP endeavours to focus on the students’ disciplines through carefully selected texts. Of course, just because this is how the likes of Hyland define ESAP or EGAP does not mean that this is exactly how it is enacted in the classroom in the multitude of contexts in the UK, indeed between different teachers within the same EAP department.

While ESAP might seem more purposeful, in actual fact it still largely focuses on language and skills, albeit for a particular discipline. Even though ESAP has specificity in its name, it does not engage in any specific *knowledge* beyond text choice, linguistic choices, text structure and academic practices, “specificity implies teaching EAP *skills* in the context of the subject” (Sloan & Porter, 2010, p. 202, emphasis added). ESAP students “are prepared for the language, texts, tasks, and expectations of the academy” (Stoller, 2016, p. 578) but not for the knowledge practices they will need.

Engaging with discipline specific knowledge, or content as it is commonly referred to within EAP, is widely not considered to be the domain of EAP – we are language teachers after all. Indeed, the BALEAP Can Do Framework for EAP syllabus design and assessment actually states “PS [Pre-sessional] tutors *cannot* check accuracy of student content but can encourage subject reading” (2013, p. 8, emphasis added). A sentiment shared by the likes of Spack (1988) and Sloan and Porter (2010) who argue that the EAP practitioner lacks the expertise, confidence or qualifications to engage with disciplinary specificity. This study is very much concerned with disputing these assumptions.

Alexander et al. (2019, p. 34) argue that in the teaching of EGAP, “recognition that it is ultimately the students’ responsibility to deal with subject specificity is a helpful perspective”. There are those who argue that students will be subject-specialists and therefore the EAP teacher need not be concerned with content, however as Jordan (1997) observes, this is not always the case. Many of the participants in this study for example, are moving into a disciplinary field for postgraduate studies that they did not study at undergraduate level (see tables 4.1 and 4.2 in chapter 4), a common scenario at postgraduate level also acknowledged by Feak (2016).

There are arguments that disciplinary skills, especially writing skills, are not the remit of EAP at all. Spack (1988) somewhat strongly argued that EAP should leave the focus on disciplinary writing to the disciplines. This is an argument that has sustained currency and, some 30 years on, is central to Wingate’s (2018) work. Though often lauded as the zenith of EAP practice, the adjunct model, where the EAP classroom *does* engage in subject content as it becomes embedded within the academic course (Alexander et al, 2019), can cause issues around teacher and student confidence. The teachers lack confidence in their knowledge of the content (Spack, 1988; Vermeire & Rewhorn, 2019; Bond, 2020) and the students lack confidence in their EAP teachers’ disciplinary authority (Spack, 1988). Vermeire and Rewhorn (2019) believe that pre-sessional teachers in particular are experts in more general skills and lack qualifications and confidence to deal with subject-specific content. This is a particularly narrow-minded view of pre-sessional teachers. A lack of opportunity to work in a permanent full-time position within EAP does not mean that teachers employed on a temporary basis on pre-sessionals cannot cope with subject-specific content.

In many respects the literature illustrates that EAP has not evolved. The debate around how best and who is best placed to develop students' academic writing has existed for 40 years. In the UK, we still seem to have not found a solution. Collaboration, with university policy support (Bond, 2020) is an aspiration and collaboration without university policy has many obstacles to success such as being reliant on personality and resources (Spack, 1988; Sloan & Porter, 2010; Perin, 2011).

Of course, tertiary education has changed tremendously in the years that EAP has existed. Not just as an institution fully embracing the Neoliberal agenda, but also in its pedagogical practices and focuses. Many universities aim to develop graduate attributes that better equip students for the world of work. In this sense, Huckin (2003) posits that an ESAP curriculum can lead to overly rigid prescriptivism. EGAP has the potential to enable students to cope with variety and apply to whatever learning context/ assessment type they are confronted with in the ever changing world of HE (in the UK at least). Perhaps then it is more purposeful for EAP to focus on the specificity of *level* of study rather than the specifics of a given discipline. Feak (2016) argues for student need to be prioritised above language proficiency in EAP course design for postgraduates, citing many studies that disprove a link between language proficiency and academic attainment. Feak (2016) argues that EAP for postgraduates needs to be responsive to cover an ever growing and ever-changing list of skills and demands. For example, the need to communicate research to non-specialists, the interdisciplinary nature of studies and research requiring students to work *across* disciplines, as well as the requirement to communicate research in creative ways and through innovative genres – i.e., through dance, tweets or within the confines of 3 minutes as in the 3-minute thesis.

Hyland (2002, p. 394) opined that “effective language teaching in the universities involves taking specificity seriously” this is quite dismissive and potentially damning of anyone working within EGAP, suggesting that EGAP is not and perhaps cannot be effective. This, now rather dated, notion is partly what this thesis is tasked with deconstructing. Hyland has latterly qualified his stance on specificity acknowledging that “ultimately, EAP is a means of empowering students with the knowledge and skills they need to succeed in their studies and professional careers, and we have to recognize that there are various ways of doing this” (Hyland, 2016, pp. 23-24). Bond (2020, p. 169) claims that there is no “evidence-based suggestion that it [EGAP] is a more effective way for students to learn”. This thesis is not interested in providing such an evidence base in order to sustain or regurgitate the EGAP/ESAP argument, it is however, concerned with offering an evidence base for a trans-disciplinary

approach that is grounded in *level* of study rather than specific disciplines and as such is an effective way for students to learn how to be postgraduates of *any* discipline. This thesis aims to demonstrate that EAP generally can be more purposeful when it opens the door to level specific knowledge and knowledge practices. EGAP is only the focus due to the context in which this study took place, the approach taken in this research will be equally purposeful in the ESAP classroom. Ultimately, the question becomes not one of *specificity*, but one of *knowledgeability* and maybe a way for the field of EAP to move forward.

1.2 The Research Problem

As stated above the problem this thesis addresses is firmly rooted in the tension that exists between EGAP and ESAP and in particular the role knowledge is afforded in the EAP classroom. Before explaining how this study aims to address this problem, it is perhaps useful to consider how my personal EAP practice has been impacted by this tension and how wrestling with this problem resulted in the research recorded within these pages.

1.2.1 The road to the problem

It is important to provide a narrative as to how this thesis came into being. A narrative that illustrates the position of researcher as EAP practitioner wrestling with the problem addressed by this thesis. I started my career in EAP in 2009 after 10 years working in Further Education in the fields of English as a Foreign Language (EFL) and teaching English to Speakers of Other Languages (ESOL). By the time I transitioned into EAP, I was disillusioned with English language teaching that I perceived served little or no purpose (EFL) and was often very patronising to the students (ESOL). It quickly transpired that I had the same disillusionment with EAP. Despite the ‘Purpose’ in its name, EAP as I was introduced to it, focused on the English and glossed the Academic. It was very clear that we were language teachers and that it was not our place to get involved with academic content. While working with postgraduate Media and Communication students on an in-session course I trialled the use of Academic Reading Circles (ARCs) (Seburn, 2011) to encourage students to engage more with their course reading (at the request of the academic director for the postgraduates who bemoaned the students’ lack of reading in their assignments). Through this approach I noticed how engaged and empowered students became. Students were able to reach their own conclusions about their reading and felt more confident in their academic studies as a result of these academic discussions based on course content in the language classroom, which they viewed as a safe

‘unassessed’ space. They felt more knowledgeable going into lectures and seminars. The ARC sessions would consist of the students discussing their core reading autonomously for half the session and then I would lead a focus on language that had emerged from the reading and the discussions for the second half of the session. This approach I termed ‘Content Unplugged’ in acknowledgement of the influence of Dogme (Meddings & Thornbury, 2009) on the focus on emergent language to complement the ARC process (Cowley-Haselden, 2014). This finally felt like EAP with a purpose. I then moved to a new institution and my work with Media postgraduates ceased. I now worked on the pre-sessional programme which was for students from a mix of disciplines. There was no core reading to work with as students had not yet embarked on their degree studies. I believed in the approach my Media students and I had developed but now my teaching context no longer permitted it. So, I started to think about how I could take the same approach but make it as purposeful with EGAP postgraduates as it had been with a homogenous group of PGTs. The key, as ever in the field of EAP, was in the choice of text to be used in the classroom. With a group of mixed-discipline PGTs it was important to employ texts that would develop meaningful knowledge as well as understanding of academic language and practices. A key to postgraduate study is the ability to employ theory within writing, so I decided to see if discussing theory, a theory that transcended disciplines, would be as effective as core reading. That is when I devised the ARC intervention at the heart of this study.

1.2.2 How this thesis aims to address the problem

This study is concerned with prioritising *level* over specificity or genericism, exploring reading and discussion (through the enactment of ARCs) for the purposes of knowledge building on a pre-sessional course for mixed discipline taught postgraduate students in a post-‘92 university in the UK. The aim of which is to explore the co-construction of knowledge through the discussion of academic reading focused on theory and whether this develops *theory knowledgeability* (Cowley-Haselden, 2020a) in students. *Theory knowledgeability* can be defined as not just acquiring knowledge of how to use theory in academic practice (the ability to convert theory into practice – indeed just another skill to cover on the EAP syllabus) but doing so through acquiring knowledge of particular theory/ theories themselves. This study aims to offer some solution to fill this void on pre-sessional courses and go some way to developing postgraduate EAL students as legitimate knowers in a UK higher education context. EAL students who come to the UK to undertake postgraduate courses often have to ‘hit the ground running’. Predominantly, these students may have had a very different experience at

undergraduate level in their country where key skills such as converting theory into practice are less valorised than in the UK context. These students will also most likely have studied IELTS prior to undertaking their pre-sessional course. This language proficiency test does not help develop essential academic skills in students. Therefore, whatever their discipline, students have a very limited time to socialise into ‘postgraduateness’ before starting their master’s programmes. This study is a small step in an attempt to consider how EAP can best help address this issue, ensuring that EAL postgraduate students are inducted into legitimated academic practices. Based on my experiences in the classroom over the years as mentioned above, the research questions driving this study are:

What happens when postgraduate pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*?

Can the ARC process help students traverse the liminal space?

In order to address these questions, this study employs Legitimation Code Theory (LCT), a sociology of education framework dedicated to uncovering knowledge practices. A framework that stands outside (but not too apart from) applied linguistics as this study is not concerned with language in EAP, rather with uncovering the knowledge practices that occur during ARC discussions focused on building *theory knowledgeability* in an attempt to uncover and understand the value in focusing on knowledge building in EAP.

1.3 Structure of thesis

This chapter has served to situate the thesis within its context of the teaching of EAP and to map the journey that has led to the problem explored within these pages. Chapter two explores the literature that further refines the position of this thesis, focusing on instances of knowledge blindness inherent in the field of EAP and how this manifests in the classroom via EAP materials design. The chapter also explores what knowledge should be a focus in an EAP syllabus for PGT students and asks what rules should EAP for PGTs uncover, and for what game? As this study is concerned with knowledge building via reading circles, academic reading as covered in the EAP curriculum and notions of reading as troublesome and as social practice are explored.

Chapter three introduces the analytical framework employed in this study - Legitimation Code Theory (LCT). This framework is being increasingly used in EAP studies for its ability to

provide powerful insight into knowledge practices in higher education and in uncovering legitimated academic practices. The chapter introduces the LCT dimensions of Specialization and Semantics enacted in this research through existent empirical studies employing the dimensions, discussing what has already been uncovered in HE practice before moving on to explore how these dimensions will address the research questions. This third chapter includes a focus on the ‘positioning’ framework of threshold concepts. The notion of threshold concepts does not contribute to the analysis of the data per se, but it does provide a context for the space in which the participants occupy as they take part in this study.

Chapter four provides a rationale for the methodology and outlines the methods used in carrying out this research. The chapter provides specifics about the context of the study, including details regarding the data collected and the ethical considerations underpinning the research design. The methodology chapter also illustrates how the theory and data speak to each other to provide insight into cumulative knowledge building within the context of this study.

The three subsequent chapters are dedicated to the data. Chapter five analyses the ARC discussions through the lens of *semantic gravity*, profiling the movement between context dependence and independence within the discussion data. Chapter six continues the enactment of Semantics in the data analysis, though through the conceptualisation of *semantic density* as *epistemic condensation*. This affords detailed visualisations of complexity as exhibited within the discussions and illustrates how knowledge is co-constructed through *clusters* and *constellations*. Chapter seven enacts Specialization to provide insight into the knowledge and knower practices afforded by the ARC process. This chapter analyses the non-discussion data, namely learner diaries and semi-structured interviews held prior to and after participation in the study.

Chapter eight concludes the thesis. The chapter summarises and synthesises the key research findings to explore how they have addressed the questions at the heart of this research. The chapter considers the implications of the findings on EAP pedagogy and also explores the contributions and limitations of this research.

CHAPTER 2 – POSITIONING THE THESIS

2.1 Introduction

The previous chapter has served to explain the genesis of this thesis and to provide a historical background to the practice of EAP explaining how EAP differs to other approaches to teaching ELT and English language acquisition in academic settings. The previous chapter also highlighted that despite the name, ESAP does not engage in academic knowledge any more than EGAP does. Both approaches to EAP in fact focus on language and skills. This chapter provides an exploration of literature that positions this study. The chapter will highlight the prevalence of ‘knowledge blindness’ (Maton, 2014a) in HE and EAP and explore how Legitimation Code Theory enables knowledge to be seen. With reference to EAP this chapter will focus on the role of academic content as knowledge within the classroom and how reading especially as a conduit for knowledge is under researched/ represented in EAP. The chapter will then help define the space created for making this knowledge visible and conclude by illustrating how this literature serves to provide context for the questions underpinning this research.

2.2 The problem of Knowledge

Given that EAP has its ancestry in ELT, it is not surprising that this is the field where most EAP professionals begin (Campion, 2016). It is also not surprising that there is a strong language focus in the delivery of EAP. This concentration on language is important as many students are on EAP programmes due to their English language proficiency being lower than the entry requirements for their academic studies (EAP courses that are known as pre-sessional in the UK context) or students are deemed to require extra language support while studying their academic degrees (known as in-sessional EAP in the UK). Where knowledge is a focus of EAP classes, it is in the guise of knowledge about language (KAL). This thesis offers an insight into what happens when EAP foregrounds *academic* knowledge, in particular, knowledge about what theory is and how one theory is employed across disciplines, and how this helps postgraduates be prepared for the level of academic studies they are about to embark on.

The question of whether or not knowledge is visible in teaching and learning is central to this thesis. Before highlighting the issue of ‘knowledge blindness’ in EAP, this chapter will first turn to the problem of knowledge in education research and of ‘knowledge blindness’ in Higher Education more generally. Doing so will reveal the ontological position of this study and introduce how the analytical framework of LCT can serve to reveal knowledge in EAP practice.

2.2.1 ‘The problem of the problem of knowledge’

Knowledge is core to this thesis; therefore, it is important to unpack how knowledge is construed within this study. Maton (2014a, p. 1) observes that “knowledge is everything and nothing” within education research. What is meant by this is that much has been espoused about the knowledge economy and information age (knowledge is everything), but despite the importance placed on knowledge, education research fails to explore knowledge as an object in itself (knowledge is nothing).

Knowledge is described as a defining feature of modern societies, but what that knowledge is, its forms and its effects, are not part of the analysis. Instead, knowledge is treated as having no inner structures with properties, powers and tendencies of their own, as if all forms of knowledge are identical and homogenous and neutral (Maton, 2014a, p. 2).

Within education research, knowledge is often conflated with knowing where “a body of ‘knowledge’ as external to the human mind, and the ‘knowledge’ that an individual has about the world” (Kirk, 2018, p. 29) are treated as one and the same and therefore there exists a phenomenon of ‘knowledge blindness’ (Maton, 2014a). “In research it [knowledge blindness] focuses attention on processes of learning and whose knowledge is being learned, but obscures what is being learned and how it shapes these processes and power relations” (Maton, 2014a, p. 7). Moore (2013) argues that the fact that this blind spot has been so prevalent in the sociology of education for so long has meant that the problem of knowledge has itself become a problem.

2.2.2 Knowledge blindness in EAP

Theoretical knowledge, or the knowledge base that underpins EAP practice, exists within a lacuna in EAP, forever overshadowed by the behemoth that is practice. The Theory/ Practice divide is somewhat of a trope in higher education and especially so within the field of EAP. This observation is not intended to discredit the wealth of knowledge EAP practitioners have

about teaching and learning and the English language itself, but to highlight the fact that, for many, theoretical knowledge (even when related to language learning) is largely deemed inappropriate for the classroom. Thus, knowledge *is* visible within the field of EAP, but it is largely obscured by the pre-eminence given to practice. Ding & Bruce (2017, p. 149) observe that “subjective practitioner knowledge is prized over the theoretical and abstract knowledge base” and that some practitioners are hostile towards theory suggesting that our relationship with theory is ‘dysfunctional’ (2017, p. 151). Indeed, a recent publication feels the need to go as far as to justify the use of theory in EAP scholarship of teaching and learning (SoTL) and reassure the audience that practice comes first:

You are investigating your own practice, much of which is likely to have developed through experience. You are therefore likely to experience a personal resistance to theory and theorising around your practice. My own approach was to be a magpie; to use a range of theories to explain different phenomena. It is necessary to engage with theory, but it is possible to begin with practice and look outward rather than to fix on a theoretical framework from the outset (Bond, 2020, p. 33).

The theory/practice divide does not appear to be disappearing from EAP anytime soon. That is not to say that EAP practice is not underpinned by theory. Ding and Bruce (2017) identify the knowledge base of the EAP practitioner. This knowledge base consists of key theories and approaches that largely inform EAP practice, for example, Systemic Functional Linguistics (SFL), Genre theory, Critical EAP and Academic Literacies. The problem is however, that while this knowledge base is mostly uncontested, for those enacting the curriculum in the classroom it is often not at all visible. A small-scale study conducted of EAP professionals within the BALEAP community (Cowley-Haselden & Monbec, 2019), found that most teachers are not at all aware of the knowledge base that informs the curriculum they teach (often a curriculum forced upon them having been designed by those in managerial roles within EAP units). Some participants in the study echoed Ding and Bruce’s (2017) hostility toward theory, suggesting that a discussion of visible theory in our practice is pompous and ‘high-falutin’ (Cowley-Haselden & Monbec, 2019, p. 43). Studies that are concerned with teacher knowledge focus more on qualifications that define the knower, rather than the knowledge that is required to teach EAP effectively (see for example Champion, 2016).

As seen in chapter one, even more contentious than making the EAP teacher’s knowledge base visible, is the idea that EAP practitioners should engage in subject-specific knowledge (or

content knowledge) of the students' discipline(s). Developing subject specific knowledge, indeed arguably any specific knowledge, is not considered the domain of EAP. Texts used to develop language and skills in the EAP classroom are often chosen for the linguistic content rather than the subject content, especially so when the students are going on to study mixed disciplines (in an EGAP setting for example). Even the explicit learning and teaching of Knowledge about Language is seen as undesirable by many, claiming that students who are not at university to be linguists have very little interest in learning theory about language use (Cowley-Haselden & Monbec, 2019; Monbec, 2018).

Literature and practice in the field of EAP has largely been concerned with the learning and teaching of academic language and skills (Monbec, 2018). The learning and teaching of knowledge itself in EAP is almost absent in the literature and somewhat contentious in practice (Cowley-Haselden & Monbec, 2019), and understandably so as EAP practitioners are largely language experts rather than subject specialists of their students' disciplines (Campion, 2016). However, by not addressing knowledge explicitly in EAP practice, the field has been ignorant of the practices, organising principles and effects of knowledge. Despite Coffin and Donohue's (2014) contention that academic language, behaviour and knowledge develop in unison and cannot, should not, be developed independently, EAP practice often fails to consider the development of knowledge, whether that be the knowledge base of the teacher, the students' subject-specific knowledge or KAL.

This failure to afford knowledge visibility in the profession or the curriculum means that we develop knowledge-blind students and if not setting them up to fail within HE, certainly setting them up to struggle with producing legitimate academic work. Knowledge is the currency of higher education and if EAP fails to address knowledge development and fails to begin to uncover the various kinds of knowledge practices that are valorised in university contexts, then ultimately, we are failing our students.

This study is concerned with addressing this gap in the literature, specifically making knowledge visible within EAP through our consideration of 'content'. The focus of this study however, is not how to employ subject-specific content (a very ESAP take on EAP), rather the focus is on building specific knowledge relevant to the students' level of academic study. In the context of PGTs this is knowledge of theory – not simply knowledge of a particular theory, but also knowledge of what theory is and how it can be applied across disciplines (a practice

termed *theory knowledgeability* (Cowley-Haselden, 2020a) within this thesis) and therefore benefitting the EGAP context.

2.2.3 Content in EAP

As mentioned above, central to this thesis is the role (academic) content plays in EAP instruction. The term content is used in this thesis to refer to academic knowledge and is not to be confused with specificity, which is used within the field of EAP to refer to “specific sets of skills, texts, linguistic forms and communicative practices that a particular group of learners must acquire” (Hyland and Hamp-Lyons, 2002, p. 5, citing not quoting Dudley-Evans and St. John 1998). The notion of specificity is a contentious one when conflated with content, however, specificity is common within EAP practice; dealing with (academic) content is not.

Firstly, it is pertinent to address exactly what is meant by content. Dudley-Evans and St John (1998, p. 11) make a distinction between ‘carrier content’ and ‘real content’. Whereby carrier content is essentially a text that focuses on a context specific or related to the students’ studies/ interests. For example, a pre-sessional class of students going on to study Business may read a report on Corporate Social Responsibility (CSR). However, the aim is not for students to learn about CSR (though they may inadvertently learn more about this concept). Carrier content is essentially a vehicle for the ‘real’ content which is a language feature. Thus, the students are reading the report because it exhibits language features that the class will focus on, perhaps the use of language in reporting data, or the genre conventions of a business report. It is this use of academic content as ‘carrier’ rather than ‘real’ that Luckett and Hunma (2014) oppose. Though working within South African university Foundation courses, Luckett and Hunma (2014) criticise the curricula for focusing on “skills development at the expense of content – which in some cases is regarded as an arbitrary vehicle for the teaching of academic skills or literacies” (2014, p.184). This is a criticism that can also be levelled at EAP in the UK. While the likes of Luckett and Hunma (2014) believe that the only way that content can be carrier *and* real is through collaboration with subject-specialists, the question this thesis aims to address is whether this is achievable solely within the confines of an EGAP pre-sessional.

There are various ‘close cousins’ of EAP whereby academic content is real rather than just carrier content; Content-Based Instruction (CBI), Content and Language Integrated Learning (CLIL) and English Medium Instruction (EMI). These approaches share many characteristics, most notably content is at the heart of instruction and in many cases the language used in the

teaching and learning of these approaches is English (Dalton-Puffer, 2011) even though these approaches are mainly delivered in non-English speaking countries.

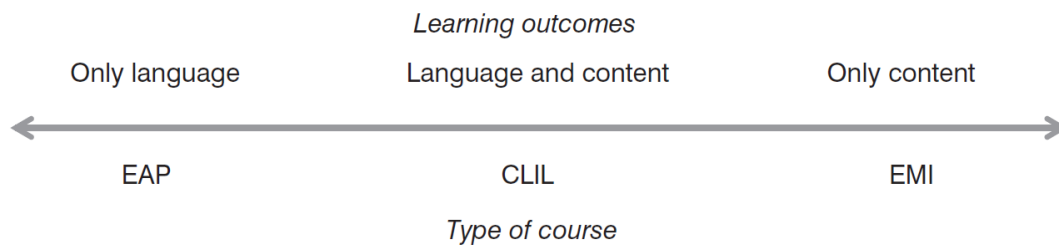


Figure 2.1 *The language/content continuum (Airey, 2016, p. 73)*

Figure 2.1 depicts Airey’s (2016) view of the relationship between EAP, CLIL and EMI. As ‘content’ and EAP specialist, Airey has a unique view on these approaches. Airey (2016) argues that EMI differs to CLIL in that high levels of language proficiency are expected to begin with and therefore EMI is primarily concerned with developing content not language. CLIL aims to develop both content and language and EAP is a solely linguistic endeavour.

In the case of CLIL teachers are often subject specialists rather than language specialists (Dalton-Puffer, 2011) though most of the CLIL literature has been produced by language specialists (Airey, 2016). Indeed, Airey (2016, p. 77) is quite adamant that EAP teachers should not engage with academic content, arguing that a

language teacher cannot be a content teacher at tertiary level. Disciplinary experts are just that—experts. The idea that language teachers could teach, say, quantum mechanics to future physicists is just as ridiculous as expecting physics lecturers to teach SFL to future linguists”.

CLIL and EMI are not without their criticisms, for example the poor language proficiency of the teachers (Tatzl 2011; Margić & Vodopija-Krstanović, 2018) leading to ineffective teaching of content and, English as a lingua franca being complicit in the colonialization of education (Margić & Vodopija-Krstanović, 2018). These approaches, however, are responses to the internationalisation of education and higher education in particular enabling non-anglophone countries to compete in the international education market and so are not generally employed within the field of EAP in the UK, particularly in the sphere of the pre-sessional. Given the neoliberal tendencies of higher education, CBI seems to have been overtaken by EMI which suits the internationalisation agenda.

The most significant difference between these approaches and EAP is that in EMI and CLIL, the teacher's background is generally within the academic subject, not language teaching. CBI also often relies on working in conjunction with a subject-specialist to deliver the content (Schleppegrell & de Oliveira, 2006), though as Garner and Borg (2005) note, this is not always feasible. Even when content is foregrounded in EAP, for example the Content Embedded Mapped (CEM) Model (Sloan & Porter, 2010), it is often in the in-session context and the content is the realm of the subject-specialists (as is also the case with Luckett and Hunma, 2014). Sloan and Porter (2010) argue that a subject-focus in EAP is reliant on the cooperation and collaboration between subject-specialists and the EAP practitioner. A somewhat mythical collaboration in the field. Content remains, therefore, somewhat extraneous within EAP, particularly in the pre-session context.

Even when EAP claims to engage with academic knowledge, it is not quite as it seems. Garner and Borg (2005), by way of example; develop a communicative environment on a pre-master's level EGAP pre-session using an undergraduate textbook intended for lifelong speakers of English. Yet this course is topic based and, by the authors' own admission, not too far removed from the topics covered in the usual EAP/ ELT course books.

The CBI approach to EAP aims to avoid the problem of centring the communicative link between teacher and student on the language itself. In CBI, the main goal of the programme is to establish a communicative link in a way that is paradigmatic for the target discipline. The communicative link is the developing shared knowledge of a *topic*, which is created by a series of communicative events that are embodied in communicative acts [emphasis added]. (Garner & Borg, 2005, p. 126)

While the theory behind the syllabus looks like it may indeed be more akin to the likes of EMI or CLIL, in reality the 'content' in Garner and Borg's case is rather watered down and serves more as a carrier than a real element of the course to engage with.

It might seem that content enjoys a somewhat more dominant position within ESAP, although this is rarely to the extent seen in the likes of CLIL and EMI and often the content (though carefully chosen to align with the disciplinary practices of a given community and perhaps even chosen by disciplinary specialists) will still remain as carrier of academic literacies and linguistic practices.

EAP work in the United States seems to be more open to closer allegiance to content based instruction. Although quite dated now, Kasper (1995) conducted a fascinating study in the US

context. The main vehicle for bringing content into the classroom being reading for the principal purpose of acquiring information. This may sound rather obvious, but it is rather unusual in a modern EAP setting. Although the notion of text as ‘vehicle of information’ rather than ‘linguistic object’ within the EAP classroom has existed since the 1980s (Johns & Davies, 1983; Jordan, 1997) works like Alexander et al. (2019, p. 35) seek to “restore language to its proper place in EAP” and advocate using a text as a source of linguistic features to be taught rather than as a source of knowledge in its own right. While de Chazal (2014) acknowledges that “for readers in general, an obvious reason [for reading] is to gain knowledge For EAP students in particular, an important purpose is reading to develop skills”. With such ‘handbooks’ for EAP teachers highlighting reading for language and skills development, it is easy to see why EAP in the 21st century seems to have lost sight of text as vehicle for knowledge. Kasper’s (1995) study focused on two student cohorts, both attending a content reading course that one group of students attended alongside their academic studies (paired content) while the other group were not yet on their academic courses (single content). The reading for both cohorts was the same (Psychology based). These two cohorts outperformed students who attended the usual EAL reading classes that focused on literary texts. These results are encouraging for pre-sessional contexts (similar to the single content reading programme) and situations where a paired content reading programme is possible (or in-session) and points to the importance of real content on student performance. Black & Kiehnhoff (1992) also believed that focusing on one subject area over a term enabled cumulative knowledge building that enabled students to engage with a subject at the level of sophistication that university study demands.

Also, in the US context and in a similar vein to Kasper (1995), Song (2006) compares the performance of first semester students on two different ESL programmes, one that is content-linked and one which is not. The content-linked programme was actually more akin to team-teaching and what we would call the in-session context in the UK. The programmes were not *preparatory*, rather, part of the students’ initial college studies. Song (2006) concludes that content-linked tuition generates many long-lasting benefits for students in terms of academic performance, promoting “academic growth and success” (2006, p. 435).

So, it seems that there is evidence to suggest that engagement with academic knowledge as real content, has real benefits for students. However, there are few more recent studies that explore how this can be achieved in the EGAP context. There appears to be a sort of blind acceptance that EGAP can never be that purposeful.

One major contributing factor to the notion that academic knowledge can only serve EAP as carrier is how ‘uncomfortable’ EAP teachers are with academic content. Alexander et al. (2019, p. 42) posit that the challenge posed by authentic texts in terms of subject knowledge can be alleviated by the ability to analyse texts in terms of structure and organisation – you can “cope with any lack of understanding of the content because you feel confident of your knowledge of the framework used to present the content.” Wu and Badger (2009, p. 22) explore the ‘coping strategies’ used by ESP teachers when “they unexpectedly had to display subject knowledge”, in what the authors call ‘In-class Subject Knowledge Dilemma’ (ISKD) situations. The use of language like ‘coping’ and ‘dilemma’ highlights the assumption that EAP practitioners are out of their depth when it comes to disciplinary content/knowledge. The situations described by Wu and Badger (2009) are based on issues that arose when students wanted more details about subject specific vocabulary used within the ESP materials. Teachers ‘coped’ by employing one of two strategies, either avoiding the ISKD by changing the subject or example sentence, or by ‘risk-taking’ and asking students if they knew the meaning of a subject-specific term, acknowledging that students may have more subject knowledge than the ESP teacher. A very small-scale study that, while interesting, sheds more light on implications for teacher training and teacher preparation. The ISKDs mentioned by Wu and Badger could arguably occur in any class, with reference to any knowledge, for example grammatical knowledge or general vocabulary knowledge. The study does not really provide a suitable solution to appease those who argue that EAP teachers do not have the expertise to engage in content, if anything Wu and Badger’s study supports this view, although discussing strategies for ‘coping’.

The reticence to engage with content within EAP is a key problem that this thesis aims to address. Many agree that in order for EAP to have *purpose* there needs to be engagement with content and that this is achieved through close collaboration with subject specialists who can choose the texts we analyse in the EAP classroom (Sloan & Porter 2010; Luckett & Hunma, 2014; Benesch, 1988; Benesch 2001). However, what can be done for the EGAP classroom where there are too many disciplines to cover or where there are situations where collaboration is not possible? How can EGAP have purpose? This is the problem addressed in this thesis.

There is a wealth of literature that discusses working with discipline specialists to bring in the specificity into EAP, namely via carrier content to unpack disciplinary practices. However, there are few, if any studies, that explore the use of ‘real’ academic content in an EAP setting without the input of discipline specialists and in a way that the EAP practitioner need not feel intimidated or that they may lose face. It would be highly valuable to find a way in which real

academic content can be at the heart of EAP without causing anxiety for teachers and frustration for students at the teacher's lack of discipline related subject knowledge. Benesch (2010, p. 113) points towards a possible solution when she cites Freire (1998, p. 33 cited in Benesch, 2010), stating that in the critical classroom students are "engaged in a continuous transformation through which they become authentic subjects of the construction of what is being taught side by side with the teacher who is equally subject to the same process". The research at the heart of this thesis centralises students within the construction of what is being learnt, and to some degree extraditing the teacher from the process. This is not achieved simply with a consideration of the content employed in the classroom, but also how that content features within the teaching and learning materials enacted.

2.2.4 Materials in EAP

The writing of teaching and learning materials is a key characteristic of working within EAP (Hutchinson and Waters, 1987). It is through materials that learners are exposed to the language and genres that they need to reproduce on their academic courses (Dudley-Evans & St John, 1998; Hyland, 2006; Stoller, 2016; Alexander et al. 2019). It is also through materials, however, that students are denied engagement with real academic content. What follows is an account of what is generally considered to be essential for inclusion in EAP materials, and importantly, for this thesis, what is excluded.

It is not just that the materials need to acculturate the student into the discourses of their academic community, but also that the learners are preparing (on a pre-sessional course at least) to enter a particular local context or institution with its idiosyncratic courses and pedagogical approaches. It is therefore important that materials prepare students for this local context (Harwood, 2010). The institution in which this research took place for example, had adopted an Active Blended Learning (ABL) model where large lecture theatres were removed, replaced with online short lectures and small class seminars dominating face to face interaction. This meant that students needed to be prepared for a very particular style of teaching and learning that was not the norm at other institutions. Therefore, those leading pre-sessional courses often develop their own, bespoke in-house materials. Jordan (1997, p. 260) summarises various checklists to consider when writing materials which all tend to agree on considerations of interest, difficulty, relevance and authenticity.

Harwood (2010) acknowledges the limitations of published materials, claiming that many materials are not based on analysis of the target language and are largely based on anecdotal evidence or what Shulman (2004) would call the ‘wisdom of practice’. Harwood (2010) lauds Swales for producing materials that were created as a result of rigorous investigation into what students needed to produce on a postgraduate course for Architecture students. However, such detailed research into the needs of students is not so practical, or even possible, in the day-to-day delivery of EAP. Evans et al. (2010, p.140) argue that “language teachers of university-bound students have a responsibility to introduce students to the language and *content* they are likely to encounter in university work” (emphasis added). If this is a responsibility, we take seriously then very careful consideration needs to be given as to how this can be enacted in the EGAP classroom.

The influential volume EAP Essentials (Alexander et al. 2019, p. 11), notes that the EAP syllabus is “goal driven: the main focus is where the student has to get to and his/her future performance, often in relation to a specific academic course”. However, in terms of teaching and learning content there is no mention of developing knowledge related to academic courses, instead the focus is on exploring ‘ideas and relationships’ within genres, where materials focus on developing in the learner an understanding of ‘audience purpose and organisation, rhetorical functions and structure’.

Monbec (2018) highlights the focus on the ‘common core’ within EAP, that is a generic set of language forms and skills that all disciplines share, for example the need to paraphrase, cite, or summarise (Hyland, 2006; Hyland, 2016). Gardner et al. (2019), however, acknowledge in their investigation into clusters of linguistic features that occur within a range of writing situations, that while key genres in the disciplines have been identified (Gardner & Nesi, 2013; Nesi & Gardner, 2012) the nuances of common language are less well-known (Gardner, et al. 2019).

Hyland (2006) argues that EAP materials as published in textbooks are inspired by intuition rather than theoretical grounding and for many materials design is considered to be an atheoretical task (Harwood, 2010). Cowley-Haselden and Monbec (2019) also found this to be the case with some EAP courses designed in-house. Even when underpinned with theory, as in the case with genre informed syllabus design, the focus is on developing knowledge of skills and language rather than acquisition of ‘academic’ knowledge. Alexander et al. (2019) recognise this and go as far as to bemoan the focus on skills at the expense of language. One

effect of which they argue is that many teachers who transition to teaching EAP often feel de-skilled as language is deprioritised.

The impetus for this research was a dissatisfaction with these normative approaches to teaching and learning in EAP and what is considered legitimate in the writing of EAP materials.

2.2.5 Theories underpinning materials design

As mentioned earlier, there is a generally accepted knowledge base which underpins EAP practice (Ding & Bruce, 2017), which includes Systemic Functional Linguistics (SFL), Genre Theory, Corpus Linguistics, Academic Literacies and Critical EAP. If Ding and Bruce were to republish their volume today, there is little doubt that they would also include Legitimation Code Theory (LCT) to this list. Some of the theories and frameworks mentioned as central to the EAP knowledge base underpin this research and the design of the ARC intervention employed within it.

Exploring the development of SFL provides some important insight into how the text has become so integral to the teaching of EAP. Matthiessen (2012, p. 436) introduces the birth of SFL as an attempt to “develop an applicable kind of linguistics”. He continues:

applicable linguistics is a kind of linguistics where theory is designed to have the potential to be applied to solve problems that arise in communities around the world ... it represents a way of relating theory and application as complementary pursuits rather than as a thesis-&-antithesis pair destined to be in constant opposition (Matthiessen, 2012, p. 436, original emphasis).

From its inception, “SFL was designed to be a holistic theory of language in context, with comprehensive descriptions of the systems of particular languages that could support text analysis” (Matthiessen, 2012, p. 437). Plotting the history of the relationship between the semiotic system and SFL, helps explain why the central concern to SFL is the text, “a rich, many-faceted phenomenon that ‘means’ in many different ways” (Halliday and Matthiessen, 2014, p. 3). The text can be:

explored from many different points of view. But we can distinguish two main angles of vision: one, focus on the text as an object in its own right; two, focus on the text as an instrument for finding out about something else. Focusing on text as an object, a grammarian will be asking questions such as: Why does the text mean what it does (to me, or to anyone else)? Why is it valued as it is? Focusing on text as instrument, the

grammarian will be asking what the text reveals about the system of the language in which it is spoken or written. These two perspectives are clearly complementary: we cannot explain why a text means what it does, with all the various readings and values that may be given to it, except by relating it to the linguistic system as a whole; and. Equally, we cannot use it as a window on the system unless we understand what it means and why (Halliday and Matthiessen, 2014, p. 3).

Halliday's framework sees "text as language functioning in context" (Halliday and Matthiessen 2014, p. 3). Perhaps obviously, given its concern with text, SFL is a framework that has proved highly influential in EAP practice. SFL has been employed extensively in studies within the field of EAP. Indeed, 2012 and 2020 saw special issues of the *Journal of English for Academic Purposes* which celebrated the contribution and influence of Halliday and SFL in EAP practice (interestingly almost exclusively in EAP writing).

Donohue (2012) though, is a particularly interesting study employing SFL to analyse student discourse (two film students' essays). Isolating extracts from the essays as Donohue (2012) does, highlights the stark contrast between the 'academicness' of the work, indeed the legitimacy of the knowledge expressed in the two assignments. Donohue's (2012) study was highly influential to the beginnings of this research. Though Donohue's analysis was largely linguistic, what appeared to be evident was that the extent of the students' knowledge about film was inextricably linked to the linguistic quality of their writing and therefore their subsequent academic success.

LCT is an immensely practical analytical framework (Maton, 2014a; Ingold & O'Sullivan, 2017), and is proving to be a crucial way in which EAP can combine "theory and application as complementary pursuits rather than as a thesis-&-antithesis pair destined to be in constant opposition" (Matthiessen, 2012, p. 436). While this is Matthiessen's claim of SFL, in reality, for many EAP practitioners, SFL is difficult to 'see' and is only generally applied to the EAP classroom when the theory has been significantly pared down to its most practical and applicable form – exploring cohesion for example. LCT is becoming increasingly enacted in EAP materials (see for example the work of Kirk, 2017; Ingold & O'Sullivan, 2017) with the aim of making legitimised knowledge practices more visible to EAP students to afford greater access to success. While the text is as important to this thesis as it is in EAP practice more widely, the focus is not on a linguistic analysis of text, but of text as vehicle of information, as

source of knowledge, and the impact this has on the legitimacy of postgraduate EAP students' knowledge practices

2.3 Uncovering knowledge in EAP

There is wide agreement that within EAP, materials and pedagogy should be centred on language and genres related to the students' future academic studies. If we are to also include a consideration of knowledge within EAP materials, the question arises as to what knowledge? In a general EAP classroom, what type of knowledge could be purposeful?

2.3.1 What rules for what game?

LCT is primarily concerned with revealing to students the 'rules of the game' (Maton, 2014a) to enable access to and success within education. International students (arguably all students transitioning to higher education) are often met with a clash of educational ideals and expectations. One way in which universities express their ideals is within the attributes they promise graduates will acquire during their studies. Graduate attributes have become a prevalent feature of universities and many list them on their websites with a view to satisfying the concerns of various stakeholders (employers and students among others) who may be reassured that graduates will have developed the necessary skills to be employable in the future. Arguably a key concern for students given the financial burden of university study and a concern for employers that has seen the vocationalisation of university education since the 1990s (Wald & Harland, 2019).

There are valid criticisms however, that the development of graduate attributes lacks theoretical grounding (Barrie, 2004). Wald and Harland (2019) argue that Neoliberalism is *the* theory that underpins graduate attributes. They argue that graduate attributes can be viewed as yet another deficit model aimed to 'fix' students. Wald and Harland (2019) call for graduate attributes to be reimagined with a focus on 'powerful knowledge', which is "theoretical, it is produced and transmitted in specialised institutions and is differentiated from knowledge based on everyday experience" (2019, p. 363). Powerful knowledge is grounded in the work of Bernstein (2000) and "equips graduates with skills that enable them to create and evaluate knowledge through critical thinking, as well as personal outcomes in the form of care (for self and others), responsibility, confidence and insight" (Wald & Harland, 2019, p. 371). According to Wald and Harland (2019) powerful knowledge has three core knowledge functions: "knowledge production, evaluation and application in different knowledge contexts" (p. 372). "Powerful knowledge references knowledge that itself wields power as it enables student movement

between their everyday experiences and theoretical concepts” (Lück et al. 2020, p.91). It can be posited then that graduates are better prepared if they develop knowledge that affords translation and transition between theory and experience, and can be applied across disciplinary contexts, ultimately empowering students.

These notions of powerful knowledge are echoed in the seven facets of ‘Mastersness’ outlined by the Scottish Higher Education Enhancement Committee (SHEEC) project 'Learning from International Practice: The Postgraduate Taught Student Experience' (QAA, 2014). The facets developed were based on input from students and staff from Scottish and other UK and international universities. The seven facets are: Complexity, (recognising and dealing with complexity of knowledge), Abstraction (“extracting knowledge or meanings from sources and then using these to construct new knowledge or meanings” (QAA, 2014, p. 3)), Depth of learning in a subject (acquiring knowledge and using knowledge differently taking a multidisciplinary approach), Salience of research and enquiry, Learner autonomy, Complexity and unpredictability, Professionalism (becoming part of a community and considering academic integrity) (QAA, 2014). Many of these facets are based on knowledge production, evaluation and application and therefore the notion of powerful knowledge.

Argent & Alexander (2013, cited in Alexander et al. 2019) developed a list of graduate attributes and state that an EAP course needs to be informed by these attributes if the course is to prepare students for academic study (Alexander et al. 2019). These attributes include critical reflection, the advancement of knowledge, communication and autonomy and team working as well as a spirit of enquiry – “pursing knowledge for its own sake” and understanding complex relations between “observations, evidence and theories” (Alexander et al 2019, p. 15).

At best, pre-sessional courses tend to address four of these facets. Developing learner autonomy is central to many pre-sessionals, not least as it is a key component of the BALEAP TEAP competency framework (BALEAP, 2014). Central to EAP is also the development of professionalism in that EAP courses are tasked with acculturating students into academic communities and instilling in students a sense of academic integrity and research rigour.

For students to succeed in the UK HE context (especially within the social sciences as was the case for the participants in this study), there is often a need for some personal engagement with the knowledge; the *knower* needs to be visible. However, for Master’s level students in particular there is an added dimension – the ability to *use* theory. The Quality Assurance Agency for Higher Education in the UK (QAA) highlights that Master’s students should

develop “the ability to convert theory into practice from a critical and informed perspective” (2015, p. 6). This ability is valorised in UK higher education settings yet is not often addressed on pre-sessional courses. Murray and Sharpling (2019) conducted a small-scale study investigating lecturers’ perceptions and expectations of what constitutes good master’s level academic writing. This study was within the context of an applied linguistics department and students were all studying master’s degrees within the same field. While the authors acknowledge the limitation of sample size and discipline variety in this study, there existed a certain level of consistency in the lecturers’ considerations of the dimensions that constituted a good essay. Linguistic accuracy was less of a concern than structure and content-knowledge, including the ability to ““use a theory without regurgitating it”” (Murray & Sharpling, 2019, p. 497).

There are many studies that enact LCT to explore why students fail to perform as well as they could on assessments. Often this comes down to the need for undergraduate and postgraduate students to integrate theory into their academic writing. There are many that have focused on reflective writing in particular (Szenes, et al. 2015; Tilakaratna et al. 2020; Brooke, 2017; Kirk, 2017). The ability to weave between theory and more concrete experience to achieve academic success is mentioned again and again. Tilakaratna and Szenes (2021) explored critical reflective tasks where students are expected to “relate subjective knowledge to objective knowledge, such as linking personal experience and theoretical knowledge” (p.105). Quinn (2021) also found that waving between theory and practice was key to success for academic development staff on a Postgraduate Diploma.

Brooke (2017) worked with second year UG students who were required to assimilate a theoretical framework in their assignments, as an identified barrier to student success was the underdeveloped theoretical knowledge within the subject. Brooke (2017) explores students’ ability to wave within a sports assignment “it can be said that there is an inability to discuss the relevant abstract and context-independent knowledge in a fully comprehensive manner. As the theoretical framework for a research paper, the student is only touching the surface of the context-independent knowledge related to this topic” (Brooke, 2017, p. 46). Brooke’s (2017) instructional model scaffolds critical, functionalist and feminist theory through exploration and application moving between less and more context dependent. “Providing students with structure and language features that emerge within the different stages allows students to organize the complex evaluative meanings and disciplinary theoretical understandings that

arise in clinical practice situations and to analyse these situations in order to improve future practice” (Tilakaratna, et al., 2020, p. 322).

What is clear from the guidance of the QAA and the research conducted by Murray and Sharpling and those within the LCT community, is that the ability to know what theory is and how to employ theory within academic work is crucial to success. Thus, it is not simply that pre-sessional students need to develop their English language, they also need to be aware of the role knowledge plays within higher education in the west. If pre-sessional programmes do not assist students in understanding knowledge practices in UK HE, then we are only half preparing them for their academic studies, and potentially enabling failure rather than success.

2.3.2 Educational culture clash

A pre-sessional course is an ideal site for aiding learners in the transition from one educational culture to another and thus limiting the potentially detrimental effects of experiencing an educational culture clash. UK based graduates will most likely embark on PG studies with a fairly clear idea of what theory is and how it should be used, this is not the case for those who have graduated from undergraduate courses in other countries, and this may lead to an “unequal distribution of forms of communication” (Hasan 2001, quoting Bernstein, 1996).

As highlighted in the introduction, the purpose of EAP is to prepare students for academic study (in this instance within HE in the UK context). According to Higher Education Statistics Authority (HESA) data for 2018/19, 45% of the full-time postgraduate population at UK HEIs are non-domicile and non-EU students (HESA, 2020). With students from China alone accounting for almost a quarter of the international student population in 2017/18 (Universities UK International, 2019).

Given the high proportion of students from China, some have researched the experiences of Chinese students when their heritage educational culture is vastly different to expectations within the western context (Chen, 2010; Maton & Chen, 2020; Sovic & Blythman, 2013; Wu & Hammond, 2011). Maton and Chen (2020) and Chen (2010) have highlighted the clash Chinese learners experience when they transition from a heritage educational culture that downplays the ‘personal dimension of learning’ (Chen, 2010, p.118) to a western education culture that is very much entrenched in the personal dimension of learning. Wu and Hammond (2011, p. 424) also highlight this contrast between the two educational cultures, observing that “Confucian education emphasises effort, often expressed in memorisation and rote learning. This contrasts with more dialogic Western education in which students are encouraged to ask

questions, challenge the ideas of teachers, and other students, and express their own ideas”. As Kirk (2018, p. 146) states “Chinese students bring with them [to the west] a cultivated gaze developed through a lifetime of socialisation in a very different education system.” The resultant ‘code clash’ can leave learners with negative feelings of inferiority, insecurity, anxiety, frustration, helplessness, and depression (Maton & Chen, 2020). To become legitimate knowers in the UK HE system, students may need to reposition themselves away from their previous educational culture toward a new one in order to succeed. One of the most significant differences between educational cultures, it seems, is with regard to the role knowledge plays in education.

At the epistemological level, [UK] university writing requirements require a different engagement with knowledge. Students are expected to develop their own understandings and ideas, to work with the knowledge of others, to use existing knowledge as support for their own ideas, to take risks and be creative (Baker, 2018, p. 404).

That is not to say that one educational culture is better than another, rather the question is whether learners are aware of the conditions in which their education is operating and consequently understand what is considered legitimate and enables success.

Durkin (2008) argues that the answer to this question is that students are not aware, a supposition supported by much LCT based research. While discussing the problem of acculturation during academic studies, rather than preparing for them, Durkin (2008) highlights that international Master’s students in the UK need to acquire an understanding of the norms and conventions of UK study and do so quickly. Durkin (2008, p. 16) acknowledges however, that “this understanding is not acquired naturally; conventions need to be explained and developed through conscious strategies”. The extent to which students are able to adopt these norms and conventions, is dependent on a number of factors, including the heritage educational culture, the student’s motivation, language proficiency and learning support received (Durkin, 2008). Being able to analyse knowledge and its effects affords a more socially just educational experience. If valorised knowledge and knowers are not made explicit it erects barriers to success which can have dire consequences. LCT is an explanatory framework that is very much concerned with making these implicit assumptions and expectations explicit. The next section will explore literature that has uncovered knowledge practices specifically within the field of EAP.

2.3.3 How LCT enables knowledge practices to be seen in EAP

Maton (2014b) explains how LCT is useful to those working in the field of teaching academic language and literacy (ALL) and the field of EAP is moving toward a more knowledge conscious position. Due to an increasing number of studies employing LCT various knowledge practices have been uncovered (see Brooke, Monbec & Tilakaratna, 2019; Ingold & O’Sullivan, 2017; Kirk, 2018; Kirk, 2017; Monbec, 2018). To date, EAP studies that employ LCT as analytical framework use only two of the three dimensions – namely Specialization and Semantics. These are also the dimensions utilized in this study and therefore they will be explored in detail in the following Theoretical Frameworks chapter. However, to appreciate the current literature it is necessary to provide a cursory gloss of these two dimensions. Specialization sees practices (curriculum design, curriculum materials, student work, for example) in terms of their relations to what is considered legitimate knowledge and relations to who can claim to be a legitimate knower (Maton, 2014a). Studies that analyse practices via Specialization are able to determine whether knowledge, knower, both or neither have a greater role to play in achieving legitimacy in a given practice. For example, Monbec (2018) uses Specialization to highlight that the field of EAP is more situated within the knower code, where knowledge practices are downplayed. To evidence this Monbec cites the tendency of EAP to prioritise practice and intuition above theory, to fail to agree on what is legitimate knowledge in the EAP classroom, as well as to provide a “lack of an explicit and visible knowledge of the way language is used in disciplinary meaning-making” (2018, p. A-92). Semantics is another prominent dimension of LCT used within EAP research. This dimension consists of two elements; semantic gravity and semantic density, which can be used in conjunction or independently (Maton, 2014a). Semantic density uncovers how condensed meanings are and semantic gravity uncovers how dependent practices are on context. In the EAP literature both concepts of gravity and density have been employed. Semantic gravity has been used to illuminate how student writing waves between the abstract and the concrete (Kirk, 2017; Ingold and O’Sullivan, 2017) and how greater lexical complexity strengthens semantic density (Ingold & O’Sullivan, 2017).

Initial literature employing LCT as an analytical framework explored student writing and has since been instrumental in developing innovative classroom practice. Kirk (2017) uses semantic gravity (albeit tacitly) to provide Anthropology students and their lecturer with a shared metalanguage to use to explore how successful reflective writing waves between concrete experience and disciplinary concepts and theories. “Semantic gravity profiling

enables students literally to *see* [via a waving visual] what is valued and required in an unfamiliar writing form” (Kirk, 2017, p. 116). This shared metalanguage and wave visual enabled students to understand where their writing was too grounded in experience or too theoretical and enabled the Anthropology lecturer to point out where this was the case too. Like Kirk (2017), Ingold and O’Sullivan (2017) use semantics as a tool to teach effective academic writing in the EAP classroom. Similarly, focused on academic writing, Brooke et al. (2019) employ both Specialization and Semantics in their aim to “provide knowledge to students in the form of analytical lenses to enable them to deconstruct and judge information effectively” (p. 429). Brooke et al.’s (2019) research undertakes a broad view of EAP, with only one of the 3 case studies being an EAP module, the other two are a CLIL course and a public writing and communication undergraduate unit delivered across the faculty of Arts and Social Sciences. Nevertheless, all three case studies explore the impact of using the theoretical concepts from LCT with students to empower them to better produce and recognise legitimated forms of knowledge (Brooke, et al., 2019).

Many EAP studies also employ LCT to focus on the curriculum. Kirk (2018), for example, uses the LCT dimensions of Specialization and Semantics to explore how EAP practitioners enact the EAP curriculum in the classroom on a pre-sessional course. As well as using the LCT dimension of Specialization to analyse the position of the field of EAP, Monbec (2018) also employs Semantics to focus on the EGAP curriculum. Using semantic gravity only, Monbec (2018) illustrates how an EGAP syllabus purposefully weakens and strengthens its semantic gravity. This is achieved by introducing students to abstract and decontextualized elements of the syllabus (for example text cohesion), therefore weakening semantic gravity, before strengthening semantic gravity through the contextualisation of the syllabus element with an EAP activity (for example practising text cohesion in writing tasks), and then enabling students to weaken semantic gravity again by applying the syllabus element to their disciplinary context (Monbec, 2018). Monbec (2018) argues that this waving enables EAP students to better transfer their knowledge about EAP to their academic studies, enabling this knowledge to “travel beyond the confines of the EGAP module” (p. A-96).

Moving beyond, but not away from, the curriculum, Cowley-Haselden and Monbec (2019) use Specialization to investigate EAP practitioners’ attitudes towards knowledge, in particular the theories that underpin EAP practice. Their small-scale study found that on the whole EAP practitioners downplay theory and instead place more emphasis on the importance of the knower.

However, no studies yet have explored how knowledge is built in the EAP classroom through reading.

2.3.4 Summary so far

Thus far, this chapter has presented literature that theoretically situates this thesis. The overarching theme is that of knowledge; how knowledge has been obscured in education and EAP research, how Social Realism offers the means by which we can begin to see knowledge and how LCT is the tool to bring knowledge into focus. Knowledge is increasingly a concern of EAP research focusing on the curriculum and academic writing pedagogy.

EAP is largely considered to be first and foremost language tuition. As has been argued above, this results in an alarming omission and a failure to fully prepare students for the rules of the game they need to successfully engage in their academic studies. That is not to say that students for whom English is not their dominant language are destined to fail their academic degrees. This is clearly not the case, what is being argued here is that students are left to uncover the rules of theory knowledgeability on their own. EAP is doing a disservice to not explicitly address the expectations of theory use on the postgraduate degrees.

What remains is to discuss the literature related to the practical element of this thesis. The knowledge practices that are to be analysed in this thesis will be created through academic reading and student discussions based on this reading. It is to these areas that this chapter now turns.

2.4 Acquiring knowledge in EAP

2.4.1 Reading in EAP

As discussed above, with the influence of SFL and Genre on EAP materials writing, the text is central to EAP teaching, indeed EAP has always been a text-based endeavour. Jordan (1997, p. 143) lists the purposes of academic reading for students, which are:

- to obtain information (facts, data, etc.)
- to understand ideas or theories, etc.
- to discover authors' viewpoints
- to seek evidence for their own point of view (and to quote) all of which may be needed for writing their essays, etc.

Academic reading within EAP often focuses on three of these four purposes, the need to understand ideas or theories is noticeably absent from many published EAP materials.

Johns and Davies (1983) made an important distinction between TALO (text as linguistic object) vs TAVI (text as vehicle for information). TALO is more akin to the approach taken in traditional EFL/ESOL course books where the key was a grammar point to be covered. With regard to TAVI, Johns and Davies (1983) distinguish between immediate and deferred need, which in some respects could be mapped to in-session or pre-session provision. When need is deferred, they argue, the focus should turn to process rather than content. In this regard TAVI topic-type considerations are almost a precursor to genre studies with its focus on shared characteristics of a given text type/ genre. Though Luckett and Hunma (2014) would perhaps argue that the distinction between TAVI and TALO has become quite blurred. In many respects EAP teaching is arguably a combination of the two types, more TAVLI - text as vehicle for *linguistic* information. While the work of Jordan (1997) and Johns and Davies (1983) is now quite dated, these approaches to reading in EAP are still pervasive. Indeed, this heritage can be seen in Alexander et al. (2019, p. 141) who argue that the focus on academic reading in EAP courses:

needs to incorporate three levels:

- introducing students to the purposes of academic texts and of academic reading
- providing students with training and practice in the skills and strategies needed to develop as academic readers
- helping students to use texts as examples of genres, focusing on purpose rhetorical functions, organisation and academic vocabulary

Alexander et al. (2019, p. 142) call for a consideration of genre to dictate text choice, arguing that often authenticity of topic drives text selection in the EAP classroom and can lead to teachers choosing more ‘accessible’ texts like journalistic sources. They argue that students do not have time to slowly acclimatize to the difficulties of reading in their disciplines and that is why analysing genres students will encounter is more purposeful than topic (most certainly a TALO approach).

Given the importance of the text in EAP teaching it is perhaps surprising to an outsider that EAP does not engage in developing academic knowledge. Extant literature that employs LCT to uncover knowledge practices within EAP has thus far not explored the role reading has to play in building knowledge. Reading plays a fundamental role in success at university (Bharuthram, 2012) yet fails to receive the level of research interest that academic writing does (Baker, et al., 2019). LCT studies within the field of EAP have, to date, been concerned with empowering international students to succeed within higher education in terms of academic

writing and transferable skills, so far there has not been an investigation into the role reading plays in building learner's knowledge in the EAP classroom. Given that there is a strong correlation between reading and succeeding in academic studies (Bohlman & Pretorius 2002; Wilcoxson, Cotter & Joy 2011; Morley, 2020) this is an important oversight. This oversight is not peculiar to LCT studies within EAP. Indeed, reading in general is under-researched within the field of EAP. The *Journal of English for Academic Purposes*, while not the only journal in which to publish EAP research, is the field's named journal and has, in its almost 20 year existence, not had a special issue dedicated to the skill. Listening has featured in a special issue, and there have been multiple special issues focused on writing. And herein lies a problem with research into EAP reading, it generally only exists to serve writing. There is a strong focus on writing in EAP and, as a consequence, reading is often side-lined to exist as an adjunct to writing. This gap is beginning to be addressed with projects like 'Becoming Well Read' (Rhead & Little, 2020), though this endeavour has been spearheaded by learning developers rather than those who work within the field of EAP.

It is widely acknowledged that reading, in its own right, is a core academic activity which enables the development of disciplinary knowledge (Bharuthram, 2012; Baker et al. 2019; Morley, 2020). Indeed, it has been argued that reading is the most necessary of the skills in EAP (Flowerdew & Peacock, 2001; Jordan, 1997). Given the importance placed on reading in academia, it seems illogical that academic reading would almost exclusively feature in relation to academic writing within EAP literature. Hyland and Wong (2019) for example, in their book on innovations in EAP practice focus heavily on academic writing. On the few occasions reading is the focus of EAP literature, it is as a skill to be honed rather than a gateway to academic knowledge. Reading is often not analysed in its own right but in conjunction with writing (Delaney 2008; Windsor & Park, 2014; Dovey, 2010; Gebril & Plakans, 2016; Rhead, 2019) and hence the focus is source use (McCulloch, 2013; Payant et al, 2019) and paraphrasing (Hirvela & Du, 2013). EAP literature that is concerned with reading, mainly explores student motivation, reading strategies (Plakans, 2009) comprehension (Hao & Humphrey 2019; Nergis, 2013; Ward, 2009), proficiency (Mežek, 2013) and performance analysing reading as a language skill and not as a means to build knowledge.

There are studies that explore the role of reading in knowledge building, however these are not within the realm of EAP per se. There have been several studies that explore the correlation between discipline-specific background knowledge and language proficiency on performance in language for specific purposes reading assessments (Cai & Kunnan, 2018; Cai & Kunnan,

2019; Taghizadeh Vahed & Alavi, 2020). Cai and Kunnan (2019) explore the role of subject-matter background knowledge and language proficiency on reading performance in a Language for Specific Purposes (LSP) context. This study was conducted with students in the second year of their nursing degree. The study found that students of an intermediate language proficiency tend to be more successful in their reading performance when they employ their background and language knowledge in tandem. These results support the findings of other studies. Taghizadeh Vahed and Alavi (2020) for example, conducted a similar study with Persian speaking Civil Engineering students. The researchers used an EAP test to ascertain the relationship between content and language knowledge arguing that there is a “must-have interaction in EAP testing between the written/spoken linguistic input and the test-taker’s subject matter knowledge” (Taghizadeh Vahed & Alavi, 2020, p. 1). However, it should be noted that these studies focus on performance in reading tests, rather than the realm of academic reading more generally and the studies do not provide any recommendations for the teaching and learning of EAP as the research participants were on their academic degrees and neither study refers to any experience of EAP tuition. Findings from a study conducted by Joh and Plakans (2017) also corroborate Cai and Kunnan’s (2019) and Taghizadeh Vahed and Alavi’s (2020) findings, albeit in the more general context of reading comprehension rather than reading testing. This study led the authors to conclude that “in L2 reading instruction, building topic knowledge is critical” (Joh & Plakans, 2017, p. 116). Usó-Juan (2006) supports this notion by arguing that at a certain proficiency level EAP students will improve in reading through engaging with the content (Content Based Instruction) and that lower-level students cope when they have discipline-related knowledge.

What is important to take away from these studies is the students’ relative success in academic reading when language proficiency *and* content knowledge are both employed. There is a precedent then for the argument that EAP students are best served by developing academic knowledge *and* language proficiency.

Despite the fact that numerous studies highlight the positive relationship between content knowledge and language proficiency in reading performance, this relationship is a glaring omission in the BALEAP Can Do Framework for EAP syllabus design and assessment (2013). This is a framework of postgraduate competencies informed by a research project that collated the views of lecturers from a range of disciplines and converted these views into competencies around four areas: Academic Context; Academic Discourse; Discipline related; Practical Skills. Each language skill has its own list of competencies. In her brief discussion of this

framework, Blaj-Ward (2017, p. 85) explains that discipline-related skills are related to “knowledge-making practices in specific subject areas”. While the other areas list multiple competencies, there is but one entry for discipline related skills and that is “Decode and respond appropriately to task requirements”. Throughout the framework reading competency is predominantly defined by approaches and skills and there is no mention of reading for developing knowledge. That may be because the lecturers interviewed did not mention this, or that this research was framed in such a way that participants were asked to comment on language and skills competencies only. Whether this omission is a result of the research design and implementation or a result of subject lecturers not considering the EAP classroom to be the place to develop subject knowledge, is of little importance. What is of importance to this thesis is that the notion of reading for knowledge development was an omission at all. This notion is not only absent from documents such as the BALEAP framework, but also absent from EAP course books. Blaj-Ward (2017, p. 86) provides a critique of how EAP course books use reading arguing that “there is no requirement to compare texts, read around the topic or synthesise ideas from various sources, to *build a knowledge base*, as would be the case outside a language classroom” (emphasis added). In other words, Blaj-Ward (2017) acknowledges the fact that building a knowledge base is a key purpose of academic reading and, by association with skills such as synthesis, one that should be included *inside* the language classroom.

Perhaps not surprisingly given its absence in course books and sector informing documents like the BALEAP Can Do Framework, there are few studies that directly address the notion of knowledge building within EAP contexts. The majority of literature that does address the issue of building knowledge within the language classroom is based in the field of ESP. The question then becomes what form of disciplinary knowledge should be built. As Hartig (2017, p. 3) highlights, “While the idea of connecting language and disciplinary content in English language teaching is not new ... distinguishing among the types of disciplinary knowledge that are most relevant for language teaching has been less fully explored”. Dudley-Evans & St. John (1998) differentiate between ‘carrier content’ and ‘real content’ where discipline related content is a mere vehicle for the “‘real’ content of the ESP curriculum” (Hartig, 2017, p. 3). Hartig’s (2017) work, focusing on the specific purpose of Law, offers a refreshing perspective on the role of disciplinary knowledge building in the language classroom. As Hartig (2017) began work as a language specialist working with Law students, she found that “discipline-specific conceptual frameworks played an important role not just in their [students’] subject matter knowledge, but also in their ability to make sense of language use in the genres that they

were learning to read and write” (2017, p. 1). Hartig (2017) differentiates between ‘discourse relevant concepts’ and ‘discipline structuring concepts’. The former relates to key terms within the field of Law that feature explicitly within discipline relevant texts and the latter are concepts that are much more implicit in the teaching and learning of Law and were therefore a much greater challenge for students to engage with. Hartig (2017) offers a version of ESP that fully engages with disciplinary concepts. While there is much value in this, that the *specific* nature of teaching a disciplinary homogenous group facilitates this is obvious. A more complex question is how Hartig’s approach can be translated to an EGAP classroom.

2.4.2 Reading as troublesome

It is incredibly naive to argue that simply using a disciplinary relevant text in the language classroom is enough to build knowledge. Texts need to be read and academic reading is by no means a simple endeavour regardless of whether English is a student’s dominant language or not. There are many studies that highlight the troublesome nature of academic reading – academic reading is complex, boring, linguistically inaccessible, and just generally disliked (Miller & Meridian, 2020; Hoeft, 2012; Andrianatos, 2019).

Literature that is emerging in response to the troublesome nature of reading suggests that a solution may lie within affording time and space. Rhead (2019), for example, uses reading retreats to afford academics and students the time and space to explore reading and the benefits this can bring to developing knowledge of epistemological concepts. Time and space (within the curriculum) are perhaps the greatest limiting factors on an EAP pre-session course. Pre-session courses are faced with the almost impossible task of acculturating students into the ‘western tradition’ of HE as well as developing and assessing language skills in around 100 hours of course time.

The notion of ‘conceptual thresholds’ (Wisker & Robinson, 2009) has its origins in the framework of threshold concepts. While the notion of threshold concepts will be explored in greater detail in chapter 3, what is pertinent to say here is that a threshold concept is usually a discipline specific concept that is troublesome to acquire. Conceptual thresholds, however, are “more generic, cross-discipline, thresholds which students may cross in the course of their studies” (Abbott, 2013, p. 192)

Morley (2020) argues that perhaps the term threshold *practices* is more accurate than threshold concepts, as knowing what is expected to be good at something and actually doing it are separate phenomena. Morley (2020) has identified eight threshold concepts (TCs) related to

academic reading. The construction of this list involved the identification of threshold concepts via a consensus building methodology involving academic staff, learning developers and students. Some of the 8 TCs identified focus on the act of reading and the skills required to perform the act, for example:

TC 1: Academic reading is complex; understanding may take time and multiple readings.

TC 4: Academic reading is purposeful and evaluative/selective; reading may involve using search terms, contents pages and indexes to pinpoint the information wanted/needed.

TC 5: Academic reading requires more than reading only the text itself; understanding the genre, social, chronological, cultural and political context is essential in fully understanding ideas and arguments.

TC 6: Academic reading is active; understanding is developed through interaction and engagement with the text.

TC 7: Academic reading is part of a wider process, linked to planning, researching and writing, as well as connecting ideas to life experiences (Morley, 2020, pp. 13-14).

These threshold concepts listed above are akin to how reading is covered in the EAP curriculum. What is of significance to this study is the notion of academic reading as knowledge/ knower building and so the remaining threshold concepts from Morley's list are of greater interest here:

TC 2: Academic reading refers to other works and texts; *ideas and arguments are built through interaction and debate.*

TC 3: Academic reading is a critical activity; it allows us to *build and develop our own understanding*, which may agree or disagree with what we read.

TC 8: Academic reading goes beyond the assignment/research; *it enables us to reflect how knowledge and ideas connect to ourselves* and inform our wider perspectives and identities. (Morley, 2020, pp. 13-14, emphasis added)

For Morley's (2020) participants the threshold concepts identified were less so because of a sense of the troublesomeness so synonymous with threshold concepts theory than they were associated with being transformative.

Perhaps then, this lack of the 'troublesome' and abundance of the 'transformative' is indicative of the implicit or hidden aspects of academic reading, that are not always taught explicitly in a reader's academic career. It may be that these TCs are not difficult for readers to understand, but rather that readers are not always aware they are an expectation or fundamental characteristic of academic reading. (Morley, 2020, p. 15).

This suggestion points to the need to make aspects of academic reading explicit. Perhaps one way to enable this is to allow "students ... to develop a dialogical relationship with the texts they read, allowing them to question the ideas they encounter and also to develop their own ideas based upon a sound yet critical understanding of the academic discourses they encounter" (Abbott, 2013, p. 199). Both Abbott (2013) and Morley (2020) see academic reading as an individual activity. Both discuss the idea of entering into a dialogue with a text, but this dialogue is between reader and text, not *readers* and text as is the focus of this study.

2.4.3 Reading as social practice

Much has been written about academic writing as social practice, in particular since the inception of the highly influential Academic Literacies via Lea and Street (1998). While this proliferation of literature has done much to highlight the importance of writing as social practice within EAP (see for example the work of Ken Hyland, John Flowerdew and Theresa Lillis,), little attention has been paid to reading as social practice. Through a scoping study of literature related to academic reading, Baker et al. (2019) highlight the invisibility of academic reading as social practice. While this is a valid point, Baker et al. (2019) simply highlight the issues rather than making an attempt to address the gaps they identify, and clearly much work in this area is needed. Like Baker et al (2019) and Abbot (2013), Bharuthram & Clarence (2015) also bemoan the lack of attention paid to academic reading, especially given its key role in helping students acculturate into a given academic discipline, that is learning how to 'be' in academia from exposure to a discipline's idiosyncratic behaviour, values, thinking and communication. Abbot (2013) concludes that lecturers believe that in order for students to develop a critical understanding of a text, they should enter into a dialogue with it, developing their own ideas. Allen (2012) concurs with Abbott in his discussion of the reading practices of faculty staff who highlight the importance of place and interaction with text as well as reading

beyond the text. Allen (2012, p. 101) suggests “that we teach *reading as a mode of negotiating uncertainty*” (original emphasis) and that we should prepare “a space for shared not-knowing (and thus genuinely shared discovery) in the classroom” (Allen, 2012, p. 116). The ARC intervention at the heart of this study is an attempt to provide this space and to gain empirical insight into how this ‘space for shared not-knowing’ enables knowledge building.

Rhead (2019) sees reading as the potential for deeper learning and as a communal activity. She argues the need to retreat for time and space to achieve both. “This lends support to Lea and Street’s (2006) argument that academic reading should not be separated as a generic skill but be seen as inextricably linked to disciplinary knowing” (Rhead 2019, p. 10). Kuzborska (2015) explores perspective taking in academic reading, that is, reading to gain perspective on disciplinary practice. For Kuzborska, (2015, p. 158) reading is a social practice and her findings lead her to conclude that “EAP tutors need to acquire a fine-grained understanding of reading as a social interactive activity and to promote such understanding among their students explicitly.” “Kuzborska’s key contribution to research into EMI readers’ experiences is her emphasis on reading as a situated and social interactive activity, something that EAP practice needs to build a greater understanding of” (Blaj-Ward, 2017, p. 88). This research aims to contribute to building this greater understanding.

Boughey and McKenna (2016) argue that the prevalent ‘decontextualised approach’ to student development (which includes EAP), which sees academic literacy as a set of neutral and apolitical skills plays a vital role in disabling access to the academy. “Key to our argument is an understanding that the reading and writing practices of the university are profoundly social involving the development of particular identities” (Boughey & McKenna, 2016, p. 7). It is within the realm of reading as social practice that this thesis makes a contribution. This thesis is not an exploration of how students approach reading, it is not an analysis of motivation and comprehension as has been the focus of many studies within EAP. Rather this study places reading for knowledge acquisition at the centre. In short, this study addresses knowledge blindness in this area of research. Rather than focus on the knower and their dispositions towards reading (and be guilty of knowledge blindness), this study focuses on what knowledge is acquired from reading and how this cumulates over a series of reading based discussions employing the ARC model.

2.4.4 Collaborative dialogue “is knowledge-building dialogue”

The research reported on in this thesis has provided the all-important time and space for students to share their not-knowing and to share their discovery of knowledge. So while academic reading will serve as the vehicle to transport knowledge, shared discovery of this knowledge through group discussions is what will provide the space for knowledge to be built. As Swain (2000, p. 97) observes, collaborative dialogue “is knowledge-building dialogue.”

To enable collaborative dialogue this study employs the Academic Reading Circles (ARC) model (Seburn, 2016). “Academic Reading Circles (ARC) is an intensive reading approach whose components work on the basis that language learners develop deep textual comprehension better through initial collaboration than if tackled alone” (Seburn, 2016, p. 6). This initial collaboration is developed by assigning students in a group individual roles to perform while participating in a discussion on an academic text that the group has read (see fig. 2.2 for the roles and their goals). The model essentially embodies Grabe and Stoller’s (2013) proposition that reading instruction should focus on main-idea comprehension and that students should

engage in a discussion about how to understand the text better. Main idea comprehension is effectively developed through class conversations identifying and exploring main ideas in the texts that students are reading, noting ways in which information connects across parts of the text, building linkages between two or more readings, and promoting connections between ideas in the text and student background knowledge. Class conversations centred on main-idea comprehension may start with post reading comprehension questions, but students should be invited to follow up initial responses with further elaboration involving multiple students (Grabe & Stoller, 2013, p. 141).

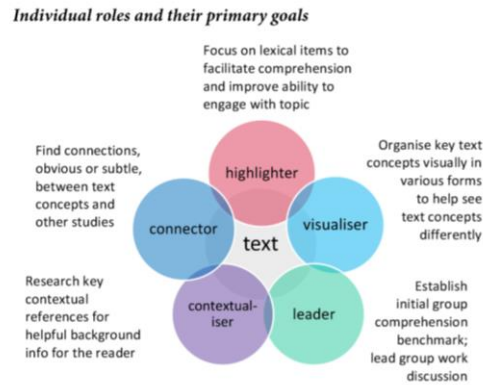


Figure 2.2 ARC roles (Seburn, 2016, p. 15)

While the use of ARCs is fairly commonplace in the field of EAP practice (see for example Vermeire & Rewhorn (2019) and blogs written by EAP practitioners Seburn, (2011) and Playfair (2018)), there is no research that has been conducted into their effectiveness or their role in knowledge building in the EAP classroom. Where ARCs are mentioned in literature, it is just to state that they were part of the curriculum rather than to provide any empirical evaluations of their effectiveness (Vermeire & Rewhorn, 2019; Bond, 2020). Even Seburn’s (2016) book dedicated to employing ARC in the EAP classroom is based on practice rather than empirical study. This thesis aims to address this gap.

2.5 Conclusion

This chapter has traced the conceptual terrain of this thesis and identified the literature, and its gaps that this research aims to address. Social Realism is central to how knowledge is viewed throughout this thesis and the LCT literature has shown how a Social Realist lens can enable knowledge practices to be examined, not just within the broader remit of Higher Education, but also within the field of EAP. This thesis therefore is a contribution to the more knowledge-conscious position developing within EAP via the first two of the research questions driving this thesis:

What happens when postgraduate pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*?

The literature discussed in this chapter has also highlighted the lack of attention given to reading within the wider context of HE and also within EAP research. It is acknowledged that academic reading is troublesome and this study is a practical exploration of how EAP

postgraduate students can be afforded the time and space to work together to mediate their way through this troublesomeness. This provides the field of EAP with an alternative pedagogy which foregrounds the building of knowledge *alongside* the building of language, and here the chapter provides a background to the final research question:

Can the ARC process help students traverse the liminal space?

This thesis makes numerous contributions to the extant literature introduced in this chapter. Firstly, and perhaps of greatest import, this thesis is a contribution to the evolving knowledge conscious position now being taken within the field of EAP, focusing not on the curriculum or academic writing practice, but on students' knowledge building through reading. The forthcoming analysis of knowledge practices within the EGAP pre-sessional context does not do so at the expense of language analysis. In this regard, this thesis is also a contribution to the literature that employs LCT to provide a richer understanding of EAP practice. Secondly, this study contributes to threshold concepts literature, not so much in its acceptance of the already acknowledged existence of reading as a threshold concept, but in its identification of *theory knowledgeability* as a new threshold concept and the analysis of discourse within the liminal space, overcoming threshold concepts' penchant for 'discourse blindness'.

CHAPTER 3 – THEORETICAL FRAMEWORKS

The previous chapter has introduced key concepts relevant to EAP pedagogy that underpin this study. The chapter concluded that EAP practice is largely knowledge blind in that developing knowledge is largely overlooked in the pursuit of language and skills development, reading is under researched, and is troublesome. This thesis is an attempt to address these issues by exploring how the ARC model can bring knowledge into the EAP classroom and in doing so ease the troublesomeness of reading around theory, acknowledging that developing knowledge of theory and its practices is central to postgraduatness in the UK.

This chapter will now provide a more detailed overview of Threshold Concepts, and Legitimation Code Theory (hereafter LCT) through published studies and explain how these frameworks are relevant to this thesis, and how they are to be employed in this thesis. Threshold concepts is a positioning framework rather than an analytical framework within this study. That is, the framework provides language to define the space within which this study takes place but is not employed in the analysis of the data. LCT is the framework that allows the data to be analysed for cumulative knowledge building (through the dimension of Semantics) and emerging knowledge practices (through the dimension of Specialization). This chapter will first provide an outline of the ontological and epistemological position of this study. The chapter will then provide an overview of LCT enacted to analyse the data and explain why this framework provides insight into the questions investigated by this study before moving on to introduce the notion of threshold concepts and outline how this framework provides a description of the space in which this research takes place.

3.1 Knowledge – ontological position of the thesis

While it is perhaps more traditional to explore the ontology and epistemology underlying a thesis in the methodology chapter, it is crucial to explore these positions here as they not only underpin the methodology, but also the theoretical framework enacted in the analysis of the data.

Chapter 2 began by establishing the problem of the problem of knowledge, highlighting Moore's (2013) contention that the persistence of knowledge as a blind spot in educational research has itself become a problem. To resolve the problem of the problem of knowledge, Maton and Moore (2010) turn to Social Realism. The problem is rooted in what Alexander

(1995) termed the ‘epistemological dilemma’, whereby the problem of knowledge is rooted in an “assumption that the only choice [in perceiving knowledge] is between positivist absolutism or constructivist relativism” (Maton & Moore, 2010, p. 1). Social Realism within the sociology of education is rooted within Critical Realism philosophy which has provided a resolution to “issues in both positivism and constructionism/ postmodernism and provides an alternative to *both*: to the absolutism of the former and the relativism of the latter” (Moore, 2013, p. 334). Critical Realism is based on three principles: ontological realism, epistemological relativism and judgemental rationality (Moore, 2013, p. 343). Moore (2013, p. 343) describes ontological realism as “the commitment to the idea that there is a reality that exists independently from human experience and of which human beings can create knowledge.” In other words, knowledge exists whether we are cognisant of it or not, as Clarence (2013, p. 27) explains; “knowledge of reality is not reality itself, but rather only part of it.” Clarence (2013) provides a useful example of the knowledge we once held that the earth was flat and that discovering that the earth was in fact a sphere did not alter the shape of the earth, just our understanding of a fact that was already true. The second principle on which Critical Realism is based is, epistemological relativism; “the recognition that all knowledge is humanly produced and reflects the conditions under which it is produced” (Moore, 2013, p. 344). In other words, the knowledge we have is socially produced and changes “over time and across socio-cultural contexts” (Maton & Moore, 2010, p. 4). The final principle, judgemental rationality, acknowledges that “all knowledge is socially produced, but crucially that some ways in which human beings produce knowledge are more powerful than others in the sense that the knowledge so produced is more reliable by virtue of how it is produced” (Moore, 2013, p. 345). Critical realism, in other words, sits between the traditionally dichotomous entities of positivism and constructionism, showing that in fact these two entities are not so diametrically opposed. Knowledge is not a finite entity that can be unveiled through a positivist lens/tool, neither is knowledge simply a constructionist product of power relations (Maton, 2014a).

Social realism then provides a solution to the ‘epistemological dilemma’ as social realism views knowledge as socially constructed but existing beyond the knower (subject/human element) and therefore is social *and* real (Young, 2008; Maton, 2014a). Social realists rail against the notion, historically prevalent within the sociology of education, that knowledge is reduced to the knower and therefore not investigated as an entity itself, which is highly problematic as knowledge is at the heart of education (Maton & Moore, 2010; Maton, 2014a; Young, 2008). Set atop this philosophical foundation, Social Realism then “allows knowledge

to be seen in itself, not merely as a reflection of either some essential truth or social power but as something in its own right, whose different forms have effects for intellectual and educational practices” (Maton & Moore, 2010, p. 2). In short, Social Realism “puts *knowledge as an object* centre-stage in thinking about education” (Maton & Moore, 2010, p. 2 original emphasis). It is for this reason that social realism has much to offer this research. EAP research offers great insight into language as an object with different forms and effects (in terms of studies employing SFL for example). This thesis adds to the establishing canon that explores knowledge as an object within the field of EAP, in particular with reference to the classroom.

Social realism affords a lens through which knowledge can be observed as an object in its own right, but “to do so requires not only the right way of seeing but also the right conceptual tools for analysing this object of study” (Maton, 2014a, p. 14). Legitimation Code Theory (LCT) provides such conceptual tools.

3.2 Legitimation Code Theory

Legitimation Code Theory (LCT) is built on the foundational Critical Realist ontology, described in the previous section. LCT sees knowledge as real (in that it has effects) and that it is socially constructed. As we have seen above Social Realism allows knowledge and its forms and effects to be analysed in their own right. Steeped in social realism, LCT is an explanatory framework used to interpret knowledge practices which “enables knowledge practices to be seen, their organizing principles to be conceptualised, and their effects to be explored” (Maton, 2014a, p. 3). This is desirable as legitimate knowledge practices are controlled by certain actors (teachers for example) and they therefore ascertain ‘the rules of the game’ (Maton, 2014a).

Within each field, actors cooperate and struggle to maximise their relational positions in its hierarchies by striving both to attain more of that which defines achievement and to shape what is defined as achievement to match their own practices. LCT highlights that actors’ practices thereby represent competing claims to legitimacy, whether explicit or tacit (Maton, 2014a, p. 17).

There are several studies that enact LCT to analyse knowledge within various educational settings. These studies often focus on the curriculum, classroom interaction/ instruction and assessment within all levels of education including secondary (Martin & Maton, 2013) vocational training (Shay & Steyn, 2016), higher education from foundation level (Luckett &

Hunma, 2014), to undergraduate (Georgiou, 2016) and postgraduate levels and to research (Hood, 2016). LCT has also been employed in a wide range of disciplinary contexts, from analysing first year undergraduate Physics students' work (Georgiou, 2016), to the teaching of Ballet (Lambrinos, 2019); from student dispositions in Jazz studies (Martin, 2016) to cumulative knowledge building in Law and Political Science pedagogy (Clarence, 2013). What is common throughout these studies is that the overarching aim is to enable the 'rules of the game' to be visible (Maton, 2014a) and by doing so facilitating greater access to success.

As explored in the introduction and literature review chapters, knowledge is central to this thesis. LCT, with its Social Realist position that views knowledge as both real and socially constructed, affords the possibility for knowledge to be analysed as an object in its own right. Maton (2014a, p. 15) is keen to highlight that, "LCT is a practical theory rather than a paradigm, a conceptual toolkit and analytic methodology rather than an '-ism', and sociological rather than philosophical". Consequently, the framework has much to offer the analysis of data in this research.

LCT concepts reveal the 'rules of the game' shaping different arenas of social life, such as education. Such bases of achievement are typically tacit, so actors whose social backgrounds do not equip them with keys to these 'legitimation codes' are disadvantaged. By making the codes visible, LCT enables the rules of the game to be taught and learned or changed, advancing social justice (Legitimation Code Theory 2019a)

Currently, LCT has three actively employed dimensions, Autonomy, Semantics and Specialization. Each dimension can be employed to uncover "different organising principles underlying practices" (Maton & Chen, 2020, p. 38). Which dimension is employed depends on the research problem. Autonomy enables the integration of knowledge practices to be conceptualised (Maton & Howard, 2018). The dimension of Semantics enables knowledge practices to be conceptualised in terms of their context dependence and complexity, providing a 'semantic profile' of knowledge practice (Maton, 2014a). Specialization enables knowledge practices to be explored in terms of "*what* can be legitimately described as knowledge (epistemic relations); and *who* can claim to be a legitimate knower (social relations)" (Maton, 2014a, p. 29). Maton (2014a, p. 19) advises that "in research you only need as much theory as the problem-situation demands." For this reason, this study employs only two of the three LCT dimensions, Semantics and Specialization.

3.3 Semantics

“semantic waves are the pulses of cumulative knowledge-building”

(Maton, 2013, p. 8).

There is a rich body of work that employs Semantics in a range of educational contexts around the world. Semantics was not the first dimension of LCT to be widely enacted, but it has certainly become widely employed in research and, perhaps more importantly from an EAP point of view, in practice. The reason for its popularity is that Semantics enables the visualisation of how knowledge builds over time, whether that ‘time’ refers to the curriculum, a lesson, an assignment, or task. This is important because cumulative knowledge building is central to education (Martin et al., 2020), and particularly central to student success.

The dimension of Semantics “construes social fields of practice as *semantic structures* whose organizing principles are conceptualized as *semantic codes* comprising *semantic gravity* and *semantic density*” (Martin et al 2020, p. 22). *Semantic gravity*

“refers to the degree to which meaning relates to its context. Semantic gravity may be relatively stronger (+) or weaker (-) along a continuum of strengths. The stronger the semantic gravity (SG+), the more meaning is dependent on its context; the weaker the semantic gravity (SG-), the less dependent meaning is on its context” (Maton 2013, p. 11).

Semantic gravity is often seen as movements between the concrete (SG+) and the abstract (SG-), for example in the case of reflective writing, where a student describes the details of a particular event this would be grounded in their concrete experiences and semantic gravity strengthened (SG+). Szenes et al. (2015) revealed how semantic gravity is weakened in reflective writing when the student connects this personal experience with the more abstract theory of reflective cycles, for example Gibb’s. This theory is not set within any particular context, it can be applied across contexts and is thus context independent.

All social practices are characterised by their respective strengths of both semantic gravity and semantic density (Maton, 2014a). Where semantic gravity either gravitates towards context dependence, or levitates to be more independent of the context, semantic density is concerned with complexity. Semantic density is related to

the degree of condensation of meaning within socio-cultural practices Semantic density may be relatively stronger (+) or weaker (-) along a continuum of strengths. The stronger the semantic density (SD+), the more meanings are condensed within practices; the weaker the semantic density (SD-), the less meanings are condensed (Maton 2013, p. 11).

This strength of semantic density “is not intrinsic to a practice but rather relates to the *semantic structure* within which that practice is located” (Martin et al., 2020, p. 22). An often cited example is that of ‘gold’. Gold, to most of us, simply means a metal of relative value that is used to make jewellery. When used within the field of Chemistry, gold exists within a *semantic structure* of greater complexity as it is imbued with connections to atomic weight and number and electron configuration (Maton, 2014a; Martin et al., 2020). Therefore, for example, if discussing the merits of gold, SD is weakened when we talk about disliking gold jewellery because it looks cheap and strengthened when we discuss the merits of gold in the Chemistry classroom where we would make our assessment based on the array of connections within the *semantic structure*.

To achieve cumulative knowledge building weaving or waving between weaker/stronger semantic gravity and stronger/weaker semantic density is necessary. A limited *semantic range* that results in practices being represented as a high flatline (see A in figure 3.1) means that meaning is decontextualized and complex. This may be legitimate practice, as in doctoral writing (Wilmot, 2019), however it is rare that practice would exist solely in this semantic range without needing to gravitate towards context and more simplified meanings at some point. For example, academic texts (whether research articles or student essays) that remain within the abstract and theoretical with significant use of technical vocabulary are dense and inaccessible. Of course, the inverse is also often problematic. A text that remains grounded in context and that utilizes everyday language are overly simplistic and probably fail to engage with literature and theory required to succeed.

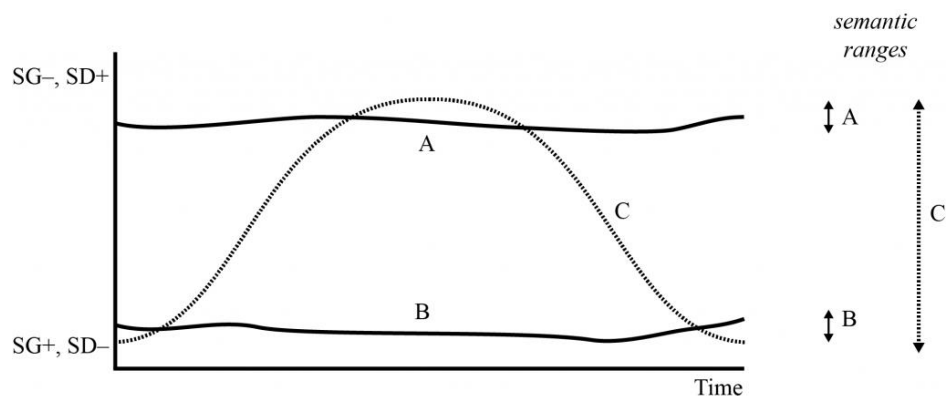


Figure 3.1 Three semantic profiles (Maton, 2013, p.13)

As can be seen from figure 3.1, a semantic profile traces the movement between weaker semantic gravity/ stronger semantic density and stronger semantic gravity/ weaker semantic density. It is important to note that there is no ‘ideal profile’. Profiles can start high or start low, or somewhere in between. Practices may spend more time high than low. Indeed, as students progress through the stages of their education or a given curriculum they will experience a *semantic range* (Maton, 2014b). The time profile can also vary greatly in length, from a paragraph to a whole career.

One issue with the semantic profile is that it suggests that SG and SD have an inverse relationship, where SG is strong, SD must be weak and vice versa. It can be the case that when practices are independent of their contexts they can do so with simplified meanings. Therefore, practices can also be plotted on the semantic plane (figure 3.2).

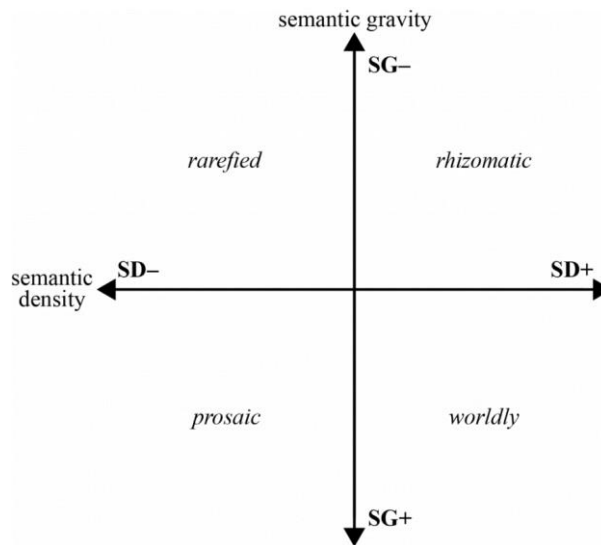


Figure 3.2 *The semantic plane* (Maton, 2014a, p. 131).

The four quadrants of the semantic plane are characterised thus (Maton, 2016, p. 16):

- *rhizomatic codes* (SG-, SD+), where the basis of achievement comprises relatively context-independent and complex stances;
- *prosaic codes* (SG+, SD-), where legitimacy accrues to relatively context-dependent and simpler stances;
- *rarefied codes* (SG-, SD-), where legitimacy is based on relatively context-independent stances that condense fewer meanings: and
- *worldly codes* (SG+, SD+), where legitimacy is accorded to relatively context-dependent stances that condense manifold meanings.

While semantic gravity and semantic density can be plotted on a Cartesian plane (fig. 3.2) much as Specialization codes can be, the relative strength and weakness of semantic gravity and semantic density are often plotted to make a semantic profile, or ‘wave’ (fig. 3.1).

An alternative, and increasingly employed, means of conceiving semantic density is with reference to “‘relationality’: the more relations established with other meanings, the stronger the semantic density” (Maton, 2020, p. 63). Maton and Doran’s (2017a; 2017b) key papers on epistemic-semantic density (epistemic is added to differentiate from axiological semantic density which focuses on issues of affective, aesthetic, ethical, political, or moral stances (Maton, 2014a, p. 153)) focuses on the ‘conceptual shift’ of exploring how combinations of words and clauses come to reveal *epistemic condensation* or the differences in the strengthening of epistemic-semantic density (2017b). This has led to representations, or more

accurately visualisations, of epistemic-semantic density as epistemic condensation through nodes, clusters and constellations rather than as part of a plane or profile (Lambrinos, 2019; Wilmot, 2019; Wilmot, 2020; Rusznyak, 2021). The great power of LCT is the ability to visualise problems/ practices in order to transform them. These developed ways of visualising epistemic condensation have greatly influenced the representation of analysis in this thesis

3.3.1 What Semantics has uncovered in HE practice to date

For almost a decade, LCT scholars have enacted Semantics to uncover legitimate practices within various disciplines, fields and regions, and at all levels within higher education. Consequently, legions of students have been afforded greater access to, and success within, HE. These studies have largely focused on curricula, classroom practice and student work.

Semantics has enabled researchers to gain profound insight into the often hidden practices that are valorised within a given curriculum. Shay (2013) focuses on curriculum differentiation with South African higher education where she developed a semantic plane for curricula which placed within the four quadrants theoretical, practical, professional/vocational, or generic curricula “the quadrants do not demarcate curriculum types, but rather ‘order of meaning’, different logics, and different bases of legitimation” (p. 572). Shay argues that understanding these quadrants and how courses align with them should encourage greater alignment across curricula at all levels which can then afford greater access to and progression within HE.

While Shay (2013) took a broader view of education, many studies attempt to ascertain what makes a particular field special and what success looks like within it. Within the context of Engineering education Wolff and Lockett (2013) explore student knowledge integration within the region of Mechatronics mapping semantic waves as students move between conceptual (theory) and contextual (practical) forms of knowledge when discussing a motion-control problem. Through this analysis Wolff and Lockett (2013) are able to develop a curriculum that makes explicit the relationships between these different knowledge practices and afford the time and space for students to develop this. Shay and Steyn (2016) also use semantics to explore what makes the design curriculum special. Design is a region like engineering which faces “inwards towards disciplines and outwards towards fields of practice” (Shay & Steyn, 2016, p. 140). Shay and Steyn used the semantic plane to illustrate how foundation level design curricula demanded of students increasing levels of knowledge complexity and contextual specificity as students progressed.

Closer to the context of this study, Monbec (2018) enacts semantics to illustrate how an EGAP curriculum may be developed to enable students to transfer knowledge to their future academic contexts. Monbec (2018) states that the EGAP curriculum is often assumed to exhibit weak semantic gravity as the common core of knowledge and skills are deemed transferable to any academic context. Yet, in reality, EGAP students often fail to enact this transfer. Monbec (2018) then illustrates an EGAP curriculum that introduces abstract academic knowledge which is then strengthened when applied in the classroom and finally weakened again as students are tasked with relating the knowledge to their own disciplines through activities like disciplinary specific text analysis. Monbec argues that this wave of context dependence could then be a powerful tool in enabling the fabled transfer of academic skills and knowledge from the EAP to the disciplinary context.

Maton (2014b) also enacts semantics in the Australian context of academic language and learning (ALL) and argues that “the notion of ‘semantic waves’ begins to shed light on transformations in knowledge that enable and constrain academic literacy” (p. A-46). It is important to note, however, that in a field like ALL (much as in EAP), semantic waves, while highly informative of academic practice, will almost certainly differ when applied to different disciplines and levels of study. Kirk (2017) also makes effective use of semantic gravity waves to illustrate how an EAP practitioner can work with a disciplinary subject specialist to unpack valorised knowledge practices in assessments and then develop a shared language, and powerful visual, to use with students in feedback on their work. An approach also employed by Ingold and O’Sullivan (2017) in their work with teaching students about reflective writing. The wave metaphor is becoming increasingly enacted in EAP practice, due in no small part to these two early works providing practical insight into employing semantics with students.

Also working on reflective writing, Szenes et al. (2015, p. 575) enact semantic gravity to analyse two high-achieving assessments in Social Work and Business in order to “examine the knowledge practices associated with what practitioners in higher education judge as successful demonstration of critical thinking”. These examples of student assessments are deemed successful because they weave between degrees of semantic gravity, making full use of the semantic range. A finding that resonates with almost all empirical studies employing semantic gravity.

Oteiza (2020) illustrates the semantic waves of interaction in a history classroom. While Oteiza’s study also enacts an SFL analysis of the discourse used within this interaction, the

wave denotes the movement between historical facts and historical processes necessary for the “transmission of historical memories” (p. 178).

These studies have occurred in a range of educational contexts and locations around the world, but the aim of these studies has been the same, to uncover what success looks like in order to inform and transform pedagogy and curriculum design. In essence these studies highlight, that regardless of disciplinary flavour, valorised knowledge recontextualization occurs when there is a *combination* of upward (weaker semantic gravity and stronger semantic density) and downward (stronger semantic gravity and weaker semantic density) shifts (Maton, 2013). As Maton (2013) observes “a key question for research is: what profiles serves what purposes, for whom, and in which contexts?” (p. 19).

3.3.2 How Semantics will be used to address the research questions.

The studies discussed in the previous section have all supported the notion that employing the full *semantic range* of the *semantic profile* is key to success in a wide range of contexts. This study is concerned with classroom interaction, but not between students and teacher as has been the focus of research by Oteiza (2021) and Matruglio et al. (2013) but between students only.

This research seeks to uncover whether or not ARCs can enable the acquisition of *theory knowledgeability*, this requires participants to deal with abstract concepts in contexts that they are unfamiliar with and relate this to situations they are more familiar with in order to process and assimilate these concepts. Plotting this movement between abstract and more concrete is exactly what semantic gravity was designed to do and therefore makes it an ideal tool to use to provide insight into the research questions.

It will be suggested later in this chapter that *theory knowledgeability* is a threshold concept. According to Meyer and Land (2003) a threshold concept is a concept within a given discipline that, once acquired, ultimately alters the student’s view of the subject matter and may also include an affective element in that there may be a greater change in the individual’s attitudes or values. As such, acquisition requires movement from what is classified within threshold concept work as the pre-liminal to the post liminal state. What occurs betwixt these states is known as the liminal state, in LCT terms we might label this the *semantic gap* (Maton, 2013). This study seeks to uncover the *semantic gravity profile* of the *semantic gap* to see whether it can be bridged.

Semantic gravity alone will not provide the full picture. What potentially makes a threshold concept a threshold concept is that knowledge is ‘troublesome’ (as outlined in more detail later in this chapter). In order for knowledge to become less troublesome, complex connections need to be made. Conceptualising semantic density as epistemic condensation is becoming a more frequent practice in LCT studies as epistemic condensation enables a richer picture of knowledge building to emerge from data. It is for this reason that the semantic profile focuses on semantic gravity alone and the complexity of knowledge building will be explored through epistemic condensation.

3.4 Specialization

The central concern of Specialization is to analyse practices for “*what* can be legitimately described as knowledge (epistemic relations); and *who* can claim to be a legitimate knower (social relations)” (Maton, 2014a, p. 29). Varied strengths of epistemic relations and social relations generate specialization codes. Specialization codes are mapped on the specialization plane (see Figure 3.3 below) with “infinite capacity for gradation” (Maton, 2014a, p. 30).

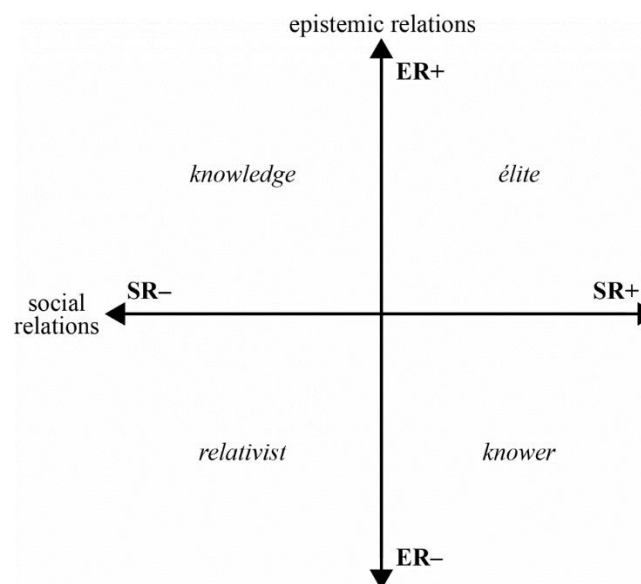


Figure 3.3 *The specialization plane (Maton, 2014a, p. 30)*

The specialization codes are characterised thus (Maton, 2014a, pp. 30-31):

- *knowledge codes* (ER+, SR-), where possession of specialized knowledge of specific objects of study is emphasized as the basis of achievement, and the attributes of actors are downplayed;
- *knower codes* (ER-, SR+), where specialized knowledge and objects are less significant and instead the attributes of actors are emphasized as measures of achievement, whether these are viewed as born (e.g. ‘natural talent’), cultivated (e.g. artistic gaze or ‘taste’) or socially based (e.g. the notions of gendered gaze in feminist standpoint theory);
- *élite code* (ER+, SR+), where legitimacy is based on both possessing specialist knowledge and being the right kind of knower (here, ‘élite’ refers not to social exclusivity but rather possessing *both* legitimate knowledge *and* legitimate dispositions); and
- *relativist code* (ER-, SR-), where legitimacy is determined by neither specialist knowledge nor knower attributes – a kind of ‘anything goes’.

Maton and Chen (2020, p. 39) highlight that what matters for each code is “‘what you know’ (knowledge codes), ‘the kind of knower you are’ (knower codes), both (elite codes), or neither (relativist codes)”. The specific codes considered to be the basis for achievement in a given context may not be explicit or without contention and they do not necessarily remain static (Maton & Chen, 2020).

To provide an example relevant to the context of this thesis; literature suggests that, as a field EAP, is within the knower code quadrant. There are a number of reasons for this, some of which have been explored in chapter 2. Cowley-Haselden & Monbec (2019) found that some EAP practitioners have a troubled relationship with knowledge (in the form of theoretical underpinning of practice). This ‘trouble’ either comes from a top-down direction, where course directors or curriculum writers keep praxis hidden from EAP practitioners employed to enact the curriculum and students studying it, or EAP management do not engage with practitioners who are interested in theory. Or the trouble can come from a more ‘bottom-up’ direction, where practitioners see no place for theory in the classroom or see EAP teaching as a craft rather than an academic endeavour (Cowley-Haselden & Monbec, 2019). Hyland (2006) acknowledges that EAP textbooks and materials are intuition based rather than theory based. Ding & Bruce (2017, p. 151) talk about a ‘dysfunctional relationship’ with knowledge. Indeed the recent fashion to be referred to as ‘EAP practitioners’ is a resounding acknowledgment of the

apotheosis of our *practice* above all else (academic research and engagement with theory for example); further entrenching the theory/practice divide in EAP. These collective voices are fairly convincing evidence that the field of EAP is very much resident in the knower code quadrant, where the knower is valorised time and again over the knowledge that underpins our field.

It is little wonder then that EAP in the classroom would also valorise the knower over knowledge.

3.4.1 What Specialization has uncovered in HE practice to date

Specialization is directly concerned with knowledge and knowers. Specialization was the first of the LCT dimensions to be widely employed in empirical studies. While the dimension has been enacted in various educational contexts and at various levels of education, here we will focus on the studies most relevant to this thesis – namely studies that explore the HE context.

There have been studies that have focused on the curriculum, assessment and student writing in higher education. All highlight the importance of uncovering valorised knowledge and knowers to afford access to, and success within, the higher education context. Summarising some of these studies below illustrates this point.

Chen's (2010) thesis used Specialization to explore Chinese students' experiences on an online course at an Australian university. Chen (2010) explored the curriculum, pedagogy and assessment from both the student experience and teacher conceptions. Chen's (2010) study revealed that students experienced a code clash which led to a host of negative feelings towards their online study, was the result of the invisible knower code inherent in the Australian course.

Clarence (2016) uses Specialization to complement the widely adopted approach to curriculum design that is constructive alignment. Clarence argues that an understanding of whether knowledge or knowers are valorised in particular disciplines "enhances our ability to write, teach and assess aligned and effective curricula" (Clarence, 2016, p. 82). A finding echoed in the work of Lockett and Hunma (2014) who enacted Specialization in their analysis of curriculum design in Humanities and Social Sciences with a particular focus on foundation level courses.

Bosman & Strydom (2021) gain insight into burgeoning pedagogy that is blended learning and its implications for the field of academic development. They employed Specialization in order to gain insight into what they, as course designers, deemed to be legitimate knowledge and who

they considered to be legitimate knowers. Also concerned with academic development, but for doctoral students, Wilmot (2019) employs Specialization to analyse the epistemic relations and social relations of knowledge practices as enacted in doctoral theses. This affords a unique insight into doctoral writing, moving away from the “more common language-focused traditions” of analysing theses (Wilmot, 2019, p. 50).

Clarence and McKenna (2017) explore legitimised knowledge structures within a range of disciplines in order to gain insight into the organising principles of assessment in public management and administration, the curriculum in political science and pedagogy in dental technology. Clarence and McKenna (2017) state this insight into knowledge and knowers in these disciplines increases “the ability of academic literacies development work to make sense of the ways in which the practices of the academy emerge from the nature of specific disciplines” (p. 46). This in many ways echoes the focus on needs analysis in EAP but does so through the lens of LCT.

3.4.2 How Specialization will be used to address the research questions.

The above studies all focus on gaining insight into valorised knowledge structures within a range of disciplines, in order to be better equipped to support students. Given Specialization’s capacity to uncover valorised practices in terms of whether what is known or who knows it is to be foregrounded for success, it is a useful tool for exploring the effect the ARCs have on the participants. The following chapter details the research design. However, it is salient to note here that this study began with interviews with participants to ascertain whether the participants may experience a ‘code clash’ as they took part in this study. The use of learner diaries concurrent with the ARC series enabled a tracking of code shift among the participants. In other words, uncovering how aware participants were of becoming more akin to the valorised postgraduate student in UK higher education. The diaries asked participants to consider their feelings about knowledge and whether they felt any sense of change in their academic behaviour. This thesis also aims to address the question of whether the ARC process can enable participants to traverse the liminal space. As will be explored in more detail below, to traverse the liminal requires change. Specialization is a useful tool to uncover the participants’ relations to the knowledge they acquire when taking part in the ARCs.

3.5 Threshold Concepts and the liminal space

The literature review has highlighted the troublesome nature of academic reading in HE. This notion of troublesomeness is embedded in the work of threshold concepts. There are a few further characteristics that, alongside troublesomeness, define a threshold concept. These include the acquisition of a certain concept being transformative, irreversible and integrative (more details of these characteristics follow below). It is a combination of *some* of these characteristics that enables the identification of a threshold concept versus a core concept within a discipline, or a concept that may be quite complex. While the notion of threshold concepts is not used here to analyse the data, it positions the space in which the ARC discussions took place; that is the liminal space. This section provides a background to the development of threshold concepts and explains how the framework is used to label the space within which this research exists.

The idea of threshold concepts was born out of the ETL (Enhancing Teaching and Learning Environments in Undergraduate Courses) project and first published in 2003 (Meyer & Land, 2003). This report brought together for the first time in print Perkins' (1999) notion of 'troublesome knowledge', Palmer's (2001) liminality, and Meyer's notion of threshold concept. The key figures in the inception of threshold concepts are Meyer and Land, and Davis and Cousin (Flanagan, 2018). Perhaps, in an attempt to reveal the usefulness of the notion of threshold concepts beyond the field of economics from whence it came, the ETL report gives examples of threshold concepts from quite disparate fields, such as physics, literary and cultural studies, and pure mathematics (Meyer & Land, 2003).

The report helpfully distinguishes between a threshold concept and a key or core concept in a given discipline. Meyer and Land (2003) define a core concept as "a conceptual 'building block' that progresses understanding of the subject; it has to be understood but it does not necessarily lead to a qualitatively different view of subject matter" (p. 4). And herein lies the key difference; threshold concepts alter our view, not just of the subject matter, but also "a transformed perspective is likely to involve an affective component – a shift in values, feeling or attitude" (Meyer & Land, 2003, p. 5). In this original foray into threshold concepts, Meyer and Land list four distinct, though very hedged, characteristics of a threshold concept; namely that the concept has the potential to be transformative, irreversible, integrative, and troublesome (in terms of knowledge and language). Threshold concepts are *transformative* in that once acquired students' perceptions of a subject are likely to be forever changed. Meyer

and Land (2003) posit that this transformation is not limited to a view of the subject, it can also involve a transformation of self. As there is an affective element to this transformation, it can, in some instances, result in changes in identity, values or attitudes (Meyer & Land, 2003). Threshold concepts are also likely to be *irreversible*, which means that once acquired, the concept will not be easily unlearned, there is no going back, to do so would require considerable effort (Meyer & Land, 2003; Land, et al. 2008 p. 10). Threshold concepts can also be *integrative* in that they can reveal the interrelatedness of something, and, due to the above, threshold concepts can be inherently *troublesome* (Meyer & Land, 2003; Land et al. 2008). “Depending on discipline and context, knowledge might be troublesome because it is ritualised, inert, conceptually difficult, alien or tacit, because it requires adopting an unfamiliar discourse” (Meyer et al. 2010, p. x).

Work within threshold concepts is not without its critics. Nicola-Richmond et al. (2018) have observed that the prolific identification of troublesome concepts is often at the expense of empirical rigour, arguing that threshold concepts are regularly self-identified without sufficient justification, or with sparse details regarding identification and research methods. O’Donnell (2009) and Salwen (2021) take issue with how ill-defined threshold concepts are. Language used around the characteristics defining a threshold concept for example ‘likely to be’ or ‘may’ “renders the attributes impotent as definitional criteria” (O’Donnell, 2009, p.192). Maton and Doran (2021) also acknowledge that “these concepts focus entirely on ways of knowing. The forms taken by ‘core’ and ‘threshold’ concepts are not part of the picture”, threshold concepts are in other words, knowledge blind (2021, p. 50). Cowley-Haselden (2020a) has also identified the issue of ‘language blindness’ in threshold concepts. Language is mentioned in the first threshold concepts report as ‘troublesome language’ (2003, p. 9), but this is not listed as discrete characteristic. Orsini-Jones (2008; 2010) looks at language, but from the perspective that aspects of language (grammar) are themselves threshold concepts rather than any discourse analysis of how to acquire troublesome knowledge. Thompson and Mitchell (2020) along with Matsuda (2015) acknowledge the need for language analysis within threshold concepts research, but to date this has not been done in practice.

The first threshold concepts report is quite self-critical and aware of potential flaws in the implications of identifying concepts that are potential gate keepers to academic success. For example, the issue of Foucauldian power relations and normalisation of the curriculum (2003, p. 10). In revisiting threshold concepts in 2005, Meyer and Land no longer show such concerns

and to date there has been no consideration of ‘critical’ threshold concepts, in other words no consideration of how threshold concepts could challenge the status quo.

Despite O’Donnell’s (2009) and Salwen’s (2021) criticism that threshold concepts are ill defined, Timmermans and Meyer (2019), do commit to the notion of transformative being non-negotiable. Perhaps then, to identify a threshold concept as such, it must first be transformative and also include other characteristics to varying degrees.

The identification of ‘theory knowledgeability’ as a threshold concept within this thesis is perhaps guilty of the lack of empirical rigour Nicola-Richmond et al. (2018) speak of. However, the current study is not aiming to contribute to the ever-multiplying list of threshold concepts, rather, the aim is to name the troublesomeness of using theory in academic practice and to explore the transformation that occurs when students acquire theory knowledgeability. Although Nicola-Richmond et al.’s (2018) criticism of research rigour within threshold concepts is valid, there have been no attempts to discredit the notion that academic reading and theorising are transformative yet also troublesome for students.

Another criticism of threshold concepts literature is that little work has been done to gain insight into what happens within the liminal space students invariably occupy when trying to acquire said troublesome knowledge/ skills, especially when it comes to analysing discourse within the liminal (Cowley-Haselden 2020a). This study aims to explicitly address the omission of discourse analysis in threshold concepts work to date.

3.5.1 Liminality

Central to this thesis is the idea that as the students acquire a threshold concept, they do so within the liminal space. Key to the notion of a threshold concept, is the space occupied by learners as they endeavour to acquire troublesome knowledge. This is referred to as the liminal space. While much has been written regarding the identification of threshold concepts, the liminal space has received far less attention in the literature (Land et al., 2014).

Meyer et al. (2010) provide a relational view of what characterises a threshold concept in terms of being preliminal, liminal or post-liminal (see figure 3.4). The preliminal state is where a learner would be introduced to a form of knowledge that is troublesome, this would instigate disruption in prior understanding and progression to the liminal state whereby a learner may need to integrate new knowledge and potentially discard previous conceptions (Meyer et al. 2010). Together with the potential need to undergo a shift in ontology and epistemology the

learner reconstitutes a new understanding and as a consequence, is likely to move to the postliminal having crossed the conceptual boundary transformed (Meyer et al., 2010). Of course, acquiring a threshold concept is, in reality, not as neat and linear as this relational view would suggest, Meyer et al., (2010, p. xi) acknowledge that “the acquisition of threshold concepts often involves a degree of recursiveness, and of oscillation, which would need to be layered across this simple diagram”.

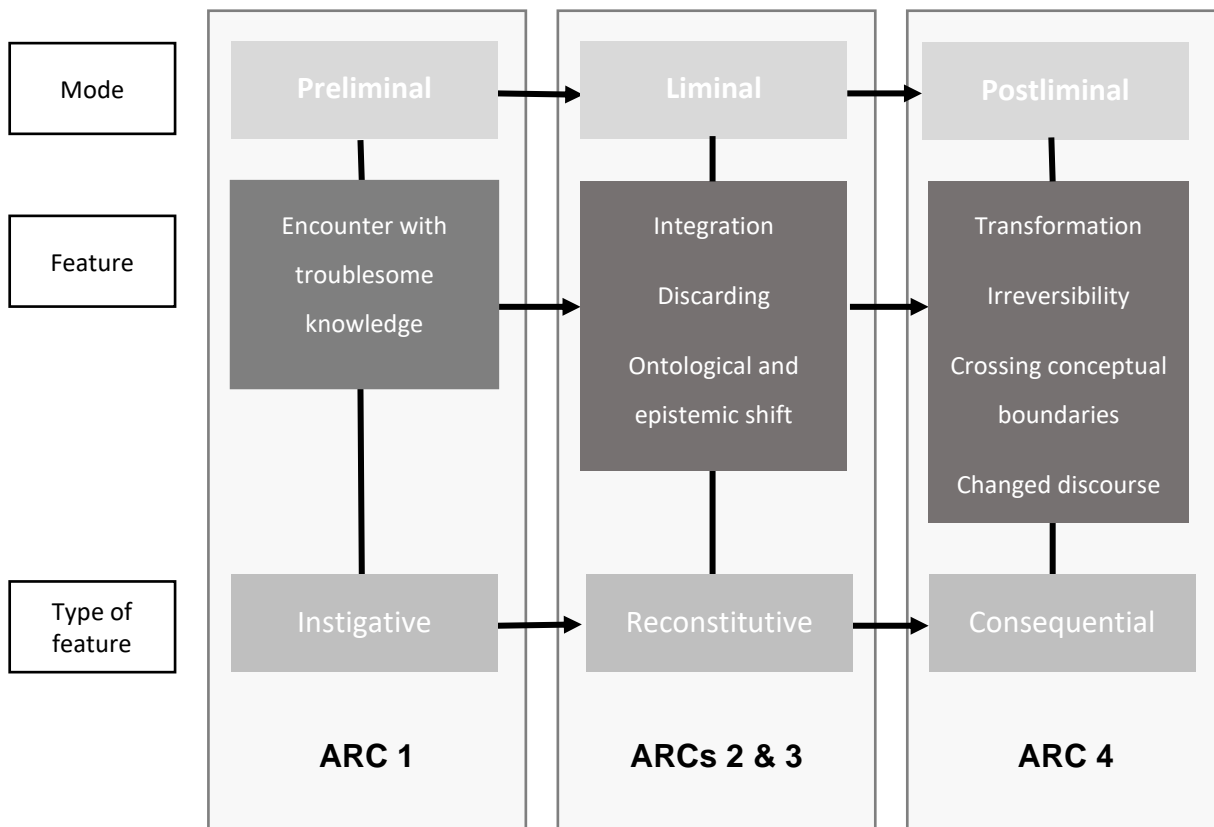


Figure 3.4 Adapted relational view of the features of threshold concepts to incorporate ARCS (Meyer et al., 2010)

As this research explores what happens when pre-sessional students take part in ARCs designed to enable the acquisition of knowledge of and about theory, the 4 ARC discussions could be mapped onto this relational view, with the first ARC as instigative, ARCs 2 and 3 as spaces for reconstitution and the fourth ARC revealing the consequence of the process revealing whether any transformation or border crossing has taken place.

Thompson and Mitchell (2020) map the modes of liminality to Vygotsky’s (1978) ‘Zones of Development’. In their view the pre-liminal is akin to the Zone of Far Development (ZFD), the liminal mapped to the Zone of Proximal Development (ZPD) and the post liminal the Zone of

Actual Development (ZAD). A concern for some EAP practitioners with using authentic academic journal articles in the EAP classroom is that for students who join classes with an IELTS 5.5, this often exposes them to texts that are in the Zone of Far Development. McKenna (2017) however, cites Shanahan and Meyer (2006) “who argue that exposure to such complexity is essential and that well-meaning simplifications of difficult ideas can set a student on the path to ‘ritualised knowledge’ and inhibit the likelihood of crossing the conceptual threshold” (p.463). The texts that the students are exposed to in the ARCs are challenging and most likely in all participants’ ZFD. This thesis will explore whether the ARC process can enable the participants to move from here to the ZAD.

3.5.2 Threshold concepts’ contribution to this thesis

As mentioned in the previous section, the notion of threshold concepts and the associated liminality provide a positioning framework, rather than an analytical one for this thesis. When describing the difficulty experienced within the state of liminality, Meyer et al., (2010, p. x) refer to learning the ‘rules of the game’: “a further complication might be the operation of an ‘underlying game’ which requires the learner to comprehend the often tacit games of enquiry or ways of thinking and practising inherent within specific disciplinary discourses”. LCT allows the rules of the game to be uncovered (Maton, 2014a) and therefore offers the potential to make the liminal state less difficult.

Threshold concepts research has historically concerned itself with disciplines that exhibit stronger classification to use Bernstein’s (1990) terminology (Cowley-Haselden, 2020a), in that from a curriculum perspective these disciplines possess particular methodologies, concepts and theoretical frameworks that are confined within the boundaries of the field (see Meyer & Land, 2006 and Land et al., 2008 for examples). There is however, a ‘new wave’ of research in threshold concepts that concerns itself with concepts of weaker classification, in that these concepts can traverse boundaries across disciplines. The chapters collected in Naming What We Know (Adler-Kassner & Wardle, 2015), and the work of Kiley and Wisker (2009) and Kiley (2009, 2015) for example, concern themselves with more ‘generic’, skills-based concepts, particularly around academic writing (Adler-Kassner & Wardle, 2015) and graduate attributes (Kiley & Wisker 2009; Kiley 2009).

While this shift within threshold concepts literature may seem on the surface to align more naturally with EAP, this new direction seems to relegate subject specific knowledge in the same

way that EAP has tended to. While this might be useful in the context of those who contributed to the recent literature, this is counterintuitive to the purposes of this study. The contributions within Naming What We Know, and the work of Kiley and Wisker also exhibit symptoms of language blindness. Despite naming many features shared within the EAP curriculum as threshold concepts, only one paper within Naming What We Know mentions negotiating language differences in academic writing (Matsuda 2015), but this is merely a statement, there is no language analysis offered here.

Kiley (2009; 2015) and Kiley and Wisker (2009), researching the domain of doctoral study, have identified ‘theory’ as a threshold concept. However, to say theory itself is a threshold concept is a little misleading, as much of what Kiley (2015) and Kiley and Wisker (2009) describe is more akin to theoretical literacy. That is, not knowledge of a prescribed theory in and of itself, but the ability to employ theory to frame research, to inform thought and argument with theory, and ‘theorising findings’ (Kiley, 2015, p. 52). This is a good example of ‘knowledge blindness’; focusing on the process rather than the ‘what’ (Maton, 2014a).

3.5.3 Theory knowledgeability as threshold concept

As illustrated above, the threshold concepts framework establishes certain knowledge and academic practices as troublesome. This is why the framework offers a useful way to identify the notion of theory knowledgeability as troublesome and to identify the space that participants occupy while trying to build knowledge of theory knowledgeability as liminal.

Archer speaks of an agent’s knowledgeability whereby “agents have different degrees of ‘discursive penetration’, ‘practical knowledge’ or ‘unconscious awareness’ of their situations which in turn affect their social practices” (1995: 131). The issue that this study is trying to address, is not that students need theoretical literacy, but that they need *theory knowledgeability*. What is meant by this is that, before students can be literate with theory, they need knowledge of theories first. Students themselves acknowledge the need to develop *theory knowledgeability*, as can be seen from the following extracts from the focus group held with participants from the pilot study. The first extract is a succinct illustration of the participant identifying *theory knowledgeability* as a threshold concept, if not in those terms, certainly identifying the ‘stuckness’ of it.

Cf1 [Pilot 2015]: *I think we don't know what is theory. We can explain in a dictionary way but when we talk about theory use we are stuck*

A second extract reveals the participant's awareness of a common phenomenon within the liminal space, that of mimicry. Kiley and Wisker (2009, p. 432) observe that "while in the liminal state students may mimic the language and behaviours that they perceive are required of them, prior to full understanding." Baker et al. (2019, p. 146) suggest that "the ability to mimic can also help a person to copy appropriate behaviours and then learn the circumstances to which the behaviour can be applied." The mimicry observed by the student below is an acknowledgement of an unawareness of what theory actually is:

Vm2 [Pilot 2015]: *We can repeat what is said and paraphrase but we don't really understand what is theory*

This extract is also an insightful observation of the pilot participants' behaviour during the discussion of the texts. Students often relied heavily on the texts, repeating what was written within it with their gaze firmly fixed on the text to avoid having to speak independently of it. Discursive penetration is limited and there is certainly an awareness of existing in the liminal space. Allowing co-construction of *theoretical knowledgeability* embraced the liminal space and afforded a somewhat luxurious lingering within it.

Of course, this one discussion did not solve the troublesomeness of theoretical knowledgeability. What it did do was to highlight the need to continue to engage with actual theories, as all students agreed talking about theory was helping them understand what theory was and that they felt a little less afraid of encountering a discussion of theory on their impending postgraduate studies:

Cf1 [Pilot 2015]:: *So in the future when tutor asks you to discuss something you won't panic*

The pilot study therefore was pivotal in developing the design of the ARC intervention for the main PhD study and in establishing *theory knowledgeability* as a threshold concept.

3.6 Conclusion

This chapter has sought to provide an introduction of the analytical frameworks that have been selected to analyse the data in the coming chapters. The chapter began with providing the ontological position of this thesis. Knowledge is real and there to be studied, investigated, explored; knowledge is also socially constructed and how we interact with it is important if we want to succeed in a given sphere. This position rationalises the use of LCT in the analysis of the data and in addressing the question of what happens when postgraduate pre-sessional students take part in a series of ARCs designed to build *theory knowledgeability*.

This chapter has also outlined the notion of threshold concepts as a positioning framework and explored the origins of *theory knowledgeability* being labelled a threshold concept based on findings from a small pilot study. A key concern for this research, and of interest to threshold concepts, is whether the ARC process can help students traverse the liminal space.

4.1 Introduction

This thesis is principally concerned with the problem of ‘knowledge blindness’ (Maton, 2014a) in the field of EAP. More specifically, it is concerned with making knowledge visible on an English for General Academic Purposes (EGAP) pre-sessional course for postgraduates. The main concern is that EAP pedagogy is stagnating in its focus on language and skills. Coffin and Donohue (2014) observe that academic behaviour, language and knowledge develop concurrently. If this is the case, then EAP is potentially doing a great disservice to its students by focusing on how to behave academically and develop the language to be used to perform academic tasks without allowing academic knowledge to enter the equation.

The introduction to this thesis provided background information to the origins of EAP, locating the practice within the historical development of ELT. The chapter defined the field and also highlighted the pervasive tension within the field of ESAP vs EGAP that has existed since the inception of EAP and shows little sign of abating. The chapter also provided a background narrative to the problem addressed in this study before outlining the research questions to be addressed in the thesis:

What happens when postgraduate pre-sessional students take part in a series of ARCs designed to build *theory knowledgeability*?

Can the ARC process help students traverse the liminal space?

Chapter 2 situated this study within literature focusing on the problem of knowledge in educational research generally, but also within EAP. The chapter then highlighted how knowledge is occluded in EAP materials development, in particular when focusing on teaching academic reading. The chapter then turned to focus on what kind of knowledge may be legitimate to address in EAP pedagogy for pre-sessional postgraduates, establishing powerful knowledge as central to success. The chapter also highlighted the culture clash that postgraduate pre-sessional students can encounter as legitimate knowledge practices are largely implicit. Finally, the chapter explored the literature around academic reading, emphasising its current status in EAP as adjunct to writing and also as a troublesome practice and suggested that group dialogue based on reading was a way to build knowledge in the EAP context.

Chapter 3 introduced two frameworks that are employed in this study, the analytical framework of LCT and the positioning framework of threshold concepts. The explanatory framework of LCT, with its view of knowledge as *real* and *social*, enables knowledge practices to be seen and therefore analysed. It is not simply that LCT provides the tools to examine knowledge practices, the framework also has a social justice agenda. Knowledge practices are not only uncovered in order to be analysed, but also uncovered to reveal often tacit practices that, given their hidden status, prevent access to legitimate practices and therefore success in a given context. Therefore, LCT is a highly suitable framework for this study's desire to reveal knowledge practices within a pre-sessional context. The chapter presented two dimensions of LCT, Semantics and Specialization. Semantics, with its analysis and visualisation of knowledge practices in terms of context dependence and complexity provide nuanced insight into what happens during the ARC discussions when participants discuss theory, in particular as they scaffold their developing *theory knowledgeability*. Specialization, which enables valorised knowledge practices to be plotted on the specialization plane, enables another visual representation of legitimate practice and reveals how knowledge practices may be impacted by pedagogy and classroom practice. In the realm of this thesis, Specialization, affords an insight into how the participants develop knowledge and knower practices over the course of the ARC series.

The Frameworks chapter then provided insight into how the threshold concepts framework positions this research within the liminal space and whether or not the co-construction of knowledge might enable navigating the liminal to reach a post liminal state. Theory knowledgeability as a threshold concept was introduced and context provided as to its genesis within the pilot study for this PhD.

This chapter now turns to the research design developed to answer the research questions. The chapter will describe the research setting and design, including a discussion of how the pilot study informed the final research design. The chapter then moves to explore the data collected and how this data relates to the theoretical frameworks using the translation devices developed for this study. The chapter ends with considerations of positionality and research quality. First, it is necessary to explain the theoretical position of this research.

4.1.1 Theoretical position

Sealy (2004, p. 184) observes that “since using language is a social practice, accounts of language in use must be informed by sociological insights, including social theory and social scientific research methods”. In accordance with this view, this research is underpinned by social theory and employs a sociology of education framework in analysis of the data.

A researcher must decide whether their research problem warrants a qualitative or quantitative design. With quantitative research there exists an element of control. There is a focus on objectivity and generalizability. The former achieved through the avoidance of values, judgements and opinions, and the latter achieved through a large sample size (Paltridge & Phakiti, 2015). “Qualitative researchers stress the importance of *meaning* and *holistic concerns* rather than discrete variables, statistics and standardization” (Paltridge & Phakiti, 2015, p. 13). It is not the case that one type of research is more valid than the other, indeed, employing a mixed methods approach is increasingly common. Maton and Howard (2016) speak of the methodological divide where quantitative was associated with dated, conservative, positivist scientific methods and often posed in direct contrast to the modern, constructivist qualitative method (citing Moore 2009). Maton and Howard (2016) highlight that the principal influencers of LCT – Bernstein and Bourdieu – both employed a mixed method approach in their work.

Quantitative research within the field of EAP might examine test scores, corpora or language proficiency. Qualitative research in the field might explore learner’s attitudes towards their studies or teacher experiences for example. In the field of applied linguistics (which often has a great deal of influence on the design and analysis of EAP research) qualitative research “typically seeks to make sense of language, language learning or use in context, or a social phenomenon as it occurs in *natural settings* such as social and classroom settings” (Paltridge & Phakiti, 2015, p. 13). However, this thesis is not exploring EAP through the gaze of an applied linguist (I do not and never have identified as one as many EAP researchers may do, probably as I do not have an educational background in applied linguistics). This research has some basis in applied linguistics, but as the objective of this research is to explore knowledge, it sits a little outside the field, but not outside the parameters of qualitative research.

Qualitative approaches are often aligned with inductive reasoning, which Rose et al. (2020, p. 261) define as “the use of a premise as the basis for an investigation for which there is no hypothesized conclusion but rather leads to a non-predetermined probable conclusion.”

Quantitative approaches on the other hand are aligned with deductive reasoning, or “the use of a premise as a hypothesis, testing it to show whether it is true” (Rose, et al., 2020, p. 259). There exists a third type of reasoning referred to as abductive reasoning, which is “the use of an unclear premise based on observations, pursuing theories to try to explain it” (Rose et al., 2020, p. 258). McKinley (2019) states that abductive reasoning is rare in applied linguistics research but concedes that in reality much of what we refer to as inductive reasoning is perhaps more akin to abductive reasoning. It is the case with this research that its genesis was born of observations in the classroom employing ARCs with postgraduate in-session students where students seemed to highly value engaging with academic knowledge in their EAP classes and felt a sense of increased confidence and knowledgeability. It also seemed that they were meeting the academic expectations of their assignments to a greater degree. Of course, this was merely anecdotal based on informal student and lecturer feedback. This thesis is an attempt to empirically rationalise these observations and see if they could be replicated and explained through theory and is therefore an example of abductive reasoning.

4.1.2 Setting

The research site for this study was a UK-based EGAP pre-session course for students preparing to embark on their academic studies in a range of subjects mostly within the social sciences at a post '92 institution (in the UK context a post '92 university, or modern university, is one that was granted university status following a government act in 1992 which removed the need for a royal charter) . The pre-session course had a bespoke curriculum, written in-house with the specific aim of preparing students for studies (in a range of disciplines) at the institution they were studying at. The course paid particular attention to preparing students for the Active Blended Learning (ABL) model employed throughout the university in which students were expected to engage in online learning activities (focusing on short input lectures) before exploring the input in small group teaching situations face to face. The syllabus included many of the ‘common core’ elements of an EGAP syllabus, for example, paraphrasing, synthesis, active reading and listening strategies to name a few. When introduced to academic conventions like citation practice, students were encouraged to discover for themselves which rules they needed to adhere to in their respective disciplines. The course employed two key texts throughout that dealt with feminism and neo-liberalism in an attempt to be in some respects both normative and transformative (Airey, 2016).

As mentioned in the introduction, EAP pre-sessional courses are incredibly high-stakes as success on the course means progression to academic studies. Pre-sessional courses are short and incredibly labour intensive for students where they will be expected to experience around 20 hours of class contact time a week (a commitment dictated by UK visa regulations rather than any sound pedagogical reasoning). Spread across the 6-week course there were a series of ‘off curriculum’ lessons where class content was at the discretion of the class teacher. These off curriculum sessions were utilised by the researcher for this study. This meant that participation in the study did not adversely affect the students’ learning and progress on this high stakes course.

Qualitative research has a number of distinct characteristics, many of which have been employed in this study. Naturalistic settings is one of these characteristics. It was important that the discussions were as representative of the participants’ actual pre-sessional study setting as possible. The reason being that it was not the intention of the research to cause the participants any undue stress or anxiety by feeling like they were in a ‘research setting’. To achieve a naturalistic setting, the discussions took place in the students’ usual timetabled classroom and we used a discussion model that they were already familiar with, centered on discussing authentic academic journal articles as they had been exposed to on their main programme.

4.1.3 Participants

Maxwell (2012, p. 94) highlights two principal considerations for selecting research settings and participants, “first, to identify groups, settings, or individuals that best exhibit the characteristics or phenomena of interest, and second, to select those that are most accessible and conducive to gaining understandings you seek”. The former commonly referred to as ‘purposive sampling’ and the latter, ‘convenience sampling’. Maxwell (2012) argues that neither type of sampling is ‘better’ and defends the status of convenience sampling, highlighting the very real issues of access, costs and time which may result in a researcher employing convenience sampling, does not mean that the research is ‘unrigorous’. The sample used in this study was one of convenience (Dörnyei, 2007) as all postgraduate students enrolled on the pre-sessional course were invited to participate. However, the groups used in this study also exhibited the characteristics of interest to this study. Perhaps the sample was more purposively convenient. While a sample of convenience has benefits of accessibility, there are limitations to generalisability (Dörnyei, 2007). In an attempt to alleviate this limitation, data

collection took place over two summers with two separate student cohorts. While convenient, the sample was also homogenous in that participants had a shared experience (Dörnyei, 2007) and it is hoped that this affords “in-depth analysis to identify common patterns in a group with similar characteristics” (Dörnyei, 2007, p. 127). There was a total of 25 participants in the 2 iterations of the data collection in the summer of 2017 (14) and 2018 (11).

The post '92 institution that was the research site, did not have a significant postgraduate (level 7) cohort on the pre-sessionals (about 1% of the total pre-sessionals cohort), this institution's main international market was the ‘Top-Up’ degree. This is where students (predominantly Chinese) studied up to HND level in their home country and then completed the 3rd year (level 6) at a UK institution to ‘top-up’ to undergraduate degree level. For this reason, the pre-sessionals course materials were aimed at an imagined level 6/2, to accommodate the needs of both groups of students (the course did not have separate UG and PG materials as some pre-sessionals courses do). It should also be noted and is visible in tables 4.1 and 4.2, that the research participants' choice of PGT programme was not necessarily connected to their undergraduate studies. This is not an uncommon situation for international students embarking on PGT studies in the UK. This rather abrupt change in disciplinary direction means that students also lacked foundational knowledge of their future disciplines. This, alongside the short time students have to acclimatise to the UK, makes life very hard.

There was a range of nationalities in 2017; Indian, Bangladeshi, Chinese, Vietnamese, Thai, Cameroonian, and Moroccan. In 2018 there were fewer nationalities, with seven Thais, one Iraqi, one Bangladeshi, and two Chinese students¹. All but 1 (a PhD student) were either going on to study a master's or a pre-master's degree. Participants are referred to in the data by their nationality, gender and a number (depending on how many students were of the same nationality and gender in the class), and year of study. Therefore, Cm4 2017 is one of at least four Chinese males who took part in the 2017 study. In terms of language proficiency, the participants entered the course with an IELTS score of between 5.5 and 6.5 dependent on their level of academic study and were expected to exit the pre-sessionals course with an increase of the equivalent to 0.5 of an IELTS band (though participants were assessed via in-house assessment rather than needing to retake the IELTS exam).

¹ The codes assigned to nationalities are as follows: B = Bangladeshi, Ca = Cameroonian, C = Chinese, I = Indian, Iq = Iraqi, M = Moroccan, T = Thai, V = Vietnamese

During transcription, participants were anonymised and assigned a code purely for differentiation purposes. The data was transcribed verbatim to include errors with grammar and vocabulary. Inaudible utterances were identified in the transcription. The data was then analysed in ‘moves’ rather than turns. A move has been defined by Swales (2004, pp.28-29) as a “discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse”. A turn within a discussion may contain many such units and as such would have been more unwieldy to code.

Participant	Undergraduate academic course [studied prior to studying in UK]	Postgraduate academic course [post pre-sessional]
Bf1	Sociology	MBA (with Placement Year) Institution x ²
Bf2	Sociology	MBA (Pre-Experience Placement Route) Institution x
Caf1	Animal Biology	MSc Environmental management UNIC
Cf1	Mechanical Engineering	MSc Engineering
Cm1	Medicine	MSc Management (Financial Analysis)
Cm2	Electronic Business	MBA
Cm3	Electronic Information Engineering	MSc Engineering
Cm4	Biological Medicine	MBA
Im1	Electrical Engineering	MBA (Pre-Experience Placement Route)
Mf1	Computer Engineering and Law	MBA (Pre-Experience Placement Route) Institution x
Tf1	Accountancy	MBA (with Placement Year)
Tf2	Cosmetic Science	MBA (Pre-Experience Placement Route)
Tm1	Statistics	MBA (with Placement Year)
Vf1	International Law	MBA (with Placement Year)

Table 4.1 UG and PG degree courses for participants of Study 1 – summer 2017

² Institution x is a pathway college, which was connected to the university where this research took place. The students joined the university’s pre-sessional before going on to pre-master’s level programmes. Students on the pre-sessional require the equivalent of IELTS 6.0 to progress on to these courses

Participant	Undergraduate academic course [studied in home country]	Postgraduate academic course [post pre-sessional]
Bf1	Political Science	MBA (Institution x)
Cf1	International Trade	MA International Business Management
Cf2	English Education (MA)	Education (PhD)
Iqm1	Computer Science and Computer Engineering	MSc Computer Engineering
Tf1	Civil Engineering	MBA
Tf2	Industrial and Organisational Psychology	MBA
Tf3	English Language	MA Education
Tf4	Civil Engineering	MBA
Tf5	Accounting	MBA
Tm1	Economics	MBA
Tm2	Telecommunication Engineering	MBA

Table 4.2 UG and PG degree courses for participants of Study 2 – summer 2018

For the purposes of this study students were grouped to ensure a mix of nationalities and genders, as far as was practicable. As the ARC model consists of 6 roles, participants were divided into 2 groups (2 per year). The groupings were made in order to mix nationality, gender and undergraduate discipline as far as possible. In 2017 there were 14 postgraduate students who were willing to participate in the study. Rather than repeat a role, these groups were also assigned an Evaluator role. One group in 2018 also had a member who did not wish to take part in the study in that they did not want to be recorded or have their contributions transcribed, they did take part in the ARC discussions and were assigned roles. The groupings are listed below (see table 4.3).

2017 cohort		2018 cohort	
Group 1	Bf1 Caf1 Cf1 Cm2 Cm4 Tf1 Tf2	Group 1	Bf1 Cf2 Tf3 Tf4 Tm1 Tm2
Group 2	Bf2 Cm1 Cm3 Im1 Mf1 Tm1 Vf1	Group 2	Cf1 Iqm1 Tf1 Tf2 Tf5 Non-participant

Table 4.3 ARC discussion groups

4.1.4 Rationale for research design

As mentioned in the previous section, this research is founded upon abductive reasoning; that is the attempt to explain something already observed. From previous experience employing ARCs in my teaching, I observed that this process enabled a depth of discussion not normally seen on a pre-sessional course. I wanted to explore why this was the case and what exactly was happening within these discussions. The pilot study also highlighted that in fact *theory knowledgeability* was a troublesome form of legitimate knowledge practice and one to attempt to develop through the ARCs. This brought me to the first research question:

What happens when postgraduate pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*?

Developing *theory knowledgeability* requires an element of scaffolding. Given the intensive nature of a pre-sessional it was important that this happen over a period of time, rather than in one session to ensure that participants were not overly burdened. The ARC model as imagined for the main PhD study was therefore used as a basis for a series of discussions. The first to introduce an understanding of what theory is, the second to explore an example of a specific theory that transcends disciplinary boundaries before seeing this theory employed in an academic context that the participants were more familiar with (i.e. that related to their undergraduate studies). Although there are potentially many theories that could have been chosen for this study, the decision was made to employ Semiotics (in particular the Semiotic theories of Peirce and Saussure). This decision was based on the notion that Semiotics is not bound to any one discipline; indeed, it was possible to find articles that employed Semiotics in the hard and soft sciences. This Semiotic theory is also fairly accessible to non-specialists as it is applied to various aspects of society (as well as many disciplines within academia). The final ARC was a revision of the previous three texts. It was hoped that this scaffolded approach might afford the acquisition of *theory knowledgeability*.

The most effective way to investigate what happens within these discussions is to examine the dialogue that takes place. For this reason, the discussions were video recorded and then transcribed to enable the analysis of the discourse. Surveying or interviewing students would simply reproduce their *perceptions* of what happened rather than capturing the data in its raw form. For this reason, discussions needed to be transcribed for later analysis. Of course, capturing participant perceptions *was* important to this study. To enable this, participants were

asked to complete a diary after every discussion to record their perceptions of the knowledge they were acquiring from the ARC discussions and also how they were developing as university students (knowledge/knower building). Participants were also invited to take part in post intervention interviews and voluntary focus groups which took place once the students were on their academic programmes.

As it is often the case that the EAP practitioner is discouraged from, or uneasy with, engaging with subject specific knowledge (as seen in chapters 1 and 2), this research was specifically designed to take the EAP practitioner out of the equation, in order to circumnavigate this debate and validate instead whether or not knowledge building should be a focus of EAP pedagogy (with little interference from the practitioner). That is not to imply that the EAP practitioner is in any way surplus to requirements or that they lack expertise, knowledge or interest to engage in the content. Rather, the purpose here was to explore what students could manage on their own to then consider the implications of this for future EAP practice and what role the EAP practitioner can play (as shall be done in the conclusion).

4.2 Data Collection

Given the range and exploratory nature of the research questions, it was necessary to collect more data than provided by the discussions alone (Figure 4.1). At each stage, permission was obtained, and participants gave informed consent (Appendix 1). While the ARC discussions provided data to explore what happens when pre-sessional students discuss theory, the discussions alone could not provide insight into what impact they have on participants' knowledge practices. It was necessary to capture this impact in terms of students' perceptions of the impact. For this reason, learner diaries (see appendix 2 for learner diary protocols and appendix 6 for a sample of diary entries) were used solely as a data capturing instrument to see how far the participants were aware of acquiring knowledge and changes in knowledge practices.

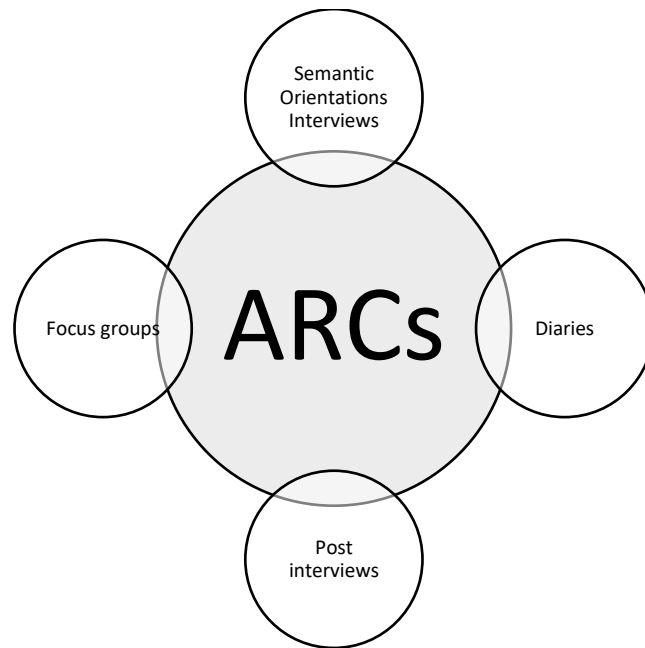


Figure 4.1 sources of data collection

There are many ungrounded and unfair perceptions of international (mostly Chinese) students that still persist in HE (in the UK at least). Lomer and Mittelmeier (2021) provide a critical review of literature focused on pedagogies with international students. They find that the dated perception of international students (in particular Chinese students) as deficient, passive and a drain on the classroom still pervade the literature. I did not want to work on an assumption that participants had come from a heritage educational culture that valorised knowledge reproduction. Instead, I wanted to provide the opportunity for the participants to tell me in their own terms about their heritage educational experience. For this reason, the participants took part in an interview (Appendix 3) to ascertain their semantic orientation; that is insight into their previous educational experiences. I also wanted to gain insight into how successful the experience had been in the participants' eyes and therefore they took part in semi-structured interview (see appendix 4 for protocols and appendix 8 for sample transcriptions) after the ARC process had been completed. As will be explained further below, this was not possible with the second cohort of participants.

Gathering data at various stages afforded greater understanding of the issues explored in this research and hopefully provides a richer picture of what happens when students discuss theory and the impact this has on their knowledge practices.

4.2.1 The ARC design

Although I have, in my previous practice, altered the ARC roles (Cowley-Haselden, 2014), it was important to ensure that the participants were not disadvantaged or overly burdened by taking part in this study. Therefore, the standard ARC roles that the students were accustomed to from their pre-session course were employed in this design. The pre-session made use of an older iteration of the roles from Seburn's original blog post about ARCs (Seburn, 2011). These roles have since been slightly amended in the writing up of the ARC process for publication (Seburn, 2016). The revised version of the roles can be seen in figure 2.2. The roles have remained largely similar, the main difference being that the model now consists of five individual roles as the Summariser role has been removed.

One perhaps glaring omission from the ARC roles, particularly for PG students, is any sort of overt evaluator role. As the 2017 study consisted of 7 participants in each group, the seventh participant was assigned the role of evaluator, where they were tasked with evaluating the text.

ARC - Roles & Responsibilities
Discussion leader
Create discussion questions about unresolved issues from / opinions about aspects of the reading. Determine how you'd like your team to discuss the reading. Manage the discussion – keep track of time and ensure all group members contribute (and no one dominates). Police the use of original words – no one should simply read from the text.
Connector
Think of ways that this reading connects: <ul style="list-style-type: none">• to other readings or lecture topics you've studied• to current news events or historical events and key concepts in the field
Visualiser
Organises information from the reading graphically (e.g. in a picture, a chart, a timeline, a map etc.) to help others understand it in a different way. This can be taken from other sources (if cited) or created originally.
Contextualiser
Research the topic, characters or event that is focussed on in the reading for contextual background information. Who is the author? What do we know about them? Where and when does the reading take place? What events occurred prior to those in the reading that may have contributed to them? What was happening in the world at the time?

Summariser
Summarise the main points of each section in your own words Find supporting points and examples that demonstrate the main points. How does the title relate to the content? What do the subtitles (if any) tell you about each section?
Highlighter
While reading, highlight and know the meanings of the following: <ul style="list-style-type: none"> • Key terms that are meaningful for the main points • Topical vocabulary • Sentences that demonstrate main points Potential quotes for research (noting page #, paragraph # and reason for quoting)

Table 4.4 ARC Roles and Responsibilities as employed on the Pre-sessional course. Adapted from Seburn (2011)

4.2.1.i The ARC texts

The texts for the ARCs were selected by the researcher for the purposes of enabling acquisition of *theory knowledgeability*. The texts themselves have a semantic profile, beginning with a rather abstract exploration of what theory is (SG-/SD+), moving to a paper summarising the two founding fathers' theories of Semiotics (namely de Saussure and Pierce) (SG-/SD+) before offering examples of applied semiotic analysis (SG+/SD-). The final articles were chosen for their relevance to the participants' undergraduate studies (SG-/SD+). These texts explored an element of Semiotics within particular disciplines. Brief summaries of the texts have been provided here to establish the contexts and complexity of each of the texts that participants are working with in each discussion.

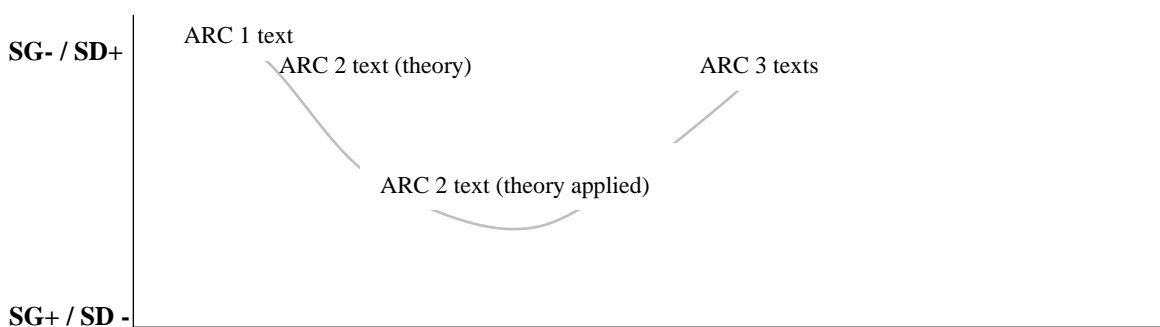


Figure 4.2 Heuristic semantic wave of ARC texts

ARC 1 Text – What is theory? (Stewart et al. 2011).

Stewart et al. (2011) provide a short review of literature addressing how theory has been defined historically, highlighting extant problems with simplistic notions of theory as ‘scientificism’. The aim of this text is to encourage human resource development (HRD) researchers to articulate the paradigm informing their theorising of and research within HRD. This paper serves to lay the foundations for a special issue (of which it is part) focused on theorising HRD. This text was chosen as it provided a short history of theory within the context of an area of business many would encounter on their MBAs, and the text introduced the participants to the concept of theory as “a supposition or system of ideas *intended to explain something*” (OED cited in Stewart et al., 2011, p. 222, emphasis added). Stewart et al. (2011) deconstruct this definition, focusing on the words emphasised in the quote to highlight that a theory is an *explanation*, it offers an account of “how and why things are as they are”, a theory’s *intention* is to explain, (it may in reality not do such a good job) and finally this explanation is of something, suggesting “phenomena separate to and independent of the theory” (2011, p. 222).

ARC 2 Text – Semiotics and Society (Berger, 2014).

Berger (2014) offers a very brief introduction to the work of the founding fathers of Semiotics, Ferdinand de Saussure and Charles Sanders Peirce. The reader learns that semiotics is concerned with the messages encoded within culture and society and decoding these messages requires understanding of/ participation in the societies and institutions that decide the messages. For Saussure there are two elements of a *sign*, the *signifier* (sound image of the sign) and the *signified*, the concepts generated by the signifier. This relationship “is arbitrary and based on convention” and can also be subject to change (Berger, 2014, p. 22). Berger then summarises Peirce’s three categories of signs – *Icons*, which “signify by resemblance, *indexes* signify by cause and effect, and *symbols* signify on the basis of convention” (2014, p. 23). Berger then provides examples of applications of semiotic theory with reference to various aspects of society – people watching, physical appearance, before focusing on examples of published semiotic studies related to culture. This text was chosen as it offered a short introduction to two prominent theories of Semiotics and also provided accessible examples of Semiotics as applied to aspects of social life.

ARC 3 Texts

The text participants read for the third ARC was dependent on their undergraduate discipline. ‘The Semiotics of Learning New Words’ (Nöth, 2014) was selected for those who had studied English Education previously. Nöth (2014, p. 446) uses Peirce’s theory of Semiotics to explore the Meno paradox – “the impossibility of learning what we do not yet know”, arguing that icons, indices and symbols play a fundamental role in the learning of new words. Nöth notes that we cannot learn a new word if we have no knowledge or very vague knowledge of what that word represents. Nöth observes that for a learner to learn a new word they must be familiar with the three correlates of the sign. The sign here is the word to be learnt and is acquired when a learner learns how to pronounce the word (sign), learns what the word represents (object) and learns what it means (interpretant). Many of the other texts selected for this third ARC also employed aspects of the Peircean theory of Semiotics, Broekman (2011) situates his discussion of American Law within the works of Peirce exploring Man as sign, chance and continuity. For those participants who had a background in medicine, Miller and Colloca (2010) refer to the work of Peirce in their exploration of Semiotics and the Placebo effect. Berger (2011) also a Peircean perspective seeing Brands as icons. Berger (2011) explores the notion of ‘the Branded self’ inspired by the perspectives of both Saussure and Peirce and the notion of ‘brand literacy’ is rooted in Saussurean Semiotics (Oswald, 2010). Both of these texts were chosen for participants with a background in Sociology and Cosmetics respectively. Verger (2011) and Hodge et al. (2018) employ Semiotics within their analysis of the discourse of articles relating to The General Agreement on Trade in Services (for the participant who had studied International Trade) and the discourse of political speeches (for a Political Science graduate).

4.2.1.ii Semi-structured interviews – semantic orientation

The ARC discussions were to provide the primary data, and in an effort to increase validity further data was collected in order to triangulate findings. Chronologically, the semantic orientation data was the first data collected. This data was collected before the participants took part in the ARC discussions, (within the first two weeks of the pre-session course) as the aim was gain a greater understanding of the participants’ heritage educational cultures *before* taking part in the ARC discussions.

Mason (2018, p. 111) suggests that one justification for the use of qualitative interviewing is “because your *ontological* position suggest that people’s knowledge, views, ... interpretations, ...perceptions ... are meaningful properties of the social reality that your research questions

are designed to explore”. Also, that the research should have “an epistemological position which allows that a legitimate or meaningful way to generate data on these ontological properties is to talk and interact with people” with the caveat that experiences or understandings “can only be *constructed or reconstructed* in interviews” (ibid). The use of interviews to generate contextual knowledge and as such one way to maximise this opportunity is to focus on specifics and that the research should be “flexible and sensitive to the specific dynamics of each interaction” (Mason, 2018, p. 113). It is for these reasons that this research employs semi-structured interviews.

“Interviews can allow researchers to investigate phenomena that are not directly observable, such as learners’ self-reported perceptions or attitudes” (Mackey & Gass, 2016, p. 225). Semi-structured interviews afford the researcher further flexibility as the interview questions are a guide and the researcher is able to digress or ask further follow up questions in order to go deeper into a particular point (Mackey & Gass, 2016). There is of course the issue of subjective interpretation of the interview data and participants may be influenced by the questions to provide answers they perceive the interviewer wants. The purpose of the semi-structured interviews was to gain insight into the participants’ previous experiences of university education and the questions were written in order to not suggest one education system was better than another (see appendix 3 for protocols). The questions were designed to ascertain where on the Specialization plane the participants’ heritage educational cultures could be positioned to see whether they may experience a code clash in the UK setting and whether a code shift may occur within the duration of the study.

These semi-structured interviews were conducted with the participants individually and therefore it was sufficient to record the audio only. The audio recordings were transcribed, and the transcripts analysed for emergent themes in terms of the relative strengths of epistemic relations and of social relations within the participants’ previous educational experiences. This data was supplementary to other data collected and served to avoid ungrounded assumptions being made as to the participants’ previous experiences university education. As supplementary data, a detailed translation device was not produced, and it is the themes that emerged from the data that are explored in chapter 7.

4.2.1.iii Diaries - Metacognitive affect/ experience diaries:

Another data collection method was the employment of learner diaries. There are many advantages to using diaries, most notably their ability to capture participants’ “thoughts

surrounding events and experiences in their real-world and unprompted context” (Rose, 2019, p. 349). Rose (2019, p. 351) observes that “the purpose of the investigation will dictate when participants will be required to write in their journals”. The purpose of the diaries was to capture the participants’ thoughts on the acquisition of knowledge and any change in their academic behaviour. The participants were asked to record their thoughts in the diary after participation in each of the four ARCs, in a systematic sampling of time (Rose, 2019). The aim being that the analysis of the discussion data was not simply the researcher’s subjective analysis but could also be triangulated with the participants’ perceptions of the discussions, in an attempt to make the findings more robust.

As this research strives to gain insight into developing academic knowledge and behaviour it was important to find some way to see how/ whether the participants had any awareness of this transformation (if indeed any transformation took place). Efklides’ (2006) notion of metacognitive experience appealed as it would encourage participants to be aware of their cognition and also how it affected them. Efklides (2006) defines metacognition as cognition of cognition (citing Flavell, 1979) and affect “represents emotions and other mental states that have the quality of pleasant-unpleasant, such as feelings, mood, motives, or aspects of the self e.g. self-esteem” (p.48). Efklides argues that most studies deal with metacognition and affect as separate entities, her focus is on metacognitive experiences (ME) which are the product of metacognition and affect in combination and central to the learning process. This was in the context of acquiring threshold concepts in Maths, but in LCT terms Efklides essentially argues that to access legitimate knowledge one needs to understand oneself as a knower. I use the term metacognitive affect as Efklides distanced metacognitive experience from metacognitive knowledge. I am interested in whether participants feel that they gain knowledge/ are aware of gaining knowledge, how they are aware of this and how they feel about this. The premise is rooted in threshold concepts’ notion of troublesome knowledge and experiencing the liminal space while acquiring troublesome knowledge. If this space, experienced during the four discussions, is troublesome, the research wanted to try to capture in some way the affect this had on participants.

Cao and Henderson (2021) observe that solicited diaries (that is diaries that are used for the purposes of research) continue to be under-utilised as a research method in higher education, despite their value and versatility. “Diaries range from highly structured to unstructured, and therefore can be aligned with the full gamut of epistemological and theoretical positionings and produce data for both quantitative and qualitative analysis” (Cao & Henderson, 2021, p. 3).

Dörnyei (2007) observes that diaries have been used as a data collection method for a relatively short period of time (since the 1980s in the field of applied linguistics). Oftentimes, diaries are suggested as a research aid to the researcher, rather than a data collection method in its own right. Richards (2003), for example, mentions diaries throughout his monograph on qualitative research in TESOL, but only as a memory aid and reflective tool for the researcher. Mackey and Gass (2005), like Dörnyei (2007), argue that diaries in second language research can provide a rich and unique insight into the learner's perspective otherwise inaccessible to the researcher. Mackey and Gass (2005) also state that there is a flexibility to diary studies not afforded by other research methods in that participants can complete the diary according to their own schedules and "learners are able to record their impressions or perceptions about learning, unconstrained by predetermined areas of interest" (p.177).

If robust methods are followed, diaries and journals can provide researchers with a highly contextualized and individualized account of the research construct. This is because the potential influences of researcher manipulation over the data are minimized – as the researcher is not even present when the data are recorded. (Rose, 2019 p. 349).

As with all research methods, there are certain caveats to using learner diaries as a research instrument. In particular, keeping a diary requires a significant commitment of time on the participant's behalf (Mackey & Gass, 2005). The analysis of diary data, in particular the extrapolation and validation of patterns, can also be complex due to the unstructured nature of diaries (Mackey & Gass, 2005). In addition, Dörnyei (2007) argues that diary entries can be highly variable in length and depth, and that participants can simply forget to update their entries on a regular basis.

It is difficult to alleviate the problem of requiring participants to commit to making regular entries to their diaries in their own time, but it is possible to provide some structure to guide entries so that patterns in the data can be extrapolated and analysed. In spite of these possible pitfalls, learner diaries offer potentially rich insight into the learners' perspective, and as Dörnyei (2007) is keen to note "the multiple benefits of diary studies would warrant in many cases at least an attempt to implement a diary study" (p.159).

4.2.2 Diary use in EAP related research

Despite the benefits, diary studies are not a regular feature of EAP related research. Most commonly, diaries are used to gain an insight into the development of learning strategies (Graham, 2011; Rao & Liu, 2011) and Kuzborska (2015) uses diaries in a UK pre-sessional

context to explore students' reading practices. Burkert (2011) focuses on developing learner autonomy and Soltani (2018) uses diaries to investigate academic socialization, but these play a limited role in the data with only one reference to a diary entry and diaries being analysed along with various other methods such as interviews and observations. Yeung and Li (2018) again use diaries alongside other instruments, to investigate student thoughts on using a language centre at a university in Hong Kong. What is evident from the existing research is that diaries are used in EAP contexts, but they are not used to explore learners' relations to knowledge. Interestingly, diary studies do not seem to be used as a research method in the field of LCT either. Most commonly, data in LCT research takes the form of curriculum documents (Kirk, 2018; Monbec, 2018), classroom interaction (Orteíza, 2020), and student work (Georgiou, 2016; Martin, 2016; Shay & Steyn, 2016). This study is unique in its use of diary data in LCT research, but also it is unique in EAP related research in that diaries are used to explore learners' relations to knowledge.

4.2.2i Post intervention interviews/focus groups

There were two 'post-intervention' data collection methods (see appendix 4 for protocols and appendix 8 for sample data). The post intervention semi-structured interviews were based on a series of questions and the participants' diaries. The aim was to investigate how far the participant may have travelled to the post-liminal and acquired *theory knowledgeability*.

While it was never the intention that this research explore participants' academic writing, it did seem useful to meet with the participants once they were on their postgraduate courses to see whether this intervention had had any impact on their success at university. Though as will be seen this was not a successful method, principally due to the amount of time that had passed between the pre-sessional and the focus group taking place. The second study in 2018 also posed unprecedented logistical constraints as the campus essentially shut down to relocate.

4.2.3 Lessons learnt from the pilot study

A pilot study was conducted in the autumn term of 2015 on a smaller iteration of the summer pre-sessional primarily for January intake onto academic degrees. The purpose of the pilot was to test the research design to better inform the main research design.

In line with Dörnyei's (2007) observation of the limitations of diary studies, the diary entries in this study naturally varied in length and breadth. However, they did yield rich data. In the pilot study diary entries were almost all superficial and focused on describing and evaluating

the individual participant's performance in the discussion. Few diaries were available for analysis as participants were given autonomy in how and where they recorded their entries and as a result few actually kept a diary. Mackey and Gass (2005) suggest that in order to alleviate the potential lack of structure to diary entries, researchers can provide a framework for the diaries (which is seen in the literature, in Kuzborska (2015) for example). Providing structure encourages deeper reflection and more focused entries and facilitates easier analysis (Mackey & Gass, 2005). Dörnyei (2007) also suggests that in order to increase participant motivation to complete the diary, researchers should make the process as convenient as possible. To this end, the participants in the main study (conducted in the summers of 2017 and 2018) were provided with paper diaries by the researcher. The diaries had a label attached to the inside of the front cover to suggest a structure to the entries consisting of five questions (see table 4.5). The questions were designed to foreground knowledge acquisition in the hope that this would enable knowledge to become more visible to the participants.

Diary questions

What have I learnt today?

How did that learning take place?

How do I know I have learnt something?

How do I feel about the knowledge I have learnt?

Has my view of my knowledge / myself / university changed?

Table 4.5 Questions included at the front of learner diaries (2017 & 2018)

On the whole, implementing these changes was successful. Some diaries directly answered the 5 questions after each of the in-class discussions (with either bulleted or numbered responses), some wrote narratives broadly covering the 5 questions. Of the 25 diaries, 21 were eligible for analysis as 1 participant did not return her diary at the end of the study due to absence and 3 were discarded as they were incomplete with very limited entries, writing only 2/3 word answers. This could have been mitigated if there had been periodic checks that the diaries were being completed and in such a manner that the data could be usefully analysed. However, I was very conscious of the fact that the PSE course was very intensive, and I did not want the

participants to feel that they were being unduly monitored or assessed while taking part in this study.

This resulted in 21 diaries that were eligible for analysis for this study. While there was variation in length of entries (a range of 108 words in total to 844 words in total, giving an average of 488 words per diary), this did not necessarily reduce the depth.

Participant code	Total number of words	Participant code	Total number of words
Cf2 2018	352	Bf1 2017	321
Tf3 2018	134 (not analysed)	Caf1 2017	696
Tf4 2018	650	Cf1 2017	620
Tm1 2018	569	Cm2 2017	708
Tm2 2018	437	Cm4 2017	607
Cf1 2018	100 (not analysed)	Tf2 2017	463
Iqm1 2018	520	Tf1 2017	423
Tf1 2018	478	Bf2 2017	149 (not analysed)
Tf2 2018	585	Cm1 2017	332
Tf5 2018	450	Cm3 2017	844
		Im1 2017	358
		Mf1 2017	195
		Tm1 2017	524
		Vf1 2017	108
Average word count	428		397

Table 4.6 Total number of words for each diary

4.2.4 Analysing the data

When transcribing student discussions, it is necessary to follow a set of transcription conventions. There are several transcription conventions that have been developed, however as Hughes (cited in Paltridge and Phakiti, p.286) observes the researcher needs to “decide on the level of detail and the salient features which are necessary to capture in the study in question”. The conventions devised for this study, took as a basis the conventions developed by Mackey and Gass (2005) (see appendix 5 for the full list of conventions). There are well-known issues with transcription, particularly around interpretation. Researchers have a choice of what to include and what not to include. There are also issues around quality of the recording. Speakers may be quiet, the recording quality poor (Bucholtz, 2000). In an attempt to mitigate this the ARC discussions were video recorded, and the discussions transcribed verbatim. Where

utterances were unclear (either due to recording quality or participant participation, location in relation to the camera) they have been identified as such in the transcription.

The discussions were transcribed to be as faithful to the participants as possible. For this reason, grammatical and lexical errors are left unchanged. As the ARC discussions were not transcribed for linguistic analysis, pronunciation was not of interest and therefore there has been no phonemic transcription. There was also no attempt to punctuate the speech. Transcriptions were put through NVivo 12 pro and then began the recursive moves between theory and data that resulted in the development of a translation device which are introduced below.

4.3 Translation devices

4.3.1 Translation device for Specialization

“Whatever the methodology, developing theoretically-appropriate, reliable and valid research tools is a craft requiring judgement, dialogue, and immersion in the object of study” (Maton & Howard, 2016).

The diary content was first coded according to its relative strength and weakness in terms of epistemic relations (ER) (the what) and social relations (SR) (the who). This initial coding of the data revealed that of the four Specialization codes, only knowledge code (ER+/SR-) and knower code (ER-/ SR+) were evident in the data set. Therefore, the translation device (table 4.7) provides data from the diaries as exemplars of how these two codes were present. The diary content was coded according to 4 groups dependent on the relative strengths of epistemic relations (ER) and social relations (SR) within the diary entries, with greater strength or weakness highlighted by + or ++ and – or -- respectively. The first code (ER++, SR--) reveals the strength of the knowledge code, here entries are focused on reproducing content from the texts discussed showing highly strengthened epistemic relations (ER++) and the participant is invisible showing very weak social relations (SR--). The next code group emphasised the knowledge learnt however the content moves across the specialization plane strengthening social relations as the knower becomes more visible (ER+, SR-). The third code grouping sees a shift in foregrounding the knower and their feelings rather than any specific knowledge (ER-, SR+). The fourth and final code grouping sees knowledge become invisible (ER--) and the diary entry foreground the knower’s actions (SR++).

	Knowledge		Knower Code	
	ER++, SR--	ER+, SR-	ER-, SR+	ER--, SR++
Diary content	Reproduces knowledge – knower is absent	Emphasis on what was learnt - specific knowledge and/or academic skills	Emphasis on feelings about knowledge rather than specific aspects of knowledge* Emphasis on change in knower rather than what is known	Emphasis on what was done (description) - knowledge is absent
Examples from data**	<i>This article showed that the cultural psychology has impacted to developing semiotics</i>	<i>I just recognise that semiotics is something like a sign</i> <i>I have learnt that we can earn a knowledge from the discussion</i>	<i>Knowledge is useful for me and I did it better than the past. I feel more knowledgeable more confident</i> <i>I usually ignore the theory of most things due to it I always do experiment or test blindly and gain nothing now I have better understanding the importance of the theory and I will do more reflection for me</i>	<i>I spend small moments of free time to do works of contextualiser [sic]</i>

*not including knowledge about language – for example learning new words. Knowledge is not necessarily ‘correct’ but is participants’ understanding

**all examples from the data are as spoken/ written by the participants so include original language errors.

Table 4.7 Translation device for Specialization analysis of learner diaries

4.3.2 Translation device for Semantics

The translation device detailed below reveals how semantic gravity has been translated to the discussion data and vice versa. There are some studies, discussed in the theoretical frameworks chapter, that while not examining similar data to the study here, have revealed similar knowledge practices. While translation devices are created through dialogue between data and theory and therefore bespoke to a given object of study (Maton, 2014a), it is not necessary to ‘reinvent the wheel’ at all times. Wilmot’s (2019) exploration of knowledge practices in theses also enacted Semantics in the analysis, observing some similar practices to the ones seen in

this discussion data. For example, the use of sources and connections made between them, therefore this translation device borrows some terms from Wilmot's (2019) own translation device. Maton's (2014a) external language devised for the analysis of written responses to a Master's level task for instructional designers is also echoed here, in terms of considerations of reproduction, interpretation and abstraction. Echoes of which are seen in many other analyses of semantic gravity in academic assignments and written work (see for example Kirk, 2017; Wolff, 2013).

As mentioned previously, the data was analysed in moves, which may comprise of a clause, a sentence or several sentences, the distinguishing factor being that the move is relative to particular strength of semantic gravity within the translation device devised for translating between theory and data (see sections below). Once moves were identified in the data through initial manual highlighting, they were then categorised in terms of relative strength of semantic gravity in NVivo.

4.3.2.i Semantic gravity

In order to develop the external language of description for semantic gravity in the data, the transcribed discussions were firstly coded according to the researcher's pre-existing knowledge of semantic gravity as developed through reading various studies enacting this dimension in analysis. The external language was refined through return trips between concept and data.

The extremes of context dependence and therefore semantic gravity within the discussion data are whether moves are grounded within the text under discussion (SG+) or whether the turns extend beyond the context of this one given text (SG-). For example, turns focus only on the information within the text under discussion or they are concerned with information not within the confines of the text. Therefore, the first macro distinction of the data is separated somewhat simplistically between Grounded and Beyond respectively. Following on from this it is possible to refine gradations further into Reproduction, Interpretation and Abstraction. These are explored in more detail below, moving from the most context dependent and therefore strongest forms of semantic gravity (SG+) to the least context dependent and thus weakest form of semantic gravity (SG-) as evident in the data.

The data could be explored in terms of whether the participants in the discussion relied solely on the context of the text under discussion with their contributions dependent on the *reproduction* of ideas from the text. The next level of (weakening) semantic gravity involved the participants relating to the information in the texts through some degree of experiential

interpretation. The weakest forms of semantic gravity that exist in the data and enable the discussion to move beyond the text occur when some level of *abstraction* takes place. This abstraction enabled the participants to move beyond the context of the text and relate ideas and information to other (academic) contexts.

It is possible to visualize these recursive divisions ‘from continuum to categories’ (Maton & Doran, 2017b) in the following way.

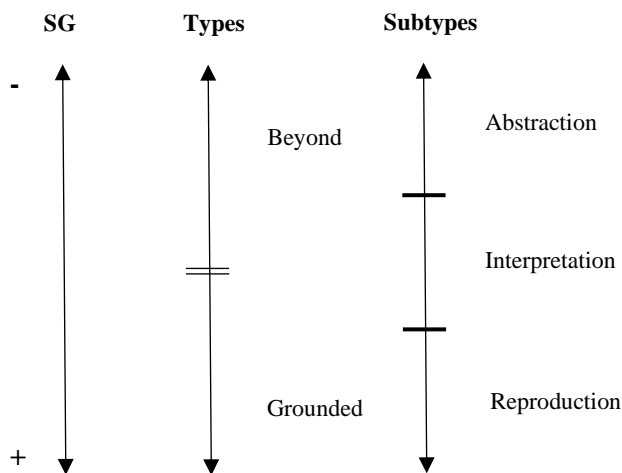


Figure 4.3 Recursive division of semantic gravity from continuum to types and subtypes

The data revealed that it was possible to make one further micro distinction. Reproduction took two forms, either participants quoted from the original text (therefore remaining firmly rooted within the context of the text), or participants summarised the ideas and information from the text largely using their own words to do so, which enabled a slight levitation of semantic gravity as ideas and information were not presented in their original form as presented in the text.

Between the macro-distinctions of Grounded and Beyond, resides interpretation. The interpretation of ideas and information from the texts also took two further forms. Either participants provided examples that they could personally relate to in order to interpret the ideas in the text, or they provided more generalised examples and observations. As these generalised examples focused more on the human experience rather than personal experience, they relate to more contexts and thus have been established within this data analysis as exhibiting weaker semantic gravity than personal examples.

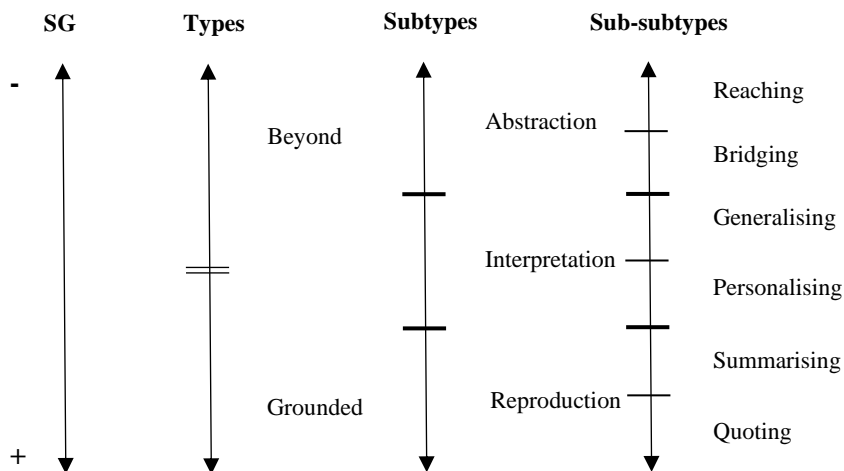


Figure 4.4 Division of semantic gravity continuum into types, subtypes and sub-subtypes

The sub-distinction of abstraction could also be sub-divided once more to one final gradation of data. Abstraction occurs when the participant is able to see connections between the information in the text under discussion (our context) and other texts beyond the assigned reading (other contexts). Bridging weakens semantic gravity by moving beyond the text and making connections between the text under discussion and other texts discussed in previous ARCs. The weakest semantic gravity in this data comes in the form of Reaching beyond the context of the reading discussed and abstracting information across to other, academic, contexts. These divisions and their relations to each other and the discussion data can be seen in table 4.8 below.

4.3.2.ii How semantic gravity is represented in the analysis

Semantic gravity has become somewhat synonymous with its wave formation visualisation via plotting semantic gravity profiles. In EAP the depiction of the wave across a semantic gravity profile is becoming increasingly recognisable, due in no small part to the work of Kirk (2017), and Ingold and O’Sullivan (2017). It is possible to plot semantic gravity alongside semantic density as a semantic profile, but to do so with this study’s data would result in important insights into semantic density being overseen.

Coding of data along the semantic gravity continuum		Examples from data
SG- Beyond the text ↑	Abstraction	Reaching <i>Iqm1 [study 2 group 2 2018]: but I think yeah the theory or theories sometimes you can see that sometimes some theory appear and another disappear that depend on yeah some expert or scientists or researchers maybe search in this field and maybe refute some theory because after get some evidence and examples experience maybe can use this to refute some theory but still a lot of theory still reliable</i>
		Bridging <i>Caf1 [study 1 group 1 2017]: OK before talking about my article I would like to go back to the previous article the first article it was talking about semiotic in general but the second article is talking about the use of semiotic in society my present article is talking about semiotic and placebo</i>
↓ Grounded in text SG+	Interpretation	Generalising <i>Cm1 [study 1 Group 2 2017]: I have another point that semiotics is useful for our life when you met a new people a new person you look at his face his clothes and that is the semiotics you know that people who is maybe is polite people or maybe he don't want to make friends with you maybe they're some you can't it hard to communication with him because the signs in the face or in the clothes or from he or her behaviours we use this in the daily life use more frequently in the daily life I think this is useful</i>
		Personalising <i>Cf2 [study 2 group 1 2018]: for example in my teaching experience ... I will offer some method to them to help them to improve their English levels but sometimes I feel confused because I don't know whether my activities can applied to the student situation or whether it is effective method for them to learn so if I want to solve that problem maybe I can find some theory because the theory often can tell me what a theory is and it can be applied to which kind of situation</i>
	Reproduction	Summarising <i>Tf4 [study 2 group 1 2018]: then I would like to summarise my article structural aesthetics what we see is not always what we expect this article it will state that [inside?] about the semiotic relate with the aesthetic of the building he suggest that the building is responsibility between the architecture and the engineer</i>
		Quoting <i>Bf1 [study 1 group 1 2017]: Yes according to OED dictionary "a supposition or a system of ideas intended to explain something" [quoted from text p.222] this is called theory</i>

Table 4.8 Translation device for semantic gravity

Semantic gravity and semantic density can also be visualised on the semantic plane, and this works to good effect when exploring practices at a curriculum level (as in the work of Shay & Steyn, 2016, p. 145) where the data reveals how levels of the foundation design curriculum progress from naïve to novice, competent and through to master or where curricula can be differentiated between the practical, theoretical or professional (Shay, 2012).

For the purposes of this study, the semantic profile is essentially a graph depicting semantic gravity alone, whereby the x-axis represents the time and the y-axis the degree of semantic gravity. For ease of reading, the sub-divisions of semantic gravity have been produced on the right-hand of the graph and colour coded to correlate with the dot plotted on the graph to represent the particular strength of SG of that participant’s contribution.

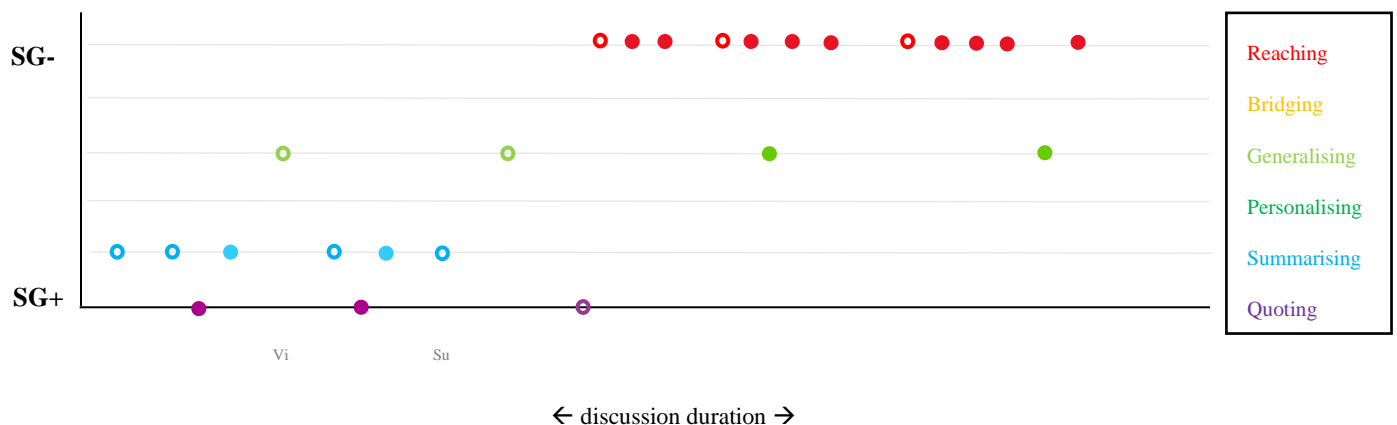


Figure 4.5 Example semantic gravity profile

4.3.2.iii Semantic density conceptualised as epistemic condensation

Following the analysis of semantic gravity within the data the analytical attention turns to semantic density. A separate external language of description has been devised for this analysis (table 4.9).

Semantic density “conceptualizes complexity in terms of the condensation of meanings within practices (symbols, concepts, expressions, gestures, actions, clothing, etc.)” (Maton & Doran, 2017a, p. 49). Where more meanings are condensed within practices, semantic density is stronger (SD+), conversely, where fewer meanings are condensed, semantic density is weaker (SD-) (Maton & Doran, 2017a). Maton and Doran (2017a, p. 49) highlight that “semantic density explores the *relationality* of meanings: the more meanings are related, the stronger the

semantic density”. Semantic density, it could be argued, is concerned with already established relations within a given sphere. To gain insight into how, or if, discussion participants acquire *theory knowledgeability* it is useful to explore how the groups *add* meanings to what they encounter in the texts. *Condensation* is the process of adding meanings to a practice (Maton & Doran, 2017a) and therefore, rather than enacting semantic density, this analysis focuses on *epistemic condensation* (EC).

Epistemic condensation (EC) is addressed in Maton’s (2014a) seminal *Knowledge and Knowers*, but with the work of Maton and Doran (2017a; 2017b) EC is becoming more enacted. Lambrinos (2019) uses EC to exhibit addition of meaning in ballet teaching, Wilmot (2020) with theorising in theses. Through this greater enactment of the concept useful ways of visualising data are being created. Wilmot (2019) for example uses a technique to show how previous ideas are connected or carried forward within PhD theses. It is the visualisations within the work of Lambrinos (2019) however that have the greatest impact on how *epistemic condensation* is represented here. This is because seeing clusters and constellations and how epistemic condensation is higher or lower within best represents the existence of co-construction of knowledge within the discussion data.

Within the ARC discussion data, complexity is quite complex to unpack. This thesis is one of few LCT analyses of student discussion data (and one of few where English is not the dominant language of the students). The semantic profile, which plots SG and SD together, normally suggests that as context dependence is strengthened, complexity is weakened – assuming that when we are more grounded within a context complexity is less evident. This is perhaps easily seen when we use the semantic profile in the ways it has been used in EAP – where context is a personal one and a more concrete experience relying on more every day and concrete language so fewer meanings are condensed. But of course, every problem/situation is different and more often it is the case that complexity and content dependence do not exist in polarised positions. Especially when complexity is enacted through connections and addition of meaning. One reason SD is not explored is for its potential to focus on only complexity within words. EC affords important analysis through clusters and constellations. This is certainly the case with this data. If measuring complexity is an entirely linguistic endeavour, then when the discussion is grounded in the context of the text, complexity is also relatively strong as participants replicate the complexity of language from the text. But complexity is not simply a linguistic endeavour. Complexity is achieved through clusters, constellations and condensation – in other words through *connection*. Condensation affords discourse analysis (Maton & Doran

2017a) whereby LCT has more traditionally focused on educational practices. However, Maton and Doran are keen to point out that EC is not a foray into linguistics, “the categories provide a means of ‘reading’ English discourse for signs of epistemic-semantic density, the basis of categories always remains strengths of epistemic-semantic density rather than attributes of language” (2017a, p. 53).

The regurgitation of complexity from the text is not considered to be an indicator of complexity for this study as it is a simulacrum of complexity, borrowed from another and not necessarily understood. Just because a student may say the word gold in Chemistry classroom does not mean that they are aware of, or indeed mean, the complexity of meanings that word carries with it within the *semantic structure* of Chemistry. As Kiley and Wisker (2009) observed when students do not acquire threshold concepts their practice is a simulacrum of what they think practice should be.

Therefore, this mere reproduction is the weakest form of complexity in this data. Complexity is strengthened through the connections made between contributions and texts. Within SG connections are made via *bridging* and *reaching*. Within EC these connections are connected explicitly with the contributions of others rather than individual observations that exist in isolation. Where SG has been plotted by moves, EC is often a stretch of discussion.

As highlighted in the theoretical frameworks chapter, much work within LCT focuses on curriculum documents, case studies and student work. There is some research that has been conducted that focuses on discourse as used by a range of actors, from councillors in a political debate (Sieborger & Adendorff, 2017) to PhD students in theses (Wilmot, 2020) and English discourse (Maton & Doran 2017a; Maton & Doran 2017b). These studies have been primarily concerned with condensation, either axiological (as in the case of Sieborger & Adendorff) or epistemological (Wilmot, 2020; Maton & Doran, 2017b). With its focus on differences in the strengthening of epistemic-semantic density and the *addition* of meaning, the concept of Epistemological Condensation (EC) enables there to be a focus on ‘processes creating complexity’ rather than ‘states of complexity’ and on ‘knowledge-building’ rather than ‘forms of knowledge’ (Maton & Doran, 2017b, p. 80). This focus on *process* and *building* enables us to ascertain whether or not ARCs afford the building of theory knowledgeability.

Epistemological condensation describes a continuum from lower epistemological condensation (EC-) or less strengthening to higher epistemological condensation (EC+) or more strengthening. We must emphasize: we are focused wholly on addition

of meaning, the difference is how much. Though denoted by a minus sign, even lower epistemological condensation involves addition; ‘EC–’ means ‘adding relatively fewer meanings’. Thus we describe ‘higher/lower’ rather than ‘stronger/weaker’, as the latter might suggest the removal of meanings (p. 80).

Therefore, the ARC data has been analysed using the concept of EC rather than ESD. A key influence on this analysis is the paper written by Maton and Doran which develops the concept of condensation (2017b) through clausing and sequencing. While sequencing enables the exploration of larger stretches of text and how complexity in knowledge is built across it, this is in reference to a larger piece of text that has been carefully crafted (presumably) to be coherent. The data here is concerned with the co-construction of knowledge across group discussions and various actors as it happens spontaneously. The TD for clausing best serves this purpose.

As with semantic gravity, a translation device has been created to illustrate the relations between theory and data in terms of semantic density for this thesis. This translation device is based on the work of Maton and Doran (2017b) and Lambrinos (2019). The visual representations of the subtypes have been influenced by Lambrinos (2019) who developed in her thesis a clear way to represent the levels of epistemic condensation via a series of connected (or not) circles. This method enables a clear illustration of how constellations are created within the discourse.

Unlike formulating the translation device for semantic gravity which began with an investigation into other studies’ enactment, the initial stage for coding EC focused on the key texts by Maton and Doran (2017a; 2017b). The data demonstrated a correlation with the types and subtypes outlined in the second of these seminal works (Maton & Doran, 2017b), it was not necessary however to include the sub-subtypes identified by Maton and Doran (2017b).

“*Augmenting* does not connect words into epistemological constellations but rather adds meanings directly to words themselves. Thus, *augmenting* is less likely to simultaneously add multiple relations to other meanings” (Maton & Doran, 2017b, p. 83). *Augmenting* therefore represents low epistemic condensation as few if any meanings are added within the turn. High epistemic condensation is realised as *connecting* and “is likely to generate higher epistemological condensation because constellations already include a number of meanings” (Maton & Doran, 2017b).

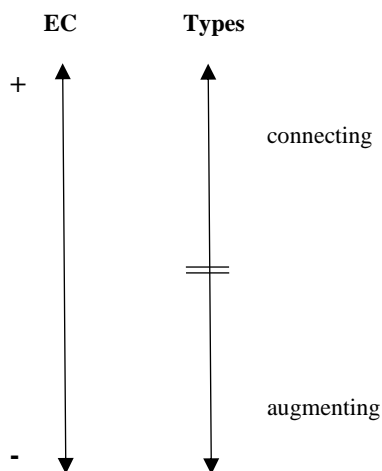


Figure 4.6 Division of EC continuum into types

These two types can then be further divided into subtypes (figure 4.7). Again, it was not necessary to radically change the subtypes as developed by Maton and Doran (2017b). Augmenting has two further subtypes, which are *establishing* and *characterising*. “*Establishing* generates few (if any) relations between a term and others....*Establishing* thereby creates an unconnected node of meaning This node may subsequently become part of a constellation but as yet remains unrelated to other meanings.” (Maton & Doran, 2017b, p.86). This occurs in the data when participants introduce terms and ideas from the text, but the group does not engage further with these contributions. It is also the case that such turns may rely heavily on language from the original text and exhibit little interpretation or comment from the speaker. “*Characterising* generates higher epistemic condensation than *establishing* by attributing properties or actions to terms” (Maton & Doran, 2017b, p. 86). In the ARC data this higher epistemic condensation is construed when participants, either individually, or as a group work to attribute properties to terms and ideas from the texts.

Connecting also has two subtypes, *coordinating* and *taxonomising*. For this study *coordinating* has been changed to *linking* as this is more akin to what occurs in the data. *Linking* connects terms and ideas so that participants start to build a network of meaning, or a constellation of meaning. This is often a group activity and EC is higher as multiple meanings are added by multiple parties as they connect the texts. *Taxonomising* “definitionally connects terms in definite relations of an ordered schema” (Maton & Doran, 2017b). Within the data this is the ultimate connection to be made.

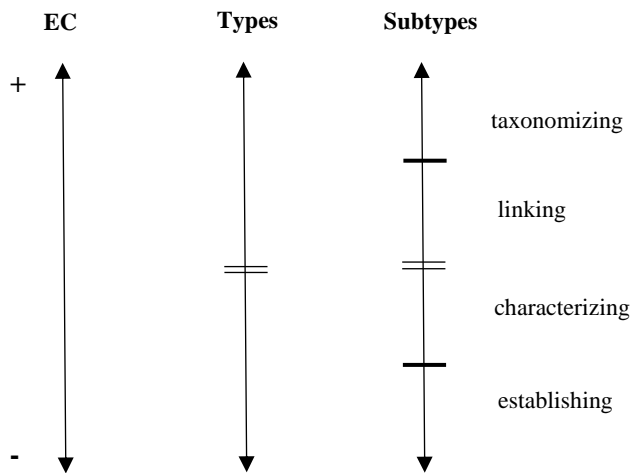



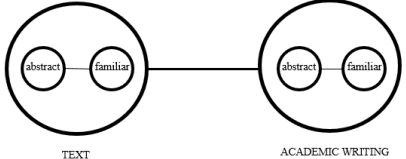
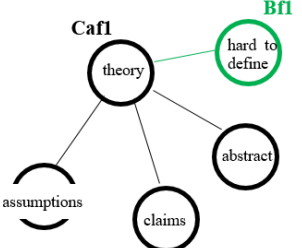
Figure 4.7 *Division of EC types into subtypes*

While it may seem odd to replicate almost exactly the types and subtypes from Maton and Doran (2017b) it is not the case that these divisions arose from a substantive study exploring particular data. It is challenging to be original with the divisions of the semantic gravity continuum as there are so many empirical studies already published that employ very similar types and subtypes, for example, abstract, general, reproducing, interpreting. There are only so many functions that exist within the kind of data most analysed in these cases - academic assignments etc. The contribution here in terms of the EC types and subtypes is perhaps that this data can add further validity to them.

4.3.2.iv How semantic density is represented in the analysis

As mentioned previously, semantic density can be plotted alongside semantic gravity as a semantic profile or on the semantic plane. To trace as a semantic profile, it requires semantic gravity and semantic density to have an inverse relationship, where SD- is low on the profile alongside SD+ and SD+ is high alongside SG-, suggesting that greater complexity comes with reduced context dependence and vice versa. Yet, this is not always the case as Wilmot (2019) demonstrates. Wilmot devised a chain like visual or ‘complexity formalism’ (2019, p. 82) to “better represent and illustrate the incremental process of building complexity over time” and to account for the fact that even when weaker semantic density is exhibited, there may also be an accumulation of meanings associated. The same issue exists in the discussion data analysed for this thesis. A given turn may be rather simplistic, however it is related to previous

participants' contributions and therefore a more complex network of meanings are developed. Conceptualising semantic density as epistemic condensation and representing this as a series of clusters and constellations better exhibits the nuances of detail within the complexity in the data. Table 4.9 details the translation device created for this study and includes how high or low EC has been visualized.

	Description	Examples from data	Visualisation *
EC+ Connecting	<i>Taxonomizing</i> (identifying type/sub-type relations)	Tf2: <i>because semiotics is one type of the theory [ARC 4, group 2, 2018]</i>	Tf2 
	<i>Linking</i> (identifying same/different relations between terms/ ideas/ (con)texts)	Cf1 Ev: <i>I think it is very similar because from the last article the author told me the theory come from the reality and the theory is also can be changed from the reality change so and the sign is also like the theory definition we can see sign come from reality like the apple like the peoples' appearance it all comes from reality and the and we also can change the definition of signs because the reality change [ARC 2, group 1, 2017]</i>	
	<i>characterising</i> (attributing properties to terms/ ideas introduced in texts)	Caf1 high: <i>I have something to add to answer when we talk about theories, theories is assumptions claims so it is theory is based on theory is something abstract built on idea we cannot touch it</i> Bf1 sum: <i>yes there is no specific definition of theory</i> [ARC 1, group 1, 2017]	

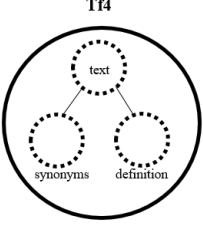
<p>Augmenting EC-</p>	<p><i>Establishing</i> (introducing terms/ ideas from texts)</p>	<p>Tf4 Hi: <i>'the theory is a formal statement of the rule on which a subject of study is based or of idea that suggest to explain a fact or even or more generally an opinion or explanation'</i> [reading from article or notes] according to the author say in this article some of the synonym offer by the ... including 'hypothesis' 'thesis' 'proposition' ... and 'contention' [ARC 1, group 1, 2018]</p>	 <p>The diagram, labeled 'Tf4', consists of a large outer circle. Inside this circle, at the top, is a smaller circle labeled 'text'. Below the 'text' circle are two more smaller circles, one on the left labeled 'synonyms' and one on the right labeled 'definition'. Lines connect the 'text' circle to both the 'synonyms' and 'definition' circles.</p>
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Table 4.9 Translation device for epistemological condensation within ARC discussions

4.4 Research quality

4.4.1 Positionality and ethics

Dörnyei (2007) accepts that one advantage of convenience sampling is that participants may be more willing to take part in the research. This was certainly the case in this study, however, it is important to reflect here on the researcher’s position in this study and account for the role played by the researcher (Paltridge & Phakiti, 2015). The researcher was the course director for the pre-session course, but not teaching on the course. It is conceivable that the participants felt that they could not refuse to take part in the study given that the researcher was in a position of authority. However, when being informed about the research, participants were assured that they could decide not to sign up to take part in the study, but still take part in the activities with their classmates. Only one student refrained from participating in the study and while they took part in the activities they were not videoed, and neither were their contributions transcribed.

This research could have been designed in such a way that there was a control group to compare to the group who experienced the research intervention. This however seemed unethical as it would essentially be denying participants the opportunity to potentially benefit from the research. For this reason, non-participants were welcome to also take part in the ARC discussions.

4.4.2 Research quality

Due diligence was taken with regard to ethics. Ethical approval was sought and granted. Informed consent was gained from each participant and participants were assured that not participating would not cause them any detriment. It should be noted that as the researcher was also the course director of the main pre-sessional, participants may have felt that they could not say no. However, to address this issue of potential coercion, participants were informed that they could withdraw at any time if they felt that involvement in the research would hamper their progress on the pre-sessional and that non-attendance would not be penalised. The ARC intervention designed for the purposes of this study was done with ethical considerations of the impact on students already on a high-stakes and intensive course. Where possible decisions were made within the research design to mitigate any negative impact on participants in terms of time, commitment, or stress.

Qualitative research is, by its very nature, a subjective endeavour where the findings are based on the researcher's interpretation of the data. Therefore, it is often argued that it is essential that the researcher be wary of this fact and venture to ensure that a level of objectivity is present in the research. Maxwell (2012, p.133), however, argues that from a realist perspective, "as observers and interpreters of the world, we are inextricably part of it; there is no way for us to step outside our own experience to obtain some observer-independent account of what it is that we experience." Maxwell (2012, p.133) opines that "there exist ways of assessing accounts that do not depend entirely on features of the account itself, or the methods used to produce it, but in some way relate to those things that the account claims to be about." Instrumental to this view is the need to recognise that validity cannot refer to data itself, only to the inferences drawn from the data (Maxwell, 2012).

Cousins (2009, p.115) although focusing on ethnography explains how triangulation of multiple data sets can substantiate claims. To avoid the potential pitfall that the data sets may incorrectly corroborate claims it is important that an attempt is made to "relate different sorts of data in such a way as to counteract various possible threats to the validity of our analysis ... one should not adopt a naively "optimistic" view that the aggregation of data from different sources will unproblematically add up to produce a more complex picture ... differences between sets or types of data may be just as important and illuminating" (Hammersley & Atkinson 1983, p. 199). Maxwell (2013, p. 128) concurs that any data set is fallible, it is more salient to triangulate with a focus on 'validity threats'.

“The first concern of most qualitative researchers is with the factual accuracy of their account” (Maxwell, 2012, p. 134) and this refers to descriptive validity. The ARC discussions were video recorded and during transcription any uncertainty has been marked. Interpretive validity is a concern for the researcher as interpreting meaning is problematic at the best of times, but more so when participants are expressing meaning through a language that is not their dominant one. The TDs provide transparency as to how the theory and data relate. Of course, this does not eradicate the existence of subjective interpretation, but the interpretation is explicit. The TDs were also discussed with two peers who work extensively with international students in a western setting and who have both employed LCT within their own studies and research.

Another criticism of qualitative research is that it is often not generalisable. However, thick description of data can afford transferability (Mackey & Gass 2005). Thick description should be analytical as it is descriptive and “has to be meaningful for the theorizing in hand” (Cousins, 2009, p. 129).

As already highlighted, LCT advocates the development of an external language, which evolves as researcher is immersed in both theory and data (Maton & Howard, 2016). LCT affords this thick description and a level of validity through utilizing translation devices: “A key task in LCT is ... to establish the empirical realizations of concepts within each specific phenomenon and to make this explicit in the form of a ‘translation device’ that relates concepts to data” (Maton & Chen, 2020, p.41). These devices reveal how the theory is directly related to the data and how the researcher negotiates between both elements. The process of devising the translation device is an iterative one with many return trips between theory and data to arrive at the final iteration of the device. This, along with the explicit application of theory to data, and data to theory, enables the observer to recognise a more objective level of interpretation. The translation devices developed for this research were also verified by two colleagues, both of whom have vast experience working with the LCT dimensions employed here and are independent of this research and the institutions in which it took place. This affords the research a descriptive validity (Maxwell, 2012).

A further factor that contributes to the validity of this research is the consideration of the papers and chapter that have already been published that focus on aspects of this study. All existing publications have been published in different arenas, two journals and one edited book, and have therefore undergone a rigorous peer review process. Cowley-Haselden (2020a) focuses on findings from the pilot study and began to explore how LCT and SFL could be employed

in the analysis of the discussion data (though published in 2020, this chapter was based on a presentation given at the biennial Threshold Concepts conference in 2016). Cowley-Haselden (2020b) concentrates on a Specialization analysis of the diary data and forms much of what is now Chapter 7 of this thesis. Cowley-Haselden (2020c) enacted Semantics in the analysis of the discussion data and helped shape the analysis now present in Chapter 5. The comments made by the reviewers of these publications have greatly informed the subsequent shape of this thesis and the analysis of the data.

4.5 Conclusion

This chapter began by reiterating the ontological and epistemological position of the study and hence the enactment of LCT dimensions in the analysis of the data. Social realism guides the analysis of the data, not only in its influence on the explanatory framework employed in analysis, but also in its view of the data. The chapter has explained that given the exploratory nature of this study a qualitative approach has been adopted. The research setting and participants have been introduced and while there are criticisms of a sample of convenience, there is hope that employing multi-perspectives will afford some degree of generalisability of findings. The design of the ARC series as research intervention has been outlined and the texts chosen summarised to give insight into how they may afford cumulative knowledge building. LCT is an explanatory framework and a practical theory, as such, through the deployment of translation devices, the dialogue between theory and data have been made explicit. The following three chapters now turn to the data. Chapter 5 details the findings of the analysis of the ARC discussions plotting the range of *semantic gravity* on *semantic profiles* for the discussions. Chapter 6 complements Chapter 5 in exploring the discussions for complexity of practices via *epistemic condensation*. Chapter 7 enacts Specialization in the analysis of the diary data and the pre and post intervention interviews.

CHAPTER 5 – SEMANTIC GRAVITY - Context

5.1 Introduction

Chapters 1 and 2 outlined the issues within EAP that this thesis aims to address, namely how knowledge can be incorporated into the EAP classroom. As seen in the discussion of the theoretical frameworks employed in this study in chapter 3, a primary concern of LCT is examining how to build knowledge. Gaining insight into the opportunity for cumulative knowledge building that ARCs may provide is central to this research. As explained in chapter 4, it is for this reason that LCT is a powerful tool for this research. The dimension of Semantics enables knowledge building to be visualised. The primary concern of Semantics is uncovering levels of context dependence and complexity within knowledge practices. As seen in chapter 2 one aspect of becoming a legitimate postgraduate student in UK HE is the need to develop *theory knowledgeability*, a term developed for this study that condenses notions of theorising with the acquisition of understanding of a given theory (Cowley-Haselden, 2020a). This chapter then turns to an empirical analysis of the ARC discussion data to explore the primary research question - what happens when postgraduate pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*? The LCT dimension of Semantics is employed in this chapter, addressing epistemic semantic gravity (and the level of context dependence within the discussions). The following chapter turns to an analysis of the data exploring epistemic condensation (and the level of complexity within the discussions as realised through addition of meaning).

As has already been demonstrated in chapter 3, empirical studies which have enacted the LCT dimension of Semantics have revealed the need to weave between degrees of context dependence and complexity in order to exhibit legitimised knowledge practices in a host of contexts within higher education. It is desirable therefore that within the ARC discussions, the participants in this study weave between relative strengths of semantic gravity and semantic density in order to display cumulative knowledge building.

It is useful to briefly review the key elements of the discussions with reference to data analysis as outlined in more detail in the methodology chapter. There are a total of 16 ARC discussions that have been transcribed for analysis, 4 ARCs per group (4 groups over 2 summers). Each group took part in 4 ARC discussions, the first two required the participants to adhere to the

ARC roles and in the final two discussions the ARC roles were removed (although participants' contributions are clearly influenced by the roles). The discussions have been analysed according to move. Moves have been interpreted as changes in degree of semantic gravity, therefore one participant's turn in the conversation may consist of multiple moves as their contribution weakens or strengthens degrees of semantic gravity within its duration.

As covered in more detail in the frameworks chapter, semantic gravity refers to the degree to which knowledge practices are dependent on the context. In order to clearly illustrate the relationship between analytical framework and data, a translation device was developed. Chapter 4 explains the translation device in greater detail but as a guide a simplified version is reproduced below. To summarise, the degree of context dependence is relative to how far the participants' contributions remain grounded within the context of the text under discussion and how far contributions move beyond the specifics of the text under discussion to be abstracted to other contexts.

SG-	Beyond	Abstraction	Reaching	To other contexts beyond the discussion text
			Bridging	To other texts discussed in other ARCs
		Interpretation	Generalising	General example of ideas in ARC text
			Personalising	Personal example of ideas in ARC text
SG+	Grounded	Reproduction	Summarising	Ideas in text - paraphrase
			Quoting	Ideas from text - verbatim

Table 5.1 Simplified translation device for semantic gravity of ARC discussions

Context and complexity vary according to the problem/situation. For the purposes of the situation under investigation here, context refers to the specific text under discussion. The focus of all ARC discussions analysed here is a text, or latterly texts, details of which are in the methodology chapter. Therefore, the degree to which the discussion is reliant on the context depends on how far the discussion remains focused only on the text (more context dependent) or how far the discussion moves away from the specific details and arguments of the text (less context dependent). It should be repeated that it is not the case that it is more desirable to be

more or less context dependent, rather that movement *between* the two enables greater potential for building knowledge (Maton, 2013).

Some of the ARC roles afford, by their design, greater scope to remain within the context of the text or to move away from the context. The summariser role for example, is tasked with providing an overview of the salient points from the article and is thus obviously more focused on the context of the text. The connector role on the other hand, is expected to offer connections between the text under discussion and other texts that have been the focus of previous discussions. Therefore, this role asks the participant to move outside the realm of the current context of the text. However, as shall be seen in the data, it is not always the case that ‘rules’ of the ARC roles are followed, or at least the potential for semantic range afforded by the role is not realised.

What follows is an illustration of the range of semantic gravity as represented in the data, from the strongest forms to the weakest. Contributions to the discussion that were most reliant on the information within, and therefore context of, the text centred on providing a summary of the text or indeed quoting directly from the text. These contributions exhibited the strongest degree of semantic gravity within the data (SG+).

5.2 Reproduction

The strongest form of semantic gravity represented within the data is that which is *grounded* within the context of the text under discussion and the first subtype is *reproduction*. *Reproduction* has been further divided into *quoting* and *summarising*. Details of how these subtypes are construed in the data are provided in the next sections.

5.2.1 Quoting

Quoting information from the texts reproduces the context of the text and therefore represents the strongest degree of semantic gravity within the data and was fairly limited across the whole quota of 16 discussions. This is perhaps due to the influence of the pre-sessional materials which encouraged students to use quotation sparingly in their work. The use of quotation characterises the strongest degree of semantic gravity in the data as it is a raw reproduction of the context of the text. Quotes were most often provided during the ARCs when defining a concept or offering examples from a text that the participant felt were significant. Defining was used most noticeably to address the titular question of the first article – What is theory? For

example, the dictionary definition of theory quoted in Stewart et al. (2011) was quoted by the Summariser in ARC 1 study 1, group 1 and the Connector in ARC 1 study 1, group 2.

“according to OED dictionary theory is a supposition or a system of ideas intended to explain something” [Stewart et al. 2011 p.222]

The Highlighter in study 2 (group 1) did not quote definitions from the article under discussion, rather they largely quoted chunks from the Wikipedia entry on Semiotics, which they may have considered to be more accessible:

Tm2 (Hi): *OK today I will explain about the meaning of semiotics I have find on Wikipedia [reads information from Wikipedia] so in this term semiotics means the study of meaning making or the study of sign process and meaningful communication semiotics is also include the study of signs and sign process indication, designation analogy and communication it mentions semiotics is can be seen as having important anthropological and sociology dimensions for example the Italian semiotician and novelist yeah*

While this information was not taken from the text, it is still firmly rooted within the context of the text which initially defines Semiotics before providing a synopsis of the ideas of Saussure and Peirce.

The first ARC text was a fairly complex discussion of the philosophy of theory. Stewart et al. (2011) provide a review of literature offering a potted history of the philosophy of theory aiming to encourage Human Resource Management (HRD) scholars to make explicit the paradigms informing their research into the field. To achieve this the authors focus on ‘realist’ versus ‘idealist’ positions. Participants who wanted to address this complex issue within the ARC relied on quoting from the article. Notably this only occurred within one of the ARC groups (group 1, study 1) during the first ARC.

Caf1 (Hi): *So one example because all the positivists accept that everything is true I highlight some examples Okasha (2002) he said that it is written that [reading from p.224 of article]*

one of the examples given by Okasha is water an everyday concept and the formula of H₂O science explains that water is composed of two molecules of hydrogen and one molecule of oxygen it therefore predicts that when molecules of hydrogen and oxygen

are combined in those proportions water will be the result but there is no explicit causal explanation that water being H₂O just is and it is not caused by being H₂O the formula does tell us why or even how adding two molecules of hydrogen to one molecule of oxygen produces water (Stewart et al. 2011, 224)

Within the same ARC discussion group, the Connector also quotes from the article to highlight differing views on theory, (albeit via an incorrect reading of the two authors cited).

Tf1 (Cn): *the author concern with [?] what the idea or concept of theory might mean to HRD but how to frame there are two article that argue about this the first is the Kuhn work “provides many reasons of question like a view of science and ... theory as being the objective ... as being the outcomes of social processes” (p.227) but on the other hand the Shapin example argue the Kuhn work this is like a epistemology is about truth and fact in opposite to the Kuhn work is about opinion and value*

Across the cohorts, the use of quotations was mainly only employed within the first 2 ARC discussions which introduced new and complex ideas to the participants. There was, however, one participant in particular who relied on quoting throughout the ARCs (Bf1 from study 1 group 1).

ARC 2

Bf1 (Cn): *well I read “semiotics teaches us not only about how to find the meaning of signs but also that these meanings are based on society and it codes; society creates meaning in signs and these meanings can change” yes*

ARC 3:

Bf1: *the branding manage “from the semiotic perspective brands are signifiers that we use to help define our self to others” to certain degree lead to “reductionistic” and also we can use “advertising help shape our identity and focus our attention on brands” and in this article they talking about different types of brands like McDonalds Gucci*

What these extracts seem to have in common is that they contribute rather complex ideas and information to the discussions. This is perhaps the reason for relying on quoting from the sources. If participants are unsure that they have truly understood these ideas, it is perhaps safer to use the words of the original.

This reliance on the words of the original text to communicate ideas is overtly grounded within the context of the text and oftentimes the participant adds very little, if any, comment on the quote.

5.2.2 Summarising

Though still reproducing the context of the text, *summarising* affords a slight weakening of semantic gravity as participants are attempting to represent the ideas from the text in their own words and thus moving slightly beyond the exact (verbatim) context of the text. As one of the ARC roles is the Summariser, who is charged with summarising the main points of the article for the group, there are examples from the data of summary in all of the ARC discussions. In early ARCs the summaries occupy the entirety of the Summariser's turn.

Bf1 (Su): *Well thank you [Tf2] today my role as a summariser now I give you a brief information about the article and later we will hear the discussion section we will discuss about the ...[?] [poor paraphrase of p.221] this article is mainly focus on theory and the purpose of the article is briefly examine the origin and the meaning of concept of theory and also this article is also illustrated without determining about the limitations and boundaries we cannot clearly explore any kind of theories theories is the subject and also in relation to theorising human resource development however this article is not concerned with specific development of the theory or HRD which is human resource development another contribution in this special issues deal with former especially Hamlin and Stewart it is mainly focused on the simply to establish the nature and the value of the concept of theory for the definition of theory the article is to go through the OED and this article also explain logical positivism possibilities and meditation of scientific theories scientific revolution and implication of HRD that's it*

In the above extract the Summariser simply provides information from the text and offers no comment on the information and often relies on reproducing phrases and chunks from the text.

Summarising the article is not limited to the role of the Summariser. The Highlighter also often remains within context of the text as in the extract from ARC 1, group 1 study 2:

Tf4 (Hi): *this article is the special issue with ... theory of human resource development this article have to include some conflict idea from the philosophy and sociology of science so I would like to highlight about three word that in this article the first word is human resource development as an area of academic enquiry [reading from article?] and of professional practice it concerned with applying social science to the study of particular phenomenon in human experience secondly the philosophy is the use of reason in understand such thing as the nature of the... and existence and the last one is sociology is the study of relationship between people living in the group especially in individual societies*

The Highlighters often focus on the key vocabulary within the texts as in the above example. What is interesting is the fact that those who are assigned the role of the Highlighter do not highlight sentences from the texts that demonstrate the key points or useful quotes as per the instructions for their role.

In the third ARC participants were assigned individual texts. These texts were related to their undergraduate degree subjects and Semiotics. In this third ARC it was not possible to assign individual ARC roles as the participants were reading different texts. This resulted in participants performing a range of roles across their turns as they told the group about their articles. As a result, all offered a summary of their articles. This will be explored further later in this chapter.

5.3 Interpretation

Interpretation is situated between *grounded* and *beyond* the text as these contributions are *grounded* in individual relations to the text and also has the capacity to move slightly *beyond* the text as interpretations focus on more general experiences. There were two ways that the participants interpreted the information within the text. These were by providing a personal example related to the text or offering more general examples of ideas within the text. Interpretation enables the participants to relate information from the text to more familiar contexts and therefore semantic gravity is weakened as contributions move beyond the context of the text towards contexts the participants are more accustomed to.

5.3.1 Personalising

In the discussion data *personalising* is a much rarer occurrence than *generalising*. Indeed, there are often discussions that do not exhibit any personalising at all. This is perhaps due to the fact that the ARC roles do not specifically require students to relate to the content of the reading in a personal manner. It may also be the case that on the pre-sessional course students are actively dissuaded from being too personal in their academic work. One group spends some time personalising information as they discuss Human Resource Development (HRD). As the extract from ARC 1, Group 2, Study 2 demonstrates. Here Tf1 provides her personal experience comparing relations with colleagues at two jobs she had as the group discuss what HRD is.

Tf1 (Hi): *Excuse me can I share something that do with my experience so I have to work before I came here so the first my first job I am a civil engineering in engineering company and my second job is the I am the advertisers in the marketing company Japanese marketing company and I will tell you about difference very muchly difference about HRD in first company and second company maybe at first company about the engineering so maybe career path or detail of that work everyone is much really focused on activity or something like how we say the trip when they must focus on the company trip [noises of acknowledgment from group but don't know word] this is the part of HRD because everyone have to have a relationship together to make friends in holiday trip but in the engineering company is not have like that everyone have individual work we didn't communicate with each other so that is why I think I cannot live in that company for a long time because of I really want to make friends to everyone but no one want to know each other because of HRD not hard working to do their work and when I move to second work about the advertisers advertising company I think many feel good maybe because of we doing the media work we have to communicate we have to go to the party sometime we have to go to have big client in country we have to party with them or give them a gift or the present something like that I think is gift the employee feel warm I think is very important when you want to decide to work in one company you want to feel like home or feel like oh I want to stay here because of everyone is warm with you something like that*

As the discussions are often focused on Semiotics (with two out of the three texts focused on Semiotics), it is not surprising that most often participants' personal experience is based in their country and the signification of particular signs within their culture.

Tf2 (Su): *But I think for example like the different culture have different meanings like this one [crosses fingers / all: laughter and agreement] everyone knows in UK is like cross fingers is good luck but in Thailand is like lie [amazement] yeah is different culture is different meanings yes... [ARC 2 group 1 2017]*

Also, as the discussions focus on theory and discussions of Semiotics within the context of the participants' previous undergraduate studies a number of attempts to personalise the ideas are based within the context of previous academic studies. Some participants spoke about how they had previously encountered theory on their undergraduate courses:

Cm1 (Su): *Yeah I have an example for my study in my high school studied in my high school study we studied chemistry there is some theory some terms there is some question how could we understand that the first way to understand is by the experiment they tell you the result and then you do the experiment and you see can go to that result you know that theories after that we learn more and we can learn some theory without experiment with our own language knowledge with our background I think [ARC 1 group 2 2017]*

In the second ARC discussion, other participants were able to explain the importance of signs within the subjects they had studied as undergraduates:

Im1 (Cx): *I agree that there are talking about personal life the same like we have we study in science and engineering especially engineering field we been with different kinds of technology different kinds of formulas in there we use different signs for different things for electronic we use the sign for the bulb and something like different that for example for the bulb it has different symbols which means which will give the idea about how is connected a lot of things we are studying in engineering field [ARC 2 group 2 2017]*

5.3.2 Generalising

Providing general examples of ideas in the articles is a much more common occurrence in the data and examples exist across all discussions. Indeed, discussions spend the majority of their time engaged in providing generalised examples in order to reach some understanding of the text.

According to Seburn (2016, p. 40) the aim of the Visualiser role is to help students grasp concepts within a text that may be challenging when expressed in language alone:

readers are left to decipher meaning through text only, which for academic literature may be more confusing than not. Readers can often benefit from graphical representations of concepts because a multi-modal approach to language learning fills in gaps left by one mode, particularly for challenging concepts represented only by language. The Visualiser's focus is here: relating key text concepts to different types of visuals to improve group comprehension of the text.

In order to achieve this the Visualiser may choose to source visuals online, draw their own concept map of the text or indeed produce their own drawing to represent the concepts within the text. In this case it is possible that the Visualiser may simply summarise the text, or move to interpret the ideas in the text. Interestingly, the Visualisers seemed to summarise the concepts in the first article and interpret by way of providing examples for the next two ARCs.

In the second ARC the Connector has the potential to weaken semantic gravity further by *bridging* between the text under discussion and the previous one. However, they do not take this opportunity and instead provide connections to more general experience rather than across texts. Semantic gravity is still weaker as the contributions are interpreting the texts, but semantic gravity is not as weak as it could be. The Connector in group 2 (2017) offers insight into the societal significance of signs in terms of signifying personality and behaviour.

Cm1 (Cn): *I have another point that semiotics is useful for our life when you met a new people a new person you look at his face his clothes and that is the semiotics you know that people who is maybe is polite people or maybe he don't want to make friends with you maybe they're some you can't it hard to communication with him because the signs in the face or in the clothes or from he or her behaviours we use this in the daily life use*

more frequently in the daily life I think this is useful [ARC 2 – study 1 group 2]

The Connector in the second ARC for group 2 (2018) relates the ideas from the text to the historical existence of signs.

Iqm1 (Cn): *here we can for example the language one of this semiotic to connect the idea about speaking then to connect with historical stories in my country here [shows group his phone] in [?] in Iraq put some like design some stone to use the semiotic language by use some theme or character like language to put some rules in this time and connect with nowadays we can find everywhere and every or many examples to explain [ARC 2 study 2 group 2]*

Asking participants for examples from their experiences and cultures is also a common discussion question and oftentimes stretches of generalisation across a discussion are initiated by a question to the group.

5.4 Abstraction

Bridging and *reaching* involved moving *beyond* the context of the text under discussion and therefore these two activities exhibit the weakest degree of semantic gravity in the data. The ARC role of the Connector explicitly requires connections to be made between texts. However, as ARCs 1 and 2 saw the least amount of *bridging*, this was clearly not realised in the role. Arguably, tasked with looking at context of the citations in the text, the Contextualiser role could also encourage some degree of *bridging* as the Contextualiser could connect the main article with the work it cites. However, due to the influence of the pre-sessional course materials, Contextualisers in this study focused on information about the authors of the articles and what this information revealed about their authority and reliability (explored in more detail further in this chapter as this is considered more of an axiological than epistemological practice).

5.4.1 Bridging

Bridging involves making connections between the text under discussion and previous articles discussed. Due to the intensity of the pre-sessional students were not expected to do extra

research for this role for the first ARC. This obviously resulted in almost no *bridging* occurring in the first ARC discussion. The one exception came from a Connector in the second study who researched the topic of theory and found an article that provided an example of a theory. As the first ARC only looked at one text and was the first in a series designed to build knowledge, not surprisingly there were limited examples of moving from the context of the text to relate this to the context of another.

Tm2 (Cn): *in my research from yesterday I found some good story to talk about you like a theory and practice about cyber bullying do you know cyber bullying is cyber bullying is some people are don't know others but they always blame when they found people did something wrong yeah in the social network or social medias like when you found something wrong in the Facebook but you don't know them and then you blame them a lot yeah many people do that in this present world and this theory talk about how to stop the cyber bullying in the present world by use the Barlett and Gentile theory yes and they said in that result of they can reduce some blame on people in the social media [ARC 1, Group 1 2018]*

Here the Connector found an example of how a theory can be applied to a real world problem.

In the second ARC there was potential for the groups to connect the first article, what is theory, with the second, an example of (Semiotic) theory applied to the real world.

Some examples of *bridging* are a result of the Discussion Leader highlighting that this was possible within the discussion

Cm4 (DL): *ok after discussing the [?.] the theory last week today we continue to discuss the relevant article semiotics and society which written by author Arthur Berger*

Or the Discussion Leader directly asking the group for connections to be made between the two weeks' articles. The exchange below is initiated by the discussion leader. Interestingly neither the Connector nor the Contextualiser contribute to the joint Bridging below in any significant way.

Cm4 (DL): *yes OK I want to ask you what do you think of this article is it related to the first article last week*

- Cm2 (Cx):** *related to first article [All: what is theory]*
- Caf1 (Vi):** *yes maybe theory...*
- Tf2 (Su):** *...because semiotics is a theory...*
- Caf1 (Vi):** *...a concept...*
- Cm4 (DL):** *I think is as a example help us understand what's theory is and how it means*
- Cf1 (Ev):** *I think it is very similar because from the last article the author told me the theory come from the reality and the theory is also can be changed from the reality change so and the sign is also like the theory definition we can see sign come from reality like the apple like the peoples' appearance it all comes from reality and the and we also can change the definition of signs because the reality change*
- Cm4 (DL):** *So this article as a specific example for the last article*
- Cf1 (Ev):** *...yeah ...*

These examples from the data are the only examples of *bridging* across the 4 groups and their first 2 ARC discussions where participants were assigned roles that specifically required *bridging* of them. There are perhaps two main reasons to account for this lack of *bridging*. Firstly, the influence of the pre-sessional course materials limiting the Contextualiser taking on this role. Secondly, the challenging content of the articles making seeing connections difficult for those who fulfilled the Connector role.

ARC 3

Caf1: *OK before talking about my article I would like to go back to the previous article the first article it was talking about semiotic in general but the second article is talking about the use of semiotic in society my present article is talking about semiotic and placebo*

For the final ARC, participants were only asked to reread/ review the 3 articles they had previously discussed. Again, this discussion was free from any prescribed ARC roles, thus lessening the preparation burden. These decisions were made in part in line with the research design and aims, but also in part to limit the imposition of the research on the participants'

increasingly stressful end of pre-sessional experience, but more so to afford the groups time and space to actively try to see the connections – to Bridge between the texts. It is perhaps no surprise then that the greatest degree of sustained *bridging* occurs across all groups in this final discussion. Having read a text that discusses what theory is, a text that introduces two approaches Semiotic theory and then an example of how these theories are employed in the context of the participants' undergraduate studies, participants now have a series of articles that are related to use in the move away from specific contexts of particular texts, to make connections across these contexts. The following excerpts from the ARC 4 data reveal how participants manage these connections.

Tf2: *and like it's related to the HRD like to study of a particular phenomena in human experience [Cm2: yeah] so that point I think is related to semiotics because the semiotic is create by the society this is related to the human experience [group 1, study 1]*

Caf1: *yeah my article of course my article talking about semiotic and placebo the last time I explain the meaning of placebo which is the non-specific effect of medicine so when they say non-specific is something that is conceptual we cannot see when something is conceptual it is based on theory in this article the author in the conclusion he said if we develop if we try to connect semiotic in medicine in can really it will have if we try to put semiotic and conventional treatment together maybe it will give some more positive effect in medicine [group 1, study 1]*

Cm3: *The first article is talk about the theory and the is talk about semiotics theory is like philosophy how you define the semiotic what is the theory of the semiotics so is abstract the second one is talk about semiotic and society the connection so is very useful for society so how can we organise semiotics in society the third article is talk about our major so you can more specific and make an example in our life is easy to understand [group 2, study 1]*

5.4.2 Reaching

Reaching exhibits the weakest form of semantic gravity in this data. *Reaching* occurs when the participants are able to relate the information from the text to another (academic) context or to talk about the topics of the articles in more abstract terms, as their own entities extracted from the confines of the original text. In other words, theory and semiotics beyond the confines of HRD, positivism and idealism, teeth and placebos.

- Cf1 (Vi):** *Ok highlighter explain the what is theory and so I find some two pictures which about the relationship between theory and reality the first picture briefly shows the relationship reality triggers theory formation and the exploratory research to produce a theory and then the theory need to be validated and do some empirical research in order to understand more easily I find the second picture to better explain the relationship between theory and reality the in this picture the reality is replaced by observation people observation the natural phenomenon to create the theory [ARC 1, study 1, group 1]*
- Caf1 (Hi):** *I have something to add to answer when we talk about theories, theories is assumptions claims so it is theory is based on theory is something abstract built on idea we cannot touch it [ARC 1, study 1, group 1]*
- Tf3:** *I think the way to produce the theory is very difficult but the way to learn the result of the theory is very easy and useful for our subjects and theory can be also developed by different actions because with time goes by with technology or the society development more people will take a more actions and they will add something new to the theory with a times maybe the theory can change a little bit according to society according to the demands of society and I think everything should be developed and so that the theory's not outdated many people don't want to focus on the theory they will think the theory is too old we just live in new age why do we follow the old rules but actually when I just check some*

articles about my field I think maybe because my research field is social science field so sometimes the theories not so change so fast sometimes we still use the theory maybe created in 1930s or 1970s but it can still it still work even in today's society [ARC 4, group 1, study 2]

Bf1 (Cn): *well I mean the semiotics or not only teaches us about how to find the meaning of signs but also these meanings are based on society and it's cause [?] simply creates meanings in signs and this meanings can change [ARC 2, Group 1, Study1]*

5.5 Summary so far

Despite the potential within in the ARC role specifications to vary degrees of semantic gravity in the first two ARCs (indeed roles like Connector required it), the majority of the roles maintained a fairly strong degree of semantic gravity, relying on reproducing the ideas from the texts. The Discussion Leader is one exception, here, dependent on the discussion questions asked, the Discussion Leader was responsible for levitating gravity. Weaker semantic gravity is often more evident when the ARC roles were removed. In order to look more closely at these patterns emerging from the data, the rest of this chapter is dedicated to plotting the semantic gravity profiles of the ARC discussions.

5.6 Plotting semantic profiles

The above has outlined how gravitation (SG↓) or levitation (SG↑) of semantic gravity exists in the data. To explore how knowledge is built, or not, over the course of a discussion the movement between these degrees of SG can be plotted on a semantic profile. For reasons hopefully clarified later, the semantic profiles here trace only the movement of semantic gravity.

As explained in more detail in the methodology chapter, the ARCs used for this study began when participants were already familiar with the format having taken part in ARCs on their pre-sessional course. The semantic profiles below are plotted according to moves in the data that exhibit the range of semantic gravity from reproduction to abstraction. The circles and dots on the profile are colour coded to the specific degree of semantic gravity according to the

translation device. Complete dots represent contributions offered by the participants, and the circles represent a contribution that was requested by another participant (most often the Discussion Leader).

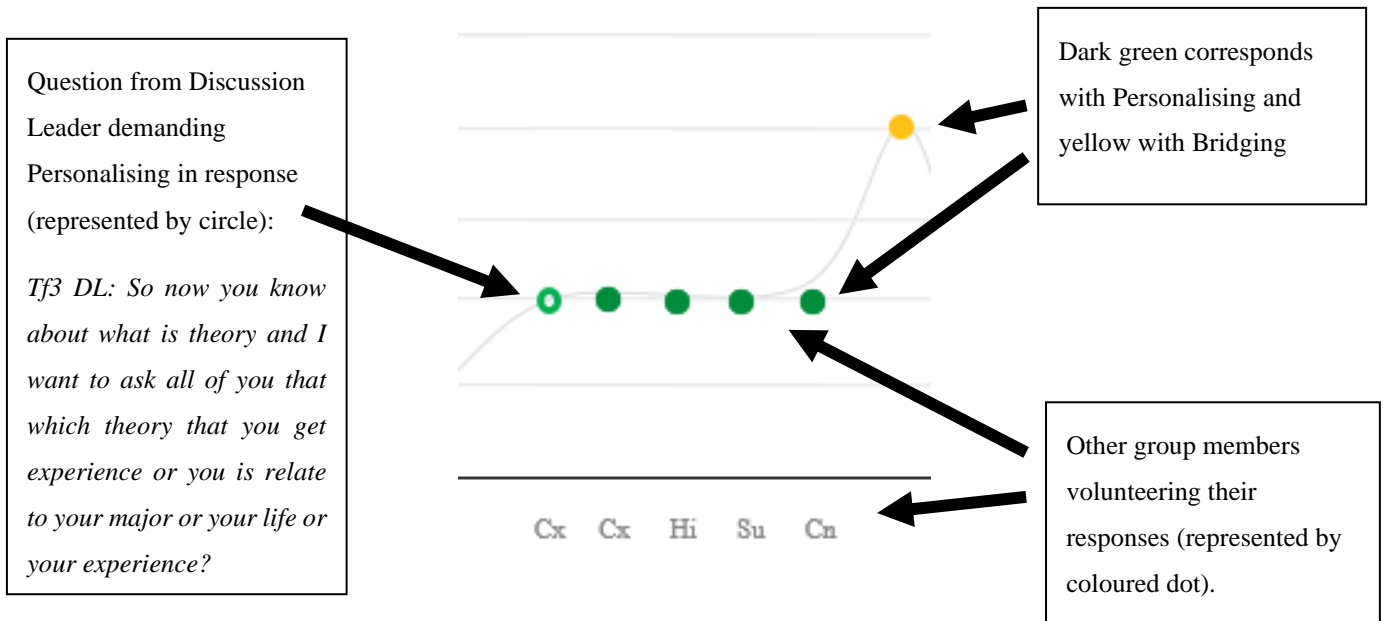


Figure 5.1 Explanation of semantic gravity profile figures

As ARC roles were employed in this initial ARC the roles assigned to participants are listed on the profile. These profiles do not include all contributions within the discussion. The contributions included in the profiles below are directly concerned with being grounded within the context of the text or moving beyond the context. In order to best visualise patterns in the data the ARCs are analysed in turn, across all four groups.

ARC 1

There are some interesting patterns that emerge across the four groups during their first discussions. These first ARCs are almost divided into two parts. With a more rigid turn taking during the first half and more spontaneous discussion in the latter half. This is inline with the approach taken by Seburn (2016) and is also partly the influence of the way ARCs were adopted and taught on the main PSE programme. The first three profiles below (figures, 5.2, 5.3 and 5.4) begin with requested contributions. These are requested by the Discussion Leader who asks for particular roles to contribute their findings to the discussion.

Tf2 (DL): *Good morning everyone and today we will discuss about the topic what is theory from the paper that we already read and shall we start with the*

contextualiser to give us a background of this article [ARC 1, Group 1, Study 1]

Cm3 (DL): *Next one is summariser can you give your summary [ARC 1, Group 2, Study 1]*

Tf3 (DL): *OK I want to show this word [points to word on a card] theory and I want the highlighter to explain what is the theory [ARC 1, Group 1, Study 2]*

Cf1 (DL): *OK so so good idea I think is a good opinion so let's come to the visualiser and [Iqm1] you can give us your what you prepared [ARC 1, Group 2, Study 2]*

This pattern is seen in the first ARC for all groups in both the 2017 and 2018 cohorts. This question and response format means that the discussion remains fairly grounded in the context of the text for the initial stages, with considerable focus on summarising the text and therefore a fairly low level flatline characterising the beginnings of most of the first ARCs. The majority of the profiles are focused around *summarising*, *personalising* and *generalising*. Perhaps, not surprisingly given the abstract topic of the text: ‘What is theory?’ the discussions, with the exception of Group 2 in 2018, spend some time reaching beyond the context of the text to other contexts.

5.6.1 ARC 1

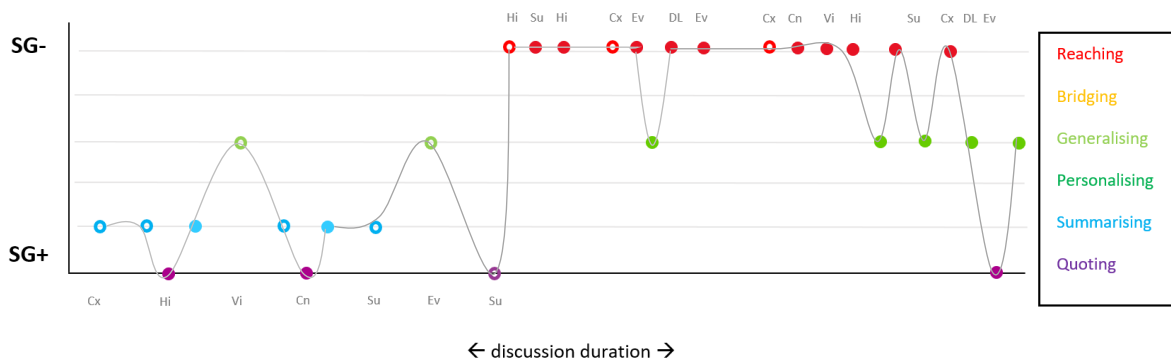


Figure 5.2 Semantic gravity profile of ARC 1 discussion (Group 1, 2017 cohort)

Group one in the first study began their first ARC by each role individually contributing the findings of their role which resulted in a fairly low level flatline of relatively strong SG. The group then spent a considerable amount of the latter part of the discussion reaching beyond the context of the text and therefore semantic gravity is greatly weakened. This is largely due to the discussion leader's control over the discussion. As can be seen in figure 5.2, the circles denote that contributions have been requested by the Discussion Leader and there are three stretches of weak SG that occur after the Discussion Leader asks three questions. This levitation is initiated when about half way through the discussion, the Discussion Leader simply requests the group to comment on the definition of theory provided by the Summariser:

Bf1 (Su): *Yes according to OED dictionary "a supposition or a system of ideas intended to explain something" [p.222] this is called theory*

Tf2 (DL): *any ideas ...*

In response to this prompt two group members begin to briefly discuss the abstract nature of theory. This is outside the context of the text and focuses on theory as an abstract concept, hence SG is at its weakest.

The next two forays into *reaching* are also as a result of discussion questions posed by the Discussion Leader:

Tf2 (DL): *.... so the first question that I want you to discuss is how important of theory in your opinion like why do theories always generate new theories these days*

In answer to this question, the focus remains on theory and its relationship with real life and general society. Semantic gravity is weakened as the group discuss how useful theory is in real life and that theory is developed when someone observes a phenomenon that others do not notice (Newton's observation regarding the apple for example). This stretch of the discussion is talking about theory in more abstract terms and therefore exhibits *reaching*. One participant highlights the fact that being aware of theory is more important to the group as university students (hence the brief strengthening of SG to *generalising*). The group levitate SG to *reaching* once more as they discuss the idea that theory changes with changes in society and

this prompts the Discussion Leader to ask their next question:

Tf2 (DL): *Yes so that's linked to the next question like do you think in the future like 10 or 20 years later are these theories still necessary or it might be not*

The discussion then turns to the changing nature of theory over time as society changes. Again, this is taking the discussion to a more abstract level and removes the notion of theory from the context in which it was introduced to the group via the article.

Tf2 (DL): *Ok do you agree or disagree that the theorising Human resource development is totally different from scientific theory scientific like the [CfI Vis] mention first about science and the in the last maybe last two pages they mention HRD human resource development how to make a theory is the way to make the theory is different*

The discussion returns to the context of the text as the group consider how theorising HRD is, or is not, scientific. Here SG is strengthened, but only to a mid-point as the group try to decide if theory within the context of HRD is scientific. Here the group return to the article, but without much reliance on *reproducing* the article as seen at the beginning of the article.

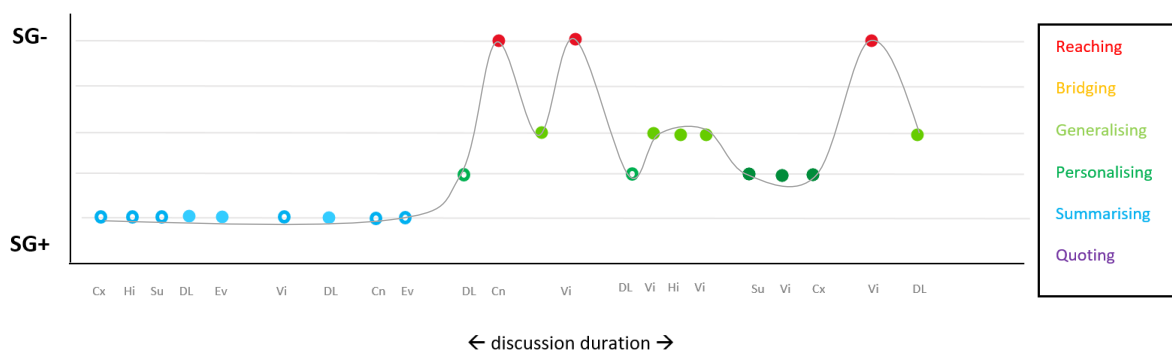


Figure 5.3 *Semantic gravity profile of ARC 1 discussion (Group 2, 2017 cohort)*

The first half of Group 2's first discussion follows the call and response format of Group 1 with each role contributing at the Discussion Leader's behest and these contributions relying on summarising various aspects of the text. The only 'voluntary' contributions come from the Discussion Leader who reformulates the contributions to check understanding:

Cm3 (DL): *So you mean this article talk about the establish some theory or definition through some different way so some new way to introduce some theory and through the example HRD*

The result is a fairly severe flatline at *summarising* which lasts for the first 20 minutes of the discussion. The Discussion Leader then overtly signals the ‘second part’ of the discussion:

Cm3 (DL): *Yeah any questions [silence] OK can we conduct the second part we need to focus some questions and we need to discuss I prepare some question but if you have question you can ask and we discuss*

The Discussion Leader attempts to weaken semantic gravity to *personalising* as they ask the group what barriers they think there are to their understanding a theory. The Connector responds with rather abstract ideas regarding how theories that develop to criticise or counter theories that have preceded help highlight the flaws in theory and she provides the example of Marxist theory, strengthening SG to *generalising*. The Visualiser also mentions the changing nature of theory, weakening SG to *reaching* once more:

Mf1 (Vi): *I think this have that means a tentative aspect of theory it's not all the time the same it will be changed with time with research with other discoveries*

The second and final question posed by the discussion leader specifically requires the participants to relate the context of the text to their experience:

Cm3 (DL): *I have another question is maybe we don't need this articles idea we need to show our experience our idea in before your life before your study life if you understand the theory when you learning or understand some concept some definition how can you understand the mean or through some definition how can you understand what exactly the mean*

Participants respond with examples of whether the theory is very abstract like in Philosophy, or whether the concept is more concrete and relevant to real life (*generalising*) and examples from their studies (*personalising*). The discussion ends with a final foray into *reaching* as the Visualiser comments on the importance of hypothesis in limiting ideas and research focus and the Discussion Leader adds the importance of connecting the abstract (theory) to experience (real life).

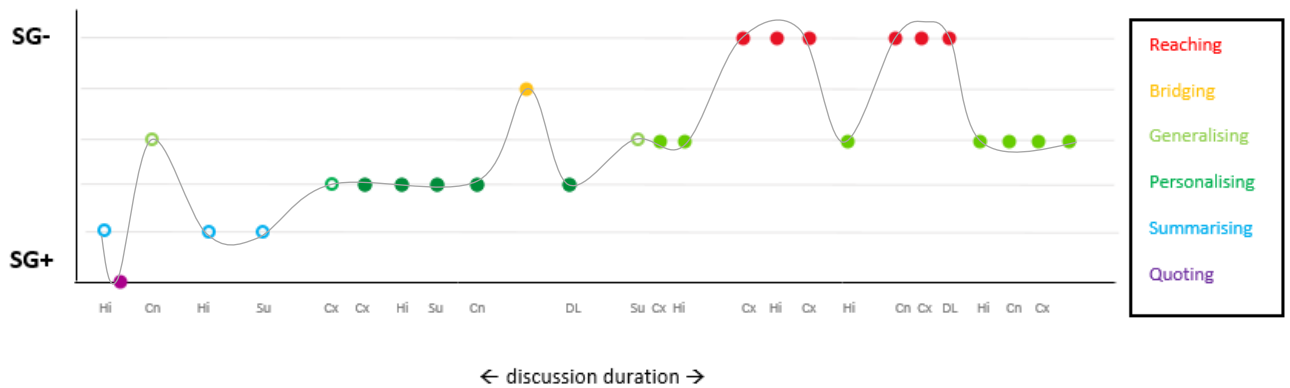


Figure 5.4 Semantic gravity profile of ARC 1 discussion (Group 1, 2018 cohort)

Group 1 in the second study, follow the now fairly familiar pattern of the first ARC. Some noticeable differences occur within the first part of the ARC as the Connector reaches *generalising*. The Connector levitates SG to *generalising* as the Discussion Leader takes a moment to ask for an example of a theory following the Highlighter providing a definition of the term (from the text). The Connector provides the example of Evolution before the ARC returns to participants adding their role contributions.

Once the ARC roles have been performed, the semantic gravity is weakened slightly to *personalising* as the Discussion Leader asks:

Tf3 (DL): *So now you know about what is theory and I want to ask all of you that which theory that you get experience or you is relate to your major or your life or your experience? First [Cf2]*

This question results in a short flatline at *personalising* as the group take turns to talk about theories they encountered in their previous studies. This flatline is broken as the connector refers to a text that they found that evidenced theory impacting on practice and thus reaches *bridging*.

After this initial question from the Discussion Leader, there is a further prompt which controls the semantic gravity of the discussion as the DL asks: “So do you think in your opinion theory is work or not?”. In response, the discussion levitates to *generalising* as the group discuss the general usefulness of theory for people before weakening SG even further to *reaching* when the Highlighter and Contextualiser consider disciplinary differences of theory – for example the rigidity of theory in a field like Engineering compared to the changeable nature of theory

with fields like Business. SG is strengthened towards the end of the discussion as the Contextualiser explains how theory is generally unchanged in her field of Education and the discussion returns to consider the relationship between theory and HRD, but rather than rely on the article the Highlighter provides an example from the more real-life context of the workplace and therefore SG remains at *generalising*.

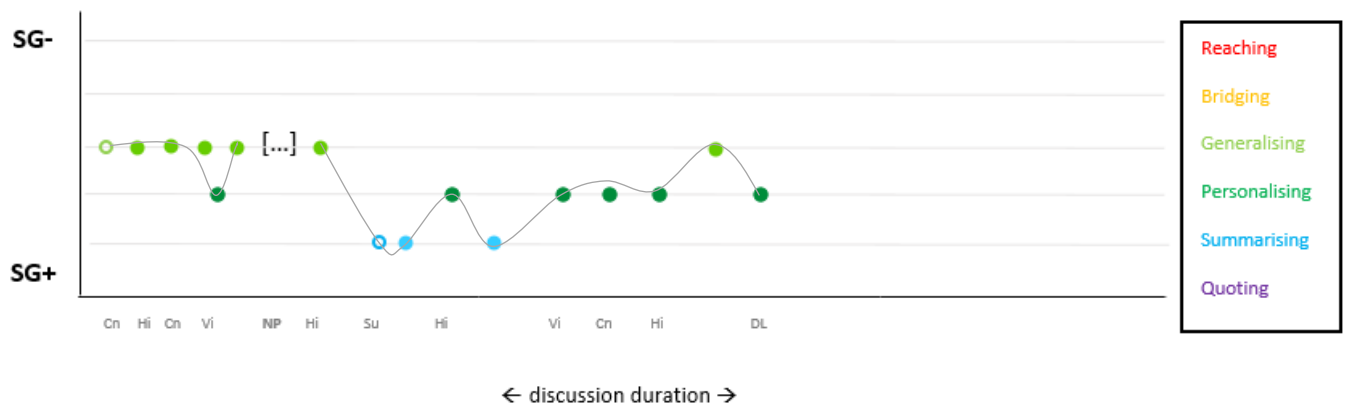


Figure 5.5 Semantic gravity profile of ARC 1 discussion (Group 2, 2018 cohort)

This first ARC of group 2 in the second cohort is quite different to the other three in that the profile fails to move beyond *generalising* and the discussion begins at this level of SG with the strengthening of SG occurring in the middle of the ARC rather than at the start. This group is a little different in terms of group members as the group contains one non-participant. The non-participant's contributions have not been transcribed and are therefore represented as [...] on the profile. This does not have a bearing on the strengthening or weakening of SG however.

There are fewer instances of the Discussion Leader controlling the SG which is due to the fact that the Discussion Leader of this group opens up discussion to the group more.

Cf1 (DL): *Because this article is difficult but I think is short is not quite long one maybe do you want to add some information or ask them some question*

The discussion flatlines around *generalising/ personalising* as this discussion focuses on Human Resource Development rather than the concept of theory. The participants share information about HRD in their countries and personal experiences with HRD. This is still within the confines of the context of the text, albeit a small part of it, as theory is discussed with reference to its relevance to future research into HRD.

5.6.2 Summary of patterns emerging from ARC 1

Three of the four groups follow the traditional ARC format of role contribution followed by wider discussion and the Discussion Leader is often the one who controls the focus of the discussion. The two cohorts from 2017 and Group 1 from 2018 spend considerable time within this first ARC discussing the notion of theory. How theory is defined in the article under discussion, what theories they have encountered in the past and whether or not theory is important to our daily lives. Some of the groups also attempt to make sense of the connection between theory and HRD as presented in the article, however, only Group 2 from the 2018 cohort spend the majority of their discussion talking about HRD.

5.6.3 ARC 2

The second ARC is where the groups are introduced to Semiotics, with a particular focus on Saussure's and Peirce's theories of Semiotics. For this discussion ARC roles were reassigned across the groups. The cohorts were given very little instruction by myself regarding the ARC process other than being given a text to discuss and roles to perform. This was so that the format was broadly the same as the participants encountered on their main pre-session programme, to lessen confusion and the burden of taking part in this research. However, I did ask the new Discussion Leaders to consider whether they wanted to front load the role contributions as had been the case in ARC 1, or whether they might like to start ARC 2 with some discussion questions first. Ultimately, the decision was theirs.

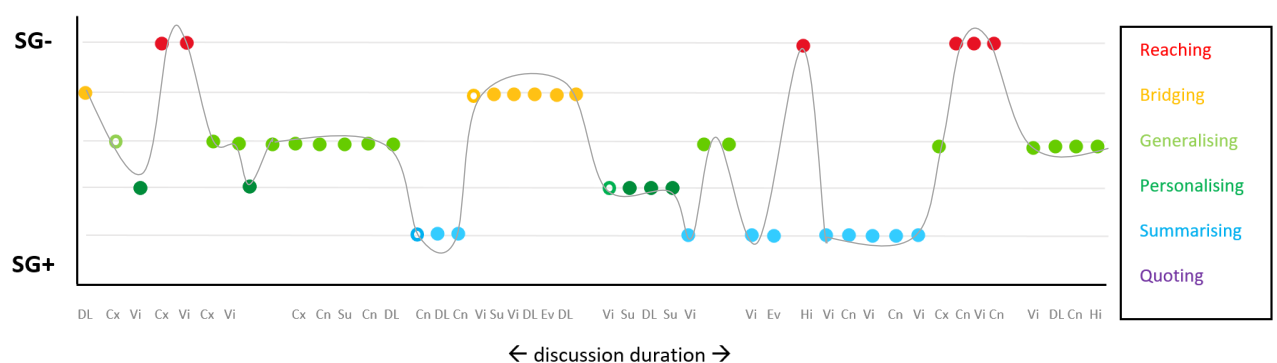


Figure 5.6 Semantic gravity profile of ARC 1 discussion (Group 2, 2018 cohort)

There is a considerable amount of waving between SG+ and SG- in this discussion. There are relatively few instances where the Discussion Leader controls contributions. Each role contribution seems to generate wider discussion so there are longer stretches of discussion between the Discussion Leader calling on a participant to contribute their role to the discussion or asking the group a question.

The Discussion Leader starts the second ARC by highlighting the fact that this text is connected to the text in the first ARC without going much further than that. The Discussion Leader then asks the Contextualiser to provide information to provide background information for the group to “make the article to be easier to understand”. The Contextualiser provides background information on the author before providing some examples of symbols used in ancient China to represent objects (the beginnings of Chinese characters). After a brief levitation to *reaching* as the Contextualiser and Visualiser offer that signs and symbols change according to time and culture, a large portion of the discussion is then taken up with sharing examples from the participants’ cultures of various signs and therefore SG gravitates towards *generalising*. The Discussion Leader asks the group what they think Semiotics is after this brief discussion and here the Connector reproduces the definition from the text, strengthening SG further to *summarising*. A stretch of *bridging* occurs as a direct result of the Discussion Leader asking the group to make connections between the texts.

Cm4 (DL): *yes OK I want to ask you what do you think of this article is it related to the first article last week*

In response to this question and within the stretch of *bridging* that ensues, the group proffer that “semiotics is a theory”, and that is “is an example help us understand what is theory”, “this article is a specific example for the last article”, hence making suggestions as to the relationship between the two texts.

SG is strengthened further to *personalising* as the Discussion Leader asks the group whether they have any findings from the article to help them with their future academic life. Rather than consider the need to employ theory in their work, the group focus on the usefulness of symbols in note taking.

The Visualiser decides that she needs to refocus the group on the article so asks the group about the article’s discussion of teeth as a sign and the group focus on some of the examples of Semiotics in society as well as the ideas if the founding fathers of Semiotics as mentioned in the text, leading to a stretch of *summarising*. SG is weakened to *reaching* as the Connector

and Visualiser comment on the fact that the meaning of signs is socially constructed and the rest of the group run with this idea a little as they focus on examples as to whether appearance and behaviour symbolise culture, strengthening SG to *generalising* as they do so.

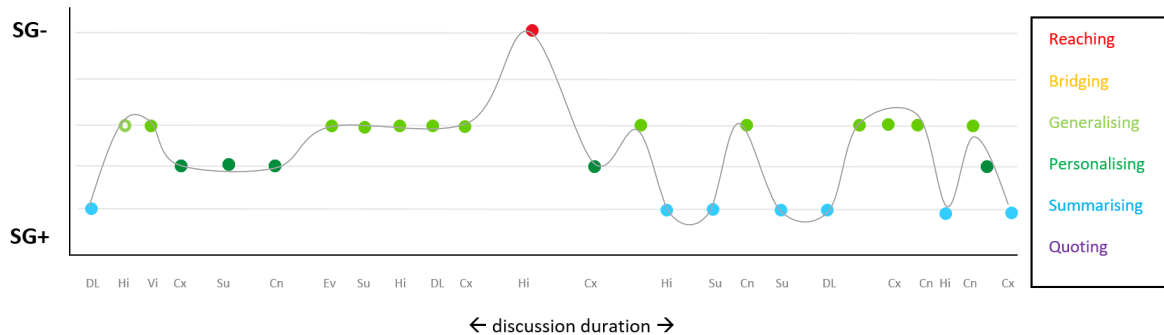


Figure 5.7 Semantic gravity profile of ARC 2 discussion (Group 2, 2017 cohort)

The Discussion Leader begins this ARC with their own summary of the text and a question rather than establishing the role turn-taking seen in ARC 1.

Tm1 (DL): *Good morning everyone I have to say thank you to everyone to come to discussion and I hope we may when we start discussion something is not that clear or have a problem I hope everyone to ask for clearly understand the first one I have to say what is semiotics semiotics is science of signs when you see everything in a room that is a sign every sign is made of the human think about the sign it can be due to [**] or something it might be message or gesture or body language [**] sign symbol movie or music advertising and this all thing are create in order to have a meaning because everything you don't know has create meaning sign for understand that when during I am speaking you see my hands is always movement that's a sign so I have first question do you think sign are important in our life why not*

The group tend to be in agreement that signs are important in life, providing examples of how facial expressions denote emotions and personal examples of how signs can be used in a particular discipline like Engineering which a few of the participants had studied previously. In doing so the group move beyond the context of the text to provide their own interpretations via *generalising* and latterly *personalising*. SG is weakened again to generalising as the group focus on signs as representation of culture and personality. There is a very brief levitation to

better comprehend these ideas the majority of the subsequent discussion sits at *generalising* as the group offers various examples.

Tm1 (Hi): [shows images on a laptop from Tf3?] *OK Let us shows some evidence about to support the evidence they try to separate the things they say icon symbol and index icon is mean is mean that they try to create not create try to acknowledge some physical thing like one human and what we want to say about him like we said before one dog but actually we don't know this is dog or not and then we give the symbol of it we give the name of dog the last one is index you can find in front of that they have symbol of dog or pet*

Cf2 (Su): *Can we say the symbol is just like McDonalds just you said can we say the symbol is the letter M and it appears all around the world maybe there are different countries have different names but when we see the M we all know that this is McDonalds [agreement from Tm2 DL and Tf4 Cx] so M the letter M is a symbol*

The Summariser gravitates SG to *summarising* as she returns to the text to argue that Peirce's theory of Semiotics is perhaps more complicated than Saussure's and she moves to discuss the relationship between Semiotics and social life as presented in the text. The Connector interrupts Cf2 to offer examples of how we are judged by our appearance in life, levitating SG to *generalising*. This oscillation between *summarising* and *generalising* continues as the Summariser returns to the text and other members of the group provide examples. The Discussion Leader breaks this pattern by asking the group whether "in your opinion or based on your experience do you ever found any semiotic that relate with your experience or your career". The group then provide personalised examples of how they believe they have encountered semiotics in their personal experience, strengthening SG slightly to *personalising*. It may appear from the semantic profile that this discussion was shorter when compared to Group 2's second ARC in 2017 for example. This is because there were very lengthy contributions from some group members, the Summariser for example had turns that lasted 5 minutes.

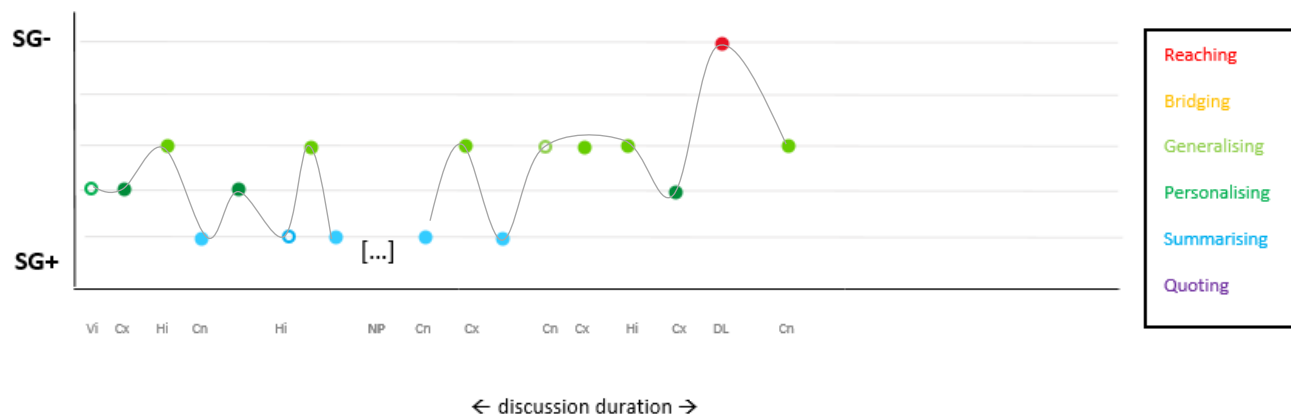


Figure 5.9 Semantic gravity profile of ARC 2 discussion (Group 2, 2018 cohort)

The Discussion Leader decides to lead with a question rather than the roles in this second ARC.

Tf2 (DL): *My name is [Tf2 DL] today I will be discussion leader today I planning to start with contextualiser then highlighter and summariser then visualiser and finally with connector before we start I would like to ask you a question in your experience on your country how often did you use the sign or the symbol*

As the question asks for reflections on personal experience the semantic profile begins with fairly middling SG at *personalising*. Contributions focus on, by now familiar examples, including the use of symbols within the Chinese language, the golden arches of the McDonald’s symbol and traffic signs. The Highlighter is then invited to contribute their role by the Discussion Leader and SG is strengthened to *summarising* as they summarise the definitions of the key word forms (Semiotics, Semiotician, sign) from the article referring back to the example of the McDonald’s M. The non-participant in this group is the Summariser who is asked to contribute after the Highlighter. The Connector does not take the opportunity to connect this text to the text from ARC 1, instead they focus on ideas within the article that exemplify the connection between Semiotics and real life. Therefore, the Connector’s turn sees SG strengthen to *summarising*. The Contextualiser talks about the use of signs in advertising (*generalising*) and then refers back to the context of the text (*summarising*) as they highlight the author’s idea that we are influenced by signs every day and in almost every situation.

Like group 1 in this second cohort, group 2’s discussion maintains a rather low wave. However, unlike group 1 who do so with trying to understand finer (and more complex) ideas

in the text, this group share examples in line with the examples of Semiotics applied to social life from the text. The discussion then moves to a fairly stable SG at *generalising* as the group respond to the Discussion Leader’s question asking how they think semiotics impacts on their daily life. SG is briefly weakened to *reaching* as the Discussion Leader starts to conclude the discussion and offers the idea that Semiotics enables international communication beyond the need to share a language.

5.6.4 Summary of patterns emerging from ARC2

What is worthy of note here is that only Group 1 from the 2017 cohort spent time within this discussion within *bridging*. Also only one group focused on the differences between Peircean Semiotic theory and Saussure’s.

5.6.5 ARC 3

The third ARC is the first time that the participants are engaging in a discussion without having prescribed ARC roles. This discussion is also different in that each participant has a different text to discuss.

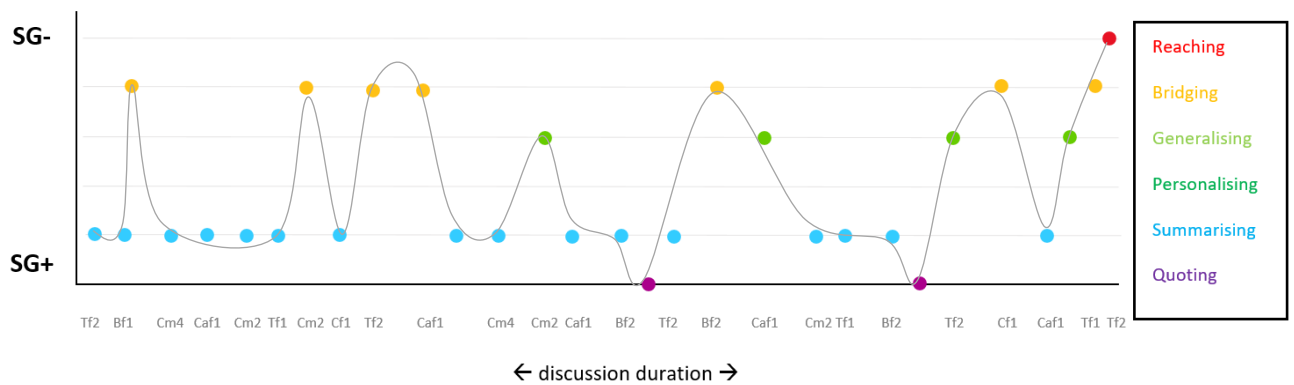


Figure 5.10 Semantic gravity profile of ARC 3 discussion (Group 1, 2017 cohort)

In this third ARC there is a lot of back and forth in the discussion as the participants in group 1 (2017) try to clarify understanding of each other’s articles. Therefore the plots on the semantic profile represent general orientation of discussion, not all the actors involved, due to space limitations.

While there were no assigned ARC roles for this discussion, to start the discussion, Caf1 adopts the role of Discussion Leader:

Caf1: *first of all I would like everybody to give maybe the titles of we can we can know how to manage the discussion*

Group 1 summarise their articles in turn and some participants attempt to connect their article to the previous articles discussed in ARCs 1 and 2. This *bridging* is rather superficial however, and is more just acknowledgement that the texts are connected rather than explaining the connections in detail as seen in the following extracts:

Bf1: *as I finished my undergradaution in sociology so this article is related with the sociology and semiotics which we discussed in our previous discussion*

Cm2: *I think this article have some connect with last article because use last article we read something about symbol yes use the because account we need to use balance sheet we need to use [points to symbol drawn on sheet of paper]*

Caf1: *OK before talking about my article I would like to go back to the previous article the first article it was talking about semiotic in general but the second article is talking about the use of semiotic in society my present article is talking about semiotic and placebo*

The majority of the discussion after each participant has introduced their texts, is focused on the group trying to get a better idea of the texts. This sees the text being summarised in more detail and other group members offering some sort of example from their culture to check understanding. Participants are quite engaged in this discussion and volunteer examples related to each other's texts by way of *generalising* as in the following example offered after Caf1 introduces her article on the Semiotics of the Placebo Effect:

Cm2: *yeah I know this I know example in China because some people they have some [**] and have some very careful illness and in the end of their life any drug cannot to happen to cure them medicine will give them some drug and say it could help them but actually just like some sweet [laughter]*

The discussion ends with the group acknowledging that semiotics is interdisciplinary.

Tf1: *I think in every discipline can use semiotics to like communicate even to another discipline and I think we have like same instinct about semiotic if you saw one symbol or one sign and but we can understand in the same meaning*

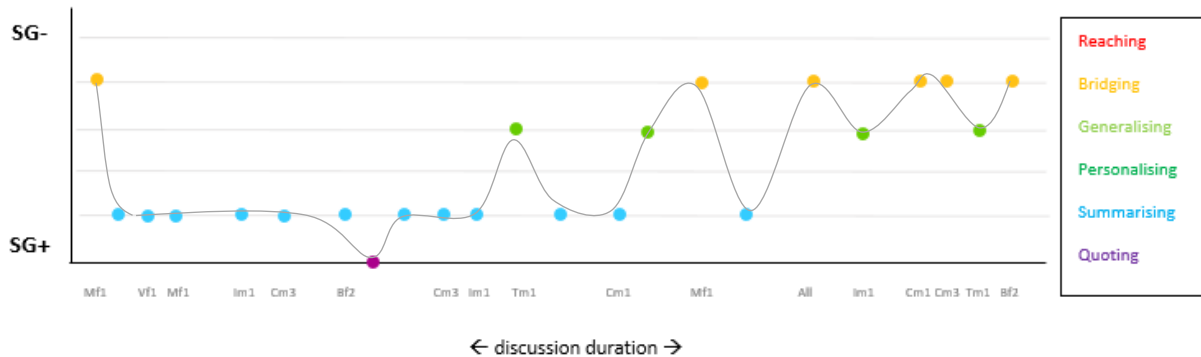


Figure 5.11 Semantic gravity profile of ARC 3 discussion (Group 2, 2017 cohort)

In this discussion the group spend a great deal of time introducing their articles by way of summary. The examples of *generalising* are the participants providing examples to enable the group to better understand their articles. *Bridging* occurs towards the end of the discussion in response to a question posed by a group member:

Cm3: *Ok I maybe we can everyone according your article you can introduce some relationship with semiotics*

In response the group members attempt to explain how their articles are related to the previous ones. This is not always easy for the participants to do.

Cm1: *yeah but if actually I don't think there some something connection to be said*

Cm3: *In my in this article the semiotics is the case is two is two build this one and this one the benefit is for these two engineering teams they can communicate they communicate in same building in same office room so that's benefit for them to communicate and even they have different language they can transfer use common semiotics so that's the semiotics for this case and the impact I think*

The two groups from the 2017 cohort enact few of the ARC roles as they present their texts to the group. They summarise the information and provide some contextual information about the authors. Other than this the ARC roles are largely ignored in this discussion.

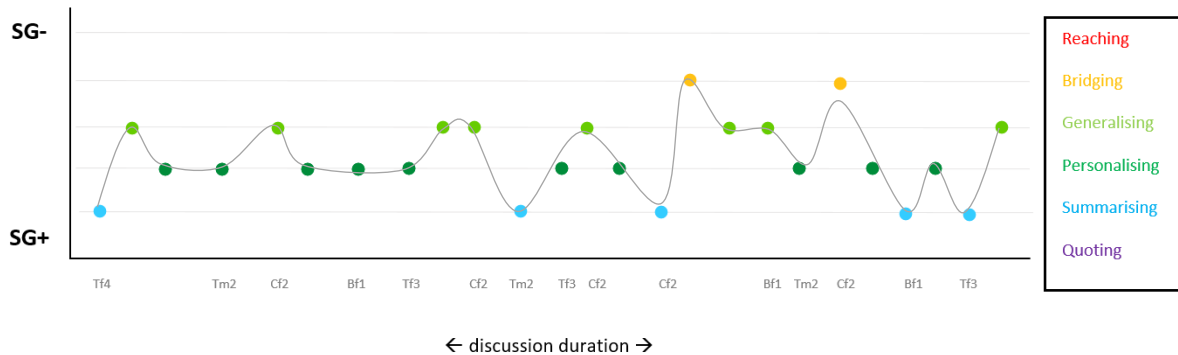


Figure 5.12 Semantic gravity profile of ARC 3 discussion (Group 1, 2018 cohort)

The two groups from the 2018 cohort perform a slightly wider range of ARC roles in this discussion and this is reflected in the semantic profiles. Participants summarise their articles and provide contextual information about the authors as the group did in 2017, however they also finish their summaries with a discussion question. These questions are often asking for participants' experiences, so we see a weakening of SG as the group move to *personalising* and *generalising* ideas in their peers' texts. For example, one participant who studied Civil Engineering as an undergraduate had a text about the semiotics of buildings and the group spent a lot of time sharing examples of unusual buildings in their countries. There were only 5 members of the group present for this discussion and a pattern emerges whereby participants summarise their articles and then there follows a period of *generalising* and *personalising* as the group respond to the discussion questions, before the next participant introduces their text. Only one participant attempts to perform the Connector role and connect her text to the previous ones:

Cf2: *according to the last ARC class we talk about maybe about the semiotics we have two kind of theory to different people and one of them is talk about the semiotics maybe contains three parts and this is the sign, contains sign object and writer just interpret and add another information about interpretant about sign maybe it refers to the new words we have to learn and object obviously it*

refers to maybe the new word refers to the object as the like we said example last class the table and the object and how do we know table is refers to this object not this object so the writer also think we need interpretant which means maybe is kind of interpretation about the objects maybe is a kind of idea

This results in only two instances of *bridging* within the discussion. The discussion generally does not move beyond introducing the texts and sharing examples of experience related to the text topics.

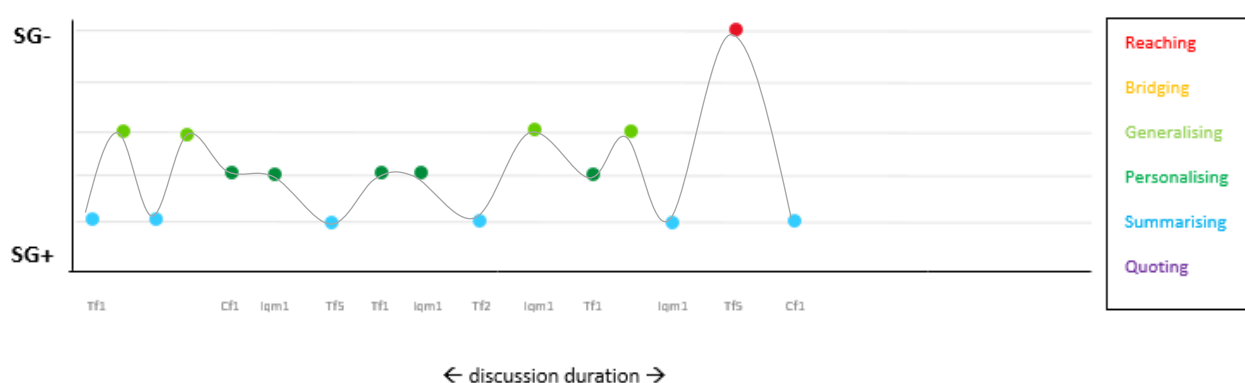


Figure 5.13 Semantic gravity profile of ARC 3 discussion (Group 2, 2018 cohort)

Group 2 in the 2018 cohort have a very similar semantic profile to Group 1 for the same reasons. The group only engage with the ideas in each other’s texts on a *personalising* and *generalising* level, offering examples that they are familiar with after being prompted to with a discussion question. Again the group fail to levitate SG any higher than generalising as the focus is on the context of the text and understanding the text content rather than trying to see any connections between the texts, either within this one discussion or between the texts here and the ones discussion is ARCS 1 and 2. There is one brief foray into the highest level of SG (*reaching*) when Tf5 considers the possibility of a global understanding of Semiotics enabling international collaboration in fields like Engineering.

Tf5: *in my view I think in engineering the semiotic quite play a significant role in this subject and how to develop this subject by semiotic is maybe every country should maybe be possible to use the same semiotic to understand the same thing when you work together*

Again, the semantic profile seems to suggest that there was a shorter discussion here, this is not the case. The turns were longer as participants took some time to summarise their texts.

5.6.6. Summary of patterns emerging from ARC 3

In structural terms, this third ARC is a much freer discussion, though some participants like Caf1 adopt the Discussion Leader role. Many of the participants also amalgamate the ARC roles, though very few include the Visualiser role.

There is a noticeable difference between the 2017 cohorts' third ARCs and those of the groups from 2018 in that in the second year, the participants include a discussion question for the group and as a result there is greater time spent *generalising* and *personalising*. The groups from 2017 spend the majority of their third ARCs in *summarising* as they focus on understanding the contexts of the texts they have read.

In terms of discussion content ARC 3 sees a substantial amount of discussion time employed in *summarising* and *generalising*, with some groups (those in 2017) also *bridging*, albeit in a rather superficial manner.

5.6.7 ARC 4

For the final ARC there were no texts to discuss, the groups just had to review the previous three articles and discuss the connections between them. This results in the discussions exhibiting weaker SG throughout with the exception of Group 1 in 2017, whose discussion used the full extent of the semantic profile.

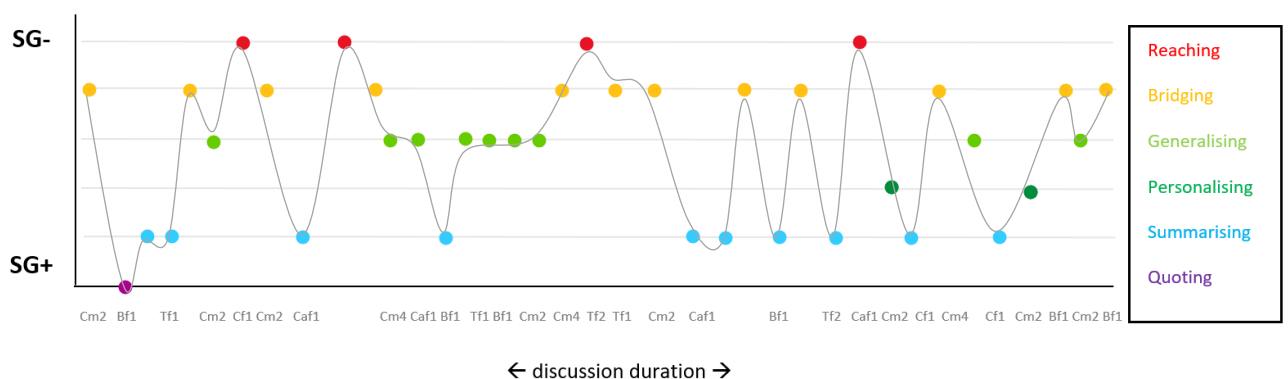


Figure 5.14 Semantic gravity profile of ARC 4 discussion (Group 1, 2017 cohort)

In this final ARC, Group 1 make use of the entire semantic range within the profile. Group 1 discuss the connections between the texts and do this by reviewing the ideas in the articles and relating their own ideas to the articles. This is perhaps helped by the fact that Cm2 begins the discussion reminding the group that this is the purpose of the ARC today:

Cm2: *OK everyone welcome join we are here again today we will connect the three article together find some similar or some difference [Tf1] you seem very afraid [Tf1: no I'm ok] [laughter] you talk about your article first [laughter]*

Caf1 suggests that group remind themselves about the first article and therefore a brief period of strong SG occurs while the group quote the definition of theory and summarise the article. SG levitates as the group work to connect this first article to the second:

Tf2: *and like it's related to the HRD like to study of a particular phenomena in human experience [Cm2: yeah] so that point I think is related to semiotics because the semiotic is create by the society this is related to the human experience*

Although there are instances of strengthened SG with summarising the articles, the majority of this discussion is concerned with connecting the articles and seeing certain conditions of the theory, for example that the meaning behind signs is socially constructed and therefore subject to change depending on the epoch.

Caf1: *I will say yeah because according to the article use semiotic in our lives all the signs they use but a surprise what some limitation of this article they mention that in the past people when you have long hair you are artist but now things has changed that mean this theory semiotic is a theory evaluate during the time if we focus on this example it is related to first article for it is theory and change*

On occasion this bridging is enabled as the group help others with questions they have about how some articles connect (in particular the articles from ARC 3 which were discipline specific) as in the example below from Cm2.

Cm2: *I'm not quite sure how does this article connect with engineer to the symbol how to connect it*

The discussion finishes with a focus on the connection between theory and Semiotics.

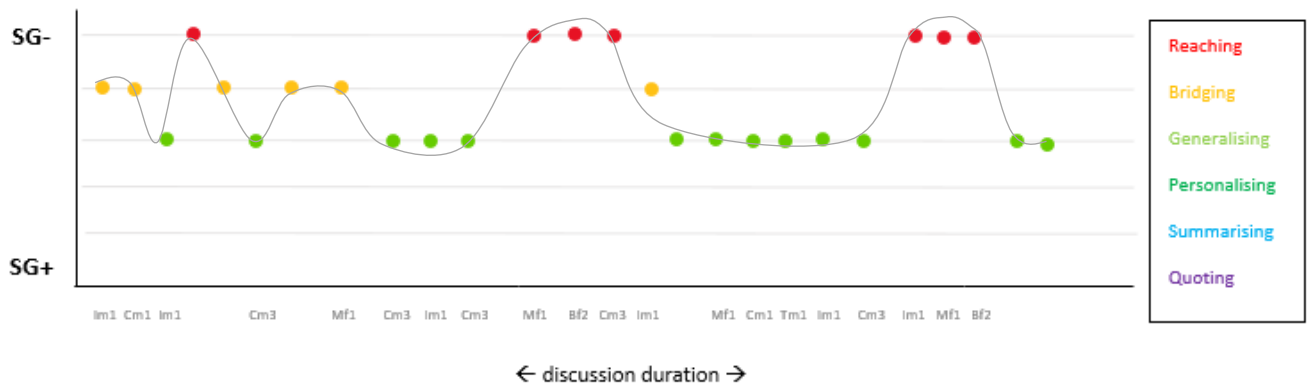


Figure 5.15 Semantic gravity profile of ARC 4 discussion (Group 2, 2017 cohort)

Group 2 from the 2017 cohort spend the majority of this final discussion discussing the connections between the texts and do so by oscillating between *generalising* and *reaching*. Interestingly they do so without *summarising* the articles, so SG remains fairly weak throughout the discussion. Like group 1 in 2017, one of the group begins the discussion by restating the purpose of this final ARC.

Im1: *can start the discussion yeah OK today we are going to discuss about the three things about we want to talk in group of three talking theory semiotics and semiotics in our discipline we are going to connect with each other and make some connections and we can discuss about the future [?] current situations everything the theory semiotics and semiotics in our discipline as well OK let's start*

The group spend time offering their views on how the texts are connected. For Cm3 there seemed to be a movement from abstract to everyday life that enabled understanding of the ideas for them:

Cm3: *The first article is talk about the theory and the is talk about semiotics theory is like philosophy how you define the semiotic what is the theory of the semiotics so is abstract the second one is talk about semiotic and society the connection so is very useful for society so how can we organise semiotics in society the third article is talk about our major so you can more specific and make an example in our life is easy to understand*

This group are able to discuss the ideas in more abstract terms and therefore time is spent at the weakest form of SG, *reaching*, as some group members reflect on the objectives of theory and Semiotics and whether they are the same or not.

Mf1: *I have something to add I think theory and semiotics sometimes have the same objective I can say that because when we last week when we was define theory it was a supposition or system of ideas intended to explain something semiotics I think have the same semiotics its for the main objective for semiotics is explain something that you can say semiotics and theory have the same objective*

Bf2: *Actually I think when sociologists and philosophers develop any theory they maybe use a different sign symbol for explain her theory for example anthropologist [Ogburn] develop theory is called Cultural Lag culture and society is related each other and culture is a symbol for society and this sociologist explained that different culture have different identity and it make complete each other so I think theory and semiotic is related but not same object*

The final stretch of reaching which occurs towards the end of the discussion focuses on the idea of a global understanding of signs and the universality of theory. The discussion ends with the group reflecting on what they found difficult about reading the articles and is therefore not present on the semantic profile as this is a general discussion about reading as a process rather than the context of the text(s).

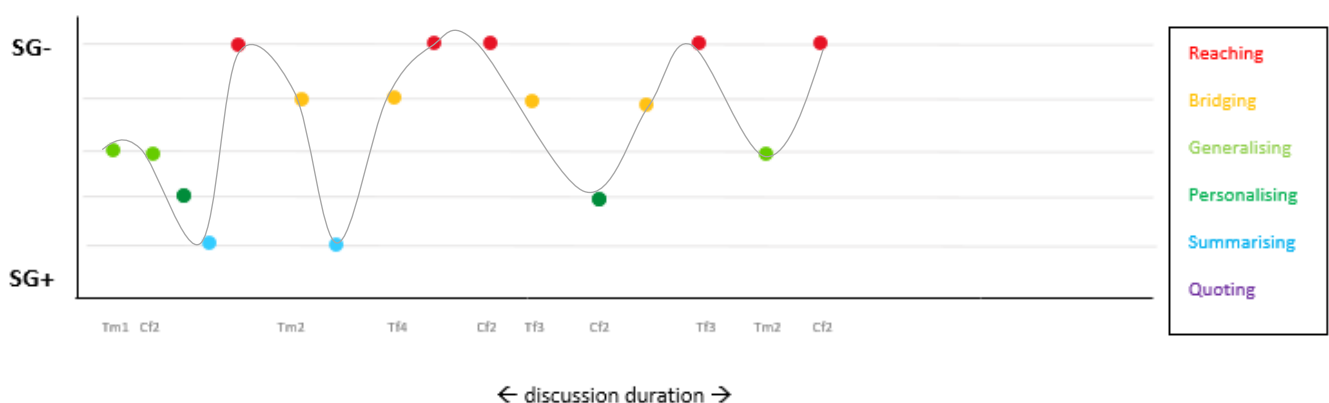


Figure 5.16 Semantic gravity profile of ARC 4 discussion (Group 1, 2018 cohort)

This final ARC for group 1 from 2018 was a short discussion at only 20 minutes and there were only five group members present. The discussion has a fairly protracted high flat line as the group focus on *bridging* and *reaching* within the discussion. While the group do spend some time discussing Semiotics, the main focus here is the notion of theory as the group discuss the changing nature of theory

Cf2: *So maybe at the very first beginning we all think theory is too abstract and especially for young peoples or not so professionals they don't like theory because theory sometimes so difficult to understand and sometimes we cannot realise importance of theory sometimes we just think if I want to do something just go take some actions why do we learn some theory but through the three articles maybe I think before we take some actions if we have better understanding of the theory about our own related field maybe we have a very clear directions to take our actions and maybe we can just in a right way and maybe it can help us to avoid making some mistakes*

Tf3: *I think the way to produce the theory is very difficult but the way to learn the result of the theory is very easy and useful for our subjects and theory can be also developed by different actions because with time goes by with technology or the society development more people will take a more actions and they will add something new to the theory with a times maybe the theory can change a little bit according to society according to the demands of society and I think everything should be developed and so that the theory's not outdated many people don't want to focus on the theory they will think the theory is too old*

Tf3: *It highlight the way to be theories have a lot of scientific proof and proof and proof and is become a theory so maybe to become a theory the new theory or change it kind of like it starting base or the old one something like that*

Cf2: *Yeah I think that's why the theory can existed maybe so many years there is always some reasons because if the theory's not reliable other people will show they are not reliable we just destroy it yes*

Tf3: *later the world is flat but now the world is [gestures round]*



Figure 5.17 Semantic gravity profile of ARC 4 discussion (Group 2, 2018 cohort)

Tf2: *because semiotics is one type of the theory as well and semiotics can adapt to every discipline also in daily life as well many people in society they use semiotics every day even in the hospital in school in organisation so I will say that is why accepted because the many of theory is theory can explain everything I think is same like semiotic semiotic can explain like explain everything as well but shorter than theory [?]*

5.6.8 Summary of patterns emerging from ARC 4

Interestingly only Group 1 from 2017 spend noticeable time *summarising* the articles that have been discussed in the previous three ARCs. This group also spend a considerable time ‘waving’ up and down the profile. The other three groups spend the majority of their ARC discussions in the realm of fairly weak semantic gravity.

5.7 Conclusion

The semantic gravity profiles illustrate that while there are some similarities in the amount of time spent at a particular stage on the profile (and by extension relative strength of SG) there are rather large variations in the number of plots on the profiles – i.e., the number of moves per participants. This may suggest that participants fail to wave between SG+ and SG- within a turn. It is also worth noting that the groups in the 2017 were larger (7 participants) and they all attended all of the ARC sessions. In 2018 the groups were smaller, and one group had a non-participant, and the other group had a student who was very often absent as she had ongoing health issues. What is evident, however, is that the four ARCS *together* enabled participants to

not simply remain *grounded* within the texts, but to move *beyond* and demonstrate some understanding of the ideas in the texts through *interpretation* and *abstraction*. This begins to reveal how this ARC process may enable the acquisition of *theory knowledgeability*. This section has discussed the data in terms of context dependence, what follows is an analysis of the complexity of practices within these ARCs.

CHAPTER 6 – SEMANTIC DENSITY – Complexity

6.1 Introduction


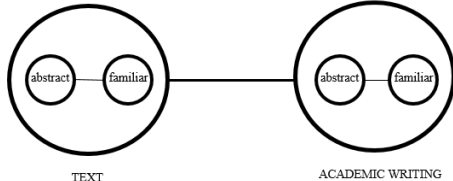
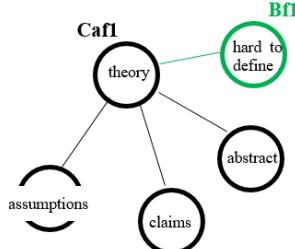
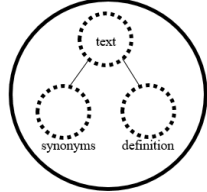
The analysis of semantic gravity provides insight into the ability of the participants to move from context dependence to more abstract context independence. This alone is not sufficient to clearly determine whether the ARC process enables the acquisition of *theory knowledgeability*. The following chapter analyses the ARCs for the ability to add meaning to concepts that emerge from the discussions. This analysis, together with the analysis of semantic gravity provides a more convincing illustration of whether or not *theory knowledgeability* was achieved.

Chapter 5 has explored what happens when postgraduate pre-sessional students take part in a series of ARCs designed to build *theory knowledgeability* in terms of the degree to which strength of semantic gravity varies across a discussion. The chapter concluded that across the four ARC discussions, groups were indeed able to weave between strengths of semantic gravity, which has been established in previous studies as key to knowledge building. This provides *part* of the answer to the research question. Context dependence as seen through degrees of semantic gravity is one half of the LCT dimension of Semantics. While semantic gravity alone can offer great insight into knowledge practices, combining it with an analysis of semantic density, or the complexity of practices, affords a more holistic insight. This chapter, therefore, turns to focus on an enactment of semantic density (SD), or more specifically epistemic condensation (EC). EC affords exploration of what is done with knowledge and how it forms relations to other knowledge.

The detailed translation device is discussed in the methodology chapter; however, a simplified version is reproduced below for illustrative purposes (table 6.1).

The subtypes of epistemic condensation are highlighted in the data, as follows:

- *Establishing* is represented in the transcript in ***bold*** (with material quoted directly from the source text *underlined*).
- *Characterising* is represented in the transcript in ***BOLD CAPITAL LETTERS***
- *Linking* is represented in the transcript as ***bold and underlined***
- *Taxonomizing* is represented in the transcript in *CAPITALS* and underlined

	Description	Visualisation *
EC+ Connecting	<i>Taxonomizing</i> (identifying type/sub-type relations)	Tf2 
	<i>Linking</i> (identifying same/different relations between terms/ ideas/ (con)texts)	
	<i>characterising</i> (attributing properties to terms/ ideas introduced in texts)	Cafl 
	<i>Establishing</i> (introducing terms/ ideas from texts)	Tf4 
Augmenting EC-		

*visualisations are colour-coded to differentiate between speakers

Table 6.1 Simplified translation device for EC analysis

6.2 Establishing

Particularly in the initial ARC discussions, complexity is reproduced from the articles in isolation, but as participants do little within the summaries to add comment or relate the information to any other there is a lack of engagement and therefore complexity is a mere simulacrum of what is within the article. To some degree this corresponds to *reproduction* within the semantic gravity analysis in the previous chapter (the strongest form of semantic gravity that was firmly grounded in the context of the text as it relied on reproduction of the text). *Establishing* is the lowest form of epistemic condensation as meanings are copied from the text and not engaged with in a way that builds complexity through addition to meaning. These establishing contributions often employ individual words/phrases from the text.

Summaries in the early ARCs are often left independent and not responded to making no connection to how the summary affords cumulative knowledge. This is perhaps often the fault of the Discussion Leader, who requests a summary and moves on to the next information request without encouraging any further participation or clarification from the other participants. This was a common pattern within the first ARC discussions as seen in the previous chapter where the first half of the ARCs saw a relatively low flatline (SG+). Within the early ARCs, the discussion leader often assumes that the group understands the information just because it has been provided. As the extract from ARC 1 Group 1 Study 2 2018 illustrates below.

Tf3 (DL): *OK I want to show this word [points to word on a card] **theory** and I want the highlighter to explain what is the theory*

Tf4 (Hi): *The **theory** I would like to highlight this word **theory** because **this word is about the topic of this article what is theory** 'the theory is a formal statement of the rule on which a subject of study is based or of idea that suggest to explain a fact or even or more generally an opinion or explanation' [reading from article or notes] *according to the author say in this article some of the **synonym** offer by the ... including **'hypothesis'** **'thesis'** **'proposition'** ... and **'contention'****

Tf3 (DL): *so OK now we know about **theory** can you give an example about **theory**? [signals to Tm2]*

It is clear to see that there is little else in this contribution that is the participant's own words. Figure 6.1 is a way of visualising this unconnected node. While theory is defined and connected to synonymous words by the Highlighter (Tf4), they have essentially taken the wording from the original text in order to define the word theory (the dotted line within the node denoting ideas from the text rather than the speaker). Once shared, the information is simply acknowledged 'OK now we know about theory' and the discussion moves on to discussing examples. This establishes theory as understood in the text but does little to relate this to other meanings. This essentially prevents the node from developing further at this point.

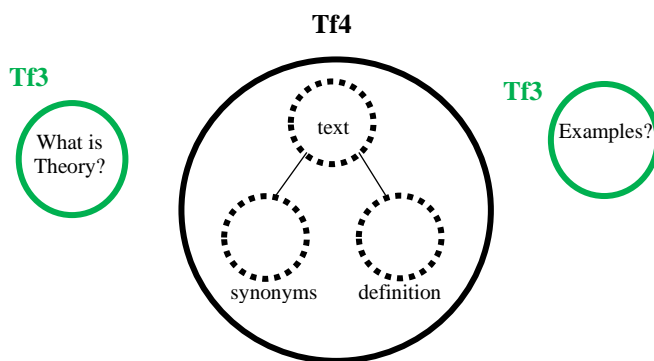


Figure 6.1 Establishing what is theory based on ideas from Stewart et al. (2011)

The extract above highlights the verbatim use of words and phrases from the text and these ideas are not engaged with generating few relations. A similar pattern emerges even when the participant uses more of their own ideas to summarise the ideas in the article.

In ARC 1 Group 1 Study 1 2017, the discussion leader is again quick to acknowledge the summary but moves on to the next contribution without further engagement.

Tf2 (DL): *Thank you for your information and now [Bf1 Sum] we would like you to summarise about the topic for us*

When the Summariser does provide a summary, they are reliant on words from the text, again highlighted in bold in the extract below. Words are reproduced from the article but little if any actual information is given, for example, the participant states the origins and meaning of theory are provided but gives no details.

Bf1 (Su): *Well thank you [Tf2 DL] today my role as a summariser now I give you a brief information about the article and later we will here the*

*discussion section we will discuss about the ...[?] [poor paraphrase of p.221] this article is mainly **focus on theory** and the purpose of the article is **briefly examine the origin and the meaning of concept of theory** and also this article is also illustrated without determining about the limitations and boundaries we cannot clearly explore any kind of theories **theories is the subject and also in relation to theorising human resource development** however this article is not concerned with specific development of the theory or HRD which is human resource development another contribution in this special issues deal with former especially Hamlin and Stewart it is mainly focused on the simply to establish the nature and the value of the concept of theory for the definition of theory the article is to go through the OED and **this article also explain logical positivism** possibilities and meditation of scientific theories scientific revelation and implication of HRD that's it*

Again, the Discussion Leader does little to encourage the generation of new meanings and moves swiftly on to the next role.

Tf2 (DL): *Thank you so next [Cm2 Ev] could you explain like what you think about the topic*

The graphic depiction of this exchange (figure 6.2) illustrates how the meanings are all from the text containing them within one large circle. Bf1 is not adding any of her own meanings, simply replicating ideas as represented in the text.

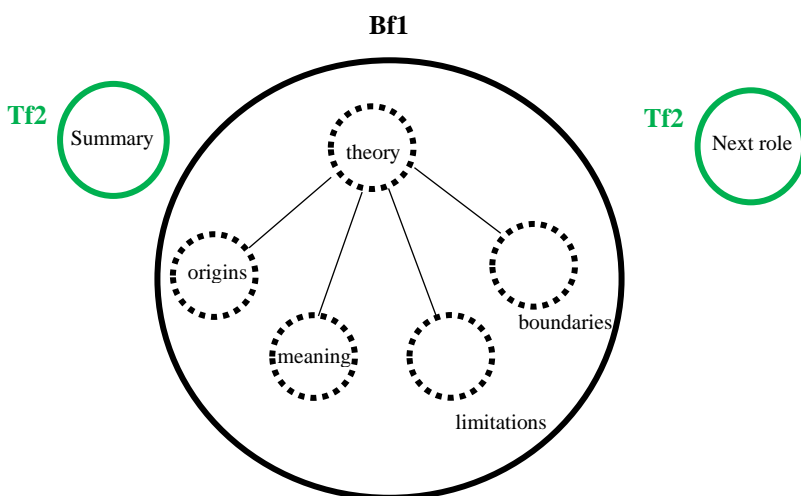


Figure 6.2 Establishing the term theory as unconnected node

This reliance on information from the text and almost blind acceptance of understanding is evident across the groups, especially in the initial ARC discussions, for example in ARC 2, group 1, study 2, 2018.

Tm1 (Hi): *Ok and now we know the word **semiotics** what is mean and let's make to the summariser to summarise the article.*

As the extracts above illustrate, the complexity provided is not the participants' rather the texts'. There is no interaction with this complexity, no effort to add meaning to the knowledge when it is offered. This means that epistemic condensation remains lower in the data, as although 'complex' words and phrases may be employed in the summaries, they are borrowed and other meanings are not associated with the information. This text is complex, and it may be that it was simply too complex for the participants to do more than *establishing* nodes of meaning from the text.

6.3 Characterising

While summaries from the texts establish the terms and may do so by offering a definition of the term, these ideas are from the text and are often left as individual contributions to the discussion which are not unpacked any further. Where the ARC participant(s) work to attribute properties to the terms, EC is higher. This attribution of qualities is evident in the data in various forms. At times, a single participant may attribute qualities to a term as in the case of the Discussion Leader in group 2 (2018) who characterises theory as abstract:

Cf1 (DL): *Yeah because **THEORY IS KIND OF ABSTRACT** yeah so I think the author use the mask [?] I think to focus on some something can be similar and we can understand*

On other occasions, the group tries to make sense of complex terms within the texts by attributing properties to the terms through semiotic mediation. The extract below from ARC 2, Group 1 in the 2018 cohort shows how the group grapples with understanding the meaning of Icon as used in the Peircean theory of Semiotics.

Cf2 (Su): *So what is **icon***

Bf1 (Cn): ***Icons** I show you some picture of this [looks on phone]*

- Tm2 (DL):** *this is maybe help or not I'm not sure but this is talk **ABOUT SEMIOTICS ICON LIKE IS PICTURE OF SOMETHING** like tiger*
- Cf2 (Su):** *We just have A **GENERAL IMAGE***
- Tm2 (DL):** ***YES GENERAL IMAGE***
- Tm1 (Hi):** ***IT MEAN UNIQUE***
-
- Tf4 (Cx):** *mean in **THE PICTURE** to draw a picture **THAT PEOPLE KNOW THIS IS MEAN THIS IS THE TIGER***
- Cf2 (Su):** *so this is not a symbol this is icon*

Cf2 is able, through this stretch of discussion, to identify characteristics of an Icon, with help from other participants. Together they establish that an Icon is a pictorial representation of a sign and is unique to it. Cf2 is also able to identify that an icon is different to a symbol. Here a cluster is forming as the group collaborate on characterising Pierce's term, Icon (figure 6.3).

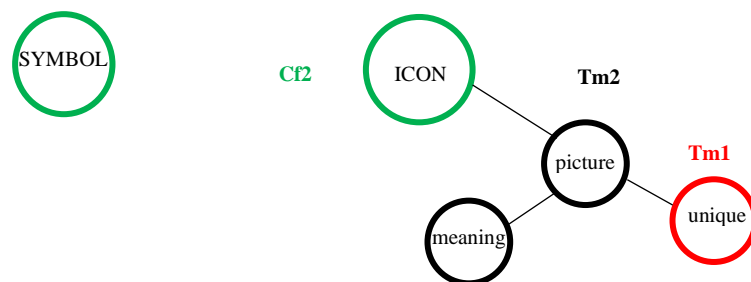


Figure 6.3 *Characterising Pierce's term Icon*

In the third ARCs the students are discussing articles that they have not all read. Therefore in order to understand these ideas, meanings are co-constructed as a group and terms are characterised. The extract below (from ARC 3, Group 2, 2017) begins with Bf2 offering a summary of her article, which establishes the key terms, though relies heavily on the original text to do so.

Bf2: *my article is **the branded self on the semiotics of identify** this article is written by Arthur Asa Berger he's an American sociologist he talk about brand self which related to semiotic and identity what is branded self actually branded self discusses some important concepts in semiotics analysis and it turns them to the notion of the self and again to other method such as branding in this article have some key words **brand self semiotics postmodernism and identity** so what is brand actually brand is a symbol of fashion it can contain a product quality price [**] power to confer status we are use in our daily life different brands product and **FAMOUS BRANDS ARE ARMANI GUCCI NIKE ADIDAS** and so on and what is the practice of postmodernism actually it is a broad movement that development in the mid to late 20th century [**] philosophy the arts architecture and criticism who is marked a departure from modernism actually this writer talk about the from the semiotic perspective of brand are significant what we use to help define ourselves to others and create us identify without being to reduce [**] we can say that we are the brand we assemble to [**] public identity*

[everyone makes noises like that was a lot to take in]

Cm1: *is a little bit long can you summarise this in more easy way*

Cm3: *could you explain this article in one sentence like just let us know what this one talk about*

As the group have not read this article and Bf2's summary is rather complex, the group are noticeably confused and ask for a more accessible summary. From this the group are able to begin to co-construct a cluster of meanings around the idea of the branded self (figure 6.4).

Bf2: *Actually I am talk about branded self and it is related semiotic of identity*

Im1: ***HOW IT INFLUENCE THE BRANDING SEMIOTICS** in which way branding means I think **THE LOGO SYMBOLS SOMETHING***

Bf2: *yes actually **IT REPRESENT A PRODUCT...***

Im1: *...Ok like we have [**]...*

Bf2: *...**PEOPLE SIGN REPRESENT WHO IS HE MY PERSONALITY** so it is related each other for example*

Mf1: *YOU MEAN THAT BRAND CAN REFLECT THE IDENTITY of for example you say adidas maybe we have the habit to buy something ADIDAS MAYBE WHEN YOU SEE THIS THE LOGO YOU KNOW BEFORE BUY MAYBE YOU KNOW WHAT QUALITY THEY USE*

Im1: *They have UNIQUE LOGO EACH BRAND*

Mf1: *LOGO EXPLAIN THE IDENTITY OF BRAND*

Im1: *WHEN SEEING THAT LOGO WE CAN IMAGINE WHAT KIND OF PRODUCT*

Bf2's initial turn where she introduces the idea of the branded self involves a lot of complex vocabulary and ideas and the group are all quite lost. However, through the subsequent discussion they are able to reach a basic understanding of the main idea in the text. This degree of *characterising* in order to reach some level of understanding was not seen in the initial ARC where information was provided and left, acquisition of understanding assumed. The visualisation below depicts the way the group characterises the ideas rather than how the text does, so focuses on the discussion that ensues after Bf2's summary. While Bf2 states that the branded self is connected to the Semiotics of identity the group focus on the idea of the branded self only.

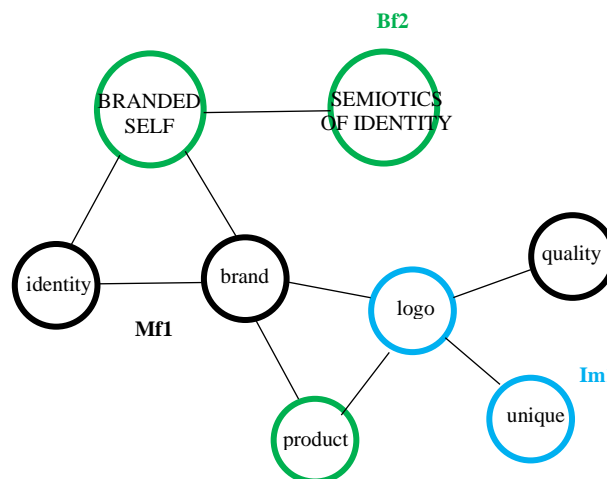


Figure 6.4 *Co-constructed constellation of the concept of the branded self*

6.4 Linking

Linking represents higher epistemic condensation as here the participants are not focusing on one term and its characteristics or properties that help define as in *characterising* but *linking* this term across to other situations. At times this *linking* occurs when participants are able to see a connection between their academic studies and the ideas or practices in the text (figure 6.5). For example, in the first ARC, the Discussion Leader from group 2 (2018) can see how relating abstract ideas to the more familiar (as is done in the text) is a way of making theory more accessible and is an example of good academic practice that students should employ in their own writing:

Cf1 (DL): *Yeah because **THEORY IS KIND OF ABSTRACT** yeah so I think the author use the mask [?] I think to focus on some something can be similar and we can understand to explain it but I think is a good methodology yeah I can we can use maybe in our writing I think because sometimes we have to explain something abstract so we can focus on some [?.] OK so highlight [looks to Tf1]*

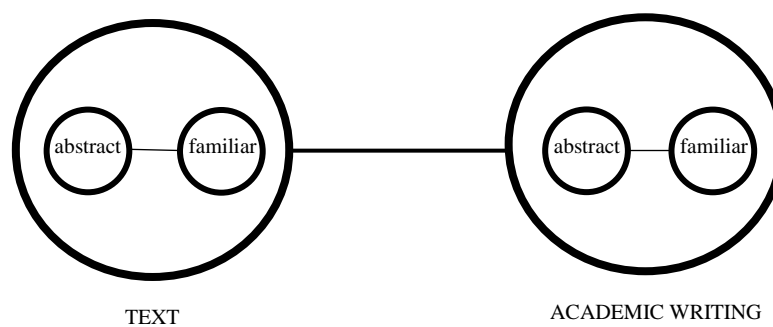


Figure 6.5 Cf1 linking author's approach to writing about theory to student academic writing

Other times, *linking* occurs where the group discuss the relationship between a term and their experiences. In other words, identifying a relationship between the abstract term and real life. In the second ARC group 2 from the second study in 2018, share ideas regarding how they have experienced signs in the past. From this a rather complex constellation emerges (figure 6.6).

- Tf2 (DL):** *My name is [Tf2 DL] today I will be discussion leader before we start I would like to ask you a question in your experience or your country how often did you use the sign or the symbol*
- Cf1 (Vi):** *er yeah I want to show you something I think Chinese words seems very different from Western countries word and I think the way of western country [shows group her laptop] all from Latin and this the [?] of the English words and you can see A B C D E here and in the past they all like this and they change step by step into the word like here and **but in China the word it kind of like a picture so you can see this is the word we are using now nowadays and this word is mean mountain so you can see it just look like mountain** and this word is not can you guess what is this mean [all look but not sure] it means horse [surprise] yes horse this word is not look like a horse but if you look at this one it kind of look like the word and there are some examples like this word means sun so you can see we write like this **but in the past we write it on the cave and on the walls and it means sun and moon and this one is cars drive and this one is horse so this is some symbol and words in China is a still kind of like a picture** yeah and its very different from English*
- Tf1 (Cx):** *So can I support somethings I will tell you in another things **another sign from my countries so the in Thailand we don't have the Thai language that based on the nature same as in the China but I will tell you something in the sign for example everyone know about McDonalds McDonalds is use the yellow M so when you see the advertisers or something in the video or online just for it yellow of M so everyone know about that is the McDonalds I think sign is very important for us to understand** yes this is my point*
- Tf5 (Hi):** *I would like to add something **because I come from Thailand as well and because of in clearly in my country everyone uses sign when they drive when they shopping when they eat or something they have to have a look so I can say that signs is be the important role in our daily life we use the sign to guide us what should we do with almost everything***

Iqm1 Cn: [has his hand up to have a turn speaking] *OK before I want to give my example about semiotic we can put we can highlight or connect the idea sorry connect the idea about to give some describe or something about semiotics first of all the semiotic according to Berger 2013 here mentioned that everything like give message and send message or receive by using pictures or symbols and examples and everything like a picture or character to explain some idea and here we can for example the language one of this semiotic to connect the idea about speaking then to connect with historical stories in my country here [shows group his phone] in [?] in Iraq put some like design some stone to use the semiotic language by use some theme or character like language to put some rules in this time and connect with nowadays we can find everywhere and every or many examples to explain*

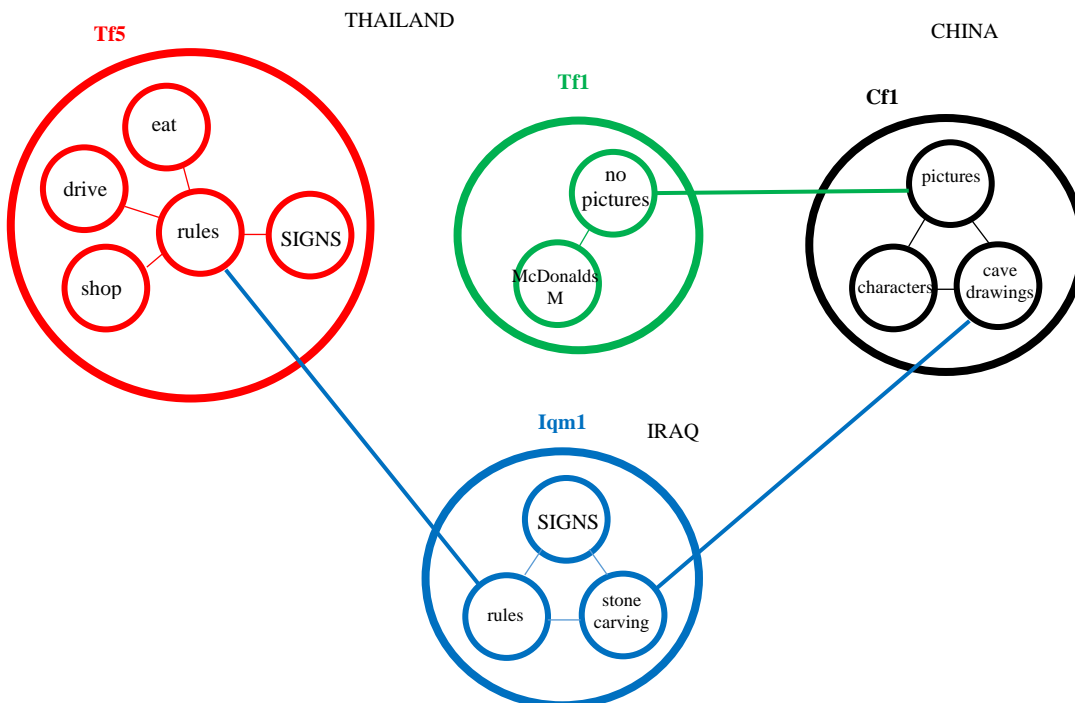


Figure 6.6 Co-constructed constellation of Signs

At other times, linking occurs through collaborative sharing of examples for example in ARC 2, Group 2, 2017. Here the group are trying to provide examples of signs from outside the ones offered in the text in order to help them understand the properties of a sign.

- Cm3 (Su):** *when we know call **the sign** just about our facial sign our subject **in our life just have a lot of sign when we travel** in our car they **have signs to show us where we should go** to take in when we go to the road in car they need to watch the green lights so [**]*
- Bf2 (Hi):** *Also **present our culture our identity** for example today I **wear several colours it is our traditional days it is a sign of what is my nationality***
- Mf1 (Ev):** *Yes I am agree with you I think that it's the most important things that helps everyone in the world for example we have some [**] in **our faces we have some identity** if we don't have this special things in our **not** especially **our personality but our physical** ..yeah*
- Tm1 (DL):** *Like the **change background of facebook** for saying everyone in the Facebook to know changing to **black colour** because themselves **feel bad** feel bad something she want to say something about that*

Through sharing these examples, the group are generating more meaning, especially meaning that is more familiar. While the term Sign is used more in terms of its everyday meaning rather than in terms of the *semantic structure* of Semiotic theory. Here the discussions begin to create clusters of meaning (figure 6.7). Constellating occurs when participants work together to see connections between texts or ideas and therefore create new meanings, or at least meanings that are new to the participants and exist beyond the specificities of the examples in the texts (figure 6.6).

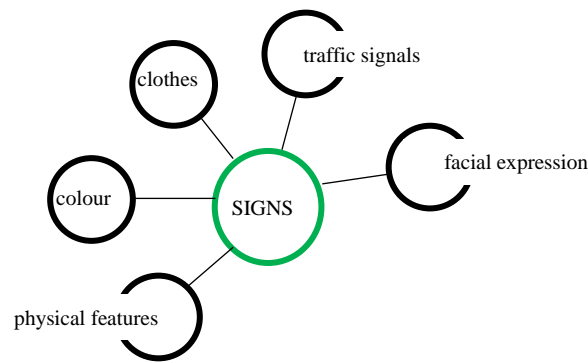


Figure 6.7 Co-constructed cluster characterising Signs

The co-construction of understanding between the group means that as *a collective* they build networks of meaning. These are either in the form of clusters of meaning added to enable a better understanding of ideas within individual texts, a particularly useful technique in the initial ARCs, or through even more complex constellations linking clusters and nodes from across texts. What is evident from these visualisations, is that more complex addition of meanings occurs across the group rather than as individuals.

6.5 Taxonomizing

Within the ARC data, *linking* creates connections between terms and more accessible contexts/experiences. Where connections create more of a classification of terms, epistemic condensation is higher. Therefore, *taxonomizing* is the highest level of epistemic condensation as it “typically creates ‘type-subtype’ relations” (Maton & Doran, 2017b, p.84). This is a key element to demonstrating the acquisition of *theory knowledgeability* as identifying the type-subtype relationship between theory and the example of Semiotics is paramount (figure 6.8). The realisation of *taxonomizing* is often limited to the final ARC where the groups return to reflect on the three articles they have discussed.

Tf2: BECAUSE SEMIOTICS IS ONE TYPE OF THE THEORY as well and SEMIOTICS CAN ADAPT TO EVERY DISCIPLINE also in daily life as well many people in society they use semiotics every day even in the hospital in school in organisation so I will say that is why accepted because the many of theory is THEORY CAN EXPLAIN EVERYTHING I think is same like semiotic SEMIOTIC CAN EXPLAIN LIKE EXPLAIN EVERYTHING AS WELL BUT SHORTER THAN THEORY [?] [ARC 4, group 2, 2018]

In the above extract, Semiotics is recognized as an example of an interdisciplinary theory. This is expanded upon as Tf2 links semiotics to its employment in society and everyday life. This extract also characterises the term theory in that one of its qualities is that it explains everything and links this to Semiotics which shares the same ability to explain phenomena.



Figure 6.8 Tf2 taxonomizing Semiotics and theory

6.6 Summary so far

Thus far this chapter has demonstrated instances of higher and lower epistemic condensation within the discussion data. Within the data there are examples of adding meaning *within* the realm of a specific term or idea as presented in the text. This is achieved by *establishing* a term, either by summarising the text or quoting directly from it. Once introduced, or established, a term is attributed properties by way of *characterising*. This often occurs when participants identify the term's properties, for example that theory is an abstract notion and somewhat nebulous. Higher epistemic condensation is realised through relating terms and ideas to others, creating relationships *between* these terms and ideas. This is achieved through *linking* terms and ideas to experiences and revealing same/different relationships or *taxonomizing*; that is identifying the type/subtype relationship between terms. This chapter, so far, has illustrated how higher/lower epistemic condensation is enacted within the ARCs through isolated extracts of data. This chapter now turns to provide a more nuanced analysis of epistemic condensation by following one group (group 1 from study 1 in 2017) across their four ARC discussions.

6.7 Epistemic constellations across ARCs – group 1 [2017]

To really gain insight into how these degrees of epistemic condensation (EC) enable the building of *theory knowledgeability* there follows an in-depth analysis of Group 1 in the first

study in 2017 across all four of their ARC discussions. The limitation of space here precludes the ability to closely map epistemic condensation across all of the ARC discussions for all cohorts. To do so might also result in a rather cursory consideration of EC. As the ARC series was designed to enable connections to be established over the period of the four discussions, exploring this in detail with one group provides a more nuanced picture of whether knowledge building does indeed occur. Group 1 from the 2017 data collection round has been selected here as a random example to illustrate how epistemic condensation manifests in the data. All discussions were analysed for EC and similar constellations were present. The constellations of each of group one's ARCs will be mapped below to illustrate higher and lower epistemic condensation and the subsequent co-construction of knowledge.

6.7.1 ARC 1

As highlighted in the analysis of semantic gravity in the previous chapter, the majority of the first half of the initial ARC discussions across all groups involved individual turns (indeed this accounts for the first 19 minutes of this particular discussion analysed below). This individual turn taking generated a large amount of *establishing* whereby participants reproduce the terms from the article without adding any new meanings and thus epistemic condensation is lower. The turns of the Highlighter, Connector and Summariser mostly relied on reproducing and quoting material from the text. One exception was the contribution of the Visualiser. Here much of the turn is concerned with *linking* theory with reality.

Cf1 (Vi): *Ok highlighter explain the what is theory and so I find some two pictures which about the relationship between theory and reality the first picture briefly shows the relationship reality triggers theory formation and the exploratory research to produce a theory and **THEN THE THEORY NEED TO BE VALIDATED AND DO SOME EMPIRICAL RESEARCH IN ORDER TO UNDERSTAND MORE EASILY** I find the second picture to better explain the relationship between theory and reality the in this picture the reality is replaced by observation people observation the natural phenomenon to create the theory for example one day an apple come down and hit Newton's head like this so he observed the natural phenomenon and create the well-known theory which is Gravity so for by scientific according to Newton's theory to predict and then design*

the experiment to test their prediction and the perform the prediction finally back to the observation they observe the experiment or results to modify the theory so therefore people continue circulating this network to find more and more theory from social reality like the theory about human resource development

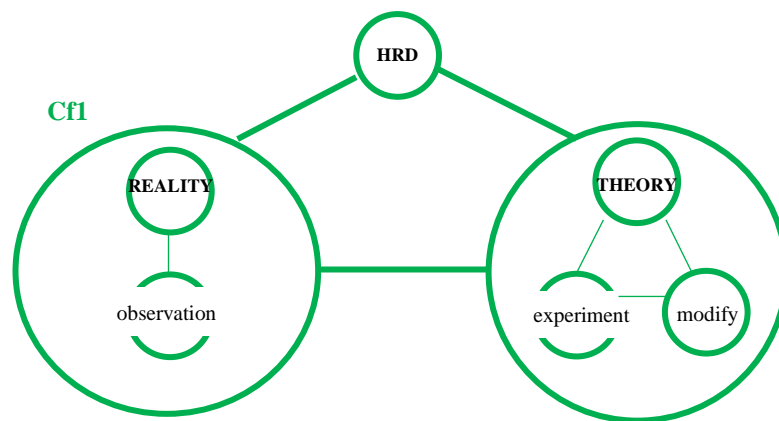


Figure 6.9 Cf1 from group 1 (2017) linking theory to reality and the example of HRD from the text

This linking is performed by the Visualiser only and the Discussion Leader prevents any further group involvement by moving on to the next role.

Tf2 (DL): *Wow yes wonderful yes make us like more clear about theory so next I would like to connector to give us about more information related to this topic*

Once participants have contributed the findings of their roles the ARC becomes more of a discussion and time is spent co-constructing their understanding of theory. This sees a shift to higher epistemic condensation as participants work together to add meanings (figure 6.10). This begins with some members of the group *characterizing* theory.

Caf1 (Hi): *I have something to add to answer when we talk about theories, THEORIES IS ASSUMPTIONS CLAIMS so it is theory is based on THEORY IS SOMETHING ABSTRACT BUILT ON IDEA WE CANNOT TOUCH it*

Bf1 (Su): *yes there IS NO SPECIFIC DEFINITION OF THEORY*

Caf1 (Hi): *I think theories when I find when I go through for the dictionary the word **THE DEFINITION OF THEORY SEEMED TO BE CONTROVERSIAL** maybe I don't understand that's why I based on Oxford English Dictionary is very clear because they say theory is defined as a set of assumptions propositions fact that are intend to provide a proximal [...?] explanation of cause and effect or rather causal relationship among a group and observed phenomenon is this right?*

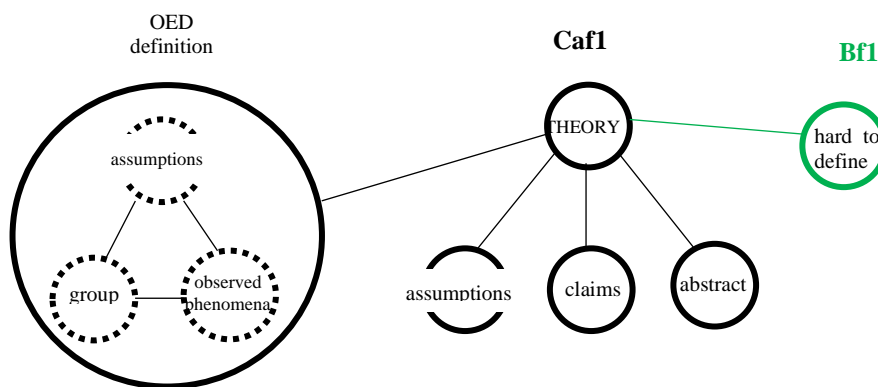


Figure 6.10 Group 1 (2017) establishing what is theory

Caf1 and Bf1 begin the 'discussion' part of this first ARC by *characterizing* theory. They highlight the idea that theory is an abstract term and as such is hard to define. Caf1 *establishing* a definition from the OED and wants to see if the group agrees with this definition. It appears that the Discussion Leader does, but the discussion then very quickly moves on:

Tf2 (DL): *Yeah I agree so the first question that I want you to discuss is how important of theory in your opinion like why do theories always generate new theories these days*

Cm4 (Cx): *Say me there is... people realise that theories is ... in our life I mean for our home or general life like because like when people they example test or do some research they maybe know the theory or thesis that the theory so I think this article will help us to better understand what is it how to*

use it how to better understand the theories of your subject or your research

Caf1 (Hi): Yes

Cm2 (Ev): *And actually I'm really quite agree with you our practice our reality life for example we know this book very clearly and it very difficult to divide [?] it **THEORY TO DEFINE [?] IT VERY DIFFICULT** and we know how to use it we know how to use it well it is enough we needn't to have a theory in our practice life we just have to pay attention about practice not on theory yeah **SO THEORY MAYBE FOR SOME PEOPLE DO RESEARCH MAYBE HAVE KIND OF USEFUL BUT IF YOU NORMAL PEOPLE NOT QUITE USEFUL***

Here Cm2 characterizes theory as useful to only some groups of people (figure 6.11). They seem to justify a divide between practice and theory. The *characterizing* of the term 'theory' by adding properties to it (abstractness and usefulness), enables the group to define theory and is the first step towards *theory knowledgeability*, that is understanding what theory is and in what contexts it is necessary.

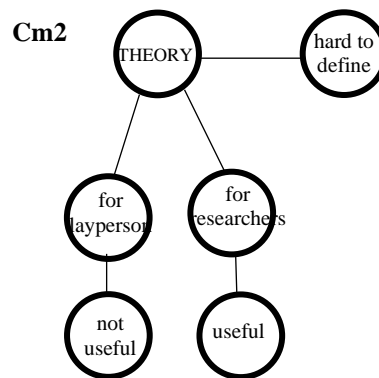


Figure 6.11 Cm2 characterizing theory

The group continue to discuss the relevance of theory and the need for theory to evolve with reality. Here the group return to the contribution made earlier by the Visualiser to add more meanings to the relationship between theory and reality and therefore there are more instances of *linking* in the data.

- Tf2 (DL):** *But maybe we just like didn't notice about this is a theory or like the Newton that you [gestures to Cf1] mentioned like just like someone observe something that maybe we didn't notice about that*
- Cm2 (Ev):** *Yeah just this apple drop in this man's head and he come to a idea yes but we find this idea with times change the idea also change right so if we if we do a theory and reality will change and it can't keep for a long time and why we find the theory and it not very useful in our practice life*
- Tf2 (DL):** *Yes so that's linked to the next question like do you think in the future like 10 or 20 years later are these theories still necessary or it might be not*
- Cm4 (Cx):** *I think is still necessary because theories always connect your thought maybe in the future we want to change the theories past based on the original theories or maybe some tests for example to change it we must expect/ extract [?] this from original theory so I think theory is really important*
- Tf1 Cn:** *I agree and I think that theory still have [...] because is past I mean in the future they have still but they have developed buy the new experience new discovery yes and might still and adapt develop to bigger*
- Cf1 Vis:** *They [holds up picture from earlier] modify the old theory and introduce the new theory SO THEORY'S NECESSARY*
- Caf1 (Hi):** *I think talk about theories in the future I think this world is culture is can have some positive aspect as we are researcher and when you read article most of the article are based on hypothesis they test hypothesis to make it true or not but if I take an example for someone who has researched on biodiversity and after he found that to manage biodiversity we have to organic agriculture for example if in the conclusion he mention that organic agriculture is effective for biodiversity conservation this result will remain positive until another researcher will find that this is maybe to give the contrast I think in*

the future this more theories everything we will be theory and people perception about some idea will be evolved [?] I think End: [26:53]

There are no instances of *taxonomizing* in this first ARC as the group have not yet encountered Semiotics employed in these discussions as an example of a theory. Therefore, this first ARC can be visualised as a constellation (figure 6.12) developing around established nodes (that is terms introduced by participants by way of performing their ARC role at the beginning of the reading circle).

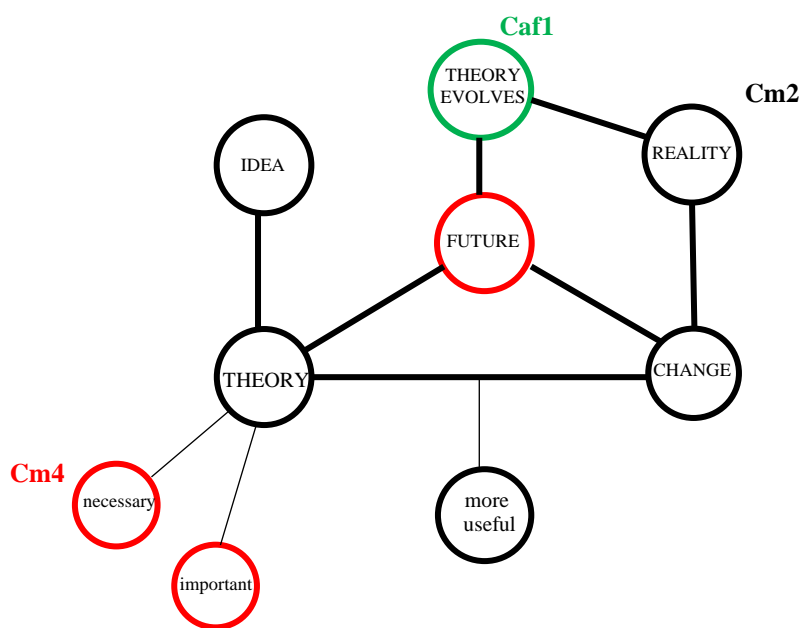


Figure 6.12 Co-constructed constellation of connections between theory and reality

6.7.2 ARC 2

Group 1 (2017) starts to collectively build a complex constellation (figure 6.13) of the connection between the text from ARC 1 and the text under discussion in ARC 2.

Bf1 (Cn): *I want to say something that like **when you use some symbol like we can easily understand** that this is the washroom and this is for woman and this is for man the easy way sometimes [?.] **like a is hard to write all the things like woman or like men so we can easily understand this symbol** and in UK they use a lot of symbol but the main fact is they also*

*use like English language so it's easy to understand these things for me
yeah*

Tf1 (Hi): *I have a question how different between ...*

Bf1 (Cn): *...your own country and yeah there is a lot of difference because in our country we don't use many kind of symbols but here a lot of symbol like if we want to go in the right side they use like this type and if you are walk so we can understand*

Tf2 (Su): *But I think for example like the different culture have different meanings like this one [crosses fingers / all: laughter and agreement] everyone knows in UK is like cross fingers is good luck but in Thailand is like lie [amazement] yeah is different culture is different meanings yes...*

Caf1 (Vi): *...what what happen when someone in Thailand come to...*

Tf2 (Su): *...Yeah **HOW TO KNOW THE MEANING** if we ...*

Caf1 (Vi): *...**THE PERSON HAVE TO FOLLOW THE SIGN OR IMPULSE** [?]*

Bf1 (Cn): *sometimes they need to know about the signs and after that [?.] suppose she says example if she does like this [crosses fingers] and they think that I am lying but here they will think that is good luck*

Cm4 (DL): ***SO WE SHOULD MAKE SOME MISTAKE BEFORE SO WE CAN FOLLOW IT LEARN FROM IT SO THIS IS IMPORTANT FOR SEMIOTICS** what is I have a question what is semiotics now after we discussed*

Bf1 (Cn): ***Well I guess semiotics is the study of signs and symbols and is related with psychology and philosophy and constitute is the study of symbolic communication semiotics can include signs [?.] gestures and other linguistic and non-linguistic communication method...***

Cm4 (DL): *... **SO IS ALSO A THEORY ABOUT SEMIOTICS IS IT A THEORY***

Cm4 (DL): *yes OK I want to ask you what do you think of this article is it related to the first article last week*

Cm2 (Cx): *related to first article [All: what is theory]*

Caf1 (Vi): *yes maybe theory...*

Tf2 (Su): *.... BECAUSE SEMIOTICS IS A THEORY ...*

Caf1 (Vi): *... a concept...*

Cm4 (DL): *I think is AS A EXAMPLE HELP US UNDERSTAND WHAT'S THEORY is and how it means*

Cf1 (Ev): *I think it is very similar because from the last article the author told me the theory come from the reality and the theory is also can be changed from the reality change so and the sign is also like the theory definition we can see sign come from reality like the apple like the peoples' appearance it all comes from reality and the and we also can change the definition of signs because the reality change*

Cm4 (DL): *So this article as a specific example for the last article*

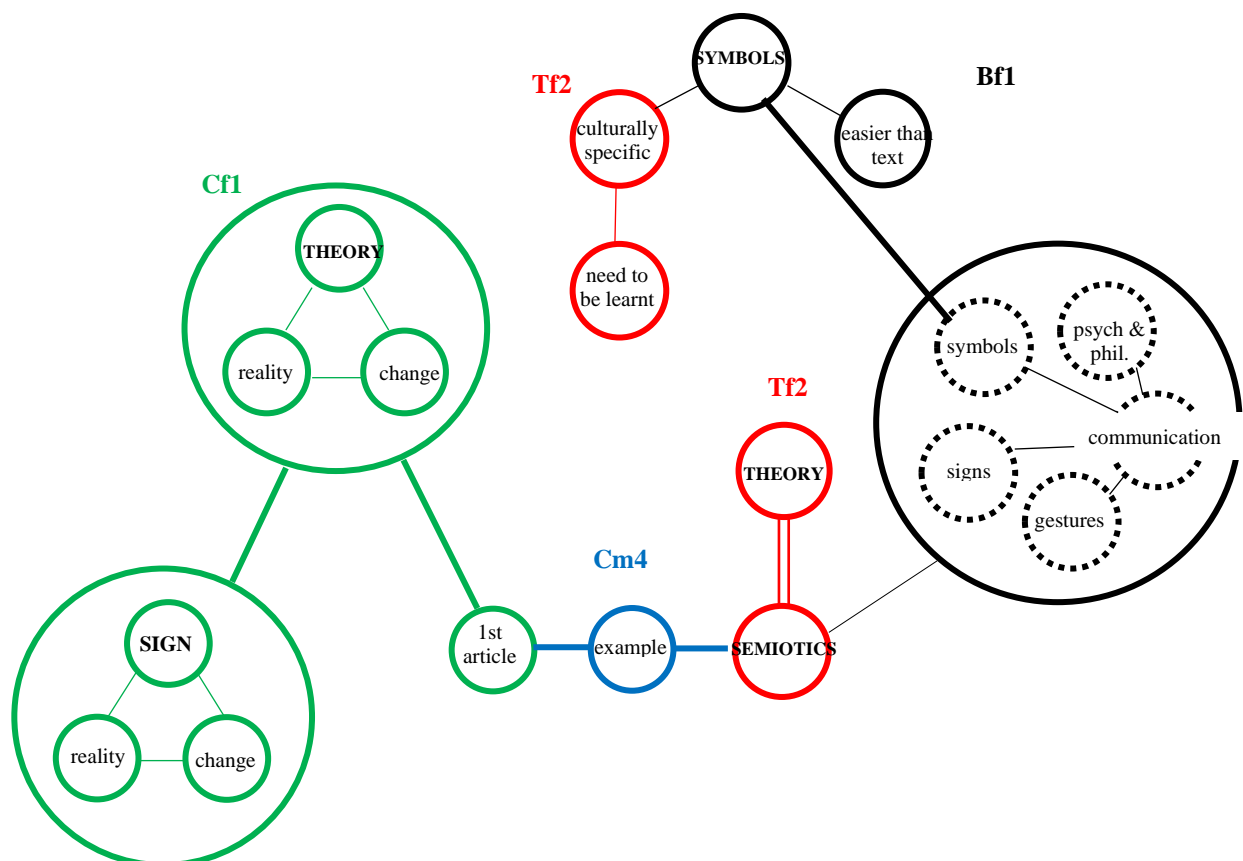


Figure 6.13 Group 1 (2017) ARC 2 constellating what is theory

6.7.3 ARC 3

Due to a participant (Caf1) taking on Discussion Leader role, the ARC starts with individual contributions from the rest of the group as they take turns to introduce the topics of their articles

Caf1: *first of all I would like everybody to give maybe the titles of we can we can know how to manage the discussion*

There is a substantial amount of *establishing* with what follows as participants give very brief information about their texts. Only one of the participants (Bf1) also attempts to make a link between her text, her undergraduate studies, and the previous ARC text.

Tf2: *OK my topic is about the topic is **developing brand literacy among affluent Chinese consumer a semiotic perspective** is about like possessing luxury brands yeah but the article focus only in Chinese consumer and about the luxury European luxury brands*

Bf1: *well as my brand my article name is **a branded self the semiotics of identity** and the author is Arthur Asa Berger he is an American sociology as I finished my undergrudation in sociology so this article is related with the sociology and semiotics which we discussed in our previous discussion*

Cm4: *my article is **the placebo effect** talk about **placebo therapy** about the **semiotics positive effect to patient***

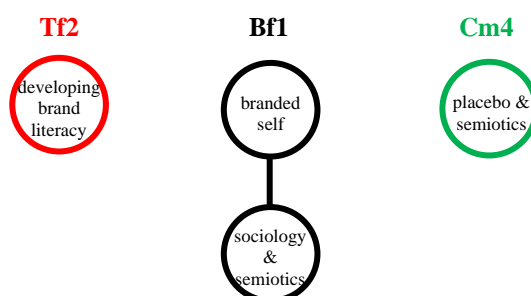


Figure 6.14 *Unconnected nodes established at beginning of ARC 3*

In the third ARC there appears to be genuine engagement, evidenced through amount of semiotic mediation, that is an attempt to understand articles and meanings that does not occur

to the same degree in ARCS 1 and 2 where there seemed to be an assumption of understanding. The group have to work to understand the articles they have not read. This is evident within the stretch of discussion focused on Caf1's article below. The discussion extract begins with Caf1 highlighting that the three ARC articles are linked by topic (Semiotics). She also establishes that her text begins by looking at *Grünbaum's* semiotic model of aspirin.

Caf1: *OK before talking about my article I would like to go back to the previous article the first article it was talking about semiotic in general but the second article is talking about the use of semiotic in society my present article is talking about semiotic and placebo and I defined placebo before in this article the author he try to hypothesise the placebo effect and he use he is focus on some study of Grünbaum the name is difficult [shows group in article] Grünbaum analysis [**] my understanding is the author **firstly he focus on Grünbaum analysis** in this study in this reflection Grünbaum wanted to draw a **semiotic models of aspirin** I don't know it you*

Cm2: *Yeah I know what aspirin is I know it is a kind of*

Caf1: [**]

Bf2: *It's a painkiller*

After some group members acknowledge that they know what aspirin is, Caf1 continues to admit that she is not quite sure how signs can replace conventional medicine, questioning the link between the two.

Caf1: *Many scientists have biological mechanism that lead to reduce the pain so he after he choose [**] he said placebo effect we can draw a model of he drew a model called [**] model that sign called placebo effect he also tried the [**] if many research focus in this semiotic it can be hurtful in medical staff that is all I talk about my article the question I was thinking when reading this article is how can we replace the conventional method of treatment by sign how can this work I was asking this question*

[laughter]

The discussion then focuses on *characterizing* the placebo effect in an attempt to form a group understanding of its properties. Cm2 then sees a connection between how the placebo effect works and psychology.

Tf2: *is difficult you mean like **HOW THE PLACEBO IS***

Caf1: *I try to find some picture **HE USE PEIRCE TRIAD OF PEIRCE AND HE SAID FOR EXAMPLE WHEN YOU HAVE HEADACHE I CAN PRESENT YOU SOME DRUGS AND SAY THIS IS A POWERFUL PAINKILLER BY JUST UNDERSTANDING THIS YOU CAN AND HE USE PEIRCE THIS QUESTION OF SEMIOTIC HE SAY WHEN SOMEONE SAY THIS IS A POWERFUL PAINKILLER MANY MECHANISM IS CONDUCT TO MAKE PLACEBO IN THIS SYMBOLS AND ICON ALL THAT WHEN I SAY THAT YOU WILL CURE YOUR DECODE THIS MESSAGE AND EXPECT FOR CURE** it was amazing*

Tf2: *you mean **LIKE YOUR BRAIN JUST THINK ABOUT IS WILL CAN CURE** your*

Caf1: *yes you anticipate when your [**]*

Tf1: [**]

Tf2: ***YOUR BRAIN THOUGHT THIS WILL GOOD AFTER YOU TAKE THE PILL** something like that*

Caf1: ***BEFORE YOU TAKE THAT PILL WHEN I SAY THIS IS A POWERFUL PILL YOUR BRAIN ANTICIPATE THIS IS CALLED PLACEBO EFFECT** [**]*

Cm2: *so I think is some kind of role of psychology*

Cm4: *yeah [**] [shows group a page in his article] doctor give her some simple [**] gives her placebo to effect the patient they will be happier and they will be safe and will be therapy*

Further *linking* takes place as Cm2 provides an example of placebo use in China. This example then reminds Caf1 of the discussion of acupuncture in her text. Caf1 characterises acupuncture as a placebo, but Cm2 disagrees and states that it is a science and can cure illness.

Cm2: *yeah I know this I know example in China because some people they have some [**] and have some very careful illness and in the end of their life any drug cannot to happen to cure them medicine will give them some drug and say it could help them but actually just like some sweet [laughter]*

Caf1: *talking about Chinese the author mention also about acupuncture I don't know if you know acupuncture [participants signal that they do] he said **in case everybody has an energy during illness this energy decrease so acupuncture is used semiotic method to cure some pain based in on the hypothesis that during illness this energy is imbalanced and they use needles localise the region of the body and release this ...***

Cm2: *but acupuncture is a science it really could cure people*

Caf1: *really*

Cm2: *yeah will*

The complexity within the discussion that takes place throughout this stretch of discussion in this third ARC is visualised in figure 6.16 below.

One unexpected consequence of the participants all having read articles that are related only through the enactment of Semiotics, is that connections are brought to the fore as figure 6.15 reveals there are more examples of *linking* here than in the previous ARC discussions. This *linking* continues when another group member introduces her third ARC text. The *linking* is not just between texts that are similar, but also in relation to more personal experience and beliefs.

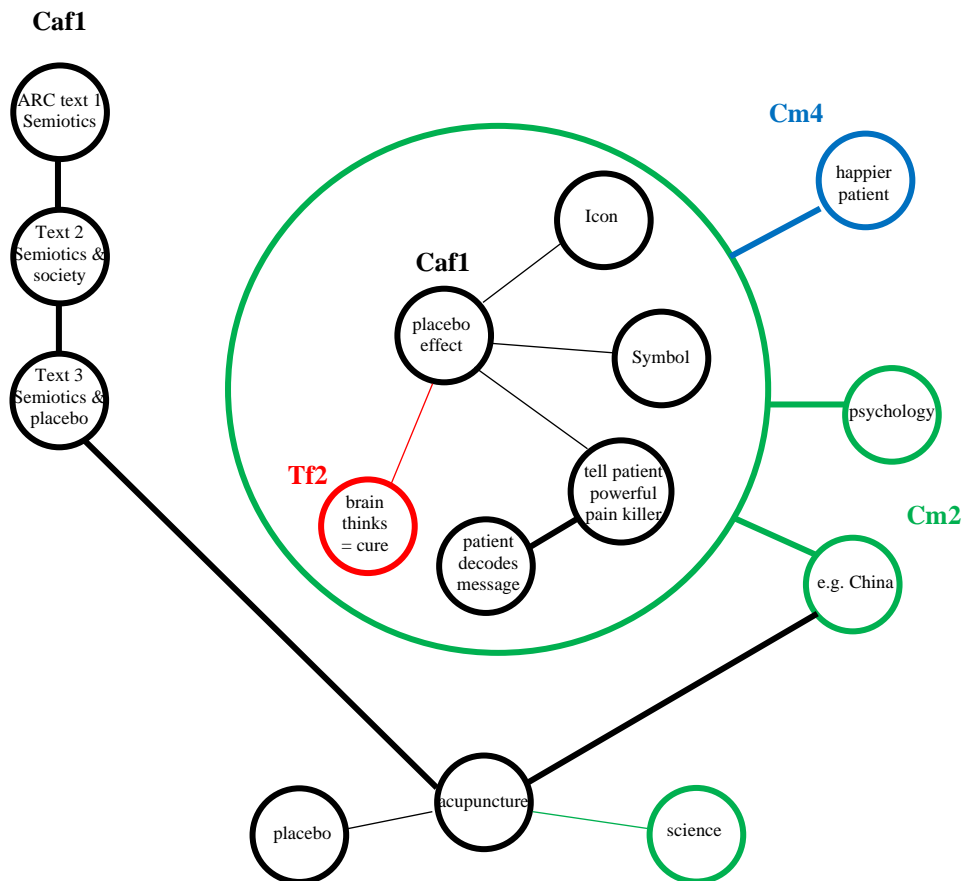


Figure 6.15 co-constructed constellation of discussion of Caf1's text in ARC 3

6.7.4 ARC 4

This fourth ARC begins with *establishing* the term theory (reproducing the definition of theory from the text).

Cm4: *so OK what is theory*

Bf1: *well from my point of view theory is a supposition or a system of ideas intend to explain something that is theory*

Caf1: *if I remember it in the first article they say **THEORY IS AMBIGUOUS THE DEFINITION IS AMBIGUOUS** so it depend on the area that mean **THEORY EVOLVED OVER TIME***

Tf1: *in this topic that relate to the HRD so I think the aim of the [*] is to assimilate about the meaning and the value of the theory as a basis*

Tf2: *and like it's related to the HRD like **TO STUDY OF A PARTICULAR PHENOMENA IN HUMAN EXPERIENCE** [Cm2: yeah] so that point I think is related to semiotics because the **SEMIOTIC IS CREATE BY THE SOCIETY** this is related to the human experience*

Cm2: *and I remember one of you show us a picture about apple drop down to people head and yeah a apple is it you [looks at Cf1] or I remember last time you connect the picture with theory*

Cf1: *yeah maybe is the second article*

Caf1: *yeah second article theory semiotics and society*

Cf1: *I use the picture to illustrate the reality the relationship between the reality and the theory **SO IT MEANS PEOPLE FIND A FACT IN REALITY AND THEY WILL THINK ABOUT OH WHY IT PRODUCT THIS FACT AND SO HE THINK ABOUT WHAT IS THE THEORY IN THIS FACT***

Cm2: *oh so that mean your second article right*

Caf1: *yes second article*

Cm2: *so yes the second article also talk about theory and our first article is about theory*

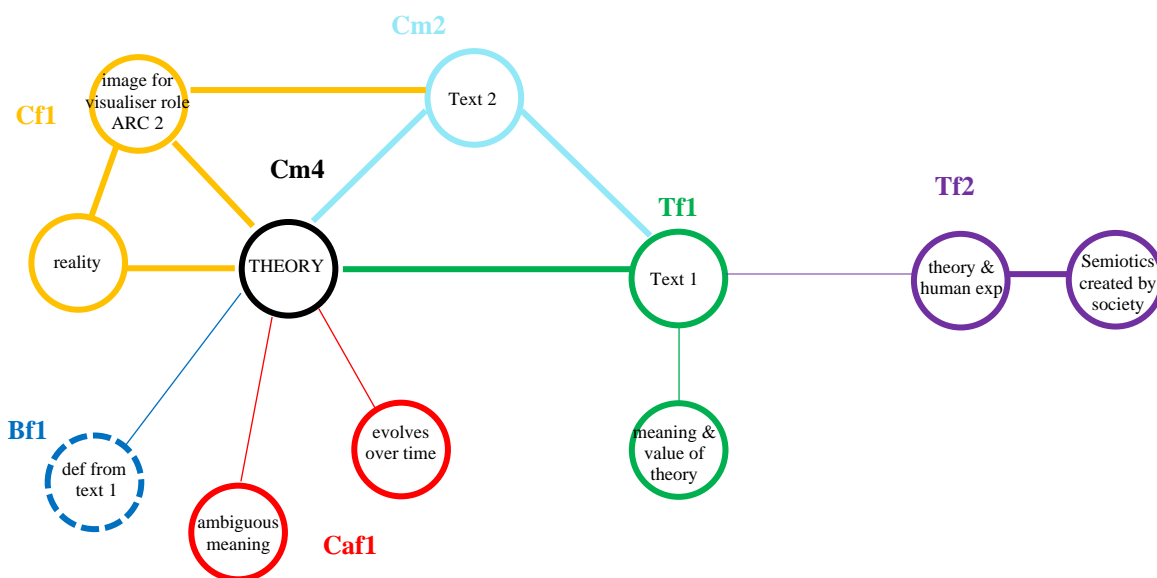


Figure 6.16 ARC 4: co-constructed understanding of theory and connections across texts

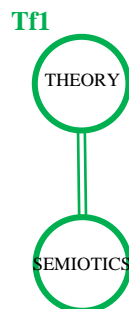
After *establishing* and *characterising* theory and Semiotics and starting to see a connection between the two, the discussion continues and here we see a greater amount of *linking* and some *taxonomizing* as the group focus on creating connections between the texts.

Cm4: so how to connect to the theory what will we talk about the semiotics how to connect with theory

Tf2: I think a theory is like to **THE THEORY IS OCCURRED FROM OUR HUMAN EXPERIENCE** so is like a semiotic that **WE CREATE SIGNS AND GIVE THEM MEANING BY OUR EXPERIENCE** yeah

Tf1: and actually [Caf1] and **THIS MEANING CAN CHANGE OVER THE TIME** actually I think ACTUALLY SEMIOTIC IS ONE KIND OF THEORY

In response to Cm4's question regarding how to connect theory and semiotics, Tf2 repeats her previous points regarding theory and semiotics having their roots in human experience and Tf1 adds a level of *taxonomizing* as she offers that the relationship is type/subtype, that Semiotics is one kind of theory.



Cm2: Yeah I agree with you you mean all the type of symbol right because the first article **HE TALK ABOUT THEORY KIND OF SYMBOL IT EXPRESS THE MEANING** and notion and symbol also mean this article could connect with **society** and here we have to talk about two articles and I know the three article most of us is different OK I need you to connect your third article with your **past two articles** and [gestures to Caf1]

Caf1: *yeah my article of course **my article talking about semiotic and placebo** the last time I explain **THE MEANING OF PLACEBO WHICH IS THE NON-SPECIFIC EFFECT OF MEDICINE** so **WHEN THEY SAY NON-SPECIFIC IS SOMETHING THAT IS CONCEPTUAL WE CANNOT SEE WHEN SOMETHING IS CONCEPTUAL IT IS BASED ON THEORY** in this article the author in the conclusion he said if we develop if we try to connect semiotic in medicine in can really it will have if we try to put **semiotic and conventional treatment together maybe it will give some more positive effect in medicine***

Cm2: *Yes and **THE MEDICINE KIND OF SYMBOL** [Bf1: no] I think it kind of symbol because you don't give the placebo patient symbol about medicine can work*

Caf1: *Yeah because the author mentioned that there **ARE SOME FACTORS THAT COME TO LEAD TO PLACEBO EFFECT LIKE THE COAT THE NURSE COAT** some image like the **IMAGE OF SOMEONE WHO IS SUFFERING** so **when the patient receive it it will create the placebo effect** that [**] **I think this is theory***

[**]

Bf1: *my article was about **BRANDED SELF WHICH INDICATES SOME BRANDS LIKE GUCCI OR LIKE THIS TYPE OF BRAND IT'S A SYMBOL AND BRAND IS A SYMBOL OF FASHION** so here its' related with symbol which is our second article semiotics and society so **BRAND** [**] **QUALITY PRICE AND POWER AND ALL OF THAT** is about my brand how to prove use of brand and disadvantage and [*] like this*

Tf2: *yeah my article is quite the same because in my article is focus like **THE ADVERTISING IS LIKE A SYMBOL OF THE BRAND IDENTITY TO SHOW TO THE CONSUMERS LIKE TO UNDERSTAND WHAT THE BRAND WANT TO TELL THEM LIKE ABOUT THE QUALITY THE PRICE***

Cm2: *I remember last time you show us two pictures they were very interesting [laughter]*

Tf2: *actually [*] advertising*

Caf1: ***That mean our life is full of theory you cannot live without theory** [Bf1: yes] my preoccupation is because theory **ALL THEORIES ARE BASED ON CLAIMS AND THOSE CLAIMS ARE ALWAYS DEMONSTRATED TRUE UNTIL***

ANOTHER INVESTIGATION CAN DEMONSTRATE THAT IT IS NOT TRUE
*but when I read the article I have never seen somewhere that maybe somebody says this is [Cm2] write in 2010 that semiotics say like this I totally disagree I never seen it [Cm2: yeah] that mean in theory people try to [**]*

Tf2: *you mean like I agree [gestures to Tf1] THAT SEMIOTIC IS ONE THEORY that try to explain because first when we read about definition of theory maybe like more abstract so is quite hard to understand but when we read the second which is the semiotic one after theory so we understand more about the meaning of theory the parts of the theory like one is definition and how it works in our daily life*

Tf1: *and that show us that **MANY THEORY IN DIFFERENT SUBJECT** and that **SEMIOTICS IS QUITE EASY TO RELATE TO EVERY SUBJECT** because is a like a same meaning*

Caf1: *IS AN APPLIED THEORY*

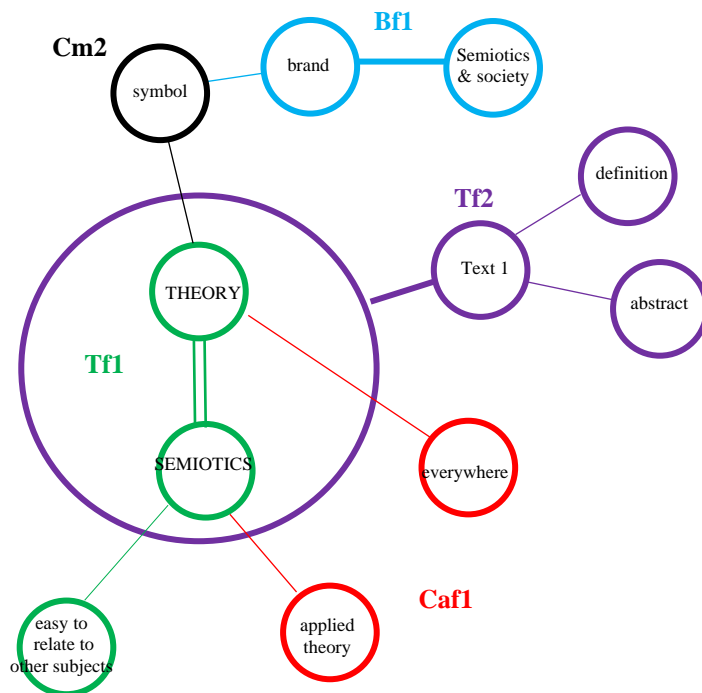


Figure 6.17 *Co-constructed constellation of connections between ARCs*

The group are able to characterise theory as having a base in human experience and observation and also that within Semiotics meaning is created by society. Theory is linked to human

existence and articles are related to each other. Some participants are able to see that Semiotics is a type of theory. All of this results in a complex, co-constructed constellation (figure 6.17).

6.8 Conclusion

The analysis of epistemic condensation within the ARC discussions has shown that building knowledge of complex ideas is enabled through *collaborative* meaning making. This co-constructed knowledge is more evident in the latter two ARCs. The ability to move between lower and higher epistemic condensation from establishing terms to characterising their meanings to then link this to other terms and finally create a taxonomy enables the acquisition of theory knowledgeability.

While often SG and SD are plotted on the semantic plane a Cartesian plane potentially obscures some interesting patterns in the data and more importantly it obscures the complexity that is evident in this data. Complexity is built across a series of turns and participants. This data is not the work of one individual in that it examines one voice and how that voice weaves and crafts other knowledge together (as in the case with theses for example (Wilmot, 2019)). Rather, this data is a discussion and therefore involved various actors in the building of knowledge. The semantic plane can reveal how SG+ and SD+ can coexist within the data as isolated instances, however it is less able to reveal how connections are made *across* data. Conceptualising semantic density as epistemic condensation affords a much richer picture of how complexity is built in the situation of group discussions.

Chapters 5 and 6 have explored what happens when postgraduates discuss theory, and how theory knowledgeability is developed through an analysis of complexity and context dependence across the ARC discussions. The analysis revealed that, over time, participants were able to acquire *theory knowledgeability* albeit at a particular *semantic threshold*. The use of the ARC roles was a useful scaffold in affording this acquisition, but was not necessarily instrumental in the process. The *semantic profiles* revealed that the ARC roles as they were enacted in the discussions in actual fact maintained a relatively low flatline within the first two discussions. It may have also been the fact that the texts may have been within Vygotsky's (1978) 'zone of far development' and too complex and alien for the participants to be able to extract the ideas to other contexts beyond the personal and the experiential. The final two ARC discussions saw an interesting shift in the *semantic profiles* as the groups were able to start to see connections between the three articles and the final ARC space left for reflection on the

three texts enabled many groups to demonstrate some acquisition of theory knowledgeability. The important finding being that across the 4 ARC discussions, all groups weaved between the full *semantic range* exhibited in the data. A finding that concurs with many other empirical studies that identify the importance of movement between the boundaries of the semantic range in order to afford cumulative knowledge building. The ARCs also demonstrated the range of degrees of *epistemic condensation* as groups moved from adding almost no new meanings to terms from the articles, thorough to determining the characteristics of key terms before moving to higher epistemic condensation and adding more meaning to the terms within the texts as the participants related them to other terms and experiences and as they were able to identify the taxonomy inherent in theory knowledgeability, that is that Semiotics, as employed in this study, served as a type of theory.

7.1 Introduction

Theory knowledgeability has been labelled a threshold concept in this thesis. As such acquiring *theory knowledgeability* should be troublesome and students should find themselves within the liminal space. Chapters 5 and 6 have demonstrated that, as a group at least, the participants were able to acquire a degree of theory knowledgeability. Therefore, as a collective, they managed to traverse the liminal space. The question remains as to how far the participants were aware of this. To move beyond the liminal requires some change to take place. This research employed a range of research methods in order to provide multiple perspectives on the problem. Exploring the ARC discussions enabled the researcher to analyse what was taking place during these discussions and whether the building of *theory knowledgeability* occurred. The other data collection methods focus on gathering the participants' perspectives on their knowledge building and whether they were aware of any changes taking place as they traversed the liminal. It was also important to discover whether the participants were indeed moving from a heritage educational culture that valorised knowledge over the knower (as is often assumed) and therefore needed to also experience a code shift in preparation for their encounter with postgraduate studies in UK HE, which largely valorises the knower. The overarching research question here is:

Can the ARC process help students traverse the liminal space?

To gain insight into these perspectives and attempt to answer this question, the data in this chapter has been analysed through the enactment of Specialization. In particular Specialization has been employed to analyse the semantic orientation interviews and also the diary data.

Chapter 2 outlined how students can encounter a culture clash, or in LCT terms a *code clash* when they move from their heritage educational culture to studies in the UK. Arguably, the purpose of a pre-sessional whether EGAP or ESAP is to enable students to *code shift* so that they do not encounter *code clash* on their academic studies. The key dimension within LCT to trace code shift or indeed highlight code clash is Specialization.

To recap, code clash results from the legitimised educational practices being implicit and therefore unseen and more difficult to come accustomed to. There is some assumption within

EAP that students from non-western educational backgrounds often experience what is known in LCT terms as a knowledge code, this means that knowledge is more valorised than the knower. Previous experiences of academic success for students often manifests as the student being required to regurgitate the knowledge that has been provided by the lecturer. In the UK, on the other hand, academic success often manifests as the student being able to interpret, comment on and manipulate ideas to form their own argument (see for example the QAA master's level characteristics) and thus, valorised practice is perhaps more often located within the knower or elite quadrants of the Specialization plane. It was not the intention of this research to assume this 'clash' of educational experiences to be the case. For this reason, prior to participating in this study, participants took part in individual semantic orientation interviews. The aim of these interviews was to ascertain where on the Specialization plane the participants' previous educational experiences may exist.

7.2 Semantic orientation interviews

As detailed in the methodology chapter, the participants of this study were mostly from Asia (Bangladesh, China, India, Iraq, Vietnam, Thailand), with two participants from Africa (Morocco and Cameroon). Rather than assume that the heritage educational university culture of these students was vastly different to the UK setting participants were asked a series of questions regarding their previous educational experience in a semi-structured interview. The questions focused on the teaching and learning style of their previous experience, including levels of interaction between teacher and students and students and peers, whether participants were required to undertake individual research and what was required of students in order to succeed in assessments. Participants were also asked what they thought the purpose of a university education was in their previous experience and here in the UK as well as their reasons for seeking a UK education and how they felt about studying in another country. The questions are listed in the appendices (appendix 3). These semi-structured interviews helped determine whether participants were more accustomed to an education style that was more 'knowledge code' or more 'knower code' (only these two codes were present in the data, none of the participants mentioned having experienced a relativist or elite code). The interviews have been analysed and recurring themes are discussed below. As these interviews were conducted to ascertain whether knowledge or knower were legitimised in the participants' previous experiences, they exist as ancillary data. As such a translation device was not developed to

analyse the responses. Rather, participants have been categorised as generally coming from a 'knowledge code' or 'knower code' background.

Teaching and learning

Despite the cohort having a variety of experiences in terms of study level (some participants had studied a Master's degree in their country already) and disciplines (from Medicine to Law), their previous classroom experiences were very similar. Perhaps unsurprisingly, group size had an impact on the teaching and learning experienced. It was a very common experience that students attended very large lectures which did not provide opportunities for participation and interaction. A handful of participants experienced small lectures or something more akin to seminars where they had the opportunity to discuss content with the teacher in small groups like Tm2 from the second cohort:

Tm2 (2018) *10/12 students in class. Always have to communicate with teacher. Sometimes taught in English Also Big lecture just have a friend to teach me before I go to exams sometimes when teacher taught me it difficult to understand clearly*

However, as Tm2 states, these classes were the exception and not the norm and may have only happened on one module. Tm2 also shared a very common experience among all participants in that teaching and learning centred round the teacher and textbooks. Knowledge was imparted to the students, and they were not expected to explore any further knowledge. This suggests that the participants experienced more of a knowledge code, where a particular remit of knowledge was expected to be acquired and reproduced. In India, Im1 was exposed to

Im1 (2017) *mostly classroom oriented teaching more theoretical than practical more exposure to research and things by heart some theories and something like that*

In Thailand it seemed to be a very common experience that knowledge was provided and expected to be regurgitated for the exam. Students did not need to demonstrate any understanding of the knowledge the teacher had shared in classes, and in many cases, students crammed for exams using notes from classmates.

Tm1 (2018) *in my country education different to UK in Thailand teacher give knowledge students look and remember and when examination day have come we memorise to do exam*

Tf2 (2018) *Just study on book and remember not focus on academic work I can just copy my friend she always like a tutor for our group because she good for lecture and she have a good knowledge and me and many friends don't understand what teacher said because boring*

Tf1 (2017): *the way the teacher teach us like is not understand but remembering more than understand [in UK] try to understand not just remembering*

A student from Morocco who had experienced the French education system shared similarities with Thai students in that their classroom experience was quite didactic.

Mf1 (2017) *French system is more theoretical teacher explain ppt after that a little of time we make exercise we listen teacher more than do exercise more theory than practice if you not go home and learn and repeat what teacher say you can't remember anything.*

As Tf1 acknowledges above, some participants had a sense that UK education was more knower-oriented, that success was down to the student rather than the knowledge remembered as was the case in their previous experiences. This was more evident in some participants who had already attended 5 weeks of a pre-session prior to attending the 6-week pre-session on which this study took place.

Tf2 (2017) *I think [UK] is totally different from my country is focus learners more than in my country like student have to active always all the time like you have to learn by yourself teachers just guide or give you some advice*

Some participants also highlighted that they were learning new skills in the UK:

Bf2 (2017) *We are use some textbook not learnt about summary and articles, in UK first time evaluation, summary and research*

It is not the intention of this study that one code is pitted against the other. The sole purpose of these interviews was to gain insight into what was considered *legitimate*, not that a knowledge or knower code, or indeed education system is better in any way. Assumptions are often made as to the knowledge code orientation of pre-sessional students. The purpose of these interviews was to afford the students the opportunity to describe for themselves their heritage educational culture rather than making such assumptions. While some participants felt their previous

studies were boring, there were some who thought that the teaching quality in their previous educational experience was very good:

Bf2 (2017) *Teachers was very good teaching quality is excellent.*

As already mentioned, some of the participants had already studied in the UK for 5 weeks prior to studying on the course researched here. Therefore, they were beginning to get a sense of what UK education was like and what is valorised in this context. However, it must be noted that this was based on studying on a pre-sessional course and not the academic degree. Therefore, participants noted that the UK prepares students well for studies, or makes clear expectations for assignments in terms of academic skills. They may well not have thought that if they had joined their academic studies in the UK directly.

Im1 (2017) *More academic in UK more idea about how to do work Academic writing style is entirely different from India. Gain mark according to points here points as well as academic style is important elaborate point*

In terms of experiences with teaching and learning, the majority of the cohort had experienced education where success was measured by being able to memorise and reproduce knowledge provided by the teacher. This suggests that the knowledge itself was more valorised than the actor reproducing it within assessment practices and that this suggests strong epistemic relations and quite weak social relations.

Experience with research and reading academic journal articles.

As the intervention at the heart of this study is based on participants reading and discussing academic journal articles it was useful to see what experiences students had with such texts prior to studying in the UK. For some of the participants, this pre-sessional was their first encounter with academic journal articles:

Cm1 (2017) *No need to research in China we just focus on our lecture*

This experience was common, especially as so many participants had experienced a very exam based education. Some participants, however, were required to undertake some research in their previous studies. One participant from Cameroon (Caf1) had some experience of conducting independent research, however topics had to be approved by tutors. This participant also had issues with academic journal articles being behind a paywall and tutors would therefore need to help students to access articles.

Tf2 (2017) had a very similar undergraduate experience to the rest of the cohort in that they did not have to research literature or read academic journal articles. Tf2 also studied at postgraduate level in Thailand and they were required to research for their dissertation, however they notice that

Tf2 (2017) *maybe we have to practice more in UK*

When students had had experience with researching literature and reading academic journal articles, it was often as a result of studying at a higher level (one participant said that research and reading academic articles in Morocco was only for PhD students) or as a requirement on certain modules. In Iraq for example:

Iqm1 (2018) *Some teacher give us some subject and go secondary research to get more information about this subject he or she want to learn student how to get research*

Academic conventions were not quite the same as in the UK however. For Iqm1, citations were expected but not with the rigor expected in the UK. Also, for many within the cohort, it was sufficient to find information on the internet and to copy from online sources.

Im1 (2017) *Have some assessment where did some research – not academic journals information from google didn't check whether relevant or reliable*

Tm1 (2018) *Wrote essays in Thai, never used books or had to do research or citations get information from Google*

Tf2 (2018) *I have to study on internet on youtube to more understanding and have new idea read one or two articles per term just copy the link and author is not like in here could copy from articles teacher always give us outline for exams*

However, for the majority of the cohort dealing with academic journal articles on a pre-session course and as part of this study was to be something new for them. In the majority of cases the teacher and lectures had been the sole source of knowledge and students were not expected to have a say in what knowledge they used in their assignments. This valorises prescribed knowledge which is controlled by the teacher and expected of all students.

Success:

A key concern for LCT is to uncover what leads to success within educational settings. For the majority of the participants, success in their heritage educational culture was based on

assessment, in particular, exams. For many students their teachers would be very direct with the students as to what they needed to prepare to succeed in exams.

The participant from Iraq stated that students were expected to:

Iqm1 (2018) *Prepare everything the teacher or lecturer say prepare this or focus on what teacher give us during the lecture*

The participant from Bangladesh had a very similar experience:

Bf2 (2017) *Teachers lecture about our modules and about examinations and talking about how we can do better for good result.*

Given the very didactic teaching style and the fact that students confessed to not paying attention in classes, it seems a very common experience in Thailand that students use the notes of others to cram for exams. Tf3 sees the key to success in knower rather than knowledge:

Tf3 (2018) *Quality of student depend on that student not teacher sometimes Thai student don't pay attention or miss class ... If you achieve depend on you not the university*

Preparation for employment

For many participants they felt that their previous education experience did little to prepare them for future employment. There appeared to be a disconnect between study and employment. For some they saw the opportunity to study in the UK a chance to add weight to their CV and to develop transferable skills.

Tm1 (2017) *can see how UK education will help in employment. No relation to future career in Thailand*

For some participants the purpose of university was to improve career prospects.

Tf2 (2018) *Just want student to have more grade for get a good job I see my friend have the top but when she finish uni she don't do work that she finish university she do another thing*

Though Tf2 felt that university failed to develop dispositions in students that are valorised in the workplace:

Tf2 (2018) *In job don't use theory, use idea and opinion but I didn't study about to discuss and give my opinion*

It is to develop as a valorised employee that many chose to come to the UK

Tm2 (2018) *No practice in Thailand, just exams lectures came to UK to use my knowledge to adapt in my work place*

Knowledge acquired is more down to the knower

Some participants felt like their ‘knowery’ dispositions were quashed in their heritage education culture and that the UK would be the place to develop these dispositions:

Cm4 (2017) *I think UK will use my curiosity of study adequately*

Cm1 2017 *UK encourage you to do own study you can get knowledge but more depend on self-study.*

Vf1 (2017) *Students in UK more independent express idea not wrong or right freely express yourself. UK requires student more skills.*

Tf4 (2018) *In UK student give opinion and use the theory to adapt to the our life is different way.*

Interestingly one student from Thailand experienced a code clash within her previous educational experience.

Tf1: *in Thai is markedly difference from here (UK) just give a paper to student and only let student remember and go to test but I think it don't work student with high grade it doesn't mean they can use it in real life. Who can remember a lot can win. Student is wrong if they do not agree with teacher.*

This participant had experience of disagreeing with her teacher in high school and was punished for having her own opinion (in fact the teacher contacted her parents about it). While this experience was quite extreme, TF1 was quite clear in her disagreement with the very knowledge code orientation of her educational experience which clashes with her own knowery disposition:

TF1: *Teacher forces students to memorise formula (in engineering) I think the formula we not need to remember we just understand why we have to use this formula but tutor let us to remember and close book to test*

Given the information gained from the semantic orientation interviews it is possible to plot the participants' heritage educational culture experiences as a heuristic on the Specialization plane. As can be seen from figure 7.1, the majority of the cohort do indeed come from a more knowledge code educational background. However, many are already setting their gaze to more knower code oriented study having already experienced pre-session studies.

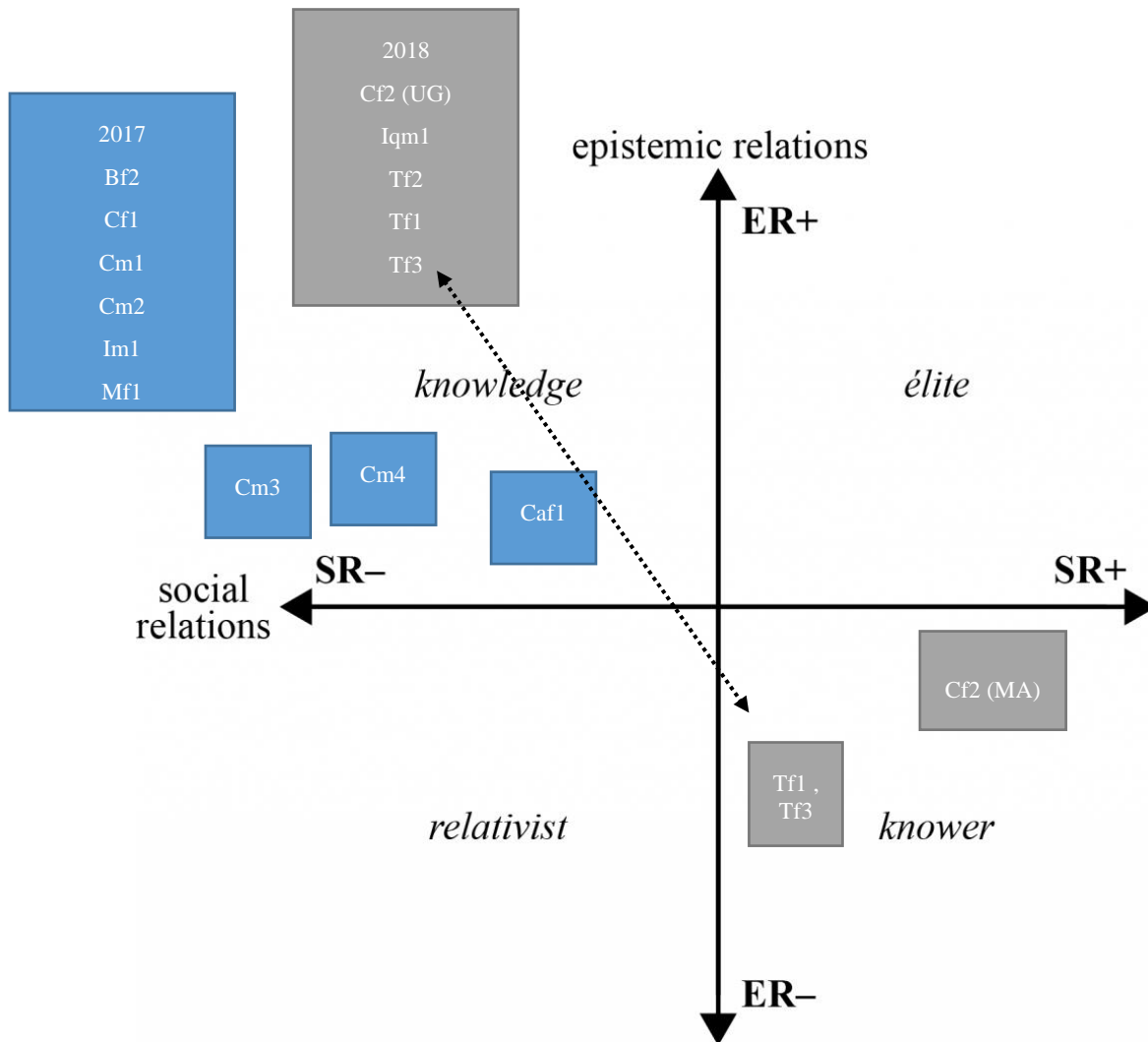


Figure 7.1 Heuristic of participants' semantic orientation as plotted on Specialization plane

Due to the fact that some participants had been studying for some time in the UK (as they had joined earlier pre-session courses), they start to develop a more knowery gaze.

Tf3 (2018) *Totally different in UK a lot of information about way I am going to get knowledge purpose here try to give information to student they didn't teach me ABC but how to do and how to use this. I learn more. Personally I like study when I come here I found myself have something change about myself*

7.3 Summary so far

Specialization has helped to understand the valorised practices in the participants' heritage educational culture. It appears that the predominant experience was firmly within the knowledge code quadrant, with knowledge reproduction the most legitimated practice to afford success. Participants have very little prior experience with reading (or researching for) academic journal articles and with sharing ideas with their peers. Some participants have demonstrated some insight into valorised practices in the UK, via an EAP preparation course or just their natural disposition, their gaze is turning toward the knower quadrant. To get a sense of how far students are able to *code shift* the participants were asked to keep learner diaries recording the metacognitive affect of participating in the ARC discussions aimed at developing theory knowledgeability. These diaries are analysed in the following section.

7.4 Diaries

The research employed learner diaries in order to track code shift. Learner diaries afford an insight into the metacognitive affect of taking part in the research and whether participants were in any way aware of a code shift occurring.

There was some variation in the engagement with the metacognitive affect diaries. Table 4. illustrates that variation by counting the number of words per participant diary. This tells us very little other than some participants wrote more than others. There is no real correlation between word count and quality of entry of course, although the majority of the diaries that totalled around 100 – 150 words were not analysed. This was because the entries lacked any real response to the prompts and consisted of 2-3 word answers. One diary was also discarded for analysis as it was not returned.

As with the discussion data, diaries were analysed by 'move' rather than clause or sentence, with 'moves' reflecting the type of content in relation to the translation device (table 7.1). Moves may consist of a clause, a sentence or several sentences, the distinguishing factor being that the move is relative to particular diary content as categorised in table 7.1. Figure 7.2 shows

the percentage of diary entries spent in the four content areas outlined above. This percentage has been calculated by number of words within the ‘move’, showing the proportion of the diary entry dedicated to one of the four specific content categories. The remaining percentage is accounted for by non-analysed data

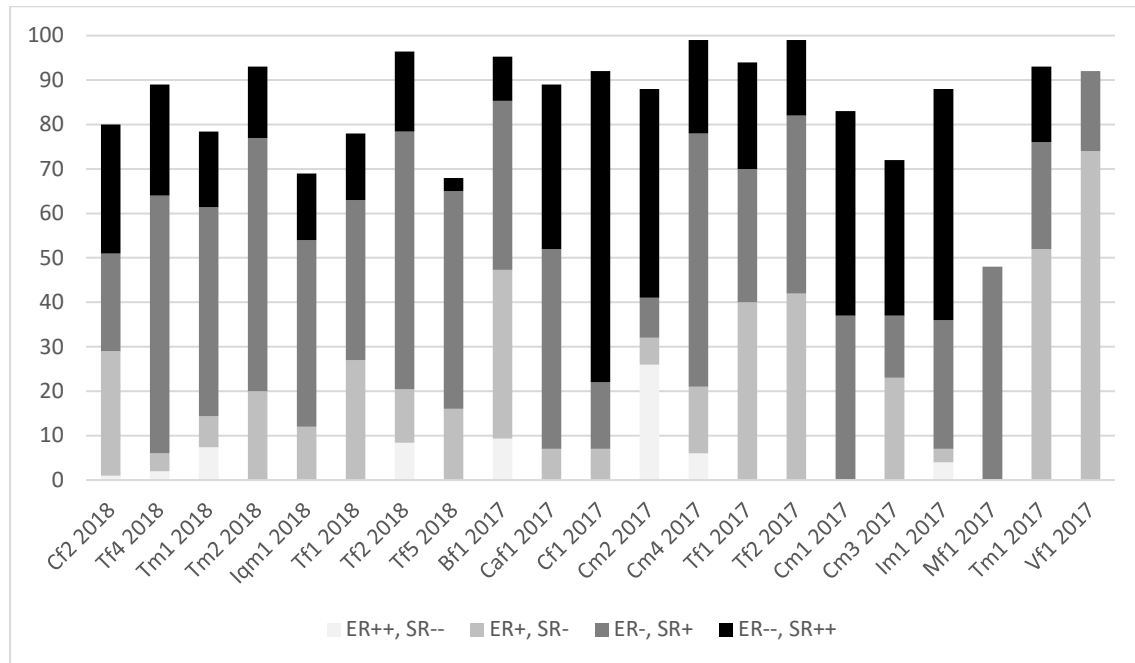


Figure 7.2 The percentage of diary entries (by word count) occupying the four content categories as defined in the translation device (Cowley-Haselden, 2020b, p. 23).

	ER++, SR--	ER+, SR-	ER-, SR+	ER--, SR++
Diary content	Reproduces knowledge – knower is absent	Emphasis on what was learnt - specific knowledge and/or academic skills	Emphasis on feelings about knowledge rather than specific aspects of knowledge*	Emphasis on what was done (description) - knowledge is absent
			Emphasis on change in knower rather than what is known	

Table 7.1 Translation device developed for Specialization (Cowley-Haselden 2020b, p. 22)

7.4.1 Reproducing Knowledge (ER++,SR--)

The simple reproduction of knowledge (showing strong ER), void of any social relations (and more typical of the participants' previous educational experience) only happens in a minority of cases (on average taking up less than 3% of the total diary entries across the whole cohort). Entries in this category do not cite the authors and may even be directly quoted from the source. The participant, through their absence, is also absolved of having any relationship with this knowledge and therefore SR is severely weakened as this quote from the data exemplifies:

Theory is a forecast or a system of idea intended to explain something. The concept of theory is to connect to concept of science that, in origin at least, refers to research the world according to a set of rules and principles [Tm1 2018]

This foregrounding of knowledge and absence of the knower is perhaps more aligned to the experiences and expectations of students from their heritage educational culture, where students succeeded by reproducing knowledge.

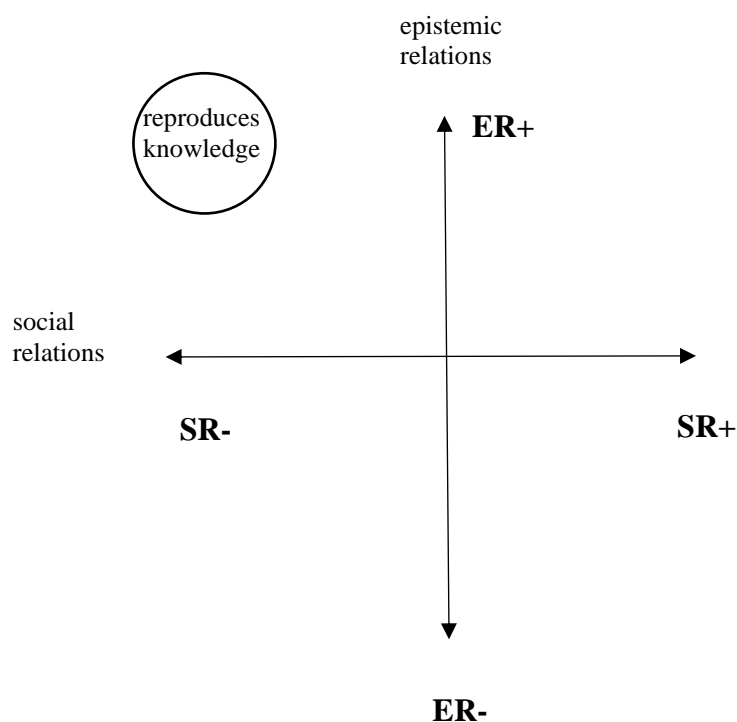


Figure 7.3 Knowledge reproduction in diaries plotted on Specialization plane

7.4.2 Emphasis on what was learnt (ER+,SR-)

This category occurs less frequently than feelings about knowledge, but more often than simple reproduction (on average 21% of diary entries were dedicated to this content type). There is also a tendency in these entries to focus on knowledge of theory, therefore Epistemic Relations are still relatively strong (ER+). Social relations are more evident here than in simple reproduction of knowledge as the participant is interpreting what they have learnt about the theory of Semiotics. This is done as an individual ('I have learnt') as in this example from the data:

I have learnt that theory is the ideas to explain something. Then, semiotics is an example of theory which using signs to communicate and the meanings are based on society. Moreover, semiotics can apply to various discipline for example semiotics has applied in marketing which advertising is used as a sign to communicate with consumers what brand identity is [Tf2 2017]

or as a group ('we know'), for example, "*We know specifically what the semiotics can be used in life and it can be have different meaning because the different recognition and different culture background*" [Cm3 2017]. There is also some consideration of what the participants have learnt in terms of academic skills rather than knowledge about theory, as one participant recorded:

Today I have learnt how to discussion in the group. We called is as an ARC (Academic Reading Circle) which is the type of reading that approach aimed at improving learner engagement and understanding a concept in article or text with collaborative [Tf1 2018].

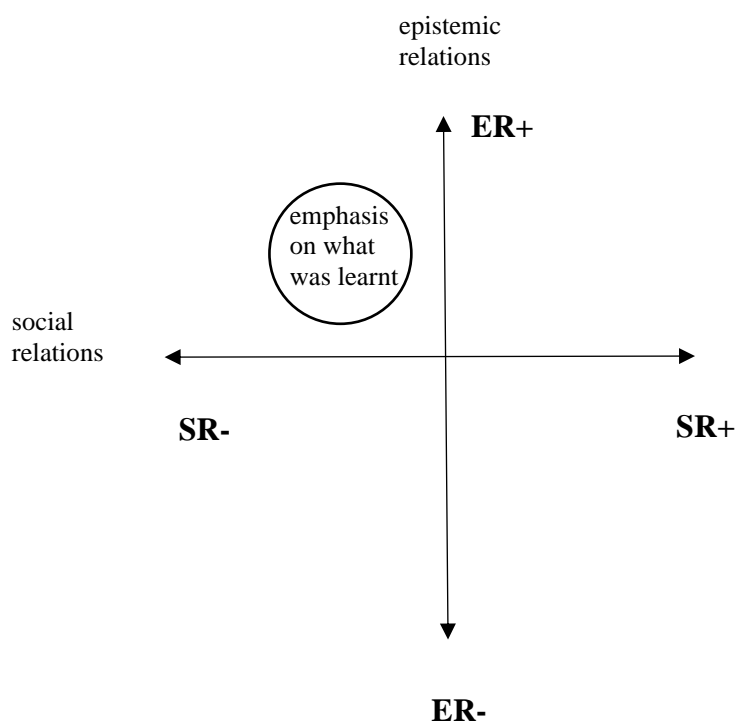


Figure 7.4 *Emphasis on what was learnt in diaries plotted on Specialization plane*

7.4.3 Feelings about knowledge and emphasis on change (ER-,SR+)

The content category whereby participants recorded their feelings about the knowledge they were acquiring, and their awareness of change accounted for an average of 37% of the diary entries and reveals a shift towards strengthening social relations (SR+). Epistemic Relations are downplayed (ER-) as the knowledge itself is not the focus, rather how the participants feel about the knowledge they are acquiring: *“When I read it I can know that is some new knowledge for me and I feel excited when I learn new things in my life.”* [Tf2 2018]. *“Before ARC I quite confuse about semiotic but before finish my discussion leader ask the question that relate with semiotic and I can answer, explain and give example because I understand clearly when I had ARC.”* [Tf4 2018]

Not surprisingly, many of the entries that focus on the participant’s feelings about knowledge explore feelings of confidence. Feelings of confidence understandably included a lack of it, as one participant entered in their diary: *“I feel not very confident with what I have learnt because I do not understand everything even it related with my previous one”* [Tf5 2018]. However,

there were participants who felt that their confidence had increased especially in the later discussions, as this example from the data shows: *“This time quite easy. I feel excited because there is nothing to read before the discussion. Even it was confused but I can connect all of it together...This time made me feel more confident about the theory of semiotic also about the university”* [Tf5 2018].

The emphasis on change is perhaps not so easily disentangled from feelings about knowledge. The extracts from the data show positive change for the participants and tend to focus more on changes in academic literacy: *“My view now is slightly different from my previous view because I have enhanced my academic study skills and my information as a postgraduate student”* [Iqm1 2018]. There were no instances of a change for the worse. Interestingly, for some participants a change was that there is value in discussions as sites of knowledge creation: *“I am happy and excited when I got the knowledge because I am able to understand such difficult article by discussing with my group it is distinct progress for me.”* [Cm4 2017]. *“Maybe my understanding with university is quite change because I have learnt that we can earn a knowledge from the discussion.”* [Tm2 2018]. Several extracts from the data reveal that interaction with others played a crucial role in enabling the knower to acquire specialist knowledge and highlights the value participants found in co-constructing knowledge in this way:

this learning took place ... by discussion in a group it help me to understand deeply some part of the article that it didn't focus onDue to we got different articles, it created a kind of creativity, and cooperation help me to build another understanding about my article on the one hand, and other people article on the other hand” [Caf1 2017]

I have learnt the useful example of theory from contextualiser that made me more understand about theory. I feel completely understand about theory from ARC [discussion]. I think the informations from our group member are useful for me” [Tf4 2018]

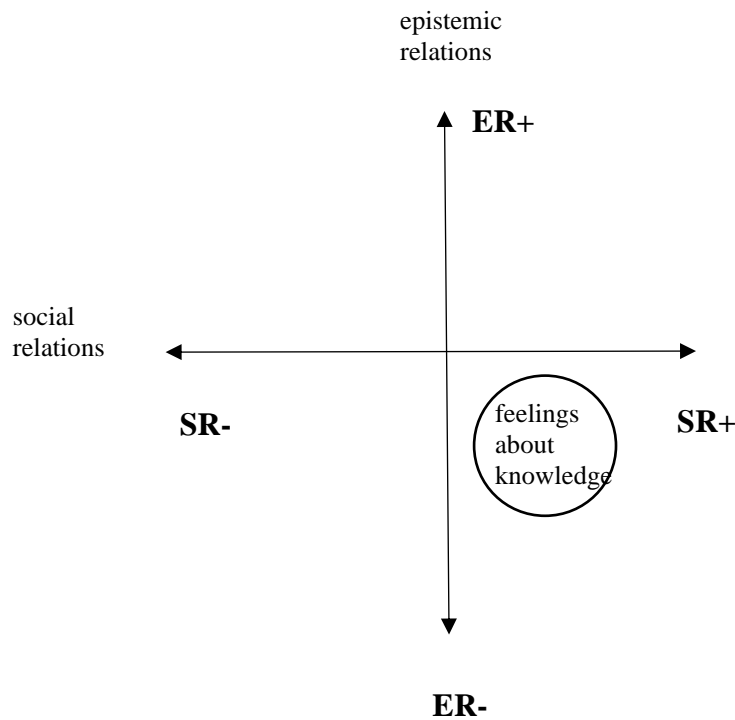


Figure 7.5 Feelings about knowledge in diaries plotted on Specialization plane

7.4.4 Emphasis on what was done (ER--,SR++)

These very descriptive entries, when present, were normally positioned at the beginning of diary entries by way of introduction (unless the whole diary entry was merely descriptive). These entries are perhaps illustrative of more typical diary entries, simply narrating what has happened. Epistemic relations are absent (ER--) as these entries do not focus on any knowledge gained from the discussions. Instead, these entries focus on what the participant did, the discussion role they enacted and how they prepared for it, therefore greatly strengthening social relations (SR++): *“I am a summariser so I conclude it by reading first sentence of each paragraph and sometimes maybe skim reading in some section. After that I paraphrase into my own word.”* [Tm1 2018]. On average, 25% of the diary entries fell within this category.

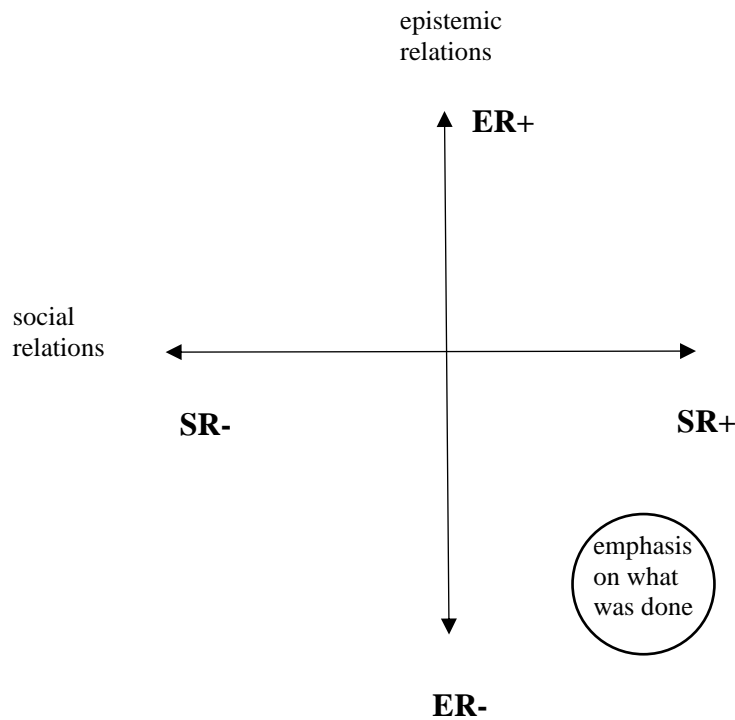


Figure 7.6 Emphasis on what was done in diaries plotted on Specialization plane

7.5 Summary of findings

Figure 7.7 is a visual representation of the data situated on the specialization plane. While it should be noted that this is a heuristic interpretation of the data it is a useful visualization summarizing the position of the diary entries relative to their strength of epistemic relations (ER) and social relations (SR), with the size of the circles plotted relative to the amount of diary data occupying that space on the plane. As the figure demonstrates, the majority of the diary data occupies more centralised space (the grey circles) where what is learnt is foregrounded (ER+, SR-) and even more so how the participant felt about acquiring this knowledge (ER-, SR+). Very little data occupies the more extreme space of simple knowledge reproduction (ER++, SR--), while a quarter of the entries occupy the other extreme of foregrounding what the participant did (ER--, SR++) ignoring the knowledge acquired completely.

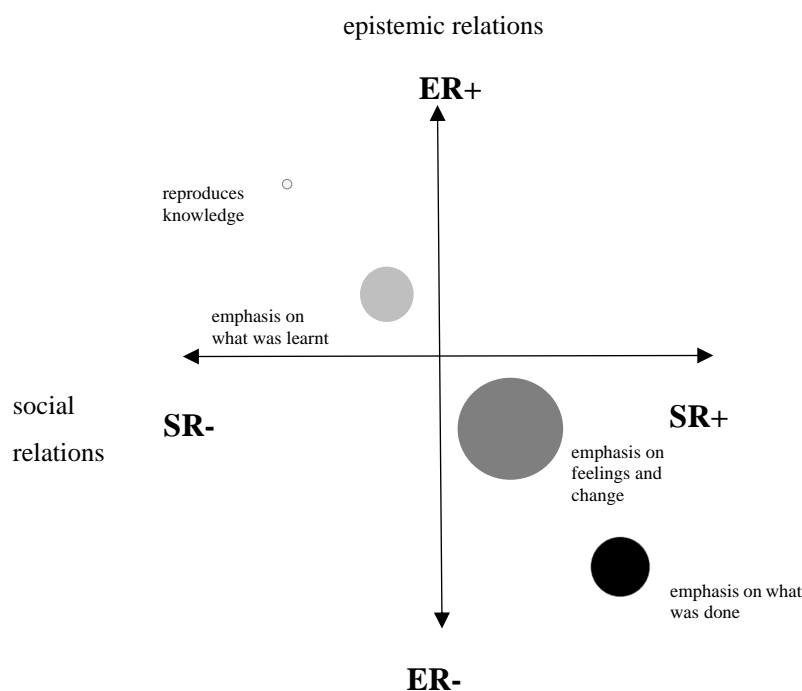


Figure 7.7 Heuristic interpretation of location of diary entries on the specialization plane (size of the circle is relative to the total percentage of diary entries plotted). (Cowley-Haselden, 2020b, p. 26)

This analysis suggests that the participants spent very little time simply reproducing the knowledge that they had gained from the discussions. The questions added to the diaries as a prompt for the participants seemed to enable them to predominantly focus on their feelings about the knowledge they had learnt and whether any change had taken place. Participants were able to demonstrate that they were developing theory knowledgeability (as in the extracts from Tf2, 2017 and Cm3, 2017) and that they were developing essential skills for postgraduate academic study (Tf1, 2018; Iqm1, 2018). The participants' feelings about knowledge and emphasis on change is perhaps most telling as to whether they were traversing the liminal space as they encountered the ARCs. Diary entries highlighted feelings of excitement at learning new knowledge (Tf2, 2018; Cm4, 2017) and experiencing an increase in confidence (Tf5, 2018) and understanding (Caf1, 2017; Tf4, 2018).

7.6 Diary interviews (2017)

In 2017 it was possible to conduct semi-structured interviews with the participants after the intervention to discuss with them their diary entries. This was not possible with the 2018 cohort as the pre-session programme was the only course running on a campus that was closing down as the university was moving sites and there was not time to conduct them. With this in mind and the logistical constraints that accompanied the campus move, the 2018 participants were asked to send weekly audio recordings of a kind of ‘think aloud’ nature to reflect on their diary entries, but few did and the recordings were mainly of the diary entry itself.

The diary interview data has not been analysed in the way that the discussion and diary data have been, in that a translation device has not been devised. This is because, much like the semantic orientation interviews, this data was collected to give an overview of the participants’ perceptions. In terms of Specialization, however, there is a very knowery (SR+) orientation to the responses as participants talk about their new relationship with theory and the effect taking part in the study has had on them.

The diary interviews were conducted on a one to one basis and participants were asked a series of questions (see appendix 4) and some questions regarding specific entries in their diaries. Participants were asked how useful they felt the research intervention was. All participants were positive about the experience. One of the participants spoke of the ARC process giving them “a braveness to speak in front of others” [Bf1]. This feeling of braveness was echoed in several other responses and Cm3 observed that “quite a few students felt braver to speak up and offer opinion”. Some spoke of feeling very comfortable in the discussions and also feeling a sense of freedom as these ARCs were not assessed. Cm2 for example, said: “more freedom because don’t need grade I feel very comfortable in discussions feel very freedom”. Bf2 also felt that the intervention enabled her to think more deeply: “when I study honours level I cannot think deep level but can now and see connections”. Not all participants felt brave or comfortable, Cf1 was the exception to the cohort. She felt that she was “not suitable for this in China not actually do like this I feel strange”. Rather than becoming more comfortable, she spoke of the discussions becoming easier.

The participants were also asked to define theory and whether this was new to them or not. For some participants, theory was not a new concept, however they developed a new understanding of the how theory relates to real life. For example, Caf1 (whose previous educational experience was more SR+ than others in the cohort) had “understood theory before as more

historical philosophical” but through the ARC discussions came to realise that theory “is contribute in many sectors of our society”. Cf1 had similar thoughts to Caf1: “before I haven’t realised theory in our life I think just information in book not related our daily life”. Mf1 reflected on a change in understanding of theory, stating it was “really new for me not only subject but manner of thinking theory is new we studied theory but only theory is applicable in this case never asked what is theory”.

The focus groups were not a success. There was very little data collected from the focus groups with the 2017 cohort as few students participated. The focus groups were held in the spring term and many participants were beginning to feel the pressure of multiple assessment deadlines. Of the 2 students who did attend a focus group, one was late and both found it difficult to disassociate the ARC intervention focused on in this study from their pre-session course. Therefore, I have decided not to include the focus group data in the thesis, though there is a transcription of the focus group in appendix 8.

7.7 Conclusion

This chapter has explored data that was collected in an attempt to triangulate the findings of xxx the discussion analyses. The semi-structured interviews conducted at either end of the research intervention were to add the participant perspective to the research. For the 2017 cohort these semi-structured interviews provided some good insights into the participants’ perspectives.

The semantic orientation interviews at the beginning of the research intervention revealed that many of the research participants were coming from an educational culture that valorised knowledge over the knower. The diaries kept by participants throughout the intervention charted their code shift from a knowledge orientation to a more knower orientation. The diary interviews reveal the usefulness of the ARC process in helping participants become more comfortable sharing their thoughts and opinions and arguably becoming more comfortable within a knower oriented setting. This suggests that the research intervention has enabled a code shift that will prepare the participants well to being legitimated postgraduates.

There were other data collection methods that were less successful and yielded little useable data. The focus group was ill timed, mainly due to the fact that I felt some need to gain a small insight into whether the intervention had had an impact on the participants’ academic

performance. The use of audio to comment on diary entries in 2018 did not work as a replacement for the post intervention interviews held in 2017. This was for very similar reasons that the diary did not yield rich data in the pilot, namely there was little incentive to do it and perhaps a lack of clarity around the purpose of doing the recordings.

The three substantive chapters have analysed the various data collected for this study. Chapter 5 presented the ARC discussion data in terms of its positioning within or beyond the context of the text(s) under discussion. Chapter 6 also explored the ARC discussion data for the extent to which meaning was added to terms and complexity built by the discussion participants. Chapter 7 moved away from the discussion data to explore the research participants' heritage educational cultures and how taking part in the intervention devised for this study impacted on their knowledge and knower practices. This chapter now seeks to synthesise these findings, exploring how far they answer the questions posed by this research and consider the wider impact this may have on E(G)AP pedagogy.

8.1 Restating the research problem

This research study began by establishing the roots of the teaching of English for Academic Purposes. EAP was situated within other approaches to teaching English language to multilingual learners in a university setting, namely CLIL and EMI. These other approaches differ significantly from EAP in that they are explicitly concerned with developing academic knowledge *and* developing academic language and skills, as in the case of CLIL, or just academic knowledge through the medium of English, as is the case with EMI (there is also a significant difference that CLIL and EMI are mostly taught in non-Anglophone countries). While these contexts are quite different and CLIL and EMI are not without their problems, they do not separate language and knowledge in the way that EAP does. This study has endeavoured to offer a way in which EAP in the UK context could develop academic knowledge (*ability*) as well as language and by doing so be more holistic preparation for postgraduate studies. This is a contentious issue in EAP as the discussion of the EGAP vs ESAP debate highlighted. While English for *Specific* Academic Purposes is valorised above EGAP within the field, in actual fact both approaches are blind to the development of academic knowledge. This is the gap that underpins this entire thesis.

This thesis was born from a desire to see if EGAP in particular could offer students more than the common core of skills and generic academic language. The research reported on in this thesis is an exploration of a reimagining of EAP pedagogy via an intervention which puts

academic knowledge development, rather than academic language development centre stage. This pedagogical intervention via the use of ARCs foregrounds the acquisition of academic knowledge and skills (in the form of theory knowledgeability) - not to argue that language should not remain a primary concern of EAP, but to explore the value in EAP *also* developing academic knowledge, not simply as a by-product of being exposed to carrier content but as a purposeful endeavour.

In order to explore this problem, the following questions have driven this research with the overall aim of the research hoping to ascertain whether there is value in focusing on knowledge building in EAP.

What happens when pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*?

Can the ARC process help students traverse the liminal space?

To address these questions, this thesis explored the knowledge practices enacted within ARC discussions to examine how four groups of students acquired knowledge and the effect this had on them as individual students on a generic EAP pre-sessional about to embark on their postgraduate studies.

8.2 Addressing the literature

This study has sought to contribute to alleviating the knowledge blindness that prevails within the field of EAP on two counts. Firstly, by providing empirical insight into a commonly adopted practice in EAP pedagogy and secondly by openly developing academic knowledge within the EAP classroom.

As the questions leading this research suggest, the purpose of this thesis was to explore what happens when postgraduate pre-sessional students discuss what theory is and how it is applied, through a series of ARC discussions. The ARC model is used in many EAP contexts in the UK (as both classroom practice and assessment tool), but to date there has been a dearth of empirical studies to evaluate its effectiveness. It is difficult to say whether other EAP practitioners use the ARC model to encourage the building of *theory knowledgeability* as there is so little published about the deployment of ARCs in EAP. EAP pedagogy can often be guilty of being intuition led rather than research led and the dearth of literature exploring the

effectiveness of ARCs is illustrative of this. Even Seburn's (2016) book is a practical guide to using ARCs, based on experience developed in practice rather than based on research. Thus, this thesis provides empirical insight into the value of ARCs within EAP pedagogy

This study clarified how the term knowledge was to be used throughout. To level the term 'knowledge blind' against EAP is not to dismiss or undermine the vast amount of knowledge EAP educators possess. EAP educators know about language, and many are highly trained and have a wealth of subject knowledge, however, there is a resistance to engaging in academic knowledge in the EAP classroom. The closest most come is to choose a text relevant to students' disciplines as carrier content in the classroom, the sole purpose of which is to provide the real linguistic content to be focused on in the class. There are those who are moving EAP into a more knowledge conscious position (Kirk, 2017; Monbec, 2019; Ingold & O'Sullivan, 2017; Brooke, 2017), however this more knowledge privileged focus does not include bringing academic knowledge into the EAP classroom, despite the research that suggests that academic knowledge has a positive impact on performance (Song, 2006; Brooke, 2017).

Literature also highlights that there are many attributes expected of the postgraduate student in the UK, the most pertinent to this study is the need to employ theory in academic work. This thesis identified theory knowledgeability as a threshold concept and this notion is at the heart of the second research question – can the ARC process enable the acquisition of theory knowledgeability? Given the focus here on knowledge rather than language or skills, adopting a framework that is rooted within the social realist perspective, which views knowledge as an object to be studied, with real effects, LCT provided the tools with which to analyse the data. The next section reviews the findings from this analysis.

8.3 Summary of main findings

LCT has three active dimensions that are regularly enacted in empirical studies within education. The two dimensions which have been enacted in this study are the two that, to date, have been most employed in substantive studies; namely Semantics and Specialization. Semantics provided the basis for data analysis in chapters 5 and 6, and chapter 7 enacted Specialization to uncover the participants' relations to knowledge both throughout the intervention designed for this study and within their heritage educational cultures. The following sections synthesise the key findings from these substantive chapters.

8.3.1 Building theory knowledgeability

Chapter 5 began the exploration of what happens when pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*. Many studies from across the disciplinary map have demonstrated that to achieve cumulative knowledge building there needs to be movement between relative degrees of context dependence (SG+) and context independence (SG-). The ARC discussion data was analysed for degrees of movement between being grounded within the context of the text under discussion and moving beyond this to other (academic) contexts. This analysis revealed that spanning the series of the four ARCs all four groups of participants did indeed make use of the full *semantic range*. This was not always the case within individual ARCs. *Semantic gravity profiles* varied across the four discussions but were very similar for each ARC across the four cohorts and clear patterns emerged. The fact that similar patterns emerged over 4 groups of students over two separate years suggest some generalisability to the findings.

There are very similar patterns across the semantic gravity profiles of these ARCs. Not all of the individual ARCs enact the full *semantic range* and there are often good reasons for this. The first ARC saw a fairly generic pattern across all groups as roles were contributed in turn and then the discussion was opened up to consider in more abstract terms what theory is. Perhaps due to the nature of the context of the text, some groups were able to reach beyond the specific context of the text (theory use in HRD research) and talk about theory in other contexts, albeit ones that the participants were more familiar with and able to provide examples for.

The first ARC saw a discussion of two halves, with a relatively low flatline of SG+ while participants provided summaries of the focal text followed by a levitation toward SG- as the second part involved discussion of questions posed by the Discussion Leader. Three of the four cohorts focused the discussion on the notion of what theory is and these three groups exhibited fairly similar semantic gravity profiles. These profiles began with strong semantic gravity as represented by the participants' reproduction of the ideas within the text. Semantic gravity was then weakened slightly while the group provided personal or more general interpretations of the ideas as well as speaking about theory in more abstract terms, outside the context of the text (SG-). These first ARC profiles tended to finish within the middle SG range. One group from the 2018 cohort exhibited a rather different profile as they discussed the idea of Human Resource Development rather than discussing the characteristics of theory as the other groups had done (and was actually the main purpose of the text under discussion).

The second ARC focused on a text that looked at Semiotic theory and how it has been applied to studies of society. For all cohorts the majority of this second discussion focused on *personalising* and *generalising* as the groups discussed cultural differences of signs. Given that this was the second in a series of ARCs, there was the opportunity for the group to levitate SG to *bridging* and try to connect this text to the text discussed in ARC 1. It is noteworthy that only one group did this, and this was due to the Discussion Leader prompting the group to make this connection. This second ARC, perhaps due to the nature of the text discussed applying semiotic theory to society, saw groups focus on examples of meanings within signs within their own cultures rather than more abstract ideas of the arbitrariness of signs and their signification and the nuances of Semiotic theory mentioned in the text.

The third ARC exhibited fairly consistent SG+ or middle SG as the discussions focused largely on *summarising* and providing examples of the concepts from the texts to help the rest of the group gain some sort of insight into a text they had not read. The third ARC required the groups to assimilate a wide range of information from a series of different texts so it is not surprising that these ARCs would largely reside in stronger semantic gravity as the groups introduced ideas from texts that not only dealt with complex theoretical ideas, but also in disciplinary domains that were alien to some.

The final ARC, where students were simply tasked with reviewing the previous three articles, saw the most consistent weakening of semantic gravity (SG-) as participants bridged between the texts and reached across contexts.

Patterns that emerge from the semantic gravity profiles seem to suggest that the progression affords the potential to exhibit full *semantic range* that affords cumulative knowledge building.

Chapter 6 continued the exploration of what happens when pre-sessional students take part in a series of ARCs designed to develop *theory knowledgeability*. Semantic gravity is only half the picture as cumulative knowledge building is a result of not only movement between context dependence but also between degrees of complexity. Semantic density was conceived as epistemic condensation for this data. This conceptualisation enabled the data to be analysed for the *addition of meanings* to the terms in the texts. Semantic density was higher or lower dependent on the degrees of epistemic condensation. Based on the seminal work of Maton and Doran (2017b) addition of meanings ranged from very low (almost none) via simply *establishing* the term, through *characterising* the term, *linking* the term to other terms and concepts and finally epistemic condensation was highest when a taxonomy could be

established. The data revealed that all groups were able to move between these four stages. This is important as to be able to add meaning from *establishing* to *taxonomizing* enables participants to realise theory knowledgeability.

The epistemic condensation analysis illustrates the clusters and constellations that are developed to reveal how one group added meanings to terms, building to theory knowledgeability. While there is not space within this thesis to provide in depth analysis of all discussions, there was evidence of this in all discussions. Chapter 6 provided examples from data of all 4 cohorts to illustrate the degrees to which they added meaning to the terms in the articles. The focus of this chapter, however, was on one group in particular to provide a more in-depth and richer picture of the constellations that developed. The analysis revealed how the group co-constructed constellations of meaning in order to acquire theory knowledgeability.

8.3.2 How far do ARCs enable knowledge building?

ARCs go some way to helping develop theory knowledgeability, but not necessarily as Seburn (2016) suggests they are used. If the ARCs always employed roles and always focused on one text, then it may be that theory knowledgeability is not fully realised. The findings from the analysis of the four ARC discussions support this supposition.

As the ARCs progressed, group 1 from the 2017 cohort were able to co-construct more complex constellations of meaning. Had the participants had one discussion based on the ‘What is theory?’ text the findings suggest they would possibly only be able to characterise the term theory based on ideas from the text and create a more simplistic cluster of meanings.

The degree of knowledge building within ARCs 3 and 4 was significant. When ARC roles were removed and the space given to revisit the texts, groups are able to make full use of the semantic range and also to enact the degrees of epistemic condensation from establishing terms to identifying their position within a taxonomy, suggesting that as a group at least, theory knowledgeability is co-constructed.

8.3.2i *The role of the roles*

It seems that the role of ARC roles can limit as much as they enable. The way in which the roles were introduced and scaffolded within the PSE materials would almost certainly have some bearing on this. The Discussion Leader role is important and often enabled the movement within the semantic gravity profile, but also inhibited the group’s ability to build on nodes to

develop clusters and constellations. Arguably the Highlighter could have played a significant role in enabling the group to characterise terms and build clusters.

It is also interesting which of the ARC roles the participants chose to enact in the discussions when they were left to their own devices to decide. In the third ARC for example, the participants were encouraged to enact all roles, in reality this may have involved too much time on preparation while also on an intense and high-stakes course. Or perhaps this is evidence of which roles the participants valued more highly or found easier to enact. It is of note that almost all participants across both studies chose to summarise their articles (Summariser) and provide some background information on the author(s) (Contextualiser). A small number of participants also asked the group a question based on their text (Discussion Leader), fewer still included a visual to help the group understand the ideas of their texts (Visualiser) or provided definitions of key terms (Highlighter) and none of the participants in group 2, study 2 connected their article to the previous two articles (Connector).

Roles are important, but perhaps more so as a sort of training. Something more interesting seems to happen when the roles are taken away. The removal of the strict turn taking enforced by the roles allows for participants to interact more and to co-construct knowledge more as seen in the complexity of constellations in ARCs 3 and 4 and the semantic gravity profile seemed to flatline less at any one strength of SG.

The data analysis has revealed that the discussion leader is quite instrumental in the group's ability to traverse the semantic range of the profile.

“The ultimate demonstration of knowledge and strongly desired in academia is being able to take an informed position and discuss/write about it rationally, logically, and evidentially. This type of interaction in ARC comes through discussion questions after the group work is done because it's at that point where conceptual comprehension should be maximised” (Seburn, 2016, p29).

It was certainly the case in the data that the discussion questions often weakened semantic gravity.

8.3.2ii The texts

As ever, text choice is of paramount importance, in this version of EAP as in any other. It seems that the text selection for ARCs to build *theory knowledgeability* is of vital importance. Despite its complexity the groups seemed to cope relatively well with the first text that

introduced theory. Only one group focused on the more accessible element of HRD within the text. Most of the groups made distinct efforts to genuinely understand the relationship between theory and reality, and many were successful in this endeavour. The second text was perhaps less successful. All but one of the groups tended to side step the technicality of Peirce's and Saussure's theories of Semiotics and focused on the very concrete examples in the text, such as teeth and long hair as signs within society. This meant that in reality the *semantic threshold* was rather low. The third ARC was also interesting. This third discussion often saw large amount of constellating as groups worked hard to understand each others' texts. Having a range of texts to discuss seems to afford a more valuable co-construction of knowledge, there were far fewer instances of *establishing* that was unresponded to in this ARC. For some participants this third ARC was more challenging. Not all of the semiotics in the disciplines' texts were of equal complexity and it is hard to know exactly what knowledge participants had gained from their undergraduate degree to tie into this text. This confirms Clapham's (2001) contention that ESAP texts are not as beneficial to the EAP classroom as many believe they are. The fourth reflective 'text-free' ARC proved to be a vital space to tie it all together and to evidence the culmination of knowledge building, most noticeably achieved through *taxonomising*. The fact that across the four ARCs all groups made use of the full *semantic range* suggests that cumulative knowledge building is achieved. However, it is important to highlight that the full range was only really achieved through a **series** of connected ARCs.

Of equal importance to text choice is the choice of theory. Semiotics is not a theory. It is however, theorised differently by different Semioticians. Semiotics was chosen as it is very applicable and is truly transdisciplinary. Arguably, this approach to employing an ARC series in the EAP classroom could be underpinned by any theory, as long as it transcends disciplines.

8.3.3 Code shifting – becoming more knowery

Many participants arrived from a predominantly knowledge code heritage educational culture and the process of taking part in this intervention seems to enable the participants to code shift towards the more knower code orientation of UK university culture.

The ARC process seems to aid traversing the liminal space. The literature suggests that to traverse the liminal change needs to take place. The diary entries were a way of capturing the participants' observations of any change taking place. Chapter 7 enacted Specialization and predominantly examined the diary data in order ascertain whether participants felt there were

any changes taking place in their knowledge practices that might enable them to traverse the liminal space. The diary data revealed that participants were able to display characteristics of a more knower code orientation as they became more aware of their own knowledge development and the effects this had on them as EAP students. Much of the data collected from participants as individuals points to a significant building of confidence not just in terms of speaking and expressing ideas in another language and educational setting, but also in terms of building academic knowledge and understanding complex (or at least new) ideas.

8.4 Implications for EAP pedagogy

EAP pedagogy, as espoused in EAP teacher handbooks, is in many ways still rather traditional. In some respects (like the treatment of reading) we may even be less innovative than the field was in the early 1990s. Bruce (2021) calls for the field to focus on research informed innovations. This research has been an attempt to do just this in its encouragement for EAP to embrace knowledge in EAP pedagogy. The findings have demonstrated the potential ARCs have for developing *theory knowledgeability*, knowledgeability that can have real effects on postgraduate EAP students' potential to succeed.

To this end, there are a number of potential suggestions for EAP pedagogy that have arisen from this research. The key ones are listed below:

We might reconsider the way we employ ARCs in the EAP classroom. The rigidity of the ARC structure is a very effective scaffold for students, but it appears that a greater amount of knowledge co-construction occurs when the roles are removed. A series of ARCs has great knowledge building potential.

There is great value in affording time and space within the EAP classroom and curriculum for students to co-construct knowledge and for students to read for the sole purpose of knowledge building. This is a challenge given the intense nature of pre-sessionals, but highly valuable.

Another suggestion is to work with students to generate their own epistemic constellations of the knowledge they acquire through an ARC series as recorded in this study. This could have a very powerful impact on student writing if used as part of the writing process.

The ARC roles could also be explicitly linked to the relative strengths of semantic gravity that they have the potential to enact. Students would then be fully aware of their need to wave up or down with the role.

Future research could focus on exploring the effectiveness of explicitly aligning the ARC roles with degrees of SG. There is scope also to see what impact an intervention like the ARC series reported on here could influence students' performance on their academic studies.

8.5 Contributions

8.7.1 to the field

The main contribution this thesis has made to the field of EAP, is the empirical study of the much employed, yet under-researched ARC model. For Seburn, (2016) the ARC model is more of a complement to the EAP curriculum:

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ARC itself can comprise a large component of an EAP program with regard to reading (and secondarily listening, speaking, and writing) curriculum. It is, however, served best as a supplementary approach to an existing set of core curricular lessons existing within an EAP program. This means that ARC does not pretend to replace invaluable class lessons on vocabulary, grammar, or even reading. Instead, when implementing ARC in a curriculum, you may consider how it complements these lessons and build ways to use ARC in conjunction with them (p. 14).

In my practice and in this research, I have seen students be transformed by the ARC process. ARCs, therefore, have the potential to be incredibly powerful as the very foundation of an EAP course.

This thesis has also added to the evolving literature that enacts LCT in a UK EAP context.

8.7.2 to methodology

This study has made some small but significant contributions to the research methodology employed here. Much LCT research makes use of case studies, looking at student discourse as data (LCT) rather than classroom (teacher) talk, or student assessments is a relatively new direction for empirical studies in LCT. Diary studies are underemployed in both EAP and higher education research more generally and have not been analysed in LCT before. The use of participant diaries in this study has provided a rich insight into the code shift participants

experienced by taking part in this study and has the potential to be a rich data source for future LCT studies.

8.6 Limitations

No research context is perfect and, in many instances, real life intervenes. This study did suffer from some logistical constraints due to the research context and external factors related to an institutional move from one campus to another. The university effectively shut down during the pre-session of 2018 as it decommissioned one campus to move to a new build. Of course, the best time to do this was during the summer months. This created problems with consistency in some data collection across cohorts as there was no time or space to conduct post-diary interviews as had been possible with the 2017 cohort.

Due to the high stakes nature of the pre-session the intervention had to take place within the pre-session course timetable. One issue with this was that when trying to get participants to reflect on the experience some months after in focus groups, they were unable to disentangle the ARC intervention with the main pre-session course.

It is perhaps a limitation that there is little evidence of the impact of the ARC process on the participants' subsequent academic studies and grades. To do so would have involved some sort of analysis of the participants' progress. It was a conscious decision to not focus on academic writing in this thesis. Writing is the focus of so much research within EAP that reading is generally only considered in how far it serves writing. A consideration of the transferability of this approach would have been an interesting insight and is perhaps an idea for future research. It was the intention within the focus group discussions to gain some anecdotal insight into how far students' perceived that their academic studies had benefitted from this experience.

This study was exploratory in nature, there would, however, be some value in a more longitudinal study that explores the impact of such an intervention as the ARC series reported on here on being and performing valorised postgraduate practices on academic studies.

Another limitation would be that the participants were only from one institution and mostly going on to study in the social sciences. While this resulted in a narrow sample, it is hoped that that given two separate cohorts took part over two consecutive years would mean there was increased generalisability to the findings.

It may be a limitation that the process was guilty of not making the rules of the game explicit. While a suggestion for future practice is to make the links between ARC roles and SG potential

explicit, this thesis was focused on testing the suitability of the approach for cumulative knowledge building. Telling participants that this is what was expected may have skewed results.

8.7 Conclusion

This study was conceived in observations from practice.

The days of the EGAP/ESAP divide are hopefully soon behind us. In the meantime, this thesis has attempted to demonstrate that EGAP can be as purposeful as ESAP. EGAP can develop powerful knowledge and prepare postgraduate students for important facets of postgraduateness. This approach could be adapted to explore disciplinary difference rather than cohesion and consensus around a specific discipline. A focus on difference affords a more critical EAP, in that while we see our disciplines in addition to others' we can question and challenge the norms and conventions that a genre informed ESAP syllabus might insist we follow.

The intention was never to add to the voluminous literature on developing language, literacies or skills in the EAP classroom. I am not arguing for EAP curricula to do away with language and skills, rather for there to be space given to the development of knowledge *in addition*. Neither do I advocate that we should teach using disciplinary texts or 'generic' ones. Theories exist *across* disciplines and as such provide valuable content to be explored in the EAP classroom. Building knowledge and building students' confidence in having and sharing ideas is, in some respects, more purposeful preparation for future academic studies than a focus on language and skills alone.

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Appendix 1: Participant Information Sheets and Consent Forms

Coventry University School of Humanities

Project: Strengthening the classification of generic pre-sessionals for postgraduates: A Systemic Functional Linguistics and Legitimation Code Theory analysis of the semiotic mediation of threshold concepts.

Researcher: Susie Cowley-Haselden

Participant information form

Purpose of this research

Aims: to investigate how group discussions based on reading about theories can help students develop academic knowledge, language, and skills. This research also aims to gain a better understanding of how students' views of knowledge and themselves as learners change during the course.

The purpose of this research is to:

- show that Semiotics is an appropriate threshold concept/theory to explore with the student cohort.
- establish the importance of students' prior learning experience and culture to the process of knower-building (becoming the 'right' kind of student for UK higher education).
- plot students' developing academic knowledge, language, skills, and identity for the duration of the course.
- Write up findings for the PhD.

Participation in this project will involve:

- Being video recorded while taking part in classroom discussions during the 6-week course (to enable accurate transcription).
- Allowing the researcher to take notes on observations of the discussions.
- Keeping a diary of thoughts, feelings, and experiences of taking part in the discussions (to be shared with the researcher).
- Taking part in 2 semi-structured interviews regarding previous learning experience and attitudes and reflecting on the experience of taking part in this research (duration 30

minutes each). One interview to take place before the group discussions start and a second to take place at the end of the course.

- Taking part in a focus group in the second semester of your postgraduate studies to discuss the group's reflection on the approach used in this research and its impact on your academic studies (duration 1 hour).

Possible Risks or Discomforts:

It should be noted that the nature of exploring Threshold Concepts requires a change in how you see the world and how you gain and use academic knowledge that can be challenging.

Participants can withdraw at any stage up to the write up of this study (30th September 2019) without giving any reason.

Possible benefits of taking part:

Participation in the study will equip you with the academic and theoretical literacies to succeed in your postgraduate study. Reflection on participation will also enable a more in-depth understanding of the expectations of postgraduate study in UK Higher Education institutions.

As postgraduate students you will gain insight into the design and conduct of a research study.

Who has approved the project?

This project has been approved by the Coventry University Ethics procedures and the Dean of the Faculty of Education and Humanities at the University of Northampton.

What will happen to your data?

Any data collected from the study will remain confidential and anonymous. The information will only be processed by the researcher and her supervisors. All data will be anonymised.

Data that is stored electronically will use participant codes so that individuals cannot be identified. All data will be destroyed at the end of the project in compliance with the Data Protection Act.

Data (anonymised) will be used for the write up of the PhD, related publications, and conference papers.

Participants can withdraw from the study if they wish to do so at any time up to the time the project is written up (30th September 2019).

If you are unhappy with any aspect of this research, you should contact the researcher at Coventry University, Susie Cowley-Haselden (cowleyhs@coventry.ac.uk).

Prof. Sheena Gardner, PhD Student Supervisor in the Faculty of Arts and Humanities, can be contacted if you want to make a complaint about this research project if you are not satisfied after having contacted the above mentioned researcher (sheena.gardner@coventry.ac.uk)

Project Title: Strengthening the classification of generic pre-sessionals for postgraduates: A Systemic Functional Linguistics and Legitimation Code Theory analysis of the semiotic mediation of threshold concepts.

Consent form

Participant Reference Code: _____
For office use – to be added
I have read and understand the attached participant information sheet and by signing below I consent to participate in this study.
Please tick this box if you consent to being video recorded <input type="checkbox"/>
Please tick this box if you consent to excerpts of video recorded discussions you have participated in to be shown as part of presentations at conferences <input type="checkbox"/>
I understand that I have the right to withdraw from the study without giving a reason at any time during the study itself and up to the write up of the findings (30 th September 2019).
Signed: _____
Print Name: _____
Email: _____

If you have any questions please email Susie Cowley-Haselden
(cowleyhs@coventry.ac.uk)

Thank you for agreeing to take part in this research project.

Appendix 2: Learner Diary protocol (guidelines and questions)

Diary

- Duration:** Duration of the course (6 weeks)
- Location:** Paper based journal / notepad provided by the researcher.
- Involving:** Individual participants (sharing diaries with researcher at the end of the course)
- Purpose:** Participants have an individual avenue to express their thoughts on participating in the research project, both cognitive and affective.

Participants will be given a template to ensure they focus on the feeling of knowing rather than just describe their participation in a discussion which happened in the pilot.

- Questions:**
1. What have I learnt today?
 2. How did that learning take place?
 3. How do I know I have learnt something?
 4. How do I feel about the knowledge I have learnt?
 5. Has my view of my knowledge/ myself / university changed?

Appendix 3: Semantic Orientation Interviews (guidelines & questions)

Individual semi-structured interviews

- Duration: 30 minutes (at the beginning of the course) [recorded]
- Location: A tutorial room at the University of Northampton
- Involving: Researcher and individual participants [1:1]
- Purpose: To explore ‘Semantic Orientations’ – students’ previous learning experience, academic culture and attitudes towards learning.

Proposed Questions:

- | | |
|------------------------------|---|
| Previous Learning experience | 1. What did you study before you came to UK? |
| | 2. What was your previous university experience like? |
| | 3. How have you used English before? |
| Academic culture | 4. How did you study in your previous university? |
| | 5. What was teaching like? |
| | 6. Did you have to do your own research, find your own reading at university? |
| | 7. How did students succeed? |
| | 8. What is the purpose of university? (in your country? In UK?) |
| Attitudes towards learning | 9. Why do you want to study at this level/ in the UK? |
| | 10. How do you feel about studying in English? |
| | 11. How would you describe yourself as a learner? |

Appendix 4: Post intervention discussions and focus groups (guidelines and questions)

Post intervention discussions - Individual semi-structured interviews based on diaries

Duration: 30 minutes (at the end of the course) [recorded]

Location: A tutorial room at the University of Northampton

Involving: Researcher and individual participants [1:1]

Purpose: To further explore 'Semantic Orientations' using the participants' diaries.

Proposed Questions:

1. What was the purpose of keeping the diary for you?
2. How did you feel about writing it?
3. Was it easy to keep the diary? Why/ why not?
4. How did you know you had learnt something?
5. How do you feel about the approach we took?
6. Has your view of knowledge/ yourself / university changed?

Discussion of selected sections of the diary:

7. Could you tell me more about what you wrote here?
8. Why do you think you felt the way you did here?
9. Why did you structure your entries the way you did?

Focus Group

- Duration:** 1 hour in the second semester of participants' academic studies [recorded].
- Location:** Classroom
- Involving:** Volunteer members of the participant group and researcher.
- Purpose:** To get group insight into their perceptions of the impact of semiotic mediation and the content discussed during the study on their academic studies.

- Questions:**
1. How has the approach affected you and your current academic studies?
 2. Do you feel you have learnt from each other?
 3. Do you feel that the experience changed you as a learner? If so, how?
 4. What advice would you give other students / teachers using the approach?
 5. Now you are on your academic course, do you feel the experience prepared you enough?
 6. What changes would you have made?

Appendix 5: Transcription conventions

KEY

Cf1: indicates participant (nationality gender number dependent on how many students have same)

All: whole group

[] text not in italics used for researcher commentary and to indicate where a participant's name has been used and therefore replaced with participant code

[] text in *italics* used for comment by another participant during another's stretch of speech

... used to indicate participants start or finish their turn as another participant speaks

[?] used for uncertain transcription

[*] used for incomprehensible word

[**] incomprehensible phrase

“..” used for anything read rather than spoken

Start [9:04] used to show start time of turn within discussion duration (minutes:seconds)

End [11:46] used to show end time of turn within discussion duration (minutes:seconds)

Appendix 6: Sample data: Learner Diaries

Cm3 diary entries (Group 2, Study 1)

The First ARC

In the first seminar, I was distributed the role of group leader, so in this ARC, my job was responsible for controlling the discussion direction and rhythm, giving some valuable questions.

When I was discussing, I gave everyone firstly to introduce their role's job, then we discuss the question what I gave or other groupmates make up with. In this process, I have to concentrate on everyone's speaking, and take care someone who didn't speak much, gave everyone got the chance and time to show their idea.

After this ARC, it was not bad, but it is not like true ARC, so we were given some suggestion, we can't do like this everyone present - firstly, we need to truly discuss on the all process, and everyone give their opinion according to their personal roles.

The second ARC.

In the second ARC, my role was summariser, but in this time, the most important thing was we cannot do the present like last time.

So we just discuss directly by group leader leading. In this process, we were making question when we was discussing. And everyone answer the question is connected to their personal role. Accotally, I found that this is much better than last time. Because one is everyone has chance make a question, one is it's more easier to understand what they talk about than presenting.

Therefore, like this model, I am very like it. I can feel the ~~go~~ progress about the ARC skills.

The third ARC.

The unique in this time, everyone got theirself's discipline article, so in one group, it ~~was~~ ^{was} ~~more~~ many different articles. Therefore, everyone have to do all the roles in ARC. However, this is a true seminar what we need in the ~~for~~ next term.

As for me, my article is about the semiotics and Engineering. I have to consider every different aspect role's job. This let me think the last two ARC is useful for familiar the different job.

In the process of discussion, I ~~let~~ suggest everyone show their article topic briefly, in their own words, so everyone can understand firstly.

Then, everyone have chance to speak their think what is important, and in the same time, everyone ask them question, then, everyone discuss.

Therefore, in this model, Although everyone have not enough time to show all their findings, show what they want others know in limited time, It is very helpful.

The fourth ARC.

In this ARC, we need discuss the last three articles, but we need more deepful and evaluate how useful the content like this.

In this ARC, like last time, we familiar to everyone show their findings, other one make question, and we discussed. In general, it is more nature, everyone do not have the specific roles. I like this model, because everyone can show their own idea or question.

However, I found that no the leader lead the discussion direction, we can stop on one point too long time. This is the limitation in this ARC, but in the process, I try to think this question and make some question to direct the direction in discussion.

So in the future, I think we have to think this question, ~~before~~ ^{After} everyone can show their idea and questions, we need to think we should make the deeper question or good. and direct this discussion more meaningful and efficient.

Summary

After finish the four ARC, I think I got the prove on the seminar skills, now I'm brave to show my opinion and question. That's the ~~the~~ big different than before.

~~Don't talk about the topic and content, as for ARC.~~

In terms of all article's topic, which is about semiotics. At first, ~~we~~ we discussed theory, what is the mean, how useful in our academic knowledge. Secondly, we understood what is semiotics, which is not ^{only} include the symbol but also other things, such as culture and facial expressions. The deeper questions are why it like this, why it can have meaning, when people conclude it into a academic learning knowledge, How useful this in our life, why it can be so useful, what the semiotics can help us in the ~~future~~ further learning or working. Therefore, in conclusion, we know signs, symbols in our life and use it all the time, but ~~before~~ ^{After} the discussion we know the philosophy aspect of semiotics is just meaning generally for transmit the information. We know specifically what

the semiotics can be used in life, and it can be have different meaning because the different recognition and different culture background.

We know it exist in every disciplines, such as. business and engineering or mathematic fields. We discussed why it emerged and a little history to help us understand what is exactly meaning in real life not just in academic understanding.

therefore, the most valuable thing in this discussion is what we found the semiotics can be use where and understanding it not just in theory, but also know how to use it in the real life, such as, for learning knowledge or for working in business. I think that's what why ~~the~~ people to research it, it's for more better to use it.

Tf2 diary entries (Group 1, Study 1)

ARC1

18/08/17

We have done ARC for the topic 'What is theory?' on 17/08/17. This time I feel that everyone do not really understand the topic because this week we have lots of assignment to do so we didn't have enough time to concentrate reading this article.

By the way, discussion make me understand clearer about the topic for example one of my group member who is visualiser, she drew the picture of relationship between theory and reality and describe each step of building theory. From that picture, I can easily understand what's happening.

Moreover, the discussion made me learn different thoughts of my group members which are some of them agree that theory is an important thing and it will still happen in the future on the other hand, some of them think it's not necessary for our lives.

ARC 2

23/08/17

We have done ARC for the topic 'Semiotics and Society'. I have learnt about the theory of Semiotics and how it relates to society. From discussion, we have talked about signs in different country for example 'cross finger' in UK means good luck but in Thailand means lying. This example relates to the theory that signs and their meaning are created by society.

I feel it's interesting that different culture create the meaning of signs differently even if they use the same sign. Then, when we travel we have to make sure that what
to other countries
those signs mean.

ARC 3

30/08/17

Today in the ARC we have different articles to talk about but all is related to semiotics. It's difficult to discuss because we don't know about others and I don't have background about those. What I have learnt today is semiotics can apply in many fields such as marketing, medicine, account and engineering. From other members, I'm quite surprised that how semiotics can relate to different kinds of fields and it makes me gain more knowledge about semiotics application.

02/09/17

Our discussion today is about how related of our 3 articles which are Theory, Semiotics and Brand literacy. I have learnt that theory is the ideas to explain something. Then, Semiotics is an example of theory which using signs to communicate and the meanings are based on society. Moreover, Semiotics can apply to various discipline for example Semiotics has applied in Marketing which advertising is used as a sign to communicate with the consumers what brand identity is.

This learning took place when I read those articles again after I had 3 ARC then, I realized that all articles had some connection and it opened my eyes of how to learn. It means I don't have to focus only on my discipline when I need to read new things. Everything can be linked, it depends on what you think about it.

Appendix 7: Sample Transcript: ARC Discussion

ARC 1 - group 1 - study 2 (2018)

Roles:

Tf3 DL – Discussion Leader

Tm1 Su – Summariser

Bf1 Vi – Visualiser (absent)

Tf4 Hi– Highlighter

Tm2 Cn– Connector

Cf2 Cx - Contextualiser

Discussion:

Tf3 DL: **Start: [0:06]** *So Today we discuss about what is theory article so let [Cf2 Cx] tell us about the author*

Cf2 Cx: **Start: [0:17]** *Ok there are three writers they cooperate to write this article and the first writer we can see in our paper is James Stewart. Maybe James Stewart is a very common name so when I type in James Stewart thousands of resources maybe someone is sportsman or some celebrities it take me a long time to select which one is James Stewart then I decided to add professor James Stewart because I can see in the end of the article the introduction part they tell us he is a professor so I just type in professor James Stewart and I can enter the university's that page and tell me a lot of information about himself and first the university website tell me he is a very famous professor in human resource development and now he works at Liverpool John Moore university obviously when he write this newspaper he works at a different university and now he works at Liverpool John Moore university in business school and from 2008 he has worked from 4 different universities and except the first university where he worked for maybe for 15 years after that almost every 4 or 5 years he will change to another university I don't know why. But I think very interesting compared to other two authors and about his professional [*] he has published 62 articles since 1981 and also published 6 books not including how to say as a co-writer just he published by himself 6 books I also noticed*

there is a figure up here on website that tells me the citations since 2013 his citation rate is 2477 that is quite high because previous article we just searched for is only maybe 20/30. His citations is higher more than 2000 and also he took part in some professional activities so many activities which most impressed me is he is appointed chartered institute of personnel and development I think maybe it's a national organisation for human resources and he was appointed three different positions in that organisation so I think maybe in human resources field he is very famous this a first author and the second author is ... [interrupted by Tf3 DL]

End: [4:10]

*Tf3 DL: **Start [4:10]** ...So let I ask group member that do you think James is reliable for doing this article, for writing this article **End [4:23]***

*Tf4 Hi: **Start [4:23]** According to [Cf2 Cx] said about the other things I think the information is very good because you show about who is he and he have the many professional in specific of the human resources development and he have many books and now he work in the professor of human resource I think he is very reliable **End [4:50]***

*Cf2 Cx: **Start [4:50]** Yes he has been appointed how to say elected professor for maybe more than 20 years I think ...*

[Tf3 DL: That's a lot of experience]

*And I can also show you the picture of him very professional I think. Umm where's my cell phone **End [5:19]***

*Tf3 DL: **Start [5:31]** it's ok maybe we discuss about histories in a short ...*

*Cf2 Cx: **Start [5:30]** About the second author is Victoria Hart and apparently she's much younger and she is a part-time lecturer at Leeds Beckett university and I also noticed Leeds Beckett university I just now I said James worked for 4 different universities and one of them is also at Leeds the city so I don't know when they just met each other and she has published 6 journal articles and never write a book by herself but as co-author she has published 2 books and according to the information about the general articles, I noticed that 4 of 7 articles she has published is cooperative with James 4 out of 7 yes so I think they are very familiar with each other **End [6:36]***

*Tf3 DL: **Start [6:38]** OK I want to show this word [points to word on a card] theory and I want the highlighter to explain what is the theory **End [6:49]***

Tf4 Hi: **Start [6:50]** *The theory I would like to highlight this word theory because this word is about the topic of this article what is theory “the theory is a formal statement of the rule on which a subject of study is based or of idea that suggest to explain a fact or even or more generally an opinion or explanation” [reading from article or notes] according to the author say in this article some of the synonym offer by the including hypothesis, thesis, proposition and contention* **End [7:32]**

Tf3 DL: **Start [7:33]** *so Ok now we know about theory can you give an example about theory* [signals to Tm2 Cc] **End [7:40]**

Tm2 Cn: **Start [7:41]** *OK In this present we have many theory in the business way in education way and also in the scientist but mostly I have explain for you is the theory of evolution In the human or animals we know because theory need to be solved to be true before they use it and this theory is very famous and I think it’s widely cited by people because I think could be almost people we know about where we like we similar that monkey before we become to human guess because this theory yes and the next thing that I suggested on my experience is the theory of relativity that mentioned by Albert Einstein that say about the law of physics or something. This is my theory* **End [8:55]**

[unclear but general agreement that people know these theories and they are good examples]

Tf3 DL: **Start [9:04]** *and one word that I have read on the article is human resource development what about this and how does it relate to this article* **End [9:13]**

Tf4 Hi: **Start [9:15]** *this article is the special issue with [*] theory of human resource development this article have to include some conflict idea from the philosophy and sociology of science so I would like to highlight about three word that in this article the first word is human resource development as an area of academic enquiry [reading from article?] and of professional practice it concerned with applying social science to the study of particular phenomenon in human experience secondly the philosophy is the use of reason in understand such thing as the nature of the [**] and existence and the last one is sociology is the study of relationship between people living in the group especially in individual societies* **End [10:22]**

Tf3 DL: **Start [10:23]** *So I can know about theory is and what is human resource development and I have read on the article the concept of the theory can you summarise the concept of theory*

Tm1 Su: **Start [10:42]** *Alright in a easy way I would like to explain the concept of theory is to connect the concept of science that origin [*] refer to research world according to a set of rules and principles in the similar term it is explain phenomenon based on systematic observation* **End [11:07]**

Tf3 DL: **Start [11:08]** *yeah I know that the OED write about something about theory can you tell us something about this*

Tm1 Su: **Start [11:19]** *you know OED is mean oxford English dictionary so in this dictionary give the meaning that this is given example of a face using the word which is in theory in a easy term is discussed is linked to an idea not idea idea you know* **End [11:46]**

Tf3 DL: **Start [11:49]** *So now you know about what is theory and I want to ask all of you that which theory that you get experience or you is relate to your major or your life or your experience? First [Cf2 Cx]* **End [12:05]**

Cf2 Cx: **Start [12:06]** *I will share my opinion with you about the theory first I think theory is necessary and important for every field for example in my teaching experience I always organise some activities to guide students or to organise them to do some research or activities or sometimes I will offer some method to them to help them to improve their English levels but sometimes I feel confused because I don't know whether my activities can applied to the student situation or whether it is effective method for them to learn so if I want to solve that problem maybe I can find some theory because the theory often can tell me what a theory is and it can be applied to which kind of situation and maybe the theory can also tell us the results and I can chose one of them to teach my students or guide my students and also I can also can prove whether the theory is applied to my situation or maybe another specific situation maybe college students and high school students is quite different so I think is very necessary and sometimes theory just like a how to say a guide can help us to find the right direction to do some research and I think when I have to teach my students guided by some theory I have a clear purpose and sometimes maybe I can say the possible result so I think is a very effective way for me if I have some theory before teaching my students* **End [14:19]**

Tf3 DL: **Start [14:19]** *Models like a model for use ...*

Tf4 Hi: **Start [14:23]** *Do you believe in the theory that you use in your when you teaching students*

Cf2 Cx: **Start [14:30]** *Definitely because I must to choose the theory that I rely on because I have to apply it to my students so I definitely believe it will work then I will just choose one of them because there are so many theories* **End [14:49]**

Tf3 DL: [signals to others to join in]

Tf4 Hi: **Start [14:54]** *OK For me when I study in bachelor degree of civil engineering and business management I learn many theory for the civil engineering how to make a concrete how many steels in the building that I will need solve this problem but today I would like to talk about the theory of marketing that I very remember in my heart about the four P of marketing the first one is the product when you would like to do some business the first thing you will think about what is your product and the second thing is price because the price is depend on your customer if your price is higher your product cannot to sell and the third thing is the place which place that you would like to sell at the past we would like to have shop or stall to sell something but nowadays this change the style to sell on the social media such as Facebook in the website and the last thing is promotion if you have the promotion to customer to buy if to make your business to actuate I think the 4 p of marketing can use in your life when you would like to sell something in the business* **End [16:15]**

Tf3 DL: *That's very nice principal. And* [Tm1 Su]

Tm1 Su **Start [16:21]** *For me the story that I would like to talk with maybe not the same but maybe like this in 3 or 4 years ago I used to read theory of how to flirt some woman because on that time I want to find girlfriend the book is give a lot of advice how to flirt woman Ok for example you should make a first impression look very confident like this or talk to her with polite words in technical term is different so excite is nervous I think for me some time is not working* **End [17:39]**

Tm2 Cc: **Start [17:40]** *how about this the result of this theory* **End [17:43]**

Tm1 Su: **Start [17:44]** *oh I forget theory I use my own way* **End [17:49]**

[laughter]

Tf3 DL: **Start [17:50]** *How about* [Tm2 Cn] **End [17:52]**

Tm2 Cn: **Start [17:53]** *Ok for me I finish the bachelor degree at electrical engineering and also it have many theories but I think theory in engineering maybe just to prove that we can design something like electrical engineering should be design light or something that we can*

*use it in this building or not something like that but yeah in my research from yesterday I found some good story to talk about you like a theory and practice about cyber bullying do you know cyber bullying is cyber bullying is some people are don't know others but they always blame when they found people did something wrong yeah in the social network or social medias like when you found something wrong in the Facebook but you don't know them and then you blame them a lot yeah many people do that in this present world and this theory talk about how to stop the cyber bullying in the present world by use the Barlett and Gentile theory yes and they said in that result of they can reduce some blame on people in the social media **End [19:26]***

Tf3 DL: Start [19:26] *so this theory did they use for [*] what is Barlett?*

Tm2 Cn: Start [19:35] *Barlett is the name of people sorry is like Barlett and Gentile is the name of people who built this theory*

Tf3 DL: Start [19:47] *And this work ...*

Tm2 Cn: Start [19:49] *They say the result is can reduce the social media cyber bullying*

Tf3 DL: Start [19:56] *For me my previous course I do some research that is talk about how to encourage students to use English and the theory is communicatable English language and it really work because last time I visit to another student and I got a lot of attention from them and I realised and I know what is changed from them so they try to attend class they tried to speak more they tried to concentrate on study in class I think this theory is very work this theory is forced by teacher teacher is very is the main of the person who motivate the student to have the motivation to learn is very nice theory. So do you think in your opinion theory is work or not **End [21:21]***

Tm1 Su Start [21:23] *[goes to answer very hesitant] I think is depend ... **End [21:26]***

Tf3 DL: Start [21:27] *maybe not about flirt with girl maybe other theory **End [21:32]***

Tm1 Su: Start [21:35] *I think it's useful is useful for everybody **End [21:38]***

Tf3 DL: Start [21:39] *like [Cf2 Cx] said it can be a model that she can ... **End [21:41]***

Cf2 Cx: Start [21:43] *Yes because sometimes even ourselves we're wondering why should I choose this method rather than that method and what's the different result sometimes if we just read more books or the articles and we will know more and how to say sometimes it can expand out horizons even sometimes I will talk to my colleagues and we will exchange some different information about one teaching method I think its inspiring **End [22:30]***

Tf4 Hi: **Start [22:32]** *For me about civil engineering I think if I use the theory of civil engineering to do the work of civil engineering I will do exactly of theory but about the business it depend on solution you will adapt your theory because the product, price, place, promotion is ever change every time by the views of the world not depends on theory all time it depend on situation* **End [23:05]**

Cf2 Cx: **[23:07]** *yes yes so sometime I think it is quite different in education and business because business have some principles I'm not sure what kind of theories or principles as a business major you have but I just according to my imagination I think because the world is changing so fast maybe you will just keep following the different trends* **End [23:37]**

Tf4 Hi: **[23:37]** *Yes because it is internal and external of situation that depend on your business*

Cf2 Cx: **[23:42]** *but for sometimes as an education major maybe we have not much change and sometimes we use other theory maybe it appears about 20 years ago but we can still use it but make a little change I think no matter what we will do in the future we should always follow the theories the popularity the popular thing the popular method of teaching and sometimes the society or the government will just encourage for example all the universities to use a new teaching method* **End [24:28]**

Tf4 Hi: **[24:28]** *Yes and you will adapt yourself to your situation* **End [24:30]**

Cf2 Cx: **[24:31]** *sometimes we have to adapt because the government requires you to do it and university requires you to do and if you don't still use it all the way it's not working especially in public college sometimes we don't have much choice just follow the directions* **End [24:59]**

Tf3 DL: **Start [25:00]** *So in the final of the discussion have anyone any questions about these persons about some example or summarise or highlight some words or the other* **End [25:19]**

Tm1 Su: **Start [25:20]** *I have according to your speech [gestures to Tf4 Hi] what is internal and external?* **End [25:25]**

Tf4 Hi: **Start [25:26]** *In general is mean when you if I applied to example if you have factory of your business and this is external solution when your machine is broken this is external solution external solution of the business is such as government share the tax will affect your business and the second thing is about now again have the short term is the solution that affect to your business* **End [26:02]**

Cf2 Cx: **Start [26:03]** *I think for me is very interesting because always changing* **End [26:06]**

Tf4 Hi: **Start [26:07]** *Yeah so so is why I change my mind to do business* **End [26:14]**

Cf2 Cx: **Start [26:15]** *Maybe you can earn a lot of money in the future [laughter] we just have a very stable job* **End [26:21]**

[laughter]

Tf4 Hi: **Start [26:23]** [gestures to Tm2 Cn] *Have you any something that in your opinion ...* **End [26:28]**

Tm2 Cn: **Start [26:30]** *for the theory I think the one important thing when we use a theory is we need some evidence to tell someone that maybe don't has a or don't understand what to do now yeah and we give them the theory you follow this or we do this or this theory you give some evidence them* **End [26:55]**

Cf2 Cx: **Start [26:56]** *Yes there's always some principles to follow and you can just find your solution or you can do better quickly* **End [27:02]**

Tf3 DL: **Start [27:04]** *I will say that we four is becoming a theory will have many clue to becoming theory and I think theory is very useful for every field* **End [27:24]**

Cf2 Cx: **Start [27:26]** *How about Human resources development theory how to apply that theory to according to the article* **End [27:35]**

Tf4 Hi: **Start [27:36]** *I think that human resources development is in every company you will make people to interact with each other you will have training to develop all the employee and you have theory to know why they are in a position if they would like to change the position the human resource will think about it she cannot work in this position or not is depend on theory that if I am a woman that talkative girl like ... I cannot move to do accounting or something like that because the human resource will screen the employee before* **End [28:22]**

Tf3 DL: **Start [28:24]** *...according ability that person to that position [Tm2 Cc] have some ...* **End [28:30]**

Tm2 Cn: **Start [28:32]** *I have some because many people will know about HR human resource development could be involved in business but I have some evidence with like political because in Jordan 2015 yes they have some they build some national policy about human resource development to develop their children in their country to access into study by equality in their country their goal is in the next ten years they need to achieve this by using human resource development theory or something like that* **End [29:23]**

Tf3 DL: **Start [29:25]** *So human resource development is important* **End [29:28]**

Tm2 Cn: **Start [29:29]** *yes because it improve people in that field* **End [29:33]**

Cf2 Cx: **Start [29:34]** *especially in business also in education ...* **End [29:37]**

Tf4 Hi: **Start [29:38]** *... in education this happen ...* **End [29:39]**

Cf2 Cx: **Start [29:41]** *yes because Sometimes university when they recruit new teachers what the evaluation is whether they have a PhD degree or whether even whether is man or woman university always prefer man to be teachers because is there are more female teachers within university actually actually my college a medical college there are still more girls than boys I don't know why but once they just recruit this new member according to their degree higher degree maybe but sometimes we find maybe he or she is not good at teaching he just good at researching so that is a problem and once we just recruit them we cannot fire them for this reason so sometimes ...* **End [30:45]**

Tm2 Cn: **Start [30:47]** *need some training for them maybe need some training to the new people or teacher* **End [29:23]**

Cf2 Cx: **Start [30:55]** *of course but the training very short maybe just 2 month or 3 month* **End [31:00]**

Tf4 Hi: **Start [31:02]** *but I think some teacher that have the PhD some teacher cannot to teach very well because they think that the student know already and skip it something that student didn't know* **End [31:16]**

Cf2 Cx: **Start [31:17]** *Or maybe they just teach the how to day some content are too abstract to students they don't understand that is also a problem* **End [31:23]**

Tf3 DL: **Start [31:24]** *So anyone have questions ok I will end the discussion* **End [31:30]**

Appendix 8: Sample Transcript: Post Lesson Interviews and Focus Groups

Focus Group transcription – 2017 cohort

Only 2 out of 14 attended. One other student was going to attend but couldn't find the room.

Tf2 = Thai female 2

Cm1 = Chinese male 1

T = teacher

Questions:

Make clear at the start to participants that we are discussing the 4 sessions we did rather than the course as a whole.

Q1: Did you feel that what we did was separate from the pre-session course? [awareness of the intervention]

Q2: How has the approach affected you as a learner? [meta-cognitive effect/ knower building]

Q3: Why do you think I asked you to keep a diary? [meta-cognitive effect]

Q4: Was it useful or just a task? [meta-cognitive effect/ knower building]

Q5: How would you describe how you felt in the summer? [meta-cognitive effect/ knower building]

Q6: How do you feel now? [meta-cognitive effect/ knower building]

Q7: Do you feel what we did prepared you for your academic studies? [knowledge building]

Q8: Do you feel you have learnt from each other? [semiotic mediation]

Q9: was looking at Semiotics useful for your degree? [knowledge building]

Q10: Would looking at other theories have been useful? [knowledge building]

Q11: Have you had feedback (positive or negative) on your use of theory in your work? [knowledge building]

T: So I just had a few questions to ask. Ok so I want to just be very, very clear that what the questions I am asking about are about the four sessions that we had together over the summer not the whole summer course but just those four sessions that we had together. Yeah. OK. So my first question is Did you feel that what we did in the summer was separate from the course or did you feel that what we did together was part of the course?

Tf2: About the theory? This may be part of the course, because in my study we learn about the theory and maybe is quite the same I mean to understand of the background of the theory and how it apply in any discipline.

T: Ok, shall we talk a little but about theory? I did have some questions so let's talk about that. So we looked at semiotics in particular didn't we. Has that been useful in your masters degree or not? Have you looked at other things?

TF2: I think some use the signs to describe about the process but not all of my study only some subject I have learnt are related to semiotics.

T: What theories have you looked at on your masters course?

TF2: An example?

T: yeah

Tf2: I've forgot it's a lot I can give a model, the PESTLE analysis I think its linked to every subject I have learnt. First time that I have learnt about this model is in marketing now its in innovation to this model. Its quite more clearer how to apply this model in the real world. I think in the future we are going to work in any business I think its important

T: and have you been surprised by how many different theories you've looked at?

Tf2: Yes but yeah I think like some theory is developed from another one or is totally different in the same subject but different point of view of researcher or different theories.

T: Do you do you think so we looked at semiotics because I felt it was a theory that engineering or management or marketing or anybody could look at. Do you think that was right or would it be more useful to look at other theories like PESTLE or other models

Tf2: yeah but semiotics is like more general and is easier to apply in any discipline and to more understand any theory if they show more pictures.... Signs is more clear to understand than only the text.

T: Have you had any feedback on your work so any assignments you've done, have you had feedback regarding use of theory either positive or negative that you've done it well or not enough?

Tf2: yes, some models like ... may be they said I tried to compare different theories how it works different points of view I got good feedback for this

T: and what sort of marks have you been getting

Tf2: A-

T: oh well done great. And what about your speaking do you feel do you contribute in seminars

Tf2: not much

T: why not?

Tf2: I am not quite confident to speak but this semester we have two presentations and the lecturer try to practise with us before the presentation in the class

T: why don't you feel comfortable in the summer we spent a lot of time trying to help students wit speaking

[another student arrives]

T: how are you?

Cm1: busy

T: Busy. Well thank you very much for coming we won't take up much of your time. We were just talking about how feel do you contribute to your seminars speaking do you feel comfortable speaking

Cm1: yeah you know I'm you have many of class use some foreign friends you speak technology been improved in daily time I feel yeah for in the class I can understand almost 80% of their talking except for some academic words which can be difficult with friends or with some foreign people on the road or outside or in some restaurant I can talk to them very comfortable.

T: you were saying you don't feel Why don't you feel so comfortable

Tf2: in some class only few people always answers some questions maybe it's not it's difficult to speak

T: because some students are dominating?

Tf2: yes always

T: is that the same for you?

Cm1: yeah you know in my class there three Chinese the other is black guys and they usually speak English they don't speak their

T: alright in the summer, you remember the sessions we had together? We had four sessions together and I gave you the articles

Cm1: I remember there is the case of that but I don't remember the context

T: what we did has it changed you as a learner as a student or not. Has it had any effect on you

Cm1: you know a little

Tf2: not much

T: not much

Cm1: is true that we can improve the in speaking in the seminar is very good but just four times may be is not enough. I find I improve very much in two case one is in the lecture I can see or I can receive a lot of new words if I can see in the course three or four times is very good I remember a lot of them or in the daily with the foreign friends we have some dinner together or play some games together we can play basketball or something like that we can talk together of course or wit the website also can improve but you know I am a little but shy to make foreign friends I just less than 10 you know some Chinese some of my Chinese friends they will make a lot of

T: it didn't change you much as a student as a learner

Tf2: yeah but the point at I think it change me is the preparation before class to make more understand when the lecturer ...

T: so do you still use some things that we did in the summer now?

Tf2: yeah

T: can you give me some examples

Tf2: in the course or

T: now

Tf2: a lot of preparation to read the slide before going to class I think the writing we did in the summer is really good for the assignment

T: I was asking earlier before you came have you had any comments on using theory in your assignments either good or bad

Cm1: some writing skills will help me for the assignment

T: but do you think you are using theory in your assignments do your lecturers say that you're good at using theory or that you are not using enough?

Cm1: I think, I think may be its good [laughs]

T: so do you remember that I asked you to keep a diary?

Tf2: yes

T: do you remember?

Cm1: I can find it

T: no you can't find it I've got it

Cm1: oh you got it? Oh I don't remember

T: do you remember that I asked you to write?

Cm1: no

T: do you remember why I asked you or do you know why I asked

Tf2: its like reflective

T: was it useful for you or did it just feel like a task

Tf2: yes its useful because some lecturer they try to tell us to write some reflective in each lecture

T: so it was good preparation for that. OK how would you describe how you felt in the summer? As a student how did you feel did you feel confident confused

Cm1: I feel my English has improved there some skills is very helpful I feel comfortable because it not too hard

T: do you feel comfortable now or at the time at the time did you feel comfortable

Cm1: just the same

T: clearly you have a bad memory, asking questions about 6 months ago is a mistake [laughter]

Tf2: I think now is more comfortable than in that time because in that time we are not familiar with the system about education in the UK after we have learnt some skills some expectations form the system we know what we have to do so I think there more clearer understand than others because some students they didn't have a chance in the summer so they fail some assignments.

T: Oh ok so students who didn't do the course in the summer, do you know why they failed some assignments

Tf2: I think because their style of writing is different from their countries that in the UK they expect critical and evaluation in the summer we practised about this a lot so it is useful

T: in the summer you spent quite a lot of time talking to each other about what is theory what is semiotics did you feel that you had learnt from each other

Tf2: sometimes

Cm1: sometimes a little forgot

Tf2: as I remember we talked about in different culture have different signs yes I think I have learnt from that about semiotics

Cm1: some place the yeah something like that [gestures to wave lesson]

T: what about the fact that we looked at how that theory worked in engineering or marketing or sociology was that a useful thing to do did it help you understand or did it confuse you more?

Cm1: when I have lecture I don't connect with the ...

Tf2: I think it more understand the root of theory because in each application in different fields maybe make us more understand about what the theory is and how to apply in each field

T: has our discussion of theory so we looked at the article what is theory and then we looked at the example of semiotics has that helped you feel more comfortable with theory now on your masters degrees do you think

Tf2: not really.

T: OK why not?

Cm1: you know when I finish the assignment or attend the lecture I don't find some things connect with theory

T: is that because your lecturers aren't saying this is a theory or

Cm1: no no they say that

T: so they don't really talk about theories

Cm1: yeah yeah

Tf2: we have learnt some theories in some subject they focus the theories but they teach some theories to learn more about discipline but not all of the theories that they have said in class

T: so how have you have you chosen some to learn more about

Tf2: yes and they in the assignment they ask us to apply the theories in some case study in the business how it works, how it used and the impact of theory in the business so it is quite related to the that we have done the theory and semiotics so first we have to understand what the theory is and then how to apply in the real life

T: is there anything you wish we had done in the summer like now you've had you've almost had almost two terms of your postgraduate studies is there anything like Oh if only I'd had a bit more practice or somebody had told me more about this in the summer

[hesitation]

Cm1: maybe study more harder study harder

T: what tell you how to study harder?

Cm1: I have to

T: we can't work miracles [laughter]

Tf2: I think its quite proper (?) in the summer course maybe a bit longer time so we have time to practise more is maybe better

T: so you feel like we covered everything that we needed to cover for now but you would have liked a bit more time to practise?

Tf2: yeah

T: yeah that's the problem isn't it? Yeah yeah

Cm1: that was a long time ...

T: one question I had asked before you came [student name] we looked at semiotics in the summer do you think there is other theories we could have looked at that may have been better for you or is semiotics ok just as an example

Cm1: is ok. I have no idea

T: tell me a little bit about how you feel now as a student how do you feel as a student now and how does your experience now compare to your previous university experience at home?

[Lack of response]

T: Are you happy to be a student here in the UK now?

Tf2: yes the way [interrupted by Cm1]

Cm1: yes I think is happy, no?

T: I mean happy or comfortable. Do you feel so when you did your first degree at home did you feel comfortable did you feel like you understood what was expected of you? Did you feel like you knew what you were doing?

Cm1: yeah

T: Do you have that same feeling now here in the UK? Or do you feel a bit is it very different do you feel a bit unsure

Cm1: some different but totally is also yeah in my home town I feel this happy and this happy too but the purpose of the study is different but is also ok is two types but I don't I think that two these two is also [nods]

T: so what's the biggest , I think its difficult for you because when I first spoke to you I think it was difficult for you to know what UK uni was like you hadn't done it yet so now you've done it well almost done it what's the biggest difference between here and home? I mean obviously you have the undergraduate/ postgraduate difference but what do you think

Tf2: the way of learning is different because here is more independent study than if you don't done it is just nothing because in my some class like if on the day of the submission of the assignment only a few student going to the class I think it's the problem for them I mean because is the time management you know what the deadline is and the class is every week so they just work for the assignment and don't go to the class.

T: so what would've what would happen at university in your country if students didn't come to class because they were doing an assignment?

Tf2: No the difficult how difficult of the exam is different so I mean it's not a problem in my country or maybe our course is quite a lot of assignment is like two weeks for one assignment so we have a lot of work to do another problem because it is not my own language it take time to understand and to do the assignment

T: is there anything else you want to say any other comments

Cm1: a difference is that in UK you need to do some presentation of the for the assessment and in my home town if you do presentation in its group work usually is group work and so far is good you can perform you can do some performance to show your understanding is good I think this type of assignment is good

T: so was everything written at home?

Cm1: we also have some sort of presentation but its not for students [laughs] is not for students

T: who is it for?

Cm1: for teacher for some professor for their studies but they don't ask student to do that for their maybe can say it is a presentation for a dissertation for final time we explain the dissertation to the lecturer in my university at that time don't have this type of examination just for dissertation its not the common type

T: if I was to repeat this again in the summer what advice would you give me? Do you think I should make any changes to what we did?

Cm1: you mean for the P... English

T: not for the for the four sessions we did for the four sessions that we did do you think I should do anything differently if I was to repeat it

Cm1: there is something yeah [tries to recall] er I find yeah yeah is I find that our terms for the last summer assessment is some assessment is written in the course I think is good I think we can find students real level of the study another thing is yeah just that that suggestion

Tf2: I think is ok

T: do you feel better prepared having done them or do you wish you hadn't done them? Are you glad you did them?

Tf2: yes

Cm1: yeah I improve a lot

T: and what about students so there's a new group of students in the summer new group of postgrad students and they are going to do these tasks what advice would you give them?

Cm1: study harder [laughs]

Tf2: the importance of preparation

T: do your lecturers ask you to prepare for sessions now? Are you expected to read before a seminar or a lecture?

Tf2: yes

Cm1: yeah

T: and does anything happen if you don't?

Tf2: yes because in one of my class gave the teacher expect us to read a case study before the class and to have a discussion in class and in that class nobody like only me read the case study so the discussion is not happening in class I think it's the opportunity in the class to have the discussion because its related to our assignment so is like a waste of time

T: did the lecturer say anything? Was the lecturer angry or?

Tf2: yes yes quite

T: have you done it again has the lecturer tried again to ask you to read something

TF2: I always do it

T: and do the other student do it or

Tf2: maybe only a few students

T: how do you think we can get students to do it more often?

Tf2: I don't know [looks towards Cm1]

T: do you read do you prepare before your sessions?

CM1: yeah sometimes yeah we have some homework I will do it I will do it carefully

T: does the teacher have to say it's homework?

Cm1: yeah its homework they say you do this week next week we er we can talk something about that homework

T: and do all of your classmates do it

CM1: no yeah yeah erm may be some is not because some didn't have time yeah my tutor is very they don't say something about that is ok

T: thank you very much for your time is there anything else you'd like to say while you're here

No response

T: Well thank you very much for your time and thank you very much for helping me with this. I really really appreciate it and it's great to hear you are doing so well. [at Cm1] How well do you mind if I ask what sort of marks do you get for your work

Cm1: Bs Cs

T: good good are you happy with the marks that you get

Cm1: yeah

T: yes. Do you get a lot of feedback from your lecturers?

[hesitation]

Cm1: not too much

Tf2: [agreement]

T: [at Tf2] Do you get a lot of feedback from your lecturers?

Tf2: Not much because maybe in whole course has lots of students so they give like 100 less than 200 words for feedback

Cm1: [agreement]

T: right ok very short yeah because there's a lot

Cm1: some tutor is hard to connect with hard to connect you send email to them yeah they have a tutorial for the assessment and I book a time er she don't attend the time I send email to her and said if I can change the time you know I sent [shakes head to imply he had no luck] yeah and many time I remember I go to her office room maybe four or five time she's very hard to

T: oh that's a shame yeah not all lecturers are the same are they?

[agreement]

T: Ok thank you very much for your time

Appendix 9: Permission granted to publish papers and chapter

Cowley-Haselden, S. (2020b). Using learner diaries to explore learner relations to knowledge on an English for General Academic Purposes pre-sessional. *Journal of Academic Language and Learning*, 14(1), 15-29. Retrieved from <https://journal.aall.org.au/index.php/jall/article/view/615>

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Susie Cowley-Haselden
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Warwick Foundation Studies
Faculty of Social Sciences
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15 May, 2021

Dear Susie,

In relation to your paper published in JALL,

Cowley-Haselden, S. (2020). Using learner diaries to explore learner relations to knowledge on an English for General Academic Purposes pre-sessional. *Journal of Academic Language and Learning*, 14(1), 15-29. Retrieved from <https://journal.aall.org.au/index.php/jall/article/view/615>

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Cowley-Haselden, S. (2020c). Building knowledge to ease troublesomeness: Affording theory knowledgeability through academic reading circles. *Journal of University Teaching & Learning Practice*, 17(2), 1-14. Retrieved from <https://ro.uow.edu.au/jutlp/vol17/iss2/8>

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Dr Joey Crawford
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Cowley-Haselden, S. (2020a). ‘Analysing Discourse in the Liminal Space: Talking Our Way Through It’ in J. A. Timmermans & R. Land (eds.), *Threshold concepts on the edge*, Brill Sense, Leiden. [the full chapter has been included in Appendix 10 as it is not open access]

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6. ANALYSING DISCOURSE IN THE LIMINAL SPACE

Talking Our Way through It

ABSTRACT

This chapter is the first step to eradicating ‘language blindness’ (a proclivity for overlooking language use) within threshold concept research. Through an analysis of learners’ knowledge and language practices within the liminal space, it is hoped that insight might be gained into the discourse necessary to acquire troublesome knowledge. Though approached from the perspective of an applied linguist, this chapter offers some understanding of the discourse of the liminal space which is pertinent and applicable to learners in all disciplines.

INTRODUCTION

The liminal space has been under-researched in the field of threshold concepts (Land, Rattray, & Vivian, 2014). No more so than when considering the discourse that is required to traverse it. Land et al. (2014) observe that to acquire troublesome knowledge requires a shift in discourse, but, to date, there has been no analysis of what this actually means in practice. This chapter analyses learners’ discourse offering insight pertinent to all disciplines into the language and knowledge practices required to enable passage through the liminal space. Prior to the analysis, some background will be given to the study that informs this chapter, including an overview of its purpose and methodology. ‘Theory knowledgeability’ will be introduced as the threshold concept that is the nucleus to the study, and an overview will be given of the two frameworks being employed to analyse the discourse within the liminal space.

THE STUDY

Background

Some background should be given to the study that has led to this chapter. The field of English for Academic Purposes (EAP) exists to prepare students, traditionally for whom English is not their first language, for their academic studies at university.

This preparation can either exist before students embark on their studies (often due to the fact that they have not yet met the English language requirement for university entry – what is known as *pre-sessional* in the UK context), or in tandem with their academic studies (*in-sessional*). EAP is often not simply language teaching; it also includes a focus on academic skills required to succeed on university level courses and varying degrees of engagement with material directly related to the students' academic disciplines. Herein lies a tension within the field. As many EAP practitioners are trained in language teaching, language is often foregrounded at the expense of exploring subject-specific knowledge, which, as non-specialists, the EAP practitioner may feel uncomfortable 'teaching'. A detrimental consequence of this is that pre-sessional courses are often what Maton (2014) would term 'knowledge blind', defined as that which 'focuses attention on processes of learning and whose knowledge is being learned, but obscures what is being learned and how it shapes these processes and power relations' (Maton, 2014, p. 7).

While the field of EAP is guilty of 'knowledge blindness', much educational research pertinent to this study in the areas of threshold concepts (Land, Meyer, & Smith, 2008; Meyer & Land, 2006; Meyer, Land, & Baillie, 2010) and Decoding the Disciplines (Middendorf & Pace, 2004; Shopkow, 2010), is also guilty of 'language blindness'. While there may be acknowledgement of the need for an evolution in discourse in successful acquisition of a threshold concept (Land et al., 2014; Matsuda, 2016), threshold concepts literature to date fails to offer any actual discourse analysis to provide insights into how language use shapes this evolution and what language is legitimate in this context. This chapter looks to Flowerdew (2013) to provide a definition of discourse and discourse analysis. Discourse is not simply sentence-level language use, but language used in context:

[T]he rationale for a contextualised ... consideration of language is based upon the belief that knowing a language is concerned with more than just grammar and vocabulary: it also includes how to participate in a conversation or how to structure a written text. (Flowerdew, 2013, p. 1)

Discourse analysis is a particularly interdisciplinary endeavour, employed in a multitude of fields outside linguistics, analysing language in terms of its structure and/or its function (Flowerdew, 2013). It is a predominantly qualitative methodology concerned with generating rich description, rather than measuring instances of language use in context (though strands of discourse analysis do this too) (Flowerdew, 2013). For Flowerdew (2013, p. 2) 'the discourse analyst considers the particular meanings and communicative forces associated with what is said or written'.

This paper holds with Coffin and Donohue's (2014, p. 4) view that 'academic knowledge does not consist of academic content and behaviours learned independently of language and literacy. Nor are language and literacy simply carriers of academic content and behaviours. Rather, knowledge, behaviours, and language develop symbiotically' [sic]. The study that underpins this paper is an attempt to reveal

this symbiotic development through the analysis of student discourse, focusing on knowledge *and* language practices within the liminal space.

Methodology

In order to eradicate knowledge blindness on a generic EAP programme, participants in this predominantly qualitative study discussed reading material that aims to build their ‘theory knowledgeability’. As will be explored below, it is the knowledge of what is being learned *and* how it shapes the process of learning (Maton, 2014) that presents itself as a threshold concept. The discussions students had manifest as *semiotic mediation* (Coffin & Donohue, 2014; Hasan, 2002; Vygotsky 1978), defined as ‘engaging with instructors and students, as well as engaging students and instructors with each other, in mutual inquiry and learning’ (Coffin & Donohue, 2014, p. viii). Taking this approach is a response to the acknowledgment that the EAP practitioner is not a subject specialist in the range of disciplines represented in the EAP classroom and therefore cannot ‘teach’ subject-specific material. What we can do is engage with our students in a mutual exploration of the concepts presented in the reading.

To enable this mutual inquiry and learning, the students took part in a seminar discussion centred on a text that explored the theory of semiotics within the various fields they were going on to study. Semiotics was chosen by the teacher, as it is a theory that transcends disciplinary borders and is therefore, in Bernstein’s (1990) terms, of weaker classification. Bernstein defines classification as the ‘degree of insulation between categories of discourse, agents, practices, contexts’ (1990, p. 214). The greater the insularity, the stronger the classification, meaning that the less accessible a discipline is to an ‘outsider’, the stronger its classification is (as with a discipline like physics, for example). However, a discipline like cultural studies that crosses borders with a range of other disciplines in terms of discourse, agents, practices and contexts, exhibits weaker classification. Operating within the confines of one discipline is not desirable in the context of the EAP classroom where the students are often from a range of disciplines.

In addition to taking part in a seminar discussion, participants also took part in a post-discussion focus group to discuss their thoughts on the activity. They also kept a diary intended to record the ‘metacognitive affect’ of taking part in the discussion.

The participants’ discussion and focus group were transcribed according to transcription practices within the field of language research (Mackey & Gass, as cited in Allwright & Bailey, 1991). This paper explores, as a heuristic, the resultant discourse analysing both language practice (employing Systemic Functional Linguistics) and knowledge practice (employing Legitimation Code Theory). This performs a more holistic analysis of the discourse.

The study gained ethics approval from both the author’s institution of employment and the institution of study.

Participants

The participants of the study were a sample of convenience (Dörnyei, 2007) and consisted of seven international graduates progressing onto taught Masters' programmes in the fields of Law, Business Management, Marketing, and Economics. These students were on a six-week pre-session course where they entered with an International English Language Testing System (IELTS) level of 6.0 and were required to reach the equivalent of IELTS 6.5 by the end of the course in order to progress onto their academic courses. Two nationalities were represented in the sample: Chinese and Vietnamese. In this chapter, the participants have been coded first by nationality, then gender, then a number; for example, Cf1 = Chinese female one and Vm2 = Vietnamese male two.

THEORY KNOWLEDGEABILITY AS THRESHOLD CONCEPT

Threshold concepts research has historically concerned itself with disciplines that exhibit stronger classification, to use Bernstein's terminology (1990), in that from a curriculum perspective, these disciplines possess particular methodologies, concepts, and theoretical frameworks that are confined within the boundaries of the field (see Land et al., 2008; Meyer & Land, 2006, for examples). There is, however, a 'new wave' of research in threshold concepts that concerns itself with concepts of weaker classification. That is, these concepts can traverse boundaries across disciplines. For example, the work of Kiley and Wisker (2009) and Kiley (2009, 2015), as well as the chapters collected in *Naming What We Know* (Adler-Kassner & Wardle, 2016), concern themselves with more 'generic', skills-based concepts, particularly around academic writing (Adler-Kassner & Wardle, 2016) and graduate attributes (Kiley, 2009, 2015; Kiley & Wisker, 2009).

While this shift within the threshold concepts literature may seem on the surface to align more naturally with EAP, this new direction seems to relegate subject specific knowledge in the same way that EAP has tended to do. While this might be useful in the context of those who contributed to the recent literature, this is counterintuitive to the purposes of this study. The contributions within *Naming What We Know* and the work of Kiley and Wisker (2009) also exhibit symptoms of language blindness. Despite naming many features shared within the EAP curriculum as threshold concepts, only one paper within *Naming What We Know* mentions negotiating language differences in academic writing (Matsuda, 2016), but this is merely a statement. There is no language analysis offered here.

Kiley (2009, 2015) and Kiley and Wisker (2009), researching the domain of doctoral study, have identified 'theory' as a threshold concept. However, to say theory itself is a threshold concept is a little misleading. Much of what Kiley (2015) and Kiley and Wisker (2009) describe is more akin to theory *literacy* – that is, not knowledge of a prescribed theory in and of itself, but the ability to employ theory to frame research, to inform thought and argument with theory, and to 'theorise

findings' (Kiley, 2015, p. 52). This is a good example of 'knowledge blindness'; focusing on the process rather than the 'what' (Maton, 2014).

It is necessary here to pause and explore what is meant by the term 'theory' in this chapter. Maton (2014) keenly observes that we have an incredibly limited vocabulary when it comes to theory, using one word to cover a variety of interpretations. This chapter works on the notion of theory as 'a supposition or a system of ideas intended to explain something' (OED, as cited in Stewart, Harte, & Sambrook, 2011, p. 222). Stewart, Harte and Sambrooke (2011) unpack this definition focusing on the importance of three words in particular: a theory *intends* to *explain something*. A theory therefore is explanatory, it is not a given that it is successful in its intention and it is separate to that which it tries to explain. This is the understanding of theory that is it hoped the students will acquire.

Archer speaks of an agent's knowledgeability, whereby 'agents have different degrees of 'discursive penetration', 'practical knowledge' or 'unconscious awareness' of their situations which in turn affect their social practices' (1995, p. 131). The aim of this study is to increase the students' knowledgeability and, consequentially, affect their academic discourse practice. The issue that this study is trying to address is not that students need theory literacy, but that they need 'theory knowledgeability'. What is meant by this is that, before students can be literate with theory, they need knowledge of theories first. Students themselves acknowledge the need to develop theory knowledgeability, as can be seen from the following extracts from the focus group. The first extract is a succinct illustration of the student identifying theory knowledgeability as a threshold concept, if not in those terms, then certainly identifying the 'stuckness' of it.

Cf1: I think we don't know what is theory. We can explain in a dictionary way but when we talk about theory use we are stuck.

A second excerpt reveals the student's awareness of a common phenomenon within the liminal space: mimicry. Kiley and Wisker claim that, 'while in the liminal state students may mimic the language and behaviours that they perceive are required of them, prior to full understanding' (2009, p. 432). The mimicry observed by the student below is an acknowledgement of an unawareness of what theory actually is, which is compounded by the fact that these students were incognisant of any actual theories.

Vm2: We can repeat what is said and paraphrase but we don't really understand what is theory.

This excerpt is also an insightful observation of the students' behaviour during the discussion of their texts. Students often rely heavily on the texts, repeating what is written within it, with their gaze firmly fixed on the text to avoid having to speak independently of it. Discursive penetration is limited, and there is certainly an awareness of existing in the liminal space.

Of course, this one discussion did not solve the troublesomeness of theory knowledgeability. However, it did highlight the need to continue to engage with actual theories. All students agreed that talking about theory was helping them to understand what it is and enabling them to feel a little less troubled about encountering a discussion of theory on their impending postgraduate studies:

Cf1: So in the future when tutor asks you to discuss something you won't panic.

It is now time to turn to the analysis of the discourse that took place within the discussion of a theory.

SYSTEMIC FUNCTIONAL LINGUISTICS

Overview

Systemic Functional Linguistics (SFL) is a framework that has proved highly influential in EAP practice. Halliday's rather dense framework essentially sees 'text as language functioning in context' (Halliday & Matthiessen, 2014, p. 3). To understand language use, it is necessary to understand the lexicogrammatical choices made by the speaker when there is a variety of other choices (Halliday, 1978). Halliday argues that 'just as you choose what to do, and what to say, you also choose what to mean' (2013, p. 17). By employing SFL to analyse choice, we gain a more in-depth understanding of the meaning within our language choices.

In SFL, the basic unit of analysis for understanding these choices is the clause (Flowerdew, 2013). The clause is considered 'a multi-functional construct consisting of three metafunctional lines of meaning' (Halliday & Matthiessen, 2014, p. 211): the textual, the interpersonal, and the ideational. While it should be highlighted that these three metafunctions coexist simultaneously within the structure of the clause (Coffin & Donohue, 2012; Eggins, 2004; Flowerdew, 2013), the ideational metafunction is the sole focus for analysis in this chapter. 'Ideational meanings realise what is called the *field* of discourse (the purpose of the communication and what it is about)' (Flowerdew, 2013, p. 12). In order to identify the ideational and the meanings they construe, it is necessary to perform what is known as a transitivity analysis of the clauses. This involves exploring the processes (verbal groups), participants (nouns) and circumstances (adverbial groups or prepositional phrases) (Flowerdew, 2013) of a clause and therefore signifying the role of each in the clause:

when we analyse the roles of the participants, the processes and the circumstances in a text, we can see the relationships between the people and the things involved, the processes they engage in and the sort of circumstances in which they occur. (p. 17)

There are six Process types: Material, Mental, Behavioural, Verbal, Existential, and Relational (Halliday & Matthiessen, 2014). Put simply, Material processes are

verbal groups that reveal physical action, or ‘doing’; Mental processes are those which relate to internal cognitive and emotional states; Behavioural processes are an outward manifestation of an internal state, for example, we cry because we feel sad. Verbal processes reveal that which has been said; Existential processes reveal what is; Relational processes reveal the attributes of a given Participant (noun) or identifies the Participant.

A transitivity analysis does not simply allow us to see who does what to whom, but when analysed fully, allows us to see power and agency within the processes. It is for this reason that transitivity is often employed in Critical Discourse Analysis. When analysing the students’ discourse then, it is most revealing to consider the agency in their utterances.

Analysis

The transitivity analysis performed here examines the research participants’ lexicogrammatical choices within their discussion (Table 6.1).

There are few instances in the data where the research participants directly refer to their article. What can be seen from the extracts in Table 6.1 is that the students do not place themselves in the dominant participant role of *actor*. If the students do refer to themselves, it is in the more passive role of *senser* and often in the negative, highlighting their perceived lack of knowledge and/or understanding. There is a dearth of language we might expect from postgraduate students when discussing such texts. There are no Verbal processes; neither authors nor students are given a voice. Within the student discourse, the authors of the texts are also deprived of any Mental processes, extricating thought and opinion.

Table 6.1. Transitivity analysis of discussion (including research participants’ errors with grammar and vocabulary use)

Discussion extract 1	My article	using	the semiotics	
	<i>Participant: Actor</i>	<i>Process: Material</i>	<i>Participant: Goal</i>	
Discussion extract 2	they	point to	the use semiotic	to develop a new understanding of law and economics
	<i>Participant: Actor</i>	<i>Process: Material</i>	<i>Participant: Goal</i>	<i>Circumstance: Purpose</i>
Discussion extract 3	It	is	difficult	
	<i>Participant: Carrier</i>	<i>Process: Relational</i>	<i>Participant: Attribute</i>	
Discussion extract 4	(Even) I	don’t know	my article	
	<i>Participant: Senser</i>	<i>Process: Mental</i>	<i>Participant: Phenomenon</i>	

This has implications for how this study needs to go forward. In future iterations, there needs to be an exploration of what role agency has to play in helping students cross the liminal space presented by theory knowledgeability. There also needs to be more explicit engagement with the processes expected of postgraduates when deepening their discursive penetration. This is not only true in this case. Donohue's (2012) excellent example from film studies uses SFL to analyse the Processes necessary in students' acquisition of *mise en scene* as a threshold concept. SFL can be a very powerful tool in helping students understand the Processes that will enable them to traverse the liminal space and internalise the threshold concept in question.

LEGITIMATION CODE THEORY

Overview

Legitimation Code Theory (LCT) has become increasingly popular in educational research in the past decade. LCT's ambition is to gain better insight into knowledge practices that are deemed legitimate in a given context. LCT reveals 'the fundamental 'rules of the game' or bases of achievement ("legitimation") of different contexts, the ways they develop over time, what they enable or constrain, and how they relate to the dispositions actors bring to those contexts' (Van Krieken et al., 2014, p. 173). LCT is a framework comprising five dimensions that allow researchers to capture 'a set of organising principles underlying dispositions, practices and contexts' (Maton, Hood, & Shay, 2016, p. 11). Here, the dimension of Semantics is employed to explore knowledge in terms of semantic gravity and semantic density. *Semantic gravity* (SG) refers to 'the degree of context-dependence of meaning – the stronger the semantic gravity (SG+), the more knowledge is dependent on its context to make sense; the weaker the semantic gravity (SG-), the less dependent knowledge is on its context for meaning' (Van Krieken et al., 2014, p. 175). *Semantic density* (SD) on the other hand 'refers to the degree of condensation of meaning within socio-cultural practices [...] The stronger the semantic density (SD+) the more meanings are condensed within practices; the weaker the semantic density (SD-), the less meanings are condensed' (Maton, 2014, p. 129). The relative strengths of semantic gravity and density are then mapped onto the semantic plane (Figure 6.1) which has four codes:

- *rhizomatic codes* (SG-, SD+) [...] relatively context-independent and complex stances;
- *prosaic codes* (SG+, SD-) [...] relatively context-dependent and simpler stances;
- *rarefied codes* (SG-, SD-) [...] relatively context-independent stances that condense fewer meanings; and
- *worldly codes* (SG+, SD+) [...] relatively context-dependent stances that condense manifold meanings (Maton et al., 2016, p. 16).

Maton et al. (2016) state that rhizomatic and prosaic codes respectively represent the theoretical and practical knowledges that divide many in the field of education.

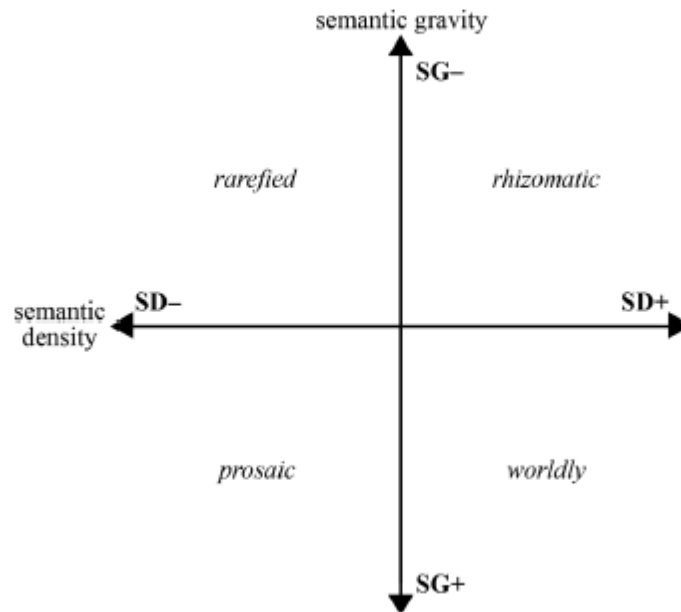


Figure 6.1. The semantic plane (from Maton, 2016, p. 16)

LCT affords a more nuanced understanding with the four quadrants of the semantic plane, rather than allowing an overly simplistic and considerably unhelpful binary. Shay and Steyn (2016) illustrate how curricula can develop students from 'naïve' and 'novice' (situated within the rarefied code), through to 'expert' and 'master' (situated in the worldly code). This rather succinctly mirrors the journey from pre- to post-liminal.

Analysis

As can be seen from the extracts below (words in italics are words from the original texts that students read), within the discussion, the participants seem unable to move beyond the rarefied code. Turns generally exhibit the abstract nature of the knowledge being discussed in that the turns are independent of a particular context (SG-), yet turns are unable to build constellations of meaning, indeed unable to build much meaning at all (SD-).

Cm2: I found out er, that *efficiency* and er *creativity* is er are the main part in their [...] and er *market economy*. That's all I read for understand this.

Cf2: I think *semiotics* is a, is a, is a significant *symbols* of of brand or of product because because in same kind of product a lot of *brand* how can the consumer know very well about your *brand*. It should be kind of *semiotic*?

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Cm2: I agree with the idea that *creativity* can create the value of society not the *efficiency* and I also agree that *economic* is *dynamic* not *aesthetic*. So what yours opinion?

Students are not able to unpack and repack the complexity within their reading in order to navigate their way through it. Cf2 is attempting to unpack the complexity of semiotics in Marketing, but with limited success. Cm2 is unable to create any real meaning, let alone relate to a specific context or generalise. The two extracts from Cm2 are almost limited to a random list of words extracted from the article. What is evident is that participants' turns are short and signal that the students have limited resources to cope with the complexity of building a shared understanding of a given theory.

LIMITATIONS OF THE STUDY

As the study that has informed this chapter was a pilot, there are many limitations to consider. Firstly, the sample size was very limited. Only two nationalities were represented within the sample, and most disciplines represented were business-based.

The data are also limited, as they mainly come from one discussion. While this offers some insight into the linguistic and knowledge practices of the liminal space, this needs to be repeated over a series of discussions building a richer picture of both language practice and knowledge practice. As mentioned in the methodology section, participants were asked to complete a diary recording the 'metacognitive affect' of taking part in the discussion. These diaries yielded poor data, and future participants need to be better supported in 'actively engag[ing] with metacognition relating to the threshold concept' (Orsini-Jones, 2010, p. 281) as it can contribute to learners' readiness to traverse the liminal space (Orsini-Jones, 2010).

CONCLUSION

Land et al. (2014, p. 201) rightly observe that 'learning in the liminal space further entails the acquisition and use of new forms of written and spoken discourse and the internalising of these'. However, we cannot make claims such as these without committing to developing a fuller understanding of what this change in discourse demands of the learner. This chapter has attempted to make an initial contribution to do just that by showing that in order to help international postgraduate students traverse the liminal space opened up by the threshold concept of theory knowledgeability, we must analyse the linguistic *and* knowledge practices involved. The complementary frameworks of Systemic Functional Linguistics and Legitimation Code Theory provide insightful analysis of discourse within the liminal space. It is of course no surprise that these participants found their engagement with theory troublesome and lacked agency in their language choices and complexity in their knowledge practice.

In Shay and Steyn's (2016) terms, these participants were 'naïve'. The future study will build on this pilot and aim to plot the participants' journey from 'naïve' to 'master', or from pre- to post-liminal, across a series of discussions providing much richer data and a greater understanding of the discourse practices within the liminal space.

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