

Expanding the Scholarship of Teaching and Learning: multimodality and semiotics of teaching-learning interactions in an undergraduate Accounting programme

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

I confirm that the word length of this thesis conforms to the permitted maximum for this programme (as extended by PVC approval).

Signature.....Wilma W Teviotdale.....

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Abstract

This conceptual and methodological study investigated the dynamics of teaching-learning interactions to contribute to the scholarship of teaching and learning holistically. It is situated in a higher education classroom environment for Accounting undergraduate students at a UK university. The purpose of the study was to provide practical information for tutors' reflections in developing their approaches to the Scholarship of Teaching and Learning (SoTL) for future development of signature pedagogy in a challenge to its status quo. Acknowledging the multimodal nature of communication within the structural-agentic processes in teaching-learning interactions, the study combined selected perspectives from Symbolic Interactionism, Edusemiotics, and Multimodality to provide a communication "turn" for SoTL in recognition of a conceptual and methodological gap. A novel multimodal and edusemiotic analytical tool, Inquiry Graphics, was used for the first time in an Accounting study to analyse the fine level detail of video recordings of classroom teaching-learning interactions. This provides a rich landscape of insights for tutors' understanding of the multimodal nature of communication, involving human and non-human objects, in developing their pedagogical practices.

Data were also obtained from staff and student interviews and surveys about their interactions.

Key themes emerged from the analysis regarding *identity interactions*, *non-verbal mediations*, and the form of *teaching-learning engagements* observed. Particular insights for tutor reflection on pedagogical practices were identified around physical infrastructures in classrooms, dialogic interactions and non-verbal communication that can take a future development within the field of socio-materiality of teaching-learning. The study further commented on the implications of using the IG analytical approach for studying teaching-learning interactions *in situ* and via video analysis. The thesis makes a contribution to knowledge by expanding the SoTL approach with the perspectives of multimodal, symbolic and edusemiotic teaching-learning interactions. It can inform scholars and practitioners interested in the above mentioned concepts, method and analysis.

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Chapter 1 – Introduction: SoTL and teaching-learning interactions

1.1 Study background and contribution to knowledge

This chapter provides the basis for this research project investigating characteristics of teaching-learning, non-verbal and verbal interactions involving tutors and students in an Accounting undergraduate programme.

The purpose and focus for this applied research came from my interest as a tutor of Accounting students intrigued by the variation in student in-class behaviours and how it connects to their learning in undergraduate programmes. As I familiarised myself with the literature on the variations in individual student performance and learning approaches (Abhaywansa, Tempone and Pillay, 2012; Jenkins and Rubin, 2011; Richardson, 2005) across modules at a level of study, variations in module pass rates at the same level of study (Guney, 2009; Xiang and Gruber, 2012), and variations in staff approaches and attitudes to teaching (Sander, Stevenson, King and Coates, 2000; Stout and Wygal, 2010; Wygal and Stout, 2015), this led to an interest in why and how these occur in practice. This was followed by various small-scale research projects to look at specific aspects of teaching and learning, for example, formative assessment and feedback (Ahmed and Teviotdale, 2008; Teviotdale, 2009).

This developed into an interest in the Scholarship of Teaching and Learning (SoTL) from Boyer's work on *Scholarship reconsidered* (1990) and his four elements of scholarship (discovery, integration, application and teaching).

From Boyer's (1990) seminal work on the scholarship of teaching, through to the development of an expanded SoTL research movement (considered further in Chapter 2), there has been significant research, and critique, of

investigating tutors' approaches to teaching and related students' learning. Nonetheless, the subsequent discussions on SoTL from Boyer's work have not brought about a common understanding of what Scholarship is, revealing a variation across disciplines (Kinchin, Lygo-Baker and Hay, 2008).

This variation across disciplines exacerbates the 'wicked' nature of HE's complex environments (Trowler P, 2012) and led me to position myself as a reflective practitioner (Schön, 1987). Schön (1987, 6) referred to teaching and learning environments as 'indeterminate zones of practice – uncertainty, uniqueness, and value conflict' which 'escape the canons of technical rationality'. This is a key starting point for this study that looks at teaching-learning interactions *in situ*. It links to Schön's (1987, 28) discussion of 'reflection-in-action' where moments of surprise (Lucas, 2008, 2011) would ideally lead to tutors stopping to consider what is happening in teaching-learning interactions. However, without the time or appropriate tools, tutors are arguably less likely to stop to reflect nor may they even recognise the need to do so from their experiences in the HE classroom. That is why I decided to record teaching-learning interactions and analyse them as a reflective practitioner, but also provide an opportunity for other teachers to reflect on their own practice by viewing these recorded interactions.

Accounting, as a discipline, would be considered one of Shulman's (2005, 53) signature pedagogies, which he argues 'must measure up to the standards not just of the academy, but also of the particular professions'. Shulman's concept of signature pedagogies can be classically described as 'types of teaching that organize the fundamental ways in which future practitioners are educated for their new professions' (2005, 52). In considering the SoTL

implications of signature pedagogies, I am aware of Shulman's (2005, 56-57)

caution:

Signature pedagogies, by forcing all kinds of learning to fit a limited range of teaching, necessarily distort learning in some manner. They persist even when they begin to lose their utility, precisely because they are habits with few countervailing forces. Since faculty members in higher education rarely receive direct preparation to teach, they most often model their own teaching after that which they themselves received.

I view this caution as a contextual aspect of the teaching-learning interactions in this study the need to be aware of how Shulman's three dimensions of signature pedagogies, surface, deep and implicit structure, may work in practice. Surface structure consists of 'concrete, operational acts of teaching and learning, of showing and demonstrating, of questioning and answering, of interacting and withholding, of approaching and withdrawing'; deep structure as 'a set of assumptions about how best to impart a certain body of knowledge'; and an implicit structure as 'a moral dimension that comprises a set of beliefs about professional attitudes, values and dispositions' (Shulman, 2005, 54-55).

However, although not explicitly discussed by Shulman (2005), my lived experience as an Accounting tutor and line manager of other tutors of Accounting signature pedagogies has demonstrated the pervasive and significant influence of professional accountancy bodies accreditation processes on curriculum coverage and means of assessment. The latter has been a key driver for learning (Ramsden, 2003) and of significant interest to students in directing their efforts. Therefore, tutors can be constrained in what they teach to match professional body requirements and how they assess. Examinations that are time constrained and may not allow books dominate the practice. These are long, time-honoured practices in the Accounting

profession, and it is expected that this study's analysis will reveal the impact on teaching-learning interactions, particularly for the surface and deep structure dimensions of Accounting signature pedagogies. The signature pedagogies of Accounting might be one of more restrictive and rigid pedagogies, as students need to learn precise skills, such as spreadsheets and database software, and professional accounting interactions, behaviours and rules in order to advance in their capability to make decisions. As Vician and Mortenson (2017, 35) posit when describing Accounting, 'the accounting discipline has a long history of linking foundational accounting concepts to accounting practice in real-life business situations (Black, 2012; Pathways Commission, 2012)'. This further underpins Shulman's (2005, 52) 'characteristic forms of teaching and learning' within signature pedagogies and how trainee accountants are inducted into their profession.

The aim of this thesis is not to explore signature pedagogies, but to uncover what is happening *in situ* in Accounting classroom practices, in order to inform future development of Accounting signature pedagogies, as well as in other disciplines to better understand the micro multimodal practices of classroom interactions. In-depth explorations of what actually happens in Accounting education classroom in terms of modalities and embodied interaction are scarce, if any exist at all. Therefore, the thesis addresses a clear gap in the field needed in order to support tutors with their development of disciplinary and interdisciplinary practices. Teaching and learning practices across disciplines that take place in small group seminars, such as the case explored in this study, can also benefit from the insights and the level of detail in this study.

In consideration of the social nature of teaching and learning, Ashwin (2009a) criticized past empirical research for treating teaching and learning as 'two discrete and separable processes' (Ashwin, 2009a, 2) and not more holistically as one activity. This separation and foregrounding of either students' or tutors' perceptions and practices, does not facilitate research into, and understanding of, the dynamic and emergent features of HE teaching-learning interactions. This is persuasive in the context of the wicked and messy nature of learning and considering holistic analyses in applied research.

To add to this need for researching the dynamics of teaching-learning interactions as one activity holistically, it needs to be acknowledged that 'human interaction *is* fundamentally embodied and, as such, any research into human social interaction is research into embodied interaction' (Hazel, Mortensen and Rasmussen, 2014, 3). This is the leading focus of the thesis as dealing with the verbal aspect of interaction alone is not sufficient. The knowledge of teaching-learning needs to be integrated with 'concurrently relevant semiotic fields' (Goodwin, 2000, 1499) and multimodal communication, realised at an intersection of language, movements, mediating artefacts and resources, gestures, and gaze, to mention some modalities. It also means that teaching-learning interactions are not only embedded in structural and agentic social tapestry, but they are fundamentally multimodal and develop via nuanced relationship and interactions between the physical and material environment and teaching-learning actors (Lacković, 2018).

This study is taking SoTL and Ashwin's (2009a) work further by considering the place of multimodal semiotics in understanding higher education teaching-learning interactions (Lacković, 2010; 2018; Hallewell and Lacković, 2017). With regards to structural-agentic processes, an approach that accounts for objects and the affordances of objects (Gibson, 1979) in relation to actors and their interactions would support a more holistic analytical approach to teaching-learning that accounts for material artefacts and designs present in the classroom. This is the approach that this thesis adopts and its unique contribution to knowledge. Understanding what exactly is happening at a fine-grain level of analytical detail is an under-researched aspect of SoTL and higher education research (Lacković, 2018; Ashwin, 2009a) that this study addresses.

1.2 Research approach overview

My overall conceptualisation of this study adopts an epistemology of pragmatism, as it brings together interpretivism and socio-cultural constructivism for the de-construction of educational interactions in HE practice. In adopting this research approach, I wish to move from the more traditional conceptions of teaching that adopt a mainly cognitive/psychological stance to one that encompasses the socio-material context of teaching practices and communication mediated by multi-layered interactions to offer a 'different angle in exploring the character of teaching in the classroom' (Guzman-Valenzuela, 2013, 69). This will involve investigation of the embodied interactions (Hazel et al, 2014) and relationships between humans and humans, and humans and objects in a highly situated classroom environment. Such an approach is taken here to be multimodal to underpin

the holistic nature of teaching-learning interactions across various modalities, such as movement, gaze, teaching resources and verbal expression, and so recognise the many resources that influence social communication and the meanings participants take from these. The human-object relations and interactions are also a staple of the socio-material approaches (Fenwick, 2010; Fenwick and Edwards, 2013) but in this thesis I do not aim to theorise the practice, but rather do an in-depth analysis of teaching-learning classroom interactions, by revealing its complex multimodal and symbolic character. Consequently, the development of the research questions will provide a focus on the fine-grained detail of those resources (human and non-human) in action in teaching-learning interactions.

To develop my unique approach that combines the experience of students and tutors (without the separation criticised by Ashwin, 2009a) and integrates multimodal structure and agency within their interactions in HE physical spaces, I will be drawing on conceptual perspectives from Symbolic Interactionism (SI) and Edusemiotics (Edus), further discussed in Chapter 2. These will support my aim to consider teaching-learning interactions that involve humans and objects in one educational system to reveal different affordances of tutor-student and student-student interactions to tutors for their reflective practices. I want to “see” the ‘different positions that students and academics might move through in a particular interaction’ (Ashwin, 2009a, 136). That is why I decided to video record these interactions and analyse them, complemented by teacher and student interviews.

As my data collection involves video recording of lessons and interviews with tutors and students, I chose analytical lenses that aligned with this multimodal

character of my data. Jewitt, Bezemer and O'Halloran's (2016) description of Conversation Analysis (CA) and its use in multimodal form (for example, by Davitti and Pasquandrea, 2016) together with Lacković's (2018) multimodal video analysis provide an appropriate method for analysing video recordings of classroom activities as the empirical focus. This analysis is enhanced with staff and student reflections on their direct experiences to understand their position as 'knowledge is not independent of the knower, but socially constructed and that reality is neither static nor fixed' (Yilmaz, 2013, 316).

1.3. Research aim and questions

In conducting this applied research, I aim to understand better non-verbal and verbal communication in classroom teaching-learning interactions. The following research questions (RQ) have been developed, building on that aim:

RQ1: What characterizes tutor-student verbal and non-verbal interaction in teaching-learning interactions in classrooms? In relation to:

RQ1a: tutor use of language to engage students.

RQ1b: tutor and student use of non-verbal communication

RQ1c: students' verbal and non-verbal reactions to tutor behaviour

RQ1d: tutors' reactions to student verbal and non-verbal communication

RQ1e: how tutors' reference prior knowledge during classroom activities to develop student understanding

RQ1f: if students report a 'change in understanding' after teaching-learning interactions?

RQ2: In what ways do classroom environments affect teaching-learning interactions? In relation to:

RQ2a: Classroom (spatial) configuration (tutor-student, student-student interaction)?

RQ2b: Artefacts employed by tutor?

RQ3: What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?

RQ4: What are the implications of the findings in terms of SoTL, Higher Education teaching, and CPD for knowledge development of teaching-learning interactions?

1.4 Summary

This chapter has set out the background and motivation for this research, setting it in its discipline-specific context and outlining the research approach and research questions to support the objective of a new and more holistic approach to investigating SoTL, and particularly HE verbal and non-verbal teaching-learning interactions within classroom settings. The next chapter describes and critiques the literature informing the study's approach.

Chapter 2 - Literature Review of the Conceptual Perspectives

2.1 Literature review approach: starting from SoTL

SoTL is a key conceptual area of this study, merged with non-verbal communication approaches of multimodality and EduS that are explored later in this chapter. EduS is proposed as a unique contribution of this thesis, as SoTL literature has scarcely unpacked teaching-learning interactions in higher education from those perspectives. The SoTL literature review set out to determine main relevant issues emerging from initial readings (Phase 1) before conducting a more detailed review of journals (Phase 2), that dealt firstly with accounting education and then a relevant selection of broader educational research journals.

Phase 1 looked for the landmark concepts, critiques of past approaches and for ideas on how development of SoTL in HE within the Accounting discipline could occur. Phase 2's systematic search of accounting education journals and wider educational research journals focused initially on SoTL and then on further refinements to include "higher education" and "undergraduate" to provide a relevant focus. Acknowledging views on the need for conversations between students and tutors (Ashwin, 2009a; Laurillard, 2002, 2008; Ramsden, 2003), a further refinement to the search added: "teaching-learning interactions"; and "student-tutor interactions". The period of review informing the study's approach and data collection was six years from 2010 to 2015 for peer-reviewed articles.

2.2 Phase 1 - SoTL movement

From general readings around Scholarship, Boyer (1990) clearly identified as a landmark author energising the debate on the scholarship of teaching.

Nonetheless, criticisms of Boyer's work emerged relating, *inter alia*, to a lack of conceptual progress (Tight, 2012); a failure to address the socio-economic context of HE and the nature of reward systems that impose control rather than address quality (Davis and Chandler, 1998); and conceptual confusion around Boyer's definitions and the state and status of SoTL (Boshier, 2009).

Kinchin et al's (2008, 89) concerns resonated with Boshier's views critiquing why our universities are 'centres of non-learning', considering that, for teachers to engage properly in SoTL, academics would need to:

'consult discipline-specific literature on teaching and learning, focusing reflection on specific areas on one's practice, focusing teaching on students and learning, and publishing results of teaching initiatives through peer review mechanisms'.(92)

My research does this by focusing on Accounting as a discipline and specifically non-verbal and verbal communication in Accounting classrooms in HE.

SoTL has had many definitions from Boyer's original conception with its four basic scholarships of: discovery, integration, application and teaching. It is fair to say that SoTL is a broad "church" and covers many perspectives and practices (Hutchings, Huber and Ciccone, 2011; Kreber, 2002). It has been variously described as a 'multidimensional construct' (Vithal, 2016, 13) and a 'big tent' (Huber and Hutchings, 2005, 4). Further, searching for definitional certainty may hinder SoTL progress (Booth and Woollacott, 2015; Fanghanel et al, 2015). Nonetheless, common features emerge that reflect tutors

adopting investigative attitudes and criticality as they research practices (Tight, 2018).

Accepting that the definitions of SoTL tend to vary, Kreber (2013, 859) further reports 'teacher-led pedagogical research' as synonymous.

For the purpose of this thesis, **my own** definition of SoTL, and **precise focus** to set my boundaries for SoTL in this broad field, is: a scholarly enquiry into facilitating HE classroom activities to inform reflective practitioners in enhancing their pedagogical practices in support of student learning. This is an instructional approach to education and focuses primarily on Boyer's scholarships of application (as applied research) and teaching (as pedagogical learning and research) (Tight, 2018). My approach to SoTL is therefore one that has more of a micro focus on specific classroom activities, which reflects more of the initial lens of SoTL rather than a broader pedagogical research in general (Tight, 2018). Further, it adopts Kreber and Cranton's (2000) recognition of the need for tutors to conduct teaching and learning research in their own disciplines and Felten's (2013, 122) assertion that 'good practice in SoTL requires focused, critical enquiry into a well-defined aspect of student learning'.

I view reflection as inherent and essential to SoTL, which accords with Kreber's (2013) view that SoTL often makes reference to reflective practitioners, as I have done in this study. The data and analysis produced herein is fundamental to SoTL and to its evolutionary development.

Focusing teaching on students and their learning had been previously considered by Ramsden (2003) who believed that the teaching process was a conversation thus highlighting the **essential need for communication**

between teachers and students. However, past conceptions of SoTL research have been criticized for the lack of such engagement (Ashwin, 2009a; Case, 2015; Trigwell and Shale, 2004) and this study serves to address this shortcoming. The dominant discourses in educational research had been based around research into approaches to studying; conceptions of learning; approaches to teaching; and conceptions of teaching (Knewstubb and Bond, 2009; Richardson, 2005). What is missing is what this study offers – a research of teaching-learning interactions as they happen in real, situated practice.

A gradual shift to more qualitative work is nonetheless evident in the literature (Ashwin, 2009a, 2009b; Haggis, 2009; Ramsden, 2003). A focus emerges on communication, noting “conversations” and the interaction between teaching and learning (Ashwin, 2009a; Kinchin et al, 2008; Laurillard, 2002, 2008; Ramsden, 2003; Richardson, 2005). However, many publications on SoTL remain conceptual with calls for empirical research (Ashwin 2009a, 2009b; Botma, Rensburg, Coetzee and Heyns, 2013; Case, 2015; Gordon, 2012; Laurillard, 2002; Richardson, 2005).

In particular, Kinchin et al’s (2008, 92) work highlighted the need for ‘collaborative meaning making’ building on work done by Trigwell and Shale (2004). Further, more holistic views of SoTL emerged from work by Laurillard (2002, 2008), and her depiction of a Conversational Framework, and Ashwin (2009a, 2009b). However, although offering more on communication for SoTL direction, such studies do not develop empirical evidence that this study offers.

Ashwin's (2009b) view is that past research has fragmented the interaction between students and tutors in a manner that obscures understanding of events producing 'static accounts of the teaching and learning process' (Ashwin, 2009b, 38-39). This aligns with Ramsden's and Laurillard's views regarding discourses around "conversations" and Kinchin et al's (2008, 92) 'collaborative meaning making'. More recently, Case (2015, 633) adds her voice to the call to 'understand the dynamic space in which student learning takes place' and that entails a focus 'on the ways in which the teaching-learning interaction happens'. While this offers a conceptual drive to develop communication within SoTL, there is no practical approach developed from empirical studies.

Arguably, more qualitative, interpretivist approaches to analyzing interactions as they happen could provide insights into these teaching-learning interactions and lead to a greater understanding of some of the dichotomies emerging from questionnaire surveys of both students and tutors or sole interviews outside the interactions (Case, 2015; Case and Marshall, 2009; Guzman-Valenzuela, 2013; Richardson, 2005; Richardson and Radloff, 2014).

Initial readings appear to support a personal view that, from a basis of not understanding each other's' experiences and weak understanding of the learning environment, tutors and students can act sub-optimally at the points of interaction. Kinchin et al (2008, 93) considered that a 'focus on the aspects concerned **with quality of communication between teachers and students seems a good entry point** from which wider issues may be explored' (emphasis added).

I argue that this is the main message to be taken from the initial readings and that a focus on **communication interactions**, with its various and fluid forms including and beyond the verbal, provides a solid basis for researching SoTL from recorded teaching-learning interactions.

2.3 Phase 2 - Lessons from Accounting education: in search of communication

The review of the Accounting education literature first identified peer-reviewed journals with the term 'accounting education' in their titles from a simple Google search and produced 12 titles. Excluding those no longer publishing articles and those which were not peer reviewed, the remaining journals were:

1.Accounting Education: an International Journal (UK)

2.Accounting Educators' Journal (USA)

3.Advances in Accounting Education (USA)

*4.AIS Educators' Journal (USA)**

5.Australian Journal of Accounting Education

6.Global Perspectives on Accounting Education (USA)

*7.IMA Educational Case Journal (USA)**

8.Issues in Accounting Education (USA)

9.Journal of Accounting Education (USA)

Journals with a focus not relevant to this study were excluded from further review (*). The Australian Journal of Accounting Education did not respond to requests for access to its university-based publications list. The remaining six journals were then searched, using the key words and phrases noted in 2.1, from 2010 to 2015 (before data collection in 2016) with further refinements for "higher education" and "undergraduate". This produced seven articles on the first search but full access to Advances in Accounting Education was not

achieved (although only one article on peer mentoring was found and abstract read but was irrelevant to this study); nine articles remained. A further search of the identified accounting journals above was carried out looking specifically for “student-tutor interactions”, “teaching-learning interactions’ and “conversation”. Three further articles were identified, bringing the total to 12 articles. Table 2.1 provides a summary of the articles’ focus, the reviewed source and scope as well as methodology and methods adopted. The lack of explicit reference to theories was notable.

Author(s) and Date	Jrn No.	Focus of article L = lit review E= empirical	Data Sources	Scope (Number of participants if empirical)	Methodology/ Methods
Articles dealing with views of Accounting teachers as exemplars					
Wygal Watty & Stout 2014	1	Views on teaching effectiveness; Australian exemplars. L&E	Teachers with awards. Articles & books	22 teachers of accounting	Open-ended questions in survey. Response rate 64%. Content analysis used.
Wygal 2011	1	University-wide faculty development initiative. L	University Pew project. Articles & books	0	Descriptive of Pew project process: set-up and participants' views (not systematic).
Wygal & Stout 2011	2	Views on teaching effectiveness; USA exemplars. E	Teachers with awards. Articles & books	105 teachers of accounting	Open-ended question in survey. No response rate noted. Content analysis used.
Wygal & Stout 2015	8	Views from award winning USA teachers. E	Teachers with awards. Articles & books	105 teachers of accounting	Open-ended question in survey. No response rate noted. Content analysis used.
Stout & Wygal 2010	9	Negative behaviours impeding learning. Views from award winning USA teachers. E	Teachers with awards. Articles & books	105 teachers of accounting	Open-ended question in survey. No response rate noted. Content analysis used.
Lucas 2011	1	Conference paper on personal and communal scholarship. L	Articles & books	0	Reflections by UK National Teaching Fellow on own development (auto ethnography) and case for communal SoTL.
Empirical articles on classroom activity					
Coetzee & Schmulian 2012	8	Analysis of pedagogical approach in teaching IFRS. E	Teachers on course Articles & books	2 teachers	Analytical auto ethnography
Curtis 2011	9	Formative assessment (FA) E	Students. Articles & books	246 students	FA tasks and post-study survey. 87% participation rate.
Dallimore, Hertenstein & Platt 2010	8	Stimulating classroom participation for learning. E	Students on course Articles & books	323 students	Pre- and post-course surveys using questionnaires. Response rate 60%. Hypothesis testing.
Literature reviews					
Apostolou, Dorminey, Hassell & Watson 2013	9	Accounting education literature review 2010-2012. L	Articles & books	0	Systematic literature review: 291 articles (126 empirical); 104 instructional cases.
Apostolou, Dorminey, Hassell & Rebele 2015a; 2015b	9	Accounting education literature review 2013-2014; 2015. L	Articles & books		2015a: Systematic literature review: 163 articles (82 empirical); 93 instructional cases.
Rebele & St. Pierre 2015	9	Stagnation in accounting education research. L	Articles & books		2015b: Systematic literature review: 97 articles (49 empirical); 29 instructional cases.

Table 2.1: Accounting education articles (2010- 2015)

The main messages taken from Table 2.1 were the little empirical research involving students, the dominance of surveys as research methods, and the absence of research on interactions and communication. Ashwin's (2009a)

view that teaching-learning interactions are under-researched appears to be supported in the Accounting discipline, hence identifies a clear gap, and makes a case for my thesis.

Not unexpectedly, the systematic literature reviews covering the period 2010-2015, presented in Table 2.1 were the most encompassing. Consequently, these were selected first to help develop an overall understanding of what has been the recent focus of accounting education research.

2.3.1 Focused Accounting literature reviews

Apostolou et al. are some of the most prolific authors in the SoTL area, having produced nine SoTL reviews since 1986. These literature reviews helped illustrate the core areas of SoTL being investigated by the discipline-specific researchers. The most likely areas relevant to interactions and communication within these publications were identified as: AOL (assurance of learning); Instruction (dealing with instructional approaches); and Students (dealing with aspects of skills and characteristics, and approaches to learning). As this study focuses on interactions and communication, this chapter proceeds to search these areas for evidence of empirical work on “teaching-learning interactions, “student-tutor interactions” and “conversations”, incorporating other articles identified in Table 1 where relevant.

Ashwin’s (2009a) view that teaching-learning *processes* are the dominant basis for empirical research has been borne out by the Accounting education literature. Studies have fragmented teaching from learning although clear acknowledgement of the importance of supporting student learning exists.

AOL produced no evidence of my search terms, mainly focusing on specific assessment tasks for students. (Searches of terms were extended to look for equivalent words, for example, “dialogue” but returned no results.)

The lack of involvement of students was notable (Curtis, 2011; Perera, Nguyen and Watty, 2014) even in formative assessment research where communication with students would be expected.

Even where the focus of the research was on some aspect of class discussions during teaching-learning interactions, survey methods and statistical analysis dominated (for example, Dallimore et al 2010; Honn and Ugrin, 2012; Akindayomi, 2015; Ellis, Riley and Shortridge, 2015) with little or no focus on student-tutor interactions or conversations between students.

In considering students, Apostolou et al’s (2013, 137) review was prefaced with ‘Students are an important focus of research because understanding their motivations, skills and career interests informs the academy’. Nonetheless, there is no evidence for understanding how communication occurs in the teaching--learning interactions.

The literature reviews by Apostolou et al (2013, 2015a, 2015b) all refer to suggestions for future scholarship but make no mention of “interactions” at the heart of my study and my own definition of SoTL with its focus on classroom activities, although Apostolou et al (2015b, 48) recognise that ‘our classrooms are our laboratory’ and that ‘testing the effectiveness of the treatment should consist of more than a perception study by the recipients of the treatment’.

None of the studies attempted to collect data by recording classroom activities, which is what my study does.

This entirely justifies Rebele and St. Pierre's (2015) critique of accounting education research; they expressed the view that most studies are not empirical and, even when they are, there is over-reliance on the survey method and little experimental approaches. While some of their comments relate to more technical aspects of the education of accounting undergraduates, there is recognition of the practice of accounting education, but no suggestions for improvement.

While recognising that 'studies of students are important because they provide insights into the current successes and opportunities for improvement' (Apostolou et al, 2015, 146), they remain critical of the lack of generalisability of findings due to a preponderance of studies being focussed on a specific class, course or university. They call for studies to become more influential by expanding research to cover 'cross institutional and geographic lines to assess whether an innovation that works in one context is effective in other contexts' (Apostolou et al, 2013, 145). In considering whether this view is appropriate for the "wicked" problems in HE (Trowler P, 2012), it was noted that this call was echoed by Gordon (2012) who discussed the strengthening of SoTL by transversal measures which would cut across the disciplines. One of these measures is 'engagement' Gordon (2012, 178) which fits well with my focus on communication during teaching-learning interactions, student-tutor interactions and conversations arising. Gordon (2012, 180) recognised the additional challenge to SoTL and past dominance of small-scale studies but called for greater attention to transversal concepts to 'seek ways to strengthen the field of endeavour and enable the new insights that come from bringing

together different lines of inquiry; this would also facilitate wider evidence of impact at a time when such evidence is becoming imperative’.

Although this supports the global nature of accounting education Apostolou et al (2013) have referred to and their call for larger-scale studies demonstrating more causal effects, it does not recognise Schön’s (1987, 6) ‘indeterminate zones of practice’. In referring to Schön’s work, Trowler P (2012, 273) commented: ‘Wicked issues are ill-understood, there are many causal levels, there is no clear ‘stopping point’ where a solution has been reached and solutions are not clearly right or wrong’. Arguably, Apostolou et al’s (2013) call for more generalisability needs to be tempered with an understanding of context implications particularly at the micro-levels of investigation more relevant to my study.

The final part of my search for recognition of the importance of interactions and communication related to the views of award winning educators (Table 2.1). In synthesizing these articles, two main commonalities emerged: a focus on students; and professionalism as a tutor.

How students are communicated with and supported emerged as clearly important with ‘negative/uncaring attitudes about students and the class’ being the most important to avoid (Stout and Wygal, 2010, 66).

Professionalism comments had two main perspectives: one dealing with organisational and instructor skills in delivering and assessing the curriculum (Stout and Wygal, 2010; Wygal et al 2014), and one dealing with continuing professional development (CPD) (Wygal and Stout, 2011). CPD supports the need for tutor self-reflection with responses from exemplars focussing on

'reinvention/continuous improvement' and 'the use of mentors and support mechanisms' (Wygol and Stout, 2011, 37).

There was clear acknowledgement from Wygol et al, 2014 that the student voice was absent in the survey approaches. There is some recognition by exemplars that dialogue with students, listening to students, developing a rapport with them is required (Wygol et al, 2014; Wygol and Stout, 2011, 2015; Stout and Wygol, 2010). It is argued that this supports my study that such communicative interactions are key to research in developing effective approaches to SoTL to support student learning. Nonetheless, these articles do not demonstrate any significant consideration of teaching-learning interactions at either a theoretical or empirical level.

In contrast, Coetzee and Schmulian (2012) recognised that micro-level practices in the classroom can be driven by the need to impart a vast body of knowledge with examinations dominating assessment (particularly with professional accreditations at stake, as in Accounting with its signature pedagogies). Analytical auto ethnography was presented, giving teachers an opportunity to reflect on their practices to determine their approach but was not further developed.

In summary, there has been little focus in the accounting education literature on teaching-learning interactions/communication as a key aspect of SoTL, nor on the development of ideas around conversations or dialogues with students which actively engage them. While this supports the rationale for my study, there remains a need to search the wider educational literature for empirical studies that could support Accounting tutors to develop approaches for more effective interactions.

2.4 Phase 2 - Lessons from educational research: in search of communication

The BEI database returned eight articles (three relevant); the ERIC database returned 98 (ten relevant) articles and the AEI database returned seven articles (none relevant).

Following this poor return, journals with a high h5-index representing top journals in higher education were located from a Google Scholar search.

Further potentially relevant 157 articles were returned from a search of 12 journals on this list; eight articles were considered relevant and are incorporated in Table 2.2 (21 articles).

Relevance was established from the abstracts by searching for the same key words and phrases used for the accounting education literature. More attention was given to the interactions between students and tutors; teaching-learning interactions and the evidence for conversational frameworks/collaborative meaning-making identified above from the initial readings. Only empirical studies were included.

Table 2.2 provides categories using “student-tutor interactions” and “teaching-learning interactions”. “Conversational framework (CF)” or “conversations’ (“dialogue” treated as equivalent) were treated as separate categories if explicitly stated. In deciding which categories to use between “student-tutor interactions” and “teaching-learning interactions”, the former was judged to be mainly focused on significant engagement between teachers and students with the latter taken to include more diverse interactions between peers, teachers, external agencies, work-based learning as main examples, or interactions that did not directly include teachers (following Ashwin (2009a)).

This led to:

Key Concept 1: Teaching-learning interactions are defined as holistic joint actions between participants in a classroom environment (physical and social) and considered as aspects of the same process (Ashwin, 2009a).

Key Concept 2: Student-tutor interactions are mainly focused on significant engagement between tutors and students in a classroom environment and excluding diverse interactions between peers (Ashwin, 2009a).

Source	Student-teacher interaction	Teaching-learning interaction	CF; conversations/dialogue	Theories/Methodologies	Geographic Locations
BEI database	1	1	1	Living theory (from Whitehead 1989); Action research; reflection	UK (1); South Africa (SA) (1) USA (1)
ERIC database	3	7		Collaborative learning v cooperative learning; social constructivism; action research; action learning; Motivational model (from Kellers 1984); active learning (from Bonwell & Eison 1991); student involvement (from Astin 1984); No specific theory – general SoTL approach; Triadic dialogue patterns – IRE/IRF; Students as consultants for tutor pedagogical reflection.	USA (3) UK (1) Asia (1) Australia (Aus) (2) Spain (1) Mexico (1) Not stated (1)
Higher Education	1			Interactions with students as influencers on teacher development	UK
Studies in Higher Education	1	1		Approaches to learning; reflection; theories and conceptions of authenticity	USA (1) UK (1)
Assessment & Evaluation in HE	1			Constructive alignment (from Biggs and Tang 2007)	Asia
Research in Higher Education	2			Theory of careers (from Holland 1985); student involvement theory (from Astin 1984); college impact theory (from Pascarella 1985); psychosocial approachability (from Wilson, 1974, 1975)	USA (2)
Teaching in Higher Education	1			No specific theory – general SoTL approach	Aus.
International Journal for Academic Development			1	Active learning; engagement; student voice	USA/UK
Total – 21 articles	10	9	2		
Quantitative/ qualitative/ mixed methods				Quantitative: 12 (USA - 6; Asia - 1; Aus - 2; Spain - 1; Mexico - 1; UK - 1) Qualitative: 7 (UK - 3; UK/USA - 1; SA - 1; Aus - 1; N/S-1) Mixed: 2 (Aus - 1; Asia - 1) Total – 21.	

Table 2.2: Educational research literature

2.4.1 Lessons for Accounting education research and SoTL

Few empirical studies related to Ashwin's conception of teaching-learning interactions, student-tutor interactions or of Laurillard's conversational framework and dialogue. Nonetheless, some studies provided evidence of student-tutor interactions and direct communication being observed. Walton's (2011) study related to planning and delivery of a module involving staff and students; Hodgson, Benson and Brack (2013) used action research with direct observation of tutorials as part of the reflective activity to refine peer-assisted learning approaches; Bovill, Cook-Sather and Felten's (2011) study used students as consultant co-creators of teaching approaches, course design and curricula. This showed a clear design to interact with students and the use of students as consultants has obtained more recent attention (for example, Jensen and Bennett, 2016; Cook-Sather and Abbot, 2016).

Much more focused (albeit a narrow focus on verbal exchanges) studies of interactions between tutors and students occurred in the work by Carillo, Gonzalez, Martinez and Sanchez (2015) (and later found in Hardman (2016)). Both these studies directly observed student-tutor interactions and used a discourse analysis identifying a triadic dialogue pattern of Initiation, Response, Feedback (IRF) during tutor's questioning of students in a classroom environment. While far from the holistic approach I am researching, it gives insights into one aspect of student-tutor interactions regarding the efficiency and effectiveness of the dialogue they observed during verbal communication. Schön's (1987) work on the reflective practitioner is a recurring theme emerging from the literature and relevant to this study's aim. While there is evidence that this does occur, the context within which it occurs is of more

interest. Creating time and space in Accounting programmes for structured and effective reflection is challenged by professional accreditation requirements and teachers who feel compelled to “cover the syllabus” (Seifried, 2012). Further, the auto ethnography approach by Lucas (2008) and Coetzee and Schmulian (2012) was noted as a potentially useful tool to support staff to capture and develop their reflection but, again, there is little empirical work to demonstrate and develop approaches.

In summary, there has been relatively little literature found which deals with empirical studies on the dynamic nature of HE learning environments and how teachers and students communicate in the teaching-learning nexus, particularly in the UK. The ‘communicative alignment’ point highlighted by Knewstubb and Bond (2009, 179) is a significant omission. It is also clear that more positivist approaches to research in this area dominate; large quantitative surveys were a common feature noted when reviewing articles, mostly from the USA.

There were a surprising number of descriptive or theoretical/conceptual studies that, while suggesting different or new approaches, are not yet being developed into empirical work. All of this identifies a clear gap in Accounting education research in understanding interactions in HE classroom environments and, indeed, in educational research in general. Consideration of the classroom environment has paid little attention to the physical infrastructure and material objects nor the emerging identities of its participants, leading to:

Key Concept 3: Classroom environment is defined as encompassing the room layout and physical objects in the room but also the emerging identities of the

participants and their impact on participation frameworks (Goffman, 1981) revealed from joint actions as they unfold.

In further considering classroom environments, Goffman's (1974) concept of a participation framework was found a useful construct for this study, conveying the fluid nature of how participants interact and the impact on activities, identities, and whether learning is being facilitated. This is a useful vehicle within which to observe the many signs that are mediating communication and whether, and how, new participation frameworks emerge and their potential to support learning. How participants react to a particular set of events, material artefacts, verbal exchanges, can signal their understanding of a situation from these signs.

Brooks, Farwell, Spicer and Barlow (1999) researched the social construction of learning situations in seminars in the context of participation frameworks, highlighting Goffman's (1974) notion of the "primary frame". This is physical and 'locates analysis in the 'real' world with 'real' social presence' and is a site of 'reflexivity and social cognition embedded in ritualized social practice' (Brooks et al, 1999, 225). It is the often accepted ritualization of classroom environment practices that this study seeks to analyse to inform SoTL on communication practices. Although Goffman's (1981) work is on Forms of Talk, there is recognition that talk is surrounded by a multiplicity of other frames (Brooks et al, 1999) and, arguably, this opens the way to introduce interactions with other resources in classrooms in developing a more holistic approach.

This led to:

Key Concept 4: Participation Frameworks are defined as beyond the individual actions of participants as tutor or student to include how the social organisation of the co-participants situation can be changed from their joint actions and how these actions construct and depict their meaning making.

Instances of joint actions are inherent in communication practices in classroom environments and are further discussed in the context of SI below.

2.4.2 The communication 'turn' for SoTL

From this literature review, there is evidence of some turn to researching how students and tutors interact and communicate in teaching-learning events.

While award-winning teachers focus on communication and rapport with students, there is little evidence of how this is happening in practice and the survey method of data collection undermines that very communication and, crucially, provides nothing from students. Equally, where studies are looking directly at interactions (for example, Carillo et al, 2015; Hardman, 2016) the focus on verbal communication is too narrow to help develop understanding of how meaning-making is occurring and so cannot adequately support tutor reflection for action. Neither does the range of literature on student engagement offer opportunities to develop this knowledge holistically *in situ* (Trowler V, HEA, 2010).

Empirical research is required to build on what is investigated and how. Direct observation is little in evidence and that offers the richest opportunity to "mine" interactions in pursuit of developing SoTL approaches. The context is also important to an interpretivist approach and observing what happens in classrooms offers an important opportunity to understand better how communication takes place. In developing this, I would wish to go further than

studies that focus on verbal communication, such as Hardman (2016), and look holistically at what is happening in classrooms during teaching-learning interactions between students and with tutors. How the participants interact with inanimate objects, and their efficacy, is also of relevance as part of the “means” of communication in support of learning.

In locating my study within a perspective that embraces SI and EduS, I am responding in a completely novel way to authors such as Ashwin (2009a; 2009b) and Case (2015) to consider alternative ways of conceptualising teaching-learning interactions. By integrating the embodied interactions and material environment with tutor’s and learner’s classroom behaviours I am making a clear contribution in terms of conceptualising SoTL with regards to multimodal and semiotic practice. In that way, I build on those (for example, Gordon, 2012) who call for a strengthening of the conceptual focus of SoTL, but giving it a novel conceptual consideration in this holistic way. Further, I am developing ideas on communication from Laurillard (2008) regarding her Conversational Framework and Knewstubb and Bond’s (2009) ideas around communicative alignment. This would create possibilities for SoTL to extend its reach beyond what are predominantly smaller-scale studies; of those possibilities, this study is exploring identities and forms of engagement as they are revealed from teaching-learning interactions.

Arguably, SoTL needs to turn to communication studies and consider the role of interactions beyond language, including material aspects of action as part of classroom practices by tutors and students. SoTL’s shortcomings point to the need for considering communication as verbal and non-verbal in teaching-learning interactions. This multimodal approach is a key aspect of the

communication landscape in HE and 'offers a theoretical perspective that brings together socially organised resources that lecturers and students use to make meaning' (Archer and Breuer, 2016, 1).

Archer and Breuer (2016) argue for a multimodal approach in HE in the context of writing as a multimodal practice. One of the studies presented by them is in the management accounting area (Alyousef and Mickan, 2016) and, although this is restricted to considering written language, there is a clear reference to other semiotic resources such as tables and graphs for students to understand as part of their ability to undertake a written assignment. Consequently, Alyousef and Mickan used Systemic Functional Linguistics (SFL) in their multimodal study as their focus was on language and in written form. Although this is a narrower approach than the CA I have adopted for my multimodal study, it is illustrative of how multimodality is being argued for in HE education research.

So this is a holistic approach, an integrated multimodal whole, and no one resource offers more or less potential for meaning-making than another (Jewitt et al, 2016).

All of this leads to a consideration of SI, semiotics as a communication study and multimodality as an approach that embraces various modalities of learning and interaction, in order to provide a holistic understanding of the impact of all of the organised resources in use in classrooms. In considering the role of interactions beyond language, EduS represents a relatively new approach to knowledge and learning that can inform SoTL and this study will provide empirical data for this developing area.

2.5 New developments and contribution to SoTL: Symbolic interactionism, Edusemiotics and Multimodality

2.5.1 Rationale

In selecting these three inter-connected conceptual and methodological perspectives as my investigative “lens”, I am addressing the shortcomings in SoTL literature and foregrounding the search for the emergent identities of students and tutors. In particular these approaches were chosen as they underpin the methodological and practical focus of this thesis, as they support the intention of expanding the SoTL concept from a practical and interactivist perspective. If I were to develop a related SoTL theory, I would have applied perspectives on social practice, such as socio-materiality. This may be usefully done in the future - the merger between the method and socio-material theorising of social practice. The approaches adopted are commented on in a fairly brief manner to meet the goal of practical developments intended in the study. I want to know how they are participating and communicating in the classroom, as a key contribution to SoTL (and from my perspective on SoTL as discussed in Chapter 1), as revealed by the fine detail of teaching-learning interactions. It is acknowledged that these participants’ identities will be influenced by their personalities, their previous experiences in HE, schools and other institutions. Although it is beyond the scope of this his study to capture this data, these may be factors tutors consider for their reflective practices in supporting student learning.

2.5.2 Symbolic Interactionism (SI)

Blumer’s (1969) work on SI has its roots in an American pragmatist tradition. C.S. Pierce’s work on pragmatism was subsequently developed by J. Dewey and W. James; one of Dewey’s associates was G. H. Mead, a philosopher

and social psychologist, who took pragmatism into the world of sociology in the form of SI (Crotty, 2013). Blumer's work developed Mead's impact on sociology, particularly with three basic interactionist assumptions:

- "That human beings act towards things on the basis of the meanings that these things have for them";
- "That the meaning of such things is derived from, and arises out of, the social interaction that one has with one's fellows";
- "That these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters" (Crotty, 2013, 72).

Ashwin (2009a, 73) adds a fourth assumption from Blumer:

That 'the complex interlinkages of acts that constitute institutions are moving, not static, affairs'.

These assumptions provide a clear link from SI to semiotics and artefact mediation and my study will be providing a fine-grained analysis of these 'complex interlinkages of acts' (Ashwin, 2009a, 73) with the 'things' referred to by Blumer (1969). I will be researching how artefacts are being used in the classrooms (comprising varying participation frameworks) and how participants react to their affordances alongside the use of language, gaze and gesture as the embodiment of meaning making revealed by the video recordings.

Mead's pragmatist view in stressing the need to put ourselves in the place of another in considering their situation is a central idea within SI and one which

can be seen in the work of Blumer who rejected positivist approaches to sociology, advocating a more empathetic and participant mode of enquiry (Azarian, 2017). In considering the role and experiences of another, SI can embrace the function of mediating artefacts and human interactions as these are symbolic engagements with symbolic tools of interactions. Observing how, for example, students interact with study booklets, as part of their overall engagement in classroom activities can evidence how students approach learning.

Blumer's notion of Joint Action (JA) is central to his SI framework although this has received little theoretical attention (Azarian, 2017). JA has already been noted in the context of Goffman's participation frameworks and is more than the summation of individual acts and highlights the interdependency among participants as they engage in interactions and decide on their next action. The roles that participants take up are the interactions. Communication is taking place through the sharing of language and other artefacts among participants as they act and react to each other (Crotty, 2013). Therefore, transformations are occurring to how participants are deriving meaning from events as actions and interactions unfold, and uncertainty is inherent (Azarian, 2017). This led to:

Key Concept 5: Joint actions emerge from the social setting and are more than individual acts as they are reflexive in nature with participants reacting to each other to determine their own actions and interpret others' (Blumer, 1969).

In order to understand signs or varied communication units in teaching-learning interactions within educational environments better, I am turning to

the study of signs, semiotics, and how these contribute to learning. All of this relates to the emerging theory of EduS and further consideration of multimodality, which the next section addresses.

2.5.3 Edusemiotics and Multimodality

With its roots in pragmatism and specifically the work by Pierce (1991) on semiotics, EduS has been defined by Stables and Semetsky (2015, 1, 3) as 'the semiotics of becoming and learning to become' and 'therefore embraces the construction of meaning'. Meaning-making derives from Blumer's JA within SI and led to:

Key Concept 6: Meaning-making in teaching-learning interactions emerges from joint actions and unfolding interactions in a situated context (Bruner, 1990). Interactions would include with tutor, other students and physical objects.

This construction of meaning is essential in educational environments and fundamental to my definition of SoTL as reflective practitioners review practices adopted in support of learning in the endless cycle of Schön's (1987, 6) 'indeterminate zones of practice' and it is in one of those zones that my study is contributing to SoTL development.

Pierce (1991)'s work in this area is considered relevant to this study as it links to SI via the sign as a communication unit that mediates interaction (this could be a gesture, gaze, learning resource, verbal reference, etc). Therefore, signs that mediate interaction can come from both verbal and non-verbal communication. This led to:

Key Concept 7: Verbal communication is what is said, vocalised and obvious.

Key Concept 8: Non-verbal communication is what is expressed through gesture, gaze, facial expression, and posture in embodied interaction (MODE, 2012).

So, signs include other resources within social environments avoiding the emphasis on the linguistic aspects of interaction that can be found within the work of Saussure's more structuralist perspectives in semiotics.

EduS is relatively new to HE research but it does stress the holistic approach to investigating pedagogical practices I seek, and so represents a different, multimodality step forward in a long history of teaching interventions (Archer and Breuer, 2016); this further helps inform SoTL approaches.

In communicating with each other, we are making meaning and that meaning comes from how we are interpreting signs. Pierce's triadic sign interpretation or meaning-making model consists of three elements of semiosis (how signs make meaning or sign-action): an embodied Representamen, the sign or what it stands for, an Interpretant (interpretation by interpreters) and an Object (what the represented or embodied refers to in reality or as a conceptual idea) Lacković (2018). In educational research, the context is an important factor in that meaning-making triad. This meaning-making triad has been translated into an analytical scrutiny of visible interactions (for example, in a photograph or a video as an embodied Representamen) by Lacković (2018) as:

Representamen-led focus means to list individual units that can be seen/heard in a video or a photograph (the sign vehicle). Commonly it would be a list of nouns, the listing observed elements; Interpretant will lead to describing elements at two levels of interpretation – denotation and connotation, the

former focusing on the description of what is happening to the focal elements and the latter focusing on what this means on a socio-cultural terms, how prior knowledge, structure, agency and other factors influence meanings. and the context and action as it unfolds including what is heard in the recorded videos. The final interpretation of the holistic action only comes from the research Object that focuses interpretative attention and meanings on my research questions and object of study inquiry. This integrates the analysis of the compositional elements for their interpretation in addressing the research questions, recognising that 'All elements of semiotics always happen *simultaneously*' (Lacković, 2018, 6).' This is further developed in Chapter 3.

The key concept of edusemiotics is sign, as signs are key units of communication; signs mediate teaching-learning interactions.

EduS offers my study a clear educational focus on interactions in a situated learning environment and one that is not pre-occupied with outcomes due to its primary focus on *process*. I am primarily interested in providing a detailed account of video recorded classroom interactions, and considering what this means conceptually and what insights it can lead to. This clearly reflects my perspective on SoTL as discussed in Chapter 1. From this, learning becomes 'an exploratory process of inquiry that exceeds the usual product of the educational system as a measurable quantity of certain empirical facts' (Stables and Semetsky, 2015, 3). Edusemiotics offers a specific and innovative development of Ashwin's (2009a) call for more holistic approaches in analysing teaching-learning interactions. In my case, this is focusing on non-verbal and verbal interactions, as consisting of a myriad of signs that mediate the communication that may, or may not, be underpinning learning

and informing tutors as they design their pedagogical practices in support of that learning. In particular, EduS has implication for education 'oriented to the transformation of habits and producing meanings for students' experiences' (Stables and Semetsky, 2015, 7). EduS offers a challenge to tutors who may misconstrue activity as learning; the mere act of doing something does not necessarily mean students are engaged in meaning-making learning (Stables and Semetsky, 2015). Consequently, making tutors more aware of what is happening in their classroom environments is vital and is the essence of SoTL in support of tutors' development as reflective practitioners.

Consistent with a more holistic stance, adopting a multi-modal approach allows for combining different means of meaning-making into an integrated whole. No one resource will have dominance and so the verbal aspects of conversations will be alongside the other non-verbal objects and actions in trying to "see" what is happening in the classroom environment and offer insights to tutors. The focus will be placed on behaviours and material environment and how it affects the development of interactions and teaching-learning. The dominance of language in a teaching-learning research where there can be emphasis on curriculum delivery may be obscuring tutors' understanding of the impact of other non-verbal interactions (including artefacts) on the multi-modal nature of student learning.

In discussing multimodality, Jewitt et al (2016) highlight three approaches to multimodal research, each requiring a fine-grained analysis of form and meaning: Conversation analysis (CA); Systemic functional linguistics; Social semiotics. CA is adopted here given that the aim of CA is to 'recognise 'order' in the ways in which people *organise* themselves in and through interaction'

(Jewitt et al, 2016, 10) for which the empirical focus is on naturally occurring social encounters and is not dominated by analysis of language. CA also is pertinent with its connections to interactionism and concerns with people's lived experiences including the role of the body (Kristensen, 2018). Further, Goodwin's notion of a mutually elaborating semiotic resource is recognised by Jewitt et al (2016) in providing synergy from different resources (such as gaze, gesture, speech, body posture, artefacts as objects in use).

2.6 Summary

In developing SoTL for the communication turn, I am merging the above perspectives (SoTL, SI, EduS and Multimodality) and operating at their nexus in analysing teaching-learning interactions situated in the environment of the HE classroom:

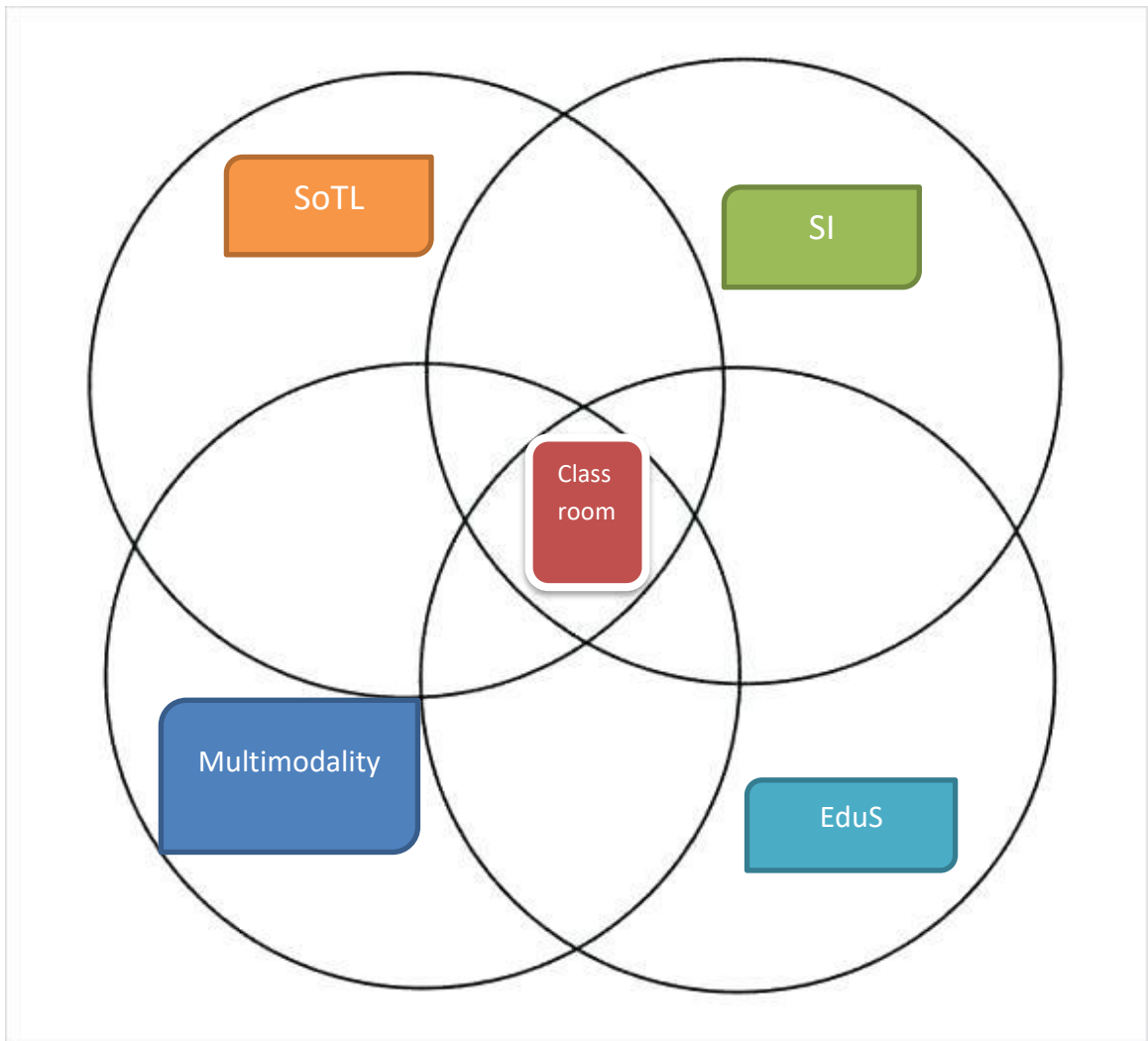


Figure 2.1 The case study's conceptual framework

The situated environment is the Accounting classroom environment, where students and tutors are encountering many joint actions (including interactions with artefacts and other material resources) within varying participation frameworks, all within signature pedagogies that can further embed ritualised practices by both tutors and students. The next chapter now addresses the various methods being used in my study.

Chapter 3 - Methods

3.1 Overview

This chapter develops the methodology introduced in Chapter 1 into the specific methods utilised in this project, and relevant to the conceptual perspectives in Chapter 2. A case study approach is described, including pilot work before methods were finalised, along with issues of ethics and insider research. Each method is then described, followed by any inherent limitations they might bring to the study.

3.2 Case study: two teaching-learning Accounting cases at a UK university

This study is applied research, qualitative in nature, and based on a case study approach on two undergraduate classes in Accounting at a UK university that were video recorded in the context of one higher education institution. The two constituent teaching-learning case studies were purposively sampled to contrast approaches at first year foundation level (Module A) and final year honours level (Module B) and had different tutors (Tutor A and Tutor B). Each case is a unit of analysis that takes place in a defined context and at a particular place and time (Yin, 2009).

Module A and Module B as key interaction cases

Module A is a two-hour seminar (there is no previous lecture) and Module B is a one-hour tutorial (with a previous lecture).

Each case study is built up from video recordings (two cameras: one student-facing; one tutor-facing) of the whole class and a student survey document.

Module A also has tutor reflections (recorded on a Dictaphone and transcribed); and recorded interviews with tutor and students. As the intention is to gather information about classroom activity *in situ*, it was considered necessary to obtain staff and student views as close to the activity as possible. Tutors were therefore given a Dictaphone and asked to answer two questions immediately after the classroom activity and a further three questions later after a short period of reflection. Both tutors were Fellows of the HEA with considerable HE classroom experience. Students were given the open-question type survey document at the start of the classroom activity and asked to complete one question before the class started and a further seven questions immediately after the class. Further data were obtained from interviews with students (who had volunteered their student ID numbers) and with tutors during the following academic year to give them a further period of reflection; these discussions took place after showing the participants selected clips of the videos. The interviews with students were video-recorded and transcribed; the interviews with tutors were audio-recorded and transcribed. As only Module A has a full set of data, it is the focus of main analysis; however, Module B data are also of value to provide some comparisons and contrasts with Module A approaches from the video recordings.

Following initial discussions with tutors to ensure their commitment to this style of research, pilot studies were undertaken on video recordings, staff reflections questions and student survey document to identify any issues with how data were to be collected. From video recording pilots, it became clear that two cameras were needed to give a more comprehensive coverage of the classroom; therefore, the final recordings utilised tutor-facing and student-

facing cameras. The original intention was that I would be present in the classroom to take observational notes alongside the video recording but the pilot for Module B revealed that this was very disconcerting for the tutor and discussions with other tutors confirmed this attitude. Consequently, the final recordings were not to be observed.

Students who piloted the student survey document suggested one small change on a question considered ambiguous and that was altered. Tutors did not suggest any changes to their reflections document.

The focus of this thesis is on Module A with contributions from Module B in the analysis section; however, there were many other hours of video recording from both modules and two other modules – one at first-year level and another at final year, honours level and involving five tutors in total. No analysis has been carried out beyond one two-hour seminar for Module A and one-hour tutorial for Module B given the time-consuming nature of the analysis and the word limit for this thesis.

In summary, Module A contains two hours of video recordings for each of a tutor-facing and a student-facing camera; a student survey document administered at the start and end of the video recorded seminar; a tutor reflection Dictaphone recording transcription; a student interview video recorded and transcribed; and a tutor interview audio recorded and transcribed. Module B contains one hour of video recordings for each of a tutor-facing and student-facing camera and the student survey document only.

3.3 Linking RQs with methods

Table 3.1 sets out the RQs from 1.3 above and shows how they are being addressed by the methods listed below.

RQ	Research question area	Research Method tools to gather evidence
1	<p>What characterises tutor-student verbal and non-verbal interaction in teaching-learning interactions in classrooms? In relation to:</p> <p>RQ1a: tutor use of language to engage students. RQ1b: tutor and student use of non-verbal communication RQ1c: students' verbal and non-verbal reactions to tutor behaviour RQ1d: tutors' reactions to student verbal and non-verbal communication RQ1e: how tutors' reference prior knowledge during classroom activities to develop student understanding RQ1f: if students report a 'change in understanding' after teaching-learning interactions?</p>	<p>RQ 1a: Videos RQ1b: Videos RQ1c: Videos; Student survey; student interview RQ1d: Videos; tutor reflection record; tutor interview following review of video selected excerpts RQ1e: Videos RQ1f: Student survey; student interviews following review of video selected excerpts.</p>
2	<p>In what ways do classroom environments affect teaching-learning interactions in relation to:</p> <p>RQ2a: Classroom (spatial) configuration (tutor-student, student-student interaction)? RQ2b: Artefacts employed by tutor?</p>	<p>RQ2a: Videos; Student interview; Tutor interview RQ2b: Videos; Student interview; Tutor interview</p>
3	<p>What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?</p>	<p>RQ3: Student survey; student interview. RQ3: Tutor reflection record; tutor interview.</p>
4	<p>What are the implications of the findings in terms of SoTL, Higher Education teaching, and CPD for knowledge development in university teaching-learning interactions?</p>	<p>N/A – will emerge from the study.</p>

Table 3.1: Linking RQs with research methods

3.4 Summary of Module A video clips focused time for analysis, linked to tutor and student interviews

Video clips			Interviews	
File No.	View	Time	Staff	Student
5	Student	02.11-03.00	x	
1	Tutor	02.11-03.00	x	
5	Student	05.50-07.40	x	
1	Tutor	05.50-07.40	x	
5	Student	16.24-16.44	x	x – from 15.00-19.00
1	Tutor	16.24-16.44	x	x in both files
6	Student	13.00-13.15	x	x – from 09.00-14.00
2	Tutor	06.44-06.59	x	x in File 6
7	Student	12.09-12.44	x	x – from 11.00-14.00
2	Tutor	27.53-28.19	x	x in File 7
3	Tutor	00.00-00.09	x	x
7	Student	16.30-17.18	x	
3	Tutor	03.52-04.40	x	
8	Student	05.31-06.27	x	
3	Tutor	14.55-15.51	x	
6	Student	12.03-13.12	x	x – from 09.00-14.00
2	Tutor	05.45-06.54	x	x in File 6
7	Student	09.37-10.55	x	
2	Tutor	25.21-26.39	x	
7	Student	10.55-22.00		x - from 11.00-14.00
8	Student	00.00-14.40		File 7

Table 3.2: Module A video clips discussed with staff and students

The interviews with staff and students were designed to answer RQ3 but be based on evidence presented in the video recordings along with general questions (details of questions in Appendices 2 and 4). The clips shown to students were longer and less numerous than for staff as these were selected following summarising the student surveys as well as my own, earlier, reflections on the videos before staff were interviewed.

3.5 Video recordings of teaching-learning interactions

In selecting video recordings as a key method for investigation, I was searching for means to expand approaches to analysing interactions (embodied practices), allowing for a focus that is more than just verbal (Kristensen, 2018). The medium of video also allows for multiple viewings

from different perspectives to facilitate the fine-grained analysis required and so the researcher becomes 'more sensitive and attentive to tacit, embodied, material or unspoken dimensions of video data' (Kristensen, 2018, 2, citing Polanyi, 2009).

Video recording is particularly useful for my research aim to provide tutors with insights for their reflections on what is happening in classroom teaching-learning interactions as it allows 'an exploration of the interplay between the spoken and material (e.g. learning resources and body movements), and as a trigger for pedagogical feedback' (Lacković, 2018, 3)

The video recordings were set up by my then university's IT staff at the start of each class for Module A and Module B. In addition to the recordings allowing tutor view and student view, they also allowed videos to be watched with and without sound. This offered a further insight into the multimodal actions taking place without the distraction of language. Video recordings were immediately downloaded into memory sticks (and the camera recording deleted) and kept securely in accordance with the ethical approval obtained (3.8).

Before applying the chosen analytical approach, I watched the videos iteratively and made hand-written notes on points of interest to my research questions but also other aspects that would support tutor reflections. This helped familiarise me with the content and supported the final development of establishing recurring themes. During the next analysis stage, the videos were again watched iteratively before clips were finally selected. This thesis only presents a small fraction of the total analysis, given space constraints.

3.6 Interviews and survey approaches – capturing staff and student views

3.6.1 Staff views

Staff Dictaphone recordings were based on a document (Appendix 1) requiring their immediate reflections on two questions: How did you feel the class went – and why?; What would you do differently – and why?. This was followed by questions for later reflection on: classroom environment and aspects of the interactions between participants and objects but also requesting any other observations; views on whether there had been any catalyst to open opportunities for a change in student understanding; and views on any influencing factors affecting student learning (Appendix 1). Dictaphone recordings were transcribed by me (and the recording then deleted) and were available during Tutor A's interview.

Tutor A's interview was based on extracts from the video recording analysis of Module A (to provide a video-stimulated recall interview) and the clips used and questions raised are in Appendix 2, the basis for which was to address **RQ3: What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?**

The interview was semi-structured, was held after the tutor had watched the video recordings, and was based on the themes emerging from the video analysis. The identified clips were shown one-by-one to Tutor A during the interview and the questions in Appendix 2 asked. The opportunity was also taken to elicit Tutor A's views on the usefulness of this method of enquiry for reflective practices and to share my observations from the recordings and

obtain the tutor's views on those. The semi-structured nature allowed the questions to be adapted, modified and added to following the interviewee's responses (Cousin, 2009). The transcript of the interview was sent to Tutor A who agreed its contents.

3.6.2 Student views

The student survey document (Appendix 3 contains questions and responses summarised) contained eight questions. The first was to obtain insights into preparation for class; a further six explored understanding of the academic work in class, interactions with other participants, which factors helped classroom activities work well, and which factors would have improved classroom activities. The final question asked for demographic data (entry qualification; age; gender; ethnic origin). Students could provide their ID number if willing to take part in subsequent interviews.

ID numbers provided were used to invite students to interview, which was held after the students had progressed to the second year, allowing for reflection on development from their experiences. Module A's interview was video recorded and downloaded to a memory stick (and the camera recording deleted) before being transcribed by me. Specific clips were identified and shown to students before asking questions on those clips (as a video-stimulated recall interview). Appendix 4 contains the details of clips and questions, again to address RQ3. The students declined the offer of reviewing the interview transcript

3.7 Inquiry graphics (IG) analytical approach

In selecting an analytical approach to the video recordings, I needed to accommodate the perspectives identified above to enable a holistic interpretation. Multimodal analytical approaches are not new to education, although there is a scarcity at HE level (Lacković, 2018). Archer and Breuer (2016) have recently addressed this gap in HE although their focus is on writing and not directed towards teaching-learning interactions holistically. However, in linking multimodality with EduS as an analytical approach, it is possible to build on Peirce's triadic sign model outlined in Chapter 2 and represented here diagrammatically, as this sign structure is a key approach to analysing the interactions in-depth:

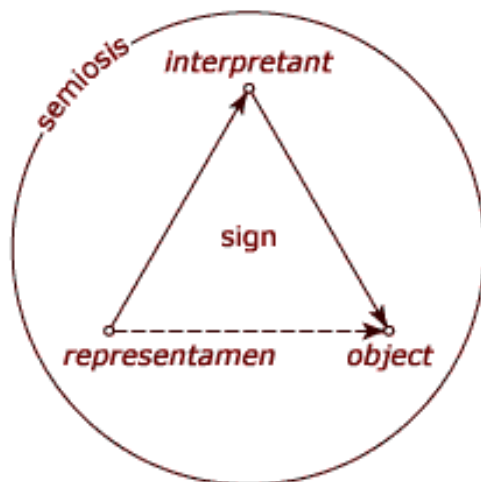


Figure 3.1: Peirce's triadic sign (downloaded from Lancaster University Moodle ED.S842)

The development of the IG approach by Lacković (2018) is merging the approach of multimodality and Peirce's pragmatic semiotics and links well to EduS. As Lacković (2018, 1) states 'In a nutshell, the IG provides interpretative guidelines to support researchers in multimodal, edusemiotic coding and analysis of video data'.

Key Concept 9: IG is an analytical approach with a focus on inquiring pictorial information in a triadic interpretative manner, in relation to other modes (e.g. language) and theoretical research concepts (Lacković, 2018).

To clarify the application of IG in my study, the IG grid template and a sample of analysis sheets showing the components of Representamen, Interpretant and Research Object, is reproduced below (**Table 3.3**). This shows the fine-grained analysis of the first 20 seconds of Module A's two-hour seminar. For each second of activity, there are four views, each colour-coded:

- Student-facing camera with sound;
- Student-facing camera without sound;
- Tutor-facing camera with sound;
- Tutor-facing camera without sound.

The analysis sheets provide headings for each of Pierce's three signs but with further description of Interpretant to show Denotation (descriptive meaning of actions) and Connotation (the everyday socio-cultural meaning to those actions). For clarification of Denotation and related Connotation of actions, Denotation would provide a basic description of Student X's action as "sitting with right elbow on desk and chin resting in right hand, looking towards the window"; Connotation for the everyday meaning would be Student X is bored and disengaged from classroom work. These are accompanied by a full transcription of speech during the identified interactions. The Research Object final column shows the full interpretation of the holistic actions in each clip and so provides Elaboration of Student X's action above, in the context of all other actions observed, for inferences, generalisation, and critique, linked to the RQs, for Anchorage. Further, this final column provides links to relevant

literature that would help inform tutors' reflections on what is occurring in classroom teaching-learning environments. The final column, with its basis for inferences, generalization and critique, supports making conclusions about the visual data. Therefore, this will affect how Chapter 5 is presented as this will effectively be the final step in analysis; the earlier steps being in the IG analysis sheets in Chapter 4.

As a development of the IG approach, I have added in the emic perspectives of staff and students at relevant points. In doing this, I am following Kristensen (2018, 1) and her metaphor of 'peeling an onion' by merging her final "layer" of 'depth and adjustment through participant perspectives'. An example of a tutor's perspective is included in the sample analysis sheets below with a **different colour-coding**. Similarly, the sample analysis sheets show the student perspectives from the surveys and the interview and they are also **colour-coded**.

RESEARCH QUESTIONS (RQ)			
<p>RQ1: What characterises tutor-student verbal and non-verbal interaction in teaching-learning interactions in classrooms? In relation to: RQ1a: tutor use of language to engage students. RQ1b: tutor and student use of non-verbal communication RQ1c: students' verbal and non-verbal reactions to tutor behaviour RQ1d: tutors' reactions to student verbal and non-verbal communication RQ1e: how tutors' reference prior knowledge during classroom activities to develop student understanding RQ1f: if students report a 'change in understanding' after teaching-learning interactions?</p> <p>RQ2: In what ways do classroom environments affect teaching-learning interactions in relation to: RQ2a: Classroom (spatial) configuration (tutor-student, student-student interaction)? RQ2b: Artefacts employed by tutor?</p> <p>RQ3: What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?</p>			
Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = tutor-facing camera)	Interpretant-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Research Object (Purple font = addition of tutor comment from reflection or interview) (Olive green font – addition of student comment from survey or interview)
Explanation of columns: coding categories definitions			
Chosen moment	Materiality	Element/Composition Action Denotation – describes what is happening; e.g. people in action ascribing basic meaning to those actions; that is the 1 st level of meaning; the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Transcription of speech
	List	No	Naming and listing actions for analysis
MODULE A			
File 5: 00.00-00.20	Element/object/artefact/actor	No	Research Questions (RQ)
	<p>Student-facing camera Tutorial style classroom; Students: BME male BME female White male White female; Tables; Chairs; Whiteboards; Ceiling Projector; Rear camera aimed at tutor;</p>	<p>5 3 3 2 12 23 2</p>	<p>RQ1a; RQ1b; RQ1c; RQ1d; RQ2a; RQ2b Classroom layout could indicate power relationship with tutor 'in charge': in such classroom configuration/design, this could suggest students are more likely to be passive participants in that context. Configuration of classroom supports a teaching-centred style philosophy from tutor rather than a student-centred learning approach (Ertwistle, 2009). "Meaning making" by students may be undermined (Bruner, 1990). Consequently, the Acquisition metaphor for learning is likely to be more prevalent than the Participation metaphor (Stard, 1998). Classroom participation between peers is hindered by physical layout/design and how students have chosen to sit with their own or similar ethnicities. Limited communication between students who are not</p>
	<p>Within a classroom layout of tables and chairs, students are set in small groups (13 total): 2 BME males back row by window 2 White females and 1 White male in middle row by window (male in middle) 3 BME males and 1 BME female in front row by window 2 BME females back row middle of room 2 White males middle row, middle of room. All students have sets of papers on tables in front of them Bottles: 1 in front of BME male (front row by window); 1 in front of BME female</p>	<p>Use of tables and chairs set out in straight rows, one behind the other, with tutor at the front of classroom positions all students to face the tutor. Ethnically, students are sitting with people 'like them': Students are letting tutor know they are getting ready for class by having papers on table. Students putting out papers on table.</p>	<p>Students talking indistinctly, rustling of papers. Tutor: "So this week we are going to (then pauses as students continue their indistinct conversations) "If we can make a start now please, I know it has been a bit disruptive to begin with."</p>
	Drinks bottles	1	

<p>Calculators Pens Booklets</p>	<p>female (front row); 1 in front of BME male (back row by window) Students handling papers Students talking</p>	<p>3 13 ? 13</p>	<p>Students talking to other students adjacent on same row. <i>White male middle row (between two white female students) talking to both, gesturing with hands.</i> <i>Male white student middle row (next to another male white student) is tapped on shoulder by BME female back row and handed a sheet of paper.</i></p>	<p>Talking; Moving papers; Gesturing; Touching another student; Gaze;</p>	<p>Students talking indistinctly, rustling of papers. Tutor: "So this week we are going to..." (then pauses as students continue their indistinct conversations) (00:19). "if we can make a start now please, I know it has been a bit disruptive to begin with".</p>	<p>on same row and sitting adjacent. Student survey document listed 8 out of 13 students who said interaction with fellow students was a factor that helped seminar work well. Student interview (2 students) held views that the back row was for 'hiding' and the tutor could mix up the groups more to encourage wider peer interaction but no mention of space design. Physical layout/design is not a well understood area in HE and would need further research (Savin-Baden, 2008; Temple, 2008; Stables, 2014 in Semetsky and Stables (Eds), 2014). Tutor A's reflection comment on layout of room and the interview discussion revealed how the tutor had to reconfigure the room to help her navigate around students. Indication of pre-prepared materials for student learning support provided. This does not mean that students have engaged with the material.</p>
<p>File 1: 00.00-00.20 Tutor-facing camera (additional items) Tutor standing; Clock on wall – time is 11.21 Smartboard screen with powerpoint slide; Back of students on front row; BME female BME male; Restricted view of papers on tables for students in view.</p>	<p>Students talking ready to start class. Tutor signalling ready to start</p>	<p>1 1 1 2</p>	<p>Topic for session clearly displayed for all students to see. <i>Male BME front row student is rocking rhythmically, moving hands.</i></p>	<p>Tutor moving then speaking; Clicking remote control; Powerpoint displaying topic <i>Rocking movements.</i></p>	<p>RQ1a; RQ1b; RQ1c; RQ1d; R2a; RQ2b Tutor starts 'joint action' (Blumer 1969) by signalling (through moving – non-verbal action) what is coming next and to get attention of students (by speaking – verbal action). Tutor trying to take control of interactions. Tutor's initiation of a 'course of action' (Jewitt, Bezemer & O'Halloran, 2016) is not being followed by students who have not recognised this 'turning point' (Erickson, 2004, in Jewitt, Bezemer & O'Halloran, 2016). Male BME student is feeling relaxed and able to 'express himself' in front of tutor and fellow students.</p>	<p>Overall, initial atmosphere in room appears a relaxed 'participation framework' (Goffman, 1981) with informal communication apparent within each small group of students.</p>

Table 3.3: IG1; Sample IG analysis sheets of video recordings

3.8 Ethics procedures

The ethics procedure and framework for the whole study was approved in advance through the Lancaster University process and through the process for my own university where the study was conducted.

Project information sheets and consent forms were prepared to inform all potential participants about the study before they became involved. Tutors were asked to hand out these sheets and forms at the previous week's class so that the students were aware of the research intention. Students who did not wish to participate were able to move to another class in the same week to avoid the research project involvement. Students who had not attended the week prior to the recordings were given information sheets and consent forms at the start of class, with the option to attend another class; none did. The aim of the research and the reason for requesting their involvement was made clear along with the right to withdraw. No data were collected without informed consent being obtained, including requesting permission to record identified classroom activities and record identified meetings.

All data were anonymised, and no participant was linked to data; physical data were stored in locked cabinets and electronic data stored were password protected.

At the start of each interview, participants were reminded of the protocols, confidentiality and the options if people wished to withdraw at a later stage (none did).

3.9 Limitations

The set-up arrangements for the cameras were at the discretion of my then university's IT staff; I had no control over their siting nor the type of cameras used. This was further affected by my sickness absence during the period when the videos were recorded. Some restrictions to viewing either tutor or students occurred due to the siting of cameras but also due to the natural movement of tutors as each moved around the classroom environment. For Module A, all students are in the student-facing camera shots; for Module B, all students are in the student-facing camera shots except for one student who moved his seat at the start of the recording and he appears in neither camera's shots. There is the inherent risk that the act of video-recording activities will change those activities, although students interviewed reported no significant impact.

An unavoidable limitation was my position as line manager of staff who were asked to support this project, given the purposeful sampling approach and the insider research nature of this study. When planning the approach, it was acknowledged that an alternative tutor may have been needed to be found or an alternative module chosen. However, by emphasizing the mutual benefit to tutors initially and then students, the chosen modules were acceptable to participants. This insider research is considered to have aided interpretation as I was familiar with the highly situated classroom activity, the typical nature of the students, and with the tutors. This is argued to have provided greater insights as discussed by Kristensen (2018, p.7): 'Knowing the field and interpreting the interactions that unfold on the screen entails understanding the culture in which the interactions unfold'.

There remained the danger of biased self-reporting of responses by tutors and students (Richardson, 2005) but the avoidance of closed questions and anonymous large-scale surveys minimized this along with the close relationship developed between the researcher and the tutors.

In interpreting the videos, it is acknowledged how subjective this is and without any background knowledge of students; however, there is some triangulation of data in Module A given staff and student views have been obtained.

3.10 Summary

This chapter has explained the methods chosen to obtain data relevant to the research area and perspectives adopted.

The volume of data was daunting and although the videos have been watched many times, there is a risk some significant data may have been missed.

Again, obtaining staff and student views of the data can reduce risk, and their views are incorporated into the data presented next in Chapter 4.

Chapter 4 – Findings and Presentation of Data

4.1 Overview

This chapter demonstrates and explains the data collected from each method, along with any limitations that were realised, before Chapter 5 presents an analysis and full discussion based on the main issues arising from the holistic review of teaching-learning interactions. Most data relates to the IG analyses for which there are 170 A3 sheets, only a small proportion of which can be presented here. Main issues were identified and, where appropriate, raised during tutor and student interviews.

4.2 Themes emerging from presentation of data

Table 4.1 categorises the three key thematic areas that I consider have emerged from the meanings revealed by the video findings and information obtained from staff and students. Firstly, I believe there are “identity interactions” taking place at an individual and group level; secondly, there are “non-verbal mediations” being demonstrated; finally, types of “teaching-learning engagements” from participants. It is acknowledged that each of these categories will have some degree of overlap with each other, so they are not completely distinct categories but dominant thematic characteristics of the analysed data.

In presenting the data collected, along with the IG analysis sheets, I have referenced (in italics) where I consider the main themes and sub-themes in Table 4.1 have arisen to illustrate the audit trail.

Key theme categorisation and related RQs	Sub-categories	Indicative literature
Identity interactions RQs 1a-1d	Social identity	Tajfel and Turner (1979) cited by Kelly (2009)
	Situated identity	Connell (2010)
	Community of Inquiry	Lipman (2003)
	Laddism	Jackson, Dempster and Pollard (2015)
Non-verbal mediations RQs 1b-1d; RQs 2a-2b	Space design	Temple (2008); Smith (2017)
	Objects affordances/Ecology of objects	Gibson (1979); Davitti and Pasquandrea (2016)
	Facial expressions	Little or no literature (Jewitt et al (2016))
	Gaze	Goodwin (1980)
	Gestures	Goodwin (1986)
Teaching-learning engagements RQs 1a-1f; RQ2a; RQ2b; RQ3	Rapport/empathy	Stout and Wygal, 2010; Wygal and Stout 2015
	Participation frameworks	Goffman (1981)
	Metaphors of learning	Sfard (1998)
	Joint actions	Blumer (1969)
	Engagement-alienation spectrum	Mann (2001)
	Monologue v. dialogue	Nicol (2010)
	Engagement v. activity	Harper and Quayle (2009)
	Surface-strategic-deep learning	Marton and Säljö (1997)
	Behaviour/cognitive engagement	Fredericks, Blumenfeld and Paris (2004)
	“means”	Norris (2004)
	Turning points	Erickson (2004)

Table 4.1 - Key themes categorisations from all findings

4.3 Case study – Module A

Module A is a compulsory first-year undergraduate module with approximately 140 students who attend two-hour seminars weekly (approximately 20 students in each seminar). Assessment is by an end-of-year examination

(50%) and online testing throughout the year (50%). There is no separate lecture, being subsumed within the first half of the seminar, after which students work on questions provided. The students are given a module booklet that contains the teaching schedule and seminar work including practice questions, but are expected to bring their pens, calculators, rulers and graph paper. The classroom was set out in long rows with all students facing the tutor who was positioned at the front of the class beside a lectern and electronic whiteboard/OHP screen. Table 3.3, IG1, contains a description of the environment.

4.3.1 Video IG analysis - Findings

The seminar recorded was on 25 February 2016 from 11.15-13.15 and was attended by 15 students, two of whom arrived after the start of the session. Student-facing and tutor-facing cameras provided four video files for each view. It was possible to see all students in the student-facing camera. The videos were listened to with and without sound.

Following iterative views of the eight videos and making hand-written notes on how the seminar progressed, the IG analysis was started by reviewing the first three minutes of the seminar to see how the tutor got the session underway. These three minutes covered the first five clips (Table 4.2) and revealed disruption in the classroom from student behaviour and how the tutor was engaging the students along with use of artefacts identified from the videos.

Video clips		
File No	View	Time
5 – Table 3.3 analysis 1	Student Tutor	00.00-00.20 00.00-00.20
5 1	Student Tutor	00.21-00.55 00.21-00.55
5 1	Student Tutor	00.56-01.40 00.56-01.40
5 1	Student Tutor	01.41-02.10 01.41-02.10
5 – 1 st latecomer arrives 1 02.18	Student Tutor	02.11-03.00 02.11-03.00

Table 4.2 – Video clips of first three minutes of Module A

In terms of contribution to themes in Table 4.1, IG1 analysis sheet (Table 3.3) showed:

- **Identity interactions** – *situated identity/social identity*
- **Non-verbal mediations** – *space design/objects affordances/gestures*
- **Teaching-learning engagements** – *participation framework/metaphors of learning/joint actions/turning point*

The review of these clips picked up two areas for further relevant video clips, linked to the research questions:

- Clip selections on student disruptions to participation frameworks and how tutor/students react. RQ1a; RQ1b; RQ1c; RQ1d (and RQ2b regarding use of object's 'affordance' in incidences of disruption)
- Look for evidence of how tutor is supporting learning and reacting to student enquiries, particularly evidence of 'objects' affordance' RQ1a; RQ1b; RQ1c; RQ1d; RQ2b.

Identity interactions: Disruptive behaviour

Clips identified for evidence of disruption to participation frameworks in *teaching-learning engagements* are presented in Table 4.3 and an extract from the IG analysis (IG2) to illustrate the fine detail of the interactions (Table 4.4). These clips include **Tutor A's comments** from the tutor interview.

Video clips - moments of disruption		
File No	View	Time
5 – 2 nd latecomer arrives 1 05.50	Student Tutor	05.50-07.40 05.50-07.40
5 1	Student Tutor	08.10-08.26 08.10-08,26
5 1	Student Tutor	11.40-12.30 11.40-12.30
5 1	Student Tutor	16.24-16.44 16.24-16.44
6 2	Student Tutor	13.00-13.15 13.00-13.15
7 2	Student Tutor	04.10-04.51 15.54-16.35
7 2 3	Student Tutor Tutor	12.09-12.44 27.53-28.19 00.00-00.09
7 3	Student Tutor	16.30-17.18 03.52-04.40
7 3	Student Tutor	15.21-15.50 02.40-03.09
7 3	Student Tutor	17.45-18.40 05.05-06.00
8 3	Student Tutor	01.29-02.12 10.48-11.32
8 – Table 4.4 analysis	Student Tutor	05.31-06.27 14.55-15.51

Table 4.3 – Video clips of disruption to classroom participation frame work

Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = tutor-facing camera)	Interpretamen-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Action focus	Speech	Research Object Plus emic perspectives of: (Purple font = addition of tutor comment from reflection or interview) (Olive green font = addition of student comment from survey or interview)
Explanation of columns: coding categories definitions					
Chosen moment	Materiality	Element/Composition Action Denotation – describes what is happening: e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Element/Composition Action Connotation - assigns socio-culturally elaborated meaning to denotation in the context of the videoed scene (here classroom setting).	Naming and listing actions for analysis	Transcription of speech
	List	No	No	No	No
MODULE A. Student disruption to participation framework					
Element/object/artefact/actor					
File 8: 05.31-06.27	Student-facing camera – as before	Tutor walks up aisle to back row with BME male students and speaks. 1 st latecomer looks up briefly as tutor approaches and resumes talking to student on his left, drinking from water bottle. No other student on back row looks up at tutor. Tutor turns away, touching left-hand side of her head with her left hand, looking down. Tutor turns around to face students on back row, putting her left hand on her left hip, and stands for a few moments without speaking. 1 st latecomer looks up briefly at tutor and raises his eyebrows. Tutor speaks to students again. White female student, middle row aisle, looks round to her left as tutor speaks to back row but does not turn all the way round to look at male BME students. 1 st latecomer and student to his left look up at tutor, both smiling. 1 st latecomer is only student to speak. Male BME student baseball cap, and student to his left do not look up or speak. Tutor turns away again. 2 nd latecomer looks at tutor's back smiling and nodding in her direction. Tutor turns back to the students and 2 nd latecomer looks down at the table. 1 st latecomer's head is turned to look at student on his right.	Tutor waling and turning. Gaze direction. Student drinking Gaze direction. Tutor gesture with hair. Tutor posture. Gaze direction. Tutor speaking. Student speaking. Facial expression. Gaze direction. Facial expression. Nodding head. Gaze direction. Student speaking Gaze direction.	Tutor: How are we getting on? Male BME student: nearly there Male BME student: London? Tutor: You could actually start drawing the graph. Male BME student: You took it out in London? Tutor: you might need to be aware that whatever you are chatting about, it's right next to the camera. Male BME student: Yeah, but we have to chat about something. Tutor: Yes, but I am just pointing out – actually doing the work as well would be useful. Male BME student: yeah, no worries Jenny Tutor: And just be careful of the topic of what you are talking about. Male BME student: (laughs) It's cars.	This prolonged interaction between the tutor and back row BME students again attracts little attention from the other students who are engaged in the work set. The two late-coming students are the main actors in the encounter with the tutor with the 1 st latecomer doing most of the speaking but the facial expressions, and body posture of tutor with hand on hip, of both latecomers display a smiling disrespect for the tutor as they firstly ignore her initial contact with them to ask them to do work and then engage in a conversation with her that does not lead to them doing any work. In Goodwin's (2000) terms, actions are understood through a process of juxtaposed mutually elaborating semiotic fields. The combination of the speech, facial expressions, gestures and body postures work together here to illustrate, and help understanding of the unfolding action. Tutor query. Tutor A explained her actions were to 'pull them back on to task' but it did not work. She also noted another instance of her sarcasm. Tutor A explained her turning away and then back to them as an action where she was checking what else was going on in the room and that she could spend some time with BME males, back row BUT she also stated she doesn't want to nag them too much – they should take responsibility and she would leave them alone if they were not disturbing anyone else. This contrasts with the analysis of time spent with the BME males, back row, below in

<p>File 3: 14.55-15.51</p>	<p>Tutor-facing camera – as before with same OHP slide showing heading of 'Summary Statistics'.</p>	<p>2nd latecomer turns to his left to look at camera as tutor refers to its presence. 1st latecomer talks to tutor. Tutor turns away while 1st latecomer continues to look at her, laugh, and raise eyebrows. Tutor stops at middle row with 2 White females and 1 White male student and turns to look back at BME students, back row. 1st latecomer speaks, looking at tutor and smiling, and tutor responds. Tutor turns away and moves down aisle towards front of class. 2nd latecomer (touching his chin) looks at 1st latecomer, smiling, looks at tutor's back as she moves off and smiles then turns back to look at 1st latecomer.</p>	<p>Tutor continues to make her point to get students to engage with work.</p> <p>2nd latecomer looking amused but not when tutor looking at him.</p> <p>2nd latecomer looks at 1st latecomer in amusement.</p>	<p>Facial expression.</p> <p>Gaze direction.</p> <p>Student speaking. Facial expression.</p> <p>Tutor walking and turning.</p>	<p>Tutor: Well, it is better than some things it could be, but actually the maths would be good as well.</p>	<p>Files 7&8 – from 10.55 – 22.00 File 7, and 00.00-14.40 in File 8, as this shows she spends the second highest amount with this group in these file times.</p> <p>There is engagement and reciprocity in gaze (Goodwin, 1980) but the two students do not comply, finding amusement in the exchange. This continues the negative behavioural engagement seen in earlier clips (Trowler, HEA, 2010). While gaze direction research indicates action can follow a positive reciprocity (Goodwin, 1980) this is clearly not sufficient for the tutor to obtain engagement and interactional control.</p> <p>The tutor's hesitancy in movement, turning backwards and forwards during this exchange, and the consequent hesitancy in the ensuing fragmented conversation that follows does not help her assume control. Her 'hand on hip' stance could illustrate her irritation although she maintains a pleasant tone of voice (and the tutor-facing camera shows she has a pleasant, often smiling expression on her face).</p>	<p>Tutor: How are we getting on? Male BME student (out of shot): nearly there. Male BME student (out of shot): London? Tutor: You could actually start drawing the graph now. Male BME student (out of shot): You took it out in London? Tutor: you might need to be aware that whatever you are chatting about, it's right next to the camera. Male BME student (out of shot): Yeah, but we have to chat about something. Tutor: Yes, but I am just pointing out – actually doing the work as well would be useful. Male BME student (out of shot): yeah, no worries Jenny Tutor: And just be careful of the topic of what you are talking about.</p>	<p>Tutor is trying to regain interactional control over the male BME students, back row by directly speaking to them to let them know she realises they are not engaging in the work set.</p> <p>Students initially ignore her comment about starting the graph work and tutor turns away but almost immediately turns back to 'have another go', warning them about the proximity of the camera.</p> <p>Tutor query. Tutor A was concerned she was too sarcastic again. She reported that although she was smiling but 'it's not because I am particularly happy with them'.</p> <p>Students' voices are not challenging in tone, but they are in words. Equally, the tutor's tone is not challenging nor her facial expressions, but her words are clear that she expects engagement in the work set.</p>
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			<p>Tutor comes back into shot moving away from back row as she continues to speak to male BME students.</p> <p>Tutor stops at middle row window by White female students and White male student and turns to her right to look back to BME students, raising eyebrows, smiling and speaking. Tutor points with both index fingers when speaking then turns away towards front of room.</p>	<p>Tutor moving to other students but still engaging verbally with back row male BME students.</p> <p>Raising eyebrows and pointing gestures are to emphasize her points made verbally.</p>	<p>Tutor turning. Gaze direction. Facial expression. Tutor gestures with hands.</p>	<p>Male BME student (out of shot): (laughs) It's cars.</p> <p>Tutor: Well, it is better than some things it could be, but actually the maths would be good as well.</p>	<p>Tutor is gesturing to emphasize her points.</p> <p>Tutor's fragmented approach and facial expressions may not be conveying sufficient resolve to 'tackle' these students and so the students are taking advantage of this.</p> <p>The students continue to display passive aggression by not engaging even when directly approached.</p> <p>Thematic contribution to Table 4.1: Identity interactions – Laddism/situated identity/social identity Non-verbal mediators – facial expressions/gaze/gestures Teaching-learning engagements – participation framework & change/behaviour engagement/engagement-alienation spectrum</p>
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Table 4.4: IC2; Student disruption to participation framework

Tutor support for learning and learning objects' affordances (*non-verbal mediations*)

Clips identified for evidence of how tutor is supporting learning and reacting to student enquiries, particularly evidence of objects' affordance are presented in Table 4.5 below and an extract from the IG analysis (Table 4.6) to illustrate the fine detail of the interactions. These clips include **Tutor A's comments** and **student comments** as discussed during interviews.

Video clips		
File No	View	Time
5	Student	08.55-09.55
1	Tutor	08.55-09.55
5	Student	10.20-11.00
1	Tutor	10.20-11.00
5	Student	13.13-14.09
1	Tutor	13.13-14.09
6	Student	01.13-03.10
1	Tutor	23.16-25.13
6 – Table 4.6 analysis	Student	12.03-13.12
	Tutor	05.45-06.54

Table 4.5 – Video clips of tutor support for learning and objects' affordances

Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = tutor-facing camera)	Interpretant-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Action focus	Speech	Research Object Plus emic perspectives of: (Purple font = addition of tutor comment from reflection or interview) (Olive green font = addition of student comment from survey or interview)
Chosen moment	Materiality	Explanation of columns: coding categories definitions			Anchorage and Elaboration – Elaboration explains what is seen from the Anchorage in the context of the RQs and visual evidence coded in previous columns. It provides the basis for inferences, generalization and critique; it supports making conclusions about the visual data, as linked to RQs.
		Element/Composition Action Denotation – describes what is happening: e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Element/Composition Action Connotation - assigns socio-culturally elaborated meaning to denotation in the context of the videoed scene (here classroom setting).	Naming and listing actions for analysis	
MODULE A. Tutor support for learning and objects' affordances					
File 6: 12.03-13.12	Student-facing camera – as before	Tutor is speaking to whole group out of shot. As tutor starts to speak, most students are still bent over their tables using pens/calculators, except for two students: Female White student, middle row, window, aisle and White male student middle row. These two students are looking up towards front of class – male student has his head in his left hand elbow on table; female student has head in her right hand elbow on table. Of the remaining students, the White male student middle row, window, has both elbows on table with arms crossed in front of him and hands on each shoulder and is resting his head on his right arm crossed in front of him. He is looking down at table. All other students are writing As the tutor continues to talk about the topic, a few more students look towards the front of the room: Male BME student, back row window leans back in seat and removes baseball cap, rubs his right hand over his head then replaces his baseball	Tutor speaking. Bent postures. Students writing/tapping calculators. Gaze direction. Student posture; gaze direction. Students writing. Gaze direction.	Tutor: Most people have just about got there. So, you can see it does not start at the beginning as it starts at quarter 3. So the trend goes down and then goes up. So this ice cream company obviously had a bad year a couple of years ago. Maybe it was bad weather, maybe they had a competitor come in, something like that (see comment in tutor-facing camera). But after that they seemed to have turned it round and the trend seems to be that the sales are going up again. So we have plotted that trend so that's the underlying behaviour of the sales, what's happening in general when we ignore all the seasonal factors for the summer, or Christmas or whatever. That is the underlying effect, so that's what the trend is. The underlying behaviour of the data and it should look something close to that. (pause) OK? Tutor: Was that a question or a stretch? 1 st latecomer (male BME back row): a stretch. Tutor: Right...so we are going to carry on with our table and	Research Questions (RQ) RQ1a; RQ1b; RQ1c; RQ1d; RQ2b. This clip was chosen to see how the tutor provided feedback (verbally and through use of artefacts) at the end of a task set for students (the subject of earlier clips) in support of their learning. The tutor's words about 'most people have just about got there' seems in sharp contrast to the postures of the students who are mainly bent over their tables dealing with pens, calculators and the booklets. Only two students are initially looking at the tutor when she starts to give feedback on the task. Two students interviewed commented that body postures indicated tiredness and trying to listen and write was difficult; the tutor could talk too fast. Students would turn initially to a peer to check was missed before considering asking the tutor. Tutor query. Tutor A's view was that if you leave the feedback 'too long you are going to lose the people who work quickly and do it too soon the people work slowing and struggling with it are just going to get lost and not understand. So it is difficult'. She went on to identify the three White students (one male, one female) in middle row by window as having finished the task some time ago and were disengaging. Tutor's initiation of a 'course of action' on providing feedback (Jewitt et al, 2016) is not being followed by students who have not
			Tutor is giving feedback on task undertaken by students. Students are still engaged in work with their booklets. Two students are not working on booklets and have completed the task. Student appears bored. More students engaging with what tutor is talking about. Some sign of agitation.		

	<p>cap and remains leant back against wall.</p> <p>Female BME student, back row aisle, looks up, wiggling her pen in her right hand and rocking slightly in her chair.</p> <p>Female BME student on same row to her left looks over briefly at her, scratches her face with her right hand then looks down at table again.</p> <p>White male, middle row aisle, puts down pen, moves his booklet slightly around table then leans back in seat, looking to front of class. He then crosses his arms in front of him and looks down at table.</p> <p>1st latecomer and male BME student to his right pass a ruler and then a pen between them. 1st latecomer then puts his right elbow on the left shoulder of the male BME student to his right and puts his hand in the air, looking forward. He then scratches the back of his head with his right hand and brings it back in front of him as the tutor speaks to him.</p> <p>Male BME student, front row second in from window, looks over to his left at document in front of student on his left.</p>	<p>Some sign of agitation.</p> <p>Student temporarily distracted by student</p> <p>Signs of ending work done.</p> <p>Evidence of lack of artefacts between students so they are sharing.</p> <p>Acting casual, drawing attention to himself.</p> <p>Student looking at another's work to see what they have done</p>	<p>Student handling cap; rubbing head; leaning back.</p> <p>Student moving in sea; wiggling pen.</p> <p>Gaze direction.</p> <p>Student handling pen/booklet</p> <p>Student leaning back; crossing arms</p> <p>gesture.</p> <p>Students passing artefacts.</p> <p>Student gesturing with arm.</p> <p>Gaze direction.</p>	<p>calculating the rest of our values now.</p>	<p>recognised this 'turning point' (Erickson, 2004).</p> <p>Gaze direction is not at the tutor so gaze and reciprocity is not realised (Goodwin, 1980) and so it is less likely that the students are following what the tutor is saying as they are engaged in other tasks.</p> <p>The tutor is not encouraging cognitive engagement (Fredricks et al., 2004) in her feedback by questioning students about their work rather than providing them with an 'answer' and then asking if that is 'OK'. Even at the point when the tutor is asking for student confirmation of understanding in saying 'OK', she allows herself to be distracted by the 1st latecomer who is gesturing in a manner that could be considered provoking. Tutor query. Tutor A considered she was providing 'space for people to be able to ask questions'; but that she also was scanning the room to see if 'anyone is looking really confused but they don't necessarily want to ask the question'. Her intention is that she would follow this up with a direct approach to a student looking confused – but there is no evidence on the videos that this occurs. The reluctance of students to ask questions did emerge from the two students interviewed.</p> <p>Nicol and Macfarlane-Dick (2006) present a model of students' active engagement with feedback with seven principles underpinned by self-regulated learning. However, the emphasis historically is on written feedback and the tutor's feedback here is often omitted when considering when feedback is occurring. Nicol (2010) considers the need for more dialogical approaches so that two-way exchanges between student-tutor and student-student take place to support learning. Laurillard's (2002) conversational framework also highlights the importance of dialogue and how learning comes from iterative dialogue on a topic goal; the dialogue needs to be adaptive (to student needs), discursive (rich in two-way communication), interactive (linked to actions related to a task goal), and reflective (on the goal-action-feedback cycle) (Laurillard, 2002). What is important here is that feedback to students should also be of value to tutors to enable them to reflect on what is working to support student learning. That reflection is not evident here nor is there</p>
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<p>evidence of any rich communication occurring from dialogue. Evidence of limited two-way exchange between students (Nicol, 2010) but not an approach that the tutor has structured in to the seminar work. Student interview comment above pertinent here regarding students turning to a peer to check what they may have missed from trying to listen and write.</p>	<p>Tutor: Most people have just about got there. So, you can see it does not start at the beginning as it starts at quarter 3. So the trend goes down and then goes up. So this ice cream company obviously had a bad year a couple of years ago. Maybe it was bad weather, maybe they had a competitor come in, something like that. But after that they seemed to have turned it round and the trend seems to be that the sales are going up again. So we have plotted that trend so that's the underlying behaviour of the sales, what's happening in general when we ignore all the seasonal factors for the summer, or Christmas or whatever. That is the underlying effect, so that's what the trend is. The underlying behaviour of the data and it should look something close to that.</p>	<p>Tutor standing, holding remote. Tutor clicking remote. Tutor gesturing with hand. Tutor speaking. Tutor walking. Tutor gaze direction.</p>	<p>Tutor is signalling that the task has ended and she is now giving feedback.</p> <p>Tutor is using gestures to emphasize points she is making when speaking.</p> <p>Tutor now looking at class to engage their attention as she explains points.</p> <p>Tutor is using gestures to emphasize points she is making when speaking.</p> <p>Tutor is using gestures and facial expression to emphasize her points.</p> <p>Tutor using gestures to inject animation into her speech.</p> <p>Actions and speech by tutor is not attracting student attention from their gaze direction.</p>	<p>Tutor is standing at the front of the class by the OHP screen and clicks the remote control in her right hand to move the slide from the task set (details left) to the graph display (details left).</p> <p>Tutor moves the remote to her left hand and walks to the OHP screen pointing with her right hand at the graph as she speaks, looking at the OHP side.</p> <p>Tutor then walks back to her left to where she started talking and looks forward at the class as she continues to speak, holding the remote in her left hand. Her gaze is general around the room.</p> <p>She then goes back to the OHP screen and points with her right hand to a different part of the graph, continuing to speak with the remote in her left hand.</p> <p>Tutor then moves away from OHP screen to her left, gesturing with her right hand and raising her eyebrows slightly as she continues to speak.</p> <p>Tutor gestures with both hands, still speaking then goes back to the OHP screen and gestures at the display in general terms by waving her right hand while talking about trends.</p> <p>The two BME students, front row, one female (aisle) and one male to her right are seen bent over their tables while tutor speaks. Neither looks up until 06.20 in clip when male student does so briefly. Then female student looks up for several seconds then goes back to looking at the table.</p> <p>The tutor then moves back to her left to speak generally to the class but also looks at the OHP slide as she speaks.</p> <p>Tutor stops speaking briefly to look at class and ask 'OK?'. She smiles and</p>	<p>File 2: 5.45-6.54</p> <p>Tutor-facing camera – as before plus OHP slide showing heading of: "Complete the Trend Calculations" and further detail below of %0+692=62.5 69+67:52=66.25</p> <p>Plot the trend on to your graph</p> <p>Remember: You have no value for the trend until Q3. (52.50)"</p> <p>Then next slide displayed that shows a graph with a heading of: "Trend plotted through Sales". The graph shows the X and Y axes and two lines, one in blue and one in green. The blue line plots the Sales and the green line plots the Trend.</p> <p>Then next slide displayed that shows a table with a heading of: "First Residuals (Sales – Trend)" and shows a table below with partially complete data.</p>
<p>Many of the points made in the student-facing camera above apply here also. Looking at this tutor-facing view, the tutor continues her feedback as a monologue rather than creating the dialogue (Nicol, 2010) noted above as more effective for student learning. The area highlighted in yellow in the column immediately to the left is an example of an opportunity for the tutor to engage students in the feedback by asking them for ideas why the company may have "had a bad year a couple of years ago". This would have stopped students continuing to be bent over their tables and avoiding her gaze. It is an example of where a tutor could have facilitated a 'turning point' (Erickson, 2004).</p>	<p>The tutor does use her OHP screen to illustrate her verbal points and looks back at students when explaining points made following her gestures at the OHP screen. However, her gaze direction is predominantly either at the OHP screen or looking more to the students on her left. That is where most students are sitting (11 out of 15).</p>	<p>Tutor gesturing with hand. Tutor speaking. Tutor gesturing with hand. Tutor facial expression. Tutor gesturing with hands. Tutor speaking. Gaze direction.</p>	<p>Another opportunity to engage students in feedback has not been taken up by the tutor who merely asks a quiet 'OK?' to students once she considers all the relevant points have been made. Rather than follow up to</p>		

		<p>looks at back of room to ask a student a question about his gesture (evident on the student-facing camera). Tutor smiles after student responds and uses the remote to click on to a new slide showing the next task. Tutor looks more to her left and to the OHP screen than to her right when standing at the front of the class and speaking.</p>	<p>Tutor continues to offer feedback. Tutor is inviting questions from students. Tutor is distracted by student gesture (out of shot but evident from student-facing camera clip). Tutor appearing pleasant by smiling. Tutor's gaze is not engaging students in the right side of her view of the class.</p>	<p>Tutor walking. Tutor speaking. Gaze direction. Tutor facial expression. Tutor clicking remote. Gaze direction.</p>	<p>Tutor: Was that a question or a stretch? 1st latecomer (male BME back row): a stretch. Tutor: Right...so we are going to carry on with our table and calculating the rest of our values now.</p>	<p>check student understanding by directly questioning students, the tutor is distracted by gestures of the 1st latecomer (see student-facing clip) even though his gestures have been more extreme and prolonged in previous clips. Does the tutor feel under such time pressure that she cannot allow students to raise questions? Tutor query. Tutor A considered 'there's quite a lot of different things to get through' and that 'a lot of the learning happens in tutorial questions'. Her emphasis is on learning by doing 'rather than hearing it'. I don't think time pressure is the reason – more to do with the tutor's approach to the subject matter from her perspective rather than the students. Although she discusses engagement, encouraging peer support and providing space for people to be able to ask questions (only through overhead-types), none of this is evident from the videos. Equally, there appears to be no driver from the students to ask questions of the tutor even though the two students interviewed considered her approachable. Of the one minute and nine seconds of this clip, her gaze direction time is: OHP – 31 seconds Left – 25 seconds The remaining 13 seconds of the clip had a gaze direction of mixed right/left directions in rapid succession as tutor gazed around the room generally. Tutor query. Tutor A was not aware of this bias in her gaze direction as she considered 'I feel when I am in the class that I am paying the same amount of attention right across or at least I am aware of all of the students', but she acknowledged that this was 'possibly not the case'. Thematic contribution to Table 4.1: Identity interactions – Laddism/social identity/situated identity Non-verbal mediations – gaze/gestures Teaching-learning engagements – rapport/cognitive engagement/turning points/monologue v. dialogue/engagement – alienation spectrum</p>
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Table 4.6 IG3; Tutor support for student learning and objects' affordances

Teaching-learning engagements: Tutor dominance

From the analysis of these clips, a further aspect of the teaching-learning interactions emerged regarding the tutor domination of the seminar in terms of her teaching as a process with little regard for understanding whether student learning was taking place. Consequently, all video files were reviewed for evidence of ‘monologue versus dialogue’ (Nicol, 2010) and linked to RQ1a; RQ1c; RQ2b. Clips identified are presented in Table 4.7 and an extract from the IG analysis (Table 4.8) to illustrate the fine detail of the interactions. These clips include **Tutor A’s comments** and **student comments** as discussed during interviews.

Video clips		
File No	View	Time
6	Student	01.13-03.10
1	Tutor	23.16-25.13
6	Student	12.03-13.12
2	Tutor	05.45-06.54
6 – Table 4.8 analysis	Student	20.31-22.00
	Student	00.00-01.06
2	Tutor	14.14-16.49
7	Student	03.09-04.57
2	Tutor	18.51-20.39

Table 4.7 - Video clips of ‘monologue versus dialogue’

Video moment	Representatamer-led ORI (Black font = student-facing camera, Blue font = tutor-facing camera, Blue font = student-facing camera)	Interpretant-led ORI (Black font = student-facing camera with sound, Blue font = tutor-facing camera with sound, Red font = student-facing camera without sound, Green font = tutor-facing camera without sound)	Action focus	Speech	Research Object Plus emic perspectives of: (Purple font = addition of tutor comment from reflection or interview) (Olive green font – addition of student comment from survey or interview)
Chosen moment	Materiality	Element/Composition Action Denotation – describes what is happening: e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Explanation of columns: coding categories definitions		
			Naming and listing actions for analysis	Transcription of speech	Anchorage and Elaboration – Elaboration explains what is seen from the Anchorage in the context of the RQs and visual evidence coded in previous columns. It provides the basis for inferences, generalization and critique; it supports making conclusions about the visual data, as linked to RQs.
MODULE A.	Monologue versus dialogue	Element/object/artefact/factor			
File 6: 20.31 - 22.00 – File 7: 00.00-01.06	Student-facing camera – as before	Tutor is at front of class, out of shot, speaking to whole class. 13 out of 15 students are looking down at their tables (10) or each other (3) and three students are looking towards front of classroom. Some students briefly look up and towards front of class as tutor speaks. Female BME student, back row, is rubbing out work in her booklet, brushing aside the loose rubber and looking up towards front of class. She then bends low over booklet on table and writes with her left hand. Female BME student to her right is holding her head in her left hand, left elbow on table, and writing slowly in booklet. Male BME student, back row on left of BME student with baseball cap, yawns. Male BME, back row baseball cap, leans back in chair and removes cap, scratching his head then replaces cap and rests elbows on table clasping hands in front of him. He is looking down at the table throughout. White male, middle row window, pushes up t-shirt left sleeve and touches top of his arm with his right hand then leans well back in chair, looking up at ceiling.	Tutor explaining work to students. Students are engaging with artefacts on table rather than looking at tutor as she speaks. Periodic interest in looking at tutor as she speaks. Student is correcting her work as the tutor provides feedback. Student is updating her work as the tutor provides feedback. Student is bored. Student is not engaging in work and is restless.	Tutor speaking. Gaze direction. Gaze direction. Student writing. Student leaning. Student yawning. Student leaning; handling cap; scratching; clasping hands. Gaze direction.	Tutor: So you have got.....this says 18.74 because the slide's been typed wrong, it's 18.75. Yeah, so, because that's the one, that's the value we've got on our table. These totals are just there to help you calculate the averages. The important bit from this table is the averages because the averages are the seasonal factor, that's how we find the seasonal factor. That's the average seasonal effect, so we've looked at the seasonal effect for each of three years and then we have averaged it out. So the seasonal factor is this bottom one. So you don't need to put the total in if you don't want. You can just go straight to the average value. Ok, so for this one, between 12 and, sorry...between minus 12 and minus 16, minus 14 that seems about right. If your value was about minus 25 with those three values then you can see you have gone wrong somewhere because the average should be somewhere in the middle of your three values. So these four values at the bottom are your seasonal factors. Tells you how much above or below the trend your, your sales are. So we're going to find the fitted values which is the trend plus the
					Research Questions (RQ) RQ1a; RQ1b; RQ1c; RQ1d; RQ2b This clip follows a task set for the student (at File 6: 17.10) when the tutor spoke to them about the task and then spent time (File 6: 17.16-20.31) going around the classroom to support some students, but not all, tackling the work set. This clip is the feedback provided to the students after completion of the task and spans two files: File 6: 20.31-22.00; File 7: 00.00-01.06. (tutor-facing equivalent camera clip is File 2: 14.14-16.49). This clip is another example of 'monologue' rather than dialogue (Nicol, 2010) when providing feedback. The view of the students indicates low levels of engagement with varied gaze directions and activities going on, not all of which relate to dealing with the artefacts e.g. booklets. Several students are obviously yawning or behaving in a restless manner, but the tutor does not react to this. The tutor is taking no action to find out if the students are understanding what she is saying, and the end of this clip sees a new slide going up (details in tutor-facing camera clip below) setting another task that follows on from this task and its feedback. However, without knowing if the students have understood what has happened so far, it may not be a good basis for engaging students in further work. Some of the tutor's speech is hesitant with some sentences/phrases stopping and then re-

<p>Female BME front row is handling her hair and looking at her fingers at intervals, both elbows resting on table.</p> <p>White male, middle row aisle, is the only student using a calculator. He is bent over his table, looking down.</p> <p>1st latecomer, male BME back row, puts his right elbow on left shoulder of student on his left and puts his right hand behind his head. He then leans his head back against wall.</p> <p>Female BME, back row aisle, is writing in her booklet, then stops writing and yawns, covering her mouth with her right hand. She then starts tapping on her calculator.</p> <p>Female BME, front row, pushes hair behind her head and secures it with an elastic band. She then rests her head on both hands, both elbows on table, and looks forwards to front of class.</p> <p>White male, middle row window, starts to yawn widely then bends well over table before coming back to an upright position.</p> <p>Male BME, front row window, touches his neck with his left hand while right hand rests on table, then raises left hand to his head and pushes back his hair, leaning back in seat. He then brings his left hand to rest on his right shoulder, looking towards front of class, then brings both hands down under table.</p> <p>White male, middle row aisle, starts to flick backwards and forwards through the pages of his booklet on table.</p> <p>White male, middle row, has been leaning on his left elbow resting his head on left hand throughout but now starts to flick through pages in his booklet on table. He then picks up a pen with his right hand but does not write.</p> <p>White male, middle row window, is tapping on calculator with pen in right hand and then writes in booklet on table.</p>	<p>Student is not engaging in work and is restless.</p> <p>Student is not engaging in work and is restless.</p> <p>Some evidence of engagement in work.</p> <p>Student is not engaging in work and is restless.</p> <p>Evidence of boredom but remaining engaged.</p> <p>Evidence of restlessness but some level of engagement from gaze direction.</p> <p>Student bored and does not cover it up.</p> <p>Evidence of restlessness but some level of engagement from gaze direction.</p> <p>Student is looking for information.</p>	<p>Student touching arm; leaning; gaze direction</p> <p>Student touching hair; gaze direction; leaning.</p> <p>Student tapping calculator.</p> <p>Student leaning; gesturing with hand.</p> <p>Student writing; yawning; tapping calculator.</p> <p>Student touching hair; leaning on hands; gaze direction.</p> <p>Student yawning; leaning.</p> <p>Student hand gestures; touching skin and hair; leaning; hand gestures; gaze direction.</p> <p>Student touching paper.</p> <p>Student leaning; touching</p>	<p>seasonal factor. This (end of File 6) (Start of File 7) is looking at what our model predicts of...the, the past values would have been. So we are looking at the trend and then at our average seasonal factors added on to it to give us what the previous sales would have been.</p> <p>So the fitted values are a check on how accurate our model is, how close our predict, past predicted values are to the actual past values. So, trend plus seasonal factor. So you've got two missing on the table and the first one is for quarter 1. So you're going to have the quarter 1 trend which is 62.5 and then we're adding on the quarter 1 seasonal factor. And the quarter 1 seasonal factor is minus 14.17 so we are doing 62.5 minus 14.17 and that will give us our first, well our first missing fitted value in our table</p>	<p>starting. This is also not designed to help meaning-making for students (Goodwin, 1980).</p> <p>Interestingly, the students are not indicating they do not understand – so they could be completely comfortable with the feedback but given the tutor self-selects who she tends to spend individual time with, it is unlikely that all are at the same level of comprehension.</p> <p>Tutor query. When asked about the ability of the students, Tutor A commented that the three White students (one male, two females) middle row by window, were the most able and that they got on with the work; followed by the two White males, middle row, although they thought they could do more than they could and they did not engage very well with the class. The two BME females, back row, were of a lower ability but 'they did tend to try' although 'they did not have that confidence to work really as hard as they could as they thought they couldn't do it'. (These two BME females were the ones who volunteered to be interviewed.)</p>
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<p>File 2: 14.14-16.49</p>	<p>Tutor-facing camera – as before plus OHP screen showing slide with heading of: "From all the First Residuals calculate the Average Seasonal factor for each of the four quarters" then follows a Table on the OHP slide with columns for each of the four populated data and blank cells.</p>	<p>White male, middle row aisle, is bent over table and now tapping on calculator and writing in booklet on table. 1st latecomer, male BME back row removes his right elbow from left shoulder of male BME student to his right and sits upright. Female White student, middle row window aisle, picks up calculator and taps on it. She then picks up her pen with her right hand and writes..</p>	<p>Student is looking for information. Student getting ready to write. Student is engaging with feedback and updating his work. Student is engaging with feedback and updating his work. Student was uncomfortable in this position. Student is engaging with feedback and updating her work.</p>	<p>paper, holding pen. Student tapping calculator, writing. Student posture; tapping calculator. Student changing posture. Student tapping calculator, writing.</p>	<p>The tutor refers to artefacts in addition to speaking to students, so use of OHP screen detail and the study booklet that all students have. Looking at the study booklet provided to the students, the page reference is 25 where the same table as is now on the OHP screen is presented but with gaps where the students have been working to complete the table on page 25. This shows the structure for interaction between learning resources is in place but does not necessarily mean it is effective. The tutor may be unaware that engagement is "more than involvement or participation – it requires feelings and sense-making as well as activity" (Harper and Quayle, 2009, p.5). The tutor's gestures provide some animation for her speaking and her facial expressions show similar animation at appropriate moments (when she is emphasizing something, or smiling wryly at a typing error on a slide as here).</p>
		<p>Tutor: So you have got...this says 18.74 because the slide's been typed wrong, it's 18.75. Yeah, so, because that's the one, that's the value we've got on our table. These totals are just there to help you calculate the averages. The important bit from this table is the averages because the averages are the seasonal factor, that's how we find the seasonal factor. That's the average seasonal effect, so we've looked at the seasonal effect for each of three years and then we have averaged it out. So the seasonal factor is this bottom one. So you don't need to put the total in if you don't want. You can just go straight to the average value. Ok, so for this one, between 12 and, sorry...between minus 12 and minus 16, minus 14 that seems about right. If your value was about minus 23 with those three values</p>	<p>Tutor pointing and speaking. Facial expression. Tutor walking and speaking. Tutor hand gesturing. Gaze direction.</p>	<p>Tutor is pointing to highlight key areas for students to understand. Tutor is dispelling any confusion regarding an incorrect number. Tutor's gestures are intended to focus student attention. Tutor is trying to engage students by looking at them as she speaks.</p>	

<p>She briefly looks to her right and then back to her left, raising her eyebrows as she turns towards the OHP screen and points to specific information she is talking about.</p> <p>The tutor then turns away from the OHP screen, walking slightly to her left and looking left. She then turns back to the OHP screen and points to specific numbers on the table she is talking about. She then looks forward again and to her left, making open gestures with both hands, still holding the remote control in her left hand.</p> <p>The tutor smiles slightly as she moves away to her left from the OHP screen, looking left and gesturing with both hands. She then goes back to her right to the OHP screen and points with her right hand at a specific area of the Table. The tutor then moves slightly to her left from the OHP screen, looking to her left and gesturing with her left hand as she speaks about 'above' and 'below'. She then turns to look back at the OHP screen.</p> <p>Male BME front row, next to female BME student, is bent over table writing around and flicking through pages.</p> <p>Female BME, front row, flicks something to the floor with her left hand.</p> <p>The tutor then clicks the remote control to bring up a new slide on the OHP screen (details left).</p> <p>Tutor continues to speak, looking round the room generally, gesturing with both hands. She then looks at the OHP screen briefly then looks back to her left while talking and gesturing with left hand.</p> <p>Tutor turns back to OHP screen briefly then looks down as she continues to speak.</p> <p>Tutor then walks to lectern and looks down at her booklet pointing to something on a page as it lies flat on the table in front of her. She continues to look down at the booklet as she speaks about the next task on the OHP screen.</p> <p>The tutor then moves away from the booklet and back toward OHP screen and speaks looking forwards into room. She then looks to her left and moves slightly back to her left towards</p>	<p>Tutor turning to screen is to focus student attention on information there.</p>	<p>Tutor gesturing. Gaze direction. Facial expression. Tutor pointing.</p> <p>Tutor walking. Tutor pointing.</p> <p>Gaze direction. Hand gestures. Facial expression.</p> <p>Tutor pointing.</p> <p>Hand gestures. Gaze direction.</p> <p>Student handling booklet. Student hand gesture.</p> <p>Tutor clicking remote. Tutor speaking. Gaze directions. Tutor hand gestures. Gaze direction.</p>	<p>then you can see you have gone wrong somewhere because the average should be somewhere in the middle of your three values. So these four values at the bottom are your seasonal factors. Tells you how much above or below the trend your, your sales are. So we're going to find the fitted values, which is the trend plus the seasonal factor. This (end of File 6)</p> <p>(Start of File 7) is looking at what our model predicts of...the, the past values would have been. So we are looking at the trend and then at our average seasonal factors added on to it to give us what the previous sales would have been.</p> <p>So the fitted values are a check on how accurate our model is...how close our predict...past predicted values are to the actual past values. So, trend plus seasonal factor. So you've got two missing on the table and the first one is for quarter 1. So you're going to have the quarter 1 trend which is 62.5 and then we're adding on the quarter 1 seasonal factor. And the quarter 1 seasonal factor is minus 14.17 so we are doing 62.5 minus 14.17 and that will give us our first...well our first missing fitted value in our table</p>	<p>In terms of 'joint action' (Blumer, 1969), this is not notably present despite the structure provided by OHP screen information linked to study booklet information along with tutor's words. The tutor's gaze direction shows a bias to either the OHP screen or to her left (where most of the students are sitting – 11 out of 15). From this clip of 2 mins and 35 secs, the tutor's gaze direction can be analysed (in seconds) as: OHP screen: 53 Left: 48 Right: 0 Mixed: 33 (general gaze around) Down & at booklet on table: 21</p> <p>The tutor is moving the students on to the next task as evidenced by her speech and clicking through to the next slide but she has not checked that the students have understood the previous work set as her monologue has not permitted enough interaction – either between student-tutor or student-student to constitute effective feedback (Nicol and Macfarlane-Dick, 2006; Nicol, 2010).</p> <p>Thematic contribution to Table 4.1: Identity interactions – absence of Community of Inquiry/situated identity Non-verbal mediators – object affordances/gaze/gestures Teaching-learning engagements – joint actions/engagement v. activity/monologue v. dialogue/surface learning</p>
<p>New slide heading is: "Find the Fitted values (F): F=T+S.F.</p>				

		<p><i>the booklet looking down at it while speaking. Her gaze then varies in a short period of time between her left, front and at the OHP screen as she ends speaking.</i></p>	<p><i>Tutor is engaging with study booklet while speaking to students.</i></p>	<p><i>Tutor walking. Tutor pointing at booklet. Gaze direction.</i></p>		
			<p><i>Tutor is referring to OHP screen information in support of her speech topic.</i></p>	<p><i>Tutor walking. Gaze directions.</i></p>		
			<p><i>Tutor is gazing around room to engage students' attention.</i></p>			

Table 4.8: IC4; Monologue versus dialogue

Tutor gaze and group interaction (non-verbal mediations/teaching-learning engagements)

Further clips were then identified for analysis from the point in the seminar when the 'lecture' aspect ends, and students are then expected to work on questions in their booklet. This is intended to reinforce their learning from the 'lecture' and the tutor goes around the classroom offering support as well as making general announcements to help the whole class. Clips from this change in the participation framework were selected to demonstrate what lessons could support tutors' reflections on teaching-learning interactions. This was based on features emerging from identified clips and related to how gaze direction and time spent with groups of students were understood by the tutor and the latter experienced by the students from student survey and interviews. Clips are presented in Table 4.9 along with the analysis of time for tutor gaze direction and tutor time spent with each group of students. This area was discussed with the tutor during her interview (4.3.5); she was not aware of the disparity in gaze direction or time spent with groups.

Video clips – tutor gaze direction			
File No	View	Time	Time – Minutes (m); Seconds (s)
2	Tutor	05.45-06.54	OHP screen: 31s Left: 25s Right: 0s Mixed: 13s (general gaze)
2	Tutor	14.14-16.49	OHP screen: 53s Left: 48s Right: 0s Mixed: 33s (general gaze) Down & at booklet on table: 21s
Video clips – tutor times with each group			
File No	View	Time	Time with each group – Minutes (m); Seconds (s)
7 8	Student Student	10.55-22.00 00.00-14.40 Total clip – 24m, 45s	Front row, window (3 BME males; 1 BME female): 3m 53s Middle row, window (2 White females; 1 White male): 35s Back row, window (4 BME males): 4m 25s Back row (2 BME females): 1m 59s Middle row (2 White males): 5m 17s Total time talking to groups of students – 16m 09s Plus talking to whole group 1m 32s.

Table 4.9 – Video clips analysing tutor gaze direction and tutor time with groups of students

Thematic contribution from Table 4.9:

Non-verbal mediations - gaze

Teaching-learning engagements – rapport/participation framework change

4.3.2 Student surveys

Of the 15 students in the classroom, 13 completed the survey document (Appendix 3). Question 1 asked the students to reflect immediately at the start of the seminar on any work set to be done before class but was not wholly applicable as work was done mainly in class for this module. However, for question 1(a), six students said they did set work 'in full', one said 'partly', five said 'not at all', and one did not respond. For question 1(b) that explored why they responded as they did for (a), five students said they did the work in class or specifically said work was not set; this was confirmed by Tutor A. The six remaining questions asked for reflections immediately after class; responses were brief where given at all (Appendix 3). The responses to question 5 (factors which made the class activities work well) proved more useful and showed that the tutor's enthusiasm, tutor's preparation for class activities (*teaching-learning engagement: rapport*), use of visual aids (*non-verbal mediations: objects affordances*), and interactions with fellow students (*identity interactions: Community of Inquiry*) were the most common factors listed. Insufficient responses to questions 6 and 7 hindered insights into how students felt activities improved their understanding and what other activities would have improved the work done in class. Question 8 about demographic data had few responses and provided no further insights.

4.3.3 Student interview

Three students provided their student ID number in the survey and were contacted for an interview in their subsequent year of study (March 2017); two responded and were interviewed. Interview questions and clips shown to the students are in Appendix 4. The interview lasted for 79 minutes and 50

seconds, covering 4 clips as detailed in Table 3.3; the transcription was colour-coded for the range of responses:

Dark Green = classroom layout/choice of seat location – disruptive behaviour (8 comments)

Purple = tutor attention to specific groups of students (8 comments)

Yellow = student responses to tutor checking understanding/attracting tutor attention (7 comments)

Blue = use/absence of artefacts in classroom (6 comments)

Light Green = student body postures (3 comments)

Pale blue = views on effectiveness of seminar and small groupings (3 comments)

Grey = tutor encouragement of student engagement in tasks (3 comments)

Red = tutor tone of voice/volume/facial expression (2 comments)

Dark red = student views on levels of understanding improving (2 comments)

Dark yellow = Level of preparation/ reference to prior knowledge (1 comment)

Responses attracting six or more comments are described further.

Although the two students were sat on the back row, they considered that is where students choose to sit to 'hide' (*non-verbal mediation: space design*). 'Hide' appears to be to not only evade tutor attention but to engage in work other than that set (*teaching-learning engagements: engagement-alienation spectrum*). Nonetheless, the behaviour of the BME males, back row, which was often disruptive, was not reported by these two students as distracting from their work.

The tutor was reported to spend more time with groups of students who were perceived as paying attention to her and that she was approachable and

helpful (*identity interactions: rapport/empathy*). However, that was not borne out by the analysis of the time spent by the tutor with the different groups of students in an extensive period extracted from the videos (see Table 4.9).

The students considered it was usual for students not to ask questions openly in class but call a tutor over when needed and a lack of confidence can deter asking questions at all. Students are more likely to ask a peer sitting in their group. The more challenging a subject is perceived then the less likely students are to even ask a peer to help them. Even when a tutor is asking if all is 'OK', students are unlikely to speak up in class (*teaching-learning engagements: behaviour/cognitive engagement*); this is borne out in the video analysis although the tutor does dominate (*teaching-learning engagement: monologue v. dialogue*).

The students made several comments about artefacts in use; this was mainly about the booklet and the issues over graph paper that arose. While the booklet was perceived as helpful, the students reported some difficulty in trying to listen to the tutor and write in their booklets simultaneously; sometimes, points were missed (*non-verbal mediations: objects affordances; teaching-learning engagements: rapport/empathy*). Their comments about the lack of graph paper that should have been brought by students revealed an attitude that sharing across groups would not be volunteered as there was no relationship inter-group nor did the tutor facilitate this (*identity interactions: situated identity*).

The student interview revealed some differences of opinions between the two students. For example, Student 1 preferred working with the tutor while Student 2 advocated more student-student work outside the groupings, when

discussing the effectiveness of the seminar. However, there was little further response on this. Similarly, the students were of different opinions regarding their understanding improving with Student 2 saying 'there were still some bits I didn't understand' but both agreed they had enough understanding to tackle the online testing.

4.3.4 Staff reflections

These were provided from transcribed Dictaphone recordings (Appendix 1 questions) and Tutor A's interview (Appendix 2 questions and clips). From the Dictaphone, the tutor's initial view immediately after the seminar was:

I thought the class went really well today, the class were paying attention and engaging. It is quite a nice seminar in that as we go through the students have to put bits into the handbook and actually do the work as we go through. It is not just watching, it is more interactive than some of the others. So that's quite nice when they are doing that. Um, it's nice to be able to go around the class and be able to show them what we are doing at each step to make sure that those who have not quite got it can understand before we move on to the next steps. So that's really nice. Um, it would help if the classroom was a bit bigger, it's a bit small in here; it's a bit difficult to actually get round to all of the students sometimes so it's more difficult to work in than a lot of the other classrooms. But I think it went really well today and everyone seems to understand what we were doing and why we were doing it at the end, even if they struggled with where some of the numbers were coming from as we went through.

Any changes considered at this stage related to having a larger classroom and putting grid lines on a key table in the booklet used to support student work (*non-verbal mediations: space design/objects affordances*).

The later reflection from the Dictaphone elaborated on the configuration of the room (the tutor did some rearranging to facilitate access) and how the booklet was used to support student learning (*non-verbal mediations: space design/objects affordances*). This latter aspect related to the tutor's confidence that filling in gaps in the booklet from her periodic feedback helped student learning (*teaching-learning engagements: engagement v. activity*). While the tutor considered short discussions had been held (not evident from videos)

she acknowledged that student responses to her questions were disappointing (*teaching-learning engagements: cognitive engagement*). The tutor watched the videos before providing an additional comment on the seminar where she reflected:

I feel confident in my abilities as a teacher. I feel that I can normally manage to engage most of the class for most of the time. Having watched the students on the video, I am feeling less confident in this ability. It is more noticeable how there is frequently little engagement with the material from quite a few students. However, with university classes, especially first years, there will always be students who are less engaged and have little or no interest in doing the work. In a classroom situation, even with only around 20 students, it is difficult to target these students without the rest suffering.

Tutor A then considered she could have done more to draw students into discussions and seemed concerned she was more sarcastic than she intended periodically (*teaching-learning engagements: rapport/empathy*). She considered her focus was more on students who were trying, and she felt she was good at getting around the students during the second half of the seminar where tutorial-style questions were tackled by students to develop their understanding. This was not borne out in Table 4.9's analysis of time spent with each group (*identity interactions: situated identity*).

4.3.5 Staff interview

The interview with Tutor A revealed a deteriorating confidence in how she had conducted the tutorial; the interview lasted 1 hour, 55 minutes and 23 seconds (**Appendix 2, questions and clips**). The tutor watched all views of the videos again and I took her through a selection of clips (Table 3.2) before each was discussed. The main points that emerged related to (colour-coding from the interview transcript):

Disruption in classroom – this emerged mainly from the disruption caused by the BME males, back row. The tutor commented that she had not realised at

the time how this affected other students by distracting/disengaging them (*identity interactions: laddism/situated identity; teaching-learning engagements: participation framework/rapport/engagement-alienation spectrum/behaviour engagement*). Her reported frustration resulted in levels of sarcasm she had not appreciated. Tutor A was also more aware of the various body postures of students during these disruptions as a means of judging how they were affected (*non-verbal mediations: gesture*). Her view of the back row of BME males was that they were not trying and were aiming to 'get one over on her' (*identity interactions: laddism/situated identity*). Tutor A did not consider that she dealt with this well and she now considered that her efforts to engage students were not effective (*teaching-learning engagements: engagement-alienation spectrum*).

Tutor attempts to get students to engage - this developed from the tutor considering how she was dealing with the BME males, back row, in attempting to re-engage them in work and then to a general consideration of how she was engaging other students (*teaching-learning engagements: behaviour/cognitive engagement*). Although the tutor stated she was more likely to engage with students who were making the effort, she did not cut back her time with the male BME students (Table 4.9). The tutor reflected on whether she should have been doing something specific to re-engage the students following any period of disruption rather than just resuming what she was talking about, ignoring the interruption (*teaching-learning engagements: means/turning points*).

The tutor provided insight about the behaviour of the two White males, middle row, who often were working more with their booklets, particularly during

periods when the tutor was providing general feedback; the tutor explained that they would work ahead in the booklet and, while they had ability, she considered they were over confident (*identity interactions: social identity*). Tutor A explained the dilemma she encounters in engaging students with feedback when she knows some students are ahead of others; the point at which feedback starts is effectively a compromise, acknowledging that some students may be bored and disengaging while others are left behind. With a frank admission that she is terrible at remembering names and looks at work on students' tables and not at their faces (*non-verbal mediations: gaze*), the tutor was revealing inherent barriers to interacting with students (*teaching-learning engagements: rapport/empathy*). However, the tutor considered that she offered space for the students to ask questions but did not solely rely on this as she scanned the room looking for facial expressions indicating confusion or an unasked question (*non-verbal mediations: facial expressions/gaze*). Nonetheless, she was not aware of her gaze direction tending to miss an area of the room to her right, nor the relative length of time she spent with the separate groups of students. Despite this, she was able to recall the range of abilities displayed by the students and she thought time spent with them was partly influenced by her view of abilities and whether the students were attempting the work; again, this is not borne out by Table 4.9's analysis of time with each group. After watching the videos again and the selected clips, the tutor considered the students were not engaging much (*teaching-learning engagements: engagement-alienation spectrum*) but they had a responsibility, as adults, to understand they 'have to learn it' (*teaching-learning engagements: rapport/empathy*).

Relative abilities of students – the tutor ranked the three White students by the window (one male, two females) as the highest ability followed by the four BME students, front row (three males, one female). Although the two White males, middle row, were ‘fairly able’, the tutor considered they were not engaging effectively through trying to be ahead of where she was working in the booklet. Although the tutor did more spend time with the four BME males, back row, than she realised, she could not comment on their ability given their tendency to disrupt rather than engage (*identity interactions: laddism/situated identity*). The two female BME students, back row, were considered of the lowest ability and lacked confidence to try as the tutor thought they believed they could not do the work (*identity interactions: situated identity/social identity*) (these were the two students who volunteered to be interviewed).

In discussing these relative abilities, Tutor A’s view about how students must make an effort was demonstrated with:

It is what I am aiming for is to make it interesting and engaging but it is not always interesting and engaging and they have to learn it whether it is the most fascinating thing on the planet or the most boring thing on the planet, because they have to learn it.

*....they should actually be paying attention and that’s part of being adult learners and university students that they have to make themselves do part of that anyway and there is only so much that the onus is on the lecturer and the onus should be on the students as well (*identity interactions: situated identity/social identity*).*

Use/absence of artefacts - - the booklet was the most common artefact mentioned. The tutor repeated that leaving blanks in the booklet to be filled in by students was effective in engaging students (*teaching-learning engagements: engagement v. activity*), although she acknowledged that the two White males, middle row, were using this out of step with her schedule. The videos certainly showed student activity with the booklets along with tutor

work on the whiteboard as they wrote information down at intervals. The absence of graph paper was a hindrance to student work and a source of disruption in class (*non-verbal mediations: objects affordances*). The back row of four BME males had the most difficulty with the absence of artefacts such as the graph paper along with not one having a ruler and an obvious sharing of pens from the videos (not noted by the tutor) (*non-verbal mediations: objects affordances*). This created participation frameworks where the tutor described her frustration and tendency to sarcasm as noted earlier (*identity interactions: situated identity*). However, the tutor described how the booklet was a useful tool to establish whether students were understanding and progressing through the work as she went around class offering support as students worked independently (*teaching-learning engagements: "means"*).

Views on peer support – the tutor initially talked about this in the context of the classroom layout and how she had to reorganise tables and chairs (*non-verbal mediations: space design*) to create an aisle between sets of tables, which remained in a linear format afterwards. Her views were that students tend to gravitate into specific groups and would probably not interact between those groups anyway (*identity interactions: social identity*). The tutor considered she encouraged students to interact by talking to each other and looking at other's work. This encouragement was not evident from the videos, but no discouragement was noted. The two students interviewed considered the tutor could have done more to have more interaction between student groupings (*identity interactions: Community of Inquiry*).

Having obtained Tutor A's views from open-ended questions, I then shared my own views for discussion.

I raised the amount of effort the students were putting in compared to the considerable effort the tutor was making – she looked to be the one doing all the hard work (*teaching-learning engagements: participation frameworks/metaphors of learning/monologue v. dialogue/behaviour/cognitive engagement*). The tutor repeated that she asks overhead type questions of the whole group, that she is terrible at remembering names, and does not like to put students ‘on the spot’ by asking direct questions (*identity interactions: situated identity; teaching-learning engagements: rapport/empathy*). She considered the students were not producing answers for the whole class but to put in their booklet, after which she puts up answers on the screen (*identity interactions: Community of Inquiry*).

Having been asked if what students write in their booklet becomes known to her, her view is that she would find out as she walks around the room looking at booklets; she considered she would stop and help a struggling student (*teaching-learning engagements: joint actions/cognitive engagement*).

I then asked the tutor if there was anything she would reflect upon to do differently. Her main comment related to how she was spending her time with the students (*teaching-learning engagements: rapport/empathy/joint actions*), following our discussion of the clips analysed showing her differing gaze direction and time with each group.

I also wanted to explore the behaviour of the four BME males, back row, and whether this behaviour was normal for them or perhaps influenced by the presence of two cameras. I expressed the view that these students appeared to be deliberately provoking the tutor into engaging with them, sometimes in a prolonged manner, and so disrupting classroom activities. She did not

consider this was due to the cameras but she was not a strict person and so could let students 'away with' more than she should (*identity interactions: situated identity*).

Finally, I enquired whether the tutor would find multimodal video analysis helpful in developing her own reflections on teaching-learning interactions. While considering the videos were interesting to watch (she noted her body posture, arm gestures and poses, along with her gaze direction and time spent with groups as points of interest to her), she did not think she would be comfortable with this as a regular occurrence. It was considered too time-consuming for regular use and she queried whether it could be done by computer. As her body posture had not been mentioned previously, I asked her what she thought it meant as a non-verbal communication, but I was assured there was nothing in that beyond feeling more comfortable when standing (*non-verbal mediations: gestures*).

4.4 Case study – Module B

Module B is an optional final-year, honours, undergraduate module with approximately 50 students who attend a one-hour lecture and a one-hour tutorial weekly (approximately 20 students in each tutorial; 13 students attended the recorded tutorial). Assessment is an end-of-year examination (70%) and coursework in January (30%). The classroom was set out with small groups of tables in a rectangle/square, which students sat around. The classroom environment is clearly set up for a teacher-training programme, at junior-school level from the displays, but this does not seem to be a significant distractor; it is likely the students are used to the room by this point in the academic year.

The tutor was positioned at the front of the class by a table (*non-verbal mediations: space design*) and OHP screen/electronic whiteboard. Table 4.9 contains a description of the environment.

The available data for this module comprises the video IG analysis and student surveys. Only two students out of 13 present completed the student surveys and none was interviewed. The main purpose of presenting Module B is to offer points of comparison to Module A; the modules are at the start and end of an undergraduate course, so the skills and knowledge levels of the students would expect to be different and so how tutors and students interact may offer more insights. Module B has a one-hour lecture preceding each tutorial and students are expected to prepare work for the tutorial, unlike Module A. Further, Module A is a quantitative subject while Module B is a more discursive subject, and this offers more points of comparison regarding tutors' approaches to conducting classroom activities.

4.4.1 Video IG analysis - Findings

The tutorial recorded was on 29 February 2016 from 15.15-16.15 and was attended by 13 students. The videos were from student-facing and tutor-facing cameras and there were three video files for each view. It was possible to see all but one student in the student-facing camera; one student moved seat shortly after the start of the recording following frequent glances towards the student-facing camera. The videos were listened to with and without sound. Following iterative views of the six videos, the IG analysis was started by reviewing the initial minutes (0.55-03.23) of the seminar to see how the tutor got the session underway (Table 4.10). Points of comparison with Module A are highlighted in **green** for commonalities and **blue** for differences.

Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = tutor-facing camera; Green font = student-facing camera without sound; Red font = tutor-facing camera without sound)	Interpretant-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Action focus	Speech	Research object
Explanation of columns: coding categories definitions					
Chosen moment	Materiality	Element/Composition Action Denotation – describes what is happening; e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Element/Composition Action Connotation - elaborated meaning to context of the videoed scene (here classroom setting).	Transcription of speech	Anchorage and Elaboration – Elaboration explains what is seen of the Anchorage in the context coded in previous columns. It provides the basis for inferences, generalization and critique; it supports making conclusions about the visual data, as linked to RQs.
	List	No	No	Naming and listing actions for analysis	
MODULE B					
Commonalities with Module A are highlighted in Green; differences are highlighted in Blue.					
File 1: 00.55 - 3.23 (first 54 seconds related to students arriving before start of tutorial).	Element/object/artefact/actor Student-facing camera Classroom style is tables in groups of two with four chairs around each group; Students: BME male BME female White male White female; Chinese male; Tables; Chairs; Display boards (‘What time is it Mir Wolf’, with clock and stickers) and (‘Addition and Subtraction to 10’ with picture of red double decker bus and stickers) Filing cupboard (one tall; one waist height)	No	No	Tutor standing. Tutor speaking. Tutor holding papers. Tutor walking. Gaze direction. Students sitting.	Research Questions (RQ). RQ1a; RQ1b; RQ1c; RQ1d; RQ2a; RQ2b The tutor is leading the start of the tutorial and getting it going promptly. She is talking to ensure students know what they are doing and has prepared an additional artefact (tutorial support sheet) to support students. The tutor quickly moves into the part where the students are doing work. This work is meant to build on what they have done before but it is clear the tutor's expectation is that some students will not have prepared; this can be construed as sarcasm and may not encourage student contributions. The reference to mnemonics indicates the tutor has historically produced resources to support student learning.
				Tutor is getting the tutorial underway. Tutor looks organised with papers in front of her ready for the class. Some body movement to reflect animation. Students are positioned for easier peer interaction/discussion. Students are sitting in small groups to ease discussion.	Student (out of shot): (indistinct) Tutor: You'll be grateful for them in the end. (01.53) OK, so, the first question is Arbroath Electrical

	<p>Display bookcase (with pictures and figures of animals and birds and blue netting across top of bookcase)</p> <p>Display table</p> <p>Drinks bottles</p> <p>Calculators</p> <p>Pens (visible)</p> <p>Booklets</p> <p>Pencil cases</p> <p>Tutor standing</p> <p>Piles of paper on table in front of tutor</p>	<p>1</p> <p>1</p> <p>3</p> <p>0</p> <p>2</p> <p>10</p> <p>1</p> <p>1</p> <p>5</p>	<p>The tutor starts to move around the room (01.22) distributing one sheet of paper to each student; she continues to talk during this process.</p> <p>The White female picks up the paper distributed by tutor and holds it up. After a quick look at it, she looks down to her right at a paper on the table, then looks briefly around the room., then places sheet of paper on the table (01.22 – 01.36).</p> <p>The Chinese male student picks up the paper distributed by tutor and places it on table in front of him, bends over it and then rocks slightly backwards and forwards while looking down (01.26 – 01.36).</p> <p>One BME male is looking up to his right at the display board entitled 'Addition and Subtraction to 10'. He then looks down at the booklet and papers on his table before reaching down with his left hand and bringing up a pad of paper that he flicks through, turns over pages and then places on table (01.30).</p> <p>Two other students (one White male and one BME male) are bending down looking towards the floor. The White male brings his pencil case to the table and opens the pad of paper in front of him. The BME male is still bent over and looks up briefly at the camera then resumes looking down; he then brings a pad of paper to the table (01.19) turns it over then opens it with a pen in his right hand. (01.38)</p> <p>One White male student (nearest camera) takes off his</p>	<p>Tutor is providing support material for the class.</p> <p>Student is responding to distribution of sheet of paper.</p> <p>Student is displaying some agitation as he looks at paper distributed.</p> <p>Student is distracted by the vibrancy of display in the room which are unconnected to the topic of the tutorial.</p> <p>Students are looking for materials.</p> <p>Male BME student is taking his time in getting ready for the class.</p> <p>Student is too warm for a coat but too cold for</p>	<p>Tutor walking.</p> <p>Tutor handling papers.</p> <p>Tutor speaking</p> <p>Student handling paper.</p> <p>Gaze direction.</p> <p>Student handling paper.</p> <p>Gaze direction.</p> <p>Rocking movement.</p> <p>Gaze direction.</p> <p>Student handling paper.</p> <p>Turning pages.</p> <p>Placing pad on table.</p> <p>Students bending down.</p> <p>Student handling case and pad.</p> <p>Gaze direction.</p> <p>Handling pad.</p> <p>Turning pad.</p> <p>Handling pen and pad.</p>	<p>Distributors. What I'd like you to do first of all is have a look at what you have already got, or haven't got, for question 1A which asked you to describe the audit procedures you would use to obtain assurance that direct material costs and direct labour costs have been properly determined. I have listed out the mnemonic for different audit techniques, the KOC, so just for five minutes I want you to review what you have already done and add bits in. Take note that (02.39) I have also (clears throat) given you a few tips in a comment box at the side where I have said you have got the questions.... I talked to you before about this, in auditing we have mini cases and the reason that information is there is for you to apply your knowledge to it and prompt you. So, I have put you have information to use here, incorporate evidence from the question into your answer and you will increase your marks'. (03.07)</p> <p>So, away you go, five minutes and then we will discuss some of the points that you have got that cover the assets of that part. So, you've only got five minutes so away you go. (03.23)</p>	<p>The indistinct comment from a student as the tutor distributes the sheet and her response at 01.53 (see left) appears to suggest a student has made a comment about the amount of paper.</p> <p>The tutor is very clear in her expectation of what the students should have done already and what they need to do now.</p> <p>The tutor has spent additional time in producing more resources beyond the student's existing information for Tutorial 17 and she is using this as a 'means' (Norris, 2004) to help scaffold student learning.</p> <p>Interesting that the tutor has put in a comment about 'increasing marks' in one of the comment boxes (see 03.07 left) as a motivator for student learning. This module is an optional final year one but it does carry a professional exemption for successful final year students who will have been applying for jobs, often with further professional aspirations in mind so obtaining exemptions from lower stage professional examinations can be significant for them.</p> <p>In terms of a participation framework (Goffman, 1981), the tutor has quickly established control over the group with minimal evidence of students being distracted.</p> <p>The classroom environment is set up for a teacher training programme, at junior level from the displays in the room, but this does not seem to be a significant distractor (apart from one male BME); it is likely the students are used to the room by this point in the academic year.</p>
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<p>coat (01.35) and puts on a fleece and rolls up his sleeves (01.46). He then takes a pencil from the case in front of him, holds it in his right hand and stretches across the table for the two sheets of paper left by tutor and passes one to his left (02.00). He looks down at the paper and puts pen down on table with his right hand. He continues to look at the paper, flicks it slightly, then looks at another paper on the table and goes back to looking at the sheet. He sits back in his chair looking up at the tutor (02.39).</p> <p>By 02.21, all students have picked up the sheet distributed by tutor and looked at it.</p> <p>Tutor then talks about the sheets handed out; all students are looking down at paper on their table at this point (02.30).</p> <p>As tutor says "Take note..." (02.39), four students raise their heads to look at her (three White males and one BME male).</p> <p>Tutor is standing to right of groups of tables again and looking at a sheet of paper (held in her left hand) as she speaks. She makes very small gestures with her right hand. She removes her glasses (02.47) with her right hand and replaces them (02.50). As tutor continues to speak, she lifts her glasses slightly off her nose as she looks at the sheet of paper in her left hand (03.00 – 03.07).</p> <p>One White male, nearest camera, makes a small gesture with the sheet of paper in his right hand, makes an open gesture with</p>	<p>no extra layer of clothing.</p> <p>Student is engaging with material distributed.</p> <p>Student is comparing what has been distributed with what he has had previously.</p> <p>All students have acknowledged sheet of paper distributed.</p> <p>Tutor is explaining paper to help students.</p> <p>Some students react to tutor's words.</p> <p>Tutor cannot read words on sheet with her glasses on.</p> <p>Student is displaying some concern with information on sheet and makes a perplexed gesture with hand.</p>	<p>Removing coat and putting on fleece. Handling pen. Stretching gesture for paper. Passing paper. Placing pen down. Gaze direction. Flicking paper. Sitting back in chair.</p> <p>Tutor speaking. Gaze direction.</p> <p>Tutor speaking. Gaze direction.</p> <p>Tutor standing. Gaze direction. Hand gestures. Touching glasses. Tutor speaking.</p> <p>Hand gestures. Student speaking.</p>	<p>There is some evidence of stress from the handing out of the tutorial support sheet: initially from the Chinese male student who rocks when looking at the sheet; and from the White male student nearest the camera who gestures with his hands and turns to student on his left after looking at the sheet. Neither of this appears to be noted by the tutor but her intent to get the students working on the question set could mean her support at this stage is not appropriate as she wishes the students to try first.</p> <p>Need to follow up how the tutor provides feedback to the students after they have worked on, and discussed, the question set for five minutes. (See clip below: File 1 from 07.51.)</p>
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<p>File 4: 00.46-03.14</p> <p>Tutor-facing camera Classroom style is tables in groups of two with four chairs around each group. Students: BME male BME female White male White female; Chinese male; Tables; Chairs; Display boards ('How can we make...' with pictures and stickers) Flip chart Display bookcases (one as before in student-facing camera plus another behind flip chart with two globes of the world on top and books on shelves)</p>	<p>his left hand palm up, looks round room briefly then turns to White male student on his right and speaks (indistinctly). He turns the sheet of paper slightly to his left and makes another open gesture with his left hand palm up. (03.23). One BME male keeps looking up briefly at the student-facing camera. He does so at 00.58; 01.09; 01.16; 01.28; 01.45; 03.00; 03.18 (and he moves away to another seat out of camera shot at 03.44).</p> <p>Tutor is standing with her back to the Display board ('How can we make...'), holding paper in her hands and speaking. Male BME student standing is looking behind him then glances at tutor before taking seat. White female student has a book open on table in front of her and is turning over pages. She stops and closes book, pushing it away from her as she looks up at tutor. (00.54). Male BME student is making occasional glances up to his right then looks down at table, handling papers and flicking through them. He bends over the papers and holds pen in his left hand with one end in his mouth. Male BME student (last to sit down) stretches down to his left and brings out a pad of paper he places on table in front of him. (01.03) Tutor is mainly looking down at the papers in her hand, while speaking, with occasional flicking of her eyes towards students and once towards the camera. When tutor talks about 'two different styles', she moves her right and left arms in an</p>	<p>turning to student for potential help.</p> <p>Student is concerned he is directly in view of camera and eventually moves out of shot.</p> <p>Tutor is getting the tutorial underway. Tutor looks organised with papers in front of her ready for the class. Student is responding to tutor's desire to get tutorial underway. Student is reading about topic. Student is distracted by the vibrancy of display in the room which are unconnected to the topic of the tutorial, but resumes focus on papers on table. Student is preparing for work. Tutor is focusing on papers more than students while speaking. Tutor displaying some animation.</p>	<p>Handling paper. Hand gesture.</p> <p>Gaze direction.</p> <p>Tutor standing. Tutor speaking. Tutor holding papers. Gaze direction. Student turning pages. Moving book. Gaze direction. Gaze directions. Student stretching. Student handling paper. Gaze direction. Arm movement.</p>	<p>More facial expressions are clear from this camera angle and the tutor, while speaking firmly to students does display humour and her commitment to supporting their work (from the tutorial support sheet) is clear. There is a clear expectation that students must do the work from the tutor's speech. The tutor and at least one student seem to be displaying some agitation which may be due to the cameras in the room. Further clips needed to see if this settles down. (one student in student-facing camera clip above does move seats just outside the time frame of this clip and he will not appear again in either the tutor-facing or student-facing cameras). The tutor seems to understand the need for students to be in charge of their learning – self-regulation (Zimmerman, 2002) and future clips will show if this is realised in action. The participation framework (Goffman, 1981) appears mainly whole with a layout that would encourage student peer discussion and support for 'joint action' (Blumer, 1969). There has been no disruptive behaviour in the first few minutes of this class (unlike Module A).</p> <p>Tutor: We'll get started as it's quarter past and we are on tutorial 17. We are still looking at exam type questions based on the lectures and the work you have already prepared. We're doing this in two different...well, I'm doing it in two different styles today because we've got the... the first question is again about inventory or stock if you like to call it that (01.13) and what I've done, for those of you who have prepared and those of you who haven't, I've done a tutorial support sheet for question 1 so that we can all think about (clears throat) what we've already got and what we might want to add with a bit of a framework for some of the concepts we should be thinking about. Back to my mnemonics.... again. Student (out of shot): (indistinct) Tutor: You'll be grateful for them in the end. (01.44) OK, so, the first question is Arbroath Electrical Distributors. What I'd like you to do first of all is have a look at what you have already got, or haven't got.</p>
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<p>Table beside flip chart with plastic trays (two blue; one red; one yellow).</p> <p>Tall filing cabinet (as before in student-facing camera).</p> <p>Drinks bottles</p> <p>Tutor standing</p> <p>Piles of paper on tables in front of tutor</p> <p>Papers on tables in front of students (visible)</p>	<p>1</p> <p>2</p> <p>1</p> <p>5</p> <p>2</p>	<p>up and down rocking movement. (01.02)</p> <p>Male BME student (nearest camera) is reaching down to his right and then brings out a pad of paper that he places on table in front of him (01.18). He is mainly looking down with occasional glances to both cameras (he is in shot for both of these).</p> <p>Male BME student reaches down to his left for a bag on floor, opens it and gets out a pad of paper. He opens the pad, flicks over a page and then places it on the table. (01.22)</p> <p>Tutor walks around room distributing sheet of paper. As she approaches the male BME student (nearest camera) she smiles and flicks her head slightly as she talks about 'mnemonics...again' (01.37) and she smiles again at the indistinct comment from a student (out of shot) when she says 'You will be grateful for them in the end' (01.42).</p> <p>BME male student (nearest camera) passes sheet of paper to his right to another student (out of shot).</p> <p>Tutor returns to her original position, puts papers left on table in front of her, looks down and clasps her hands together. Tutor speaks.</p> <p>BME female students is turning over pages of papers in front of her then pushes scarf back from left hand side of her face.</p> <p>Male BME student (nearest camera) sits back in chair and slaps pen down on table. He leans over to his right then comes back upright and picks up a sheet of paper from table in front of him. (02.00). He remains looking down then moves some</p>	<p>Student is getting ready to work.</p> <p>Student is concerned about camera locations.</p> <p>Student is preparing for work.</p> <p>Tutor is handing out material for students to use during tutorial.</p> <p>Tutor displaying humour.</p> <p>Student handing paper on to a student who cannot reach it.</p> <p>Tutor resuming control from her original position.</p> <p>Student is looking over the papers for tutorial.</p> <p>Student displaying some agitation.</p>	<p>Student stretching. Handling paper. Gaze direction.</p> <p>Student stretching. Handling paper.</p> <p>Tutor walking. Handling out paper. Facial expression, smiling. Tutor speaking.</p> <p>Student passing paper.</p> <p>Tutor standing. Handling paper. Speaking.</p> <p>Student slapping pen on table. Leaning. Sitting upright. Gaze direction.</p>	<p>for question 1A which asked you to describe the audit procedures you would use to obtain assurance that direct material costs and direct labour costs have been properly determined. I have listed out the mnemonic for different audit techniques, the KOC, so just for five minutes I want you to review what you have already done and add bits in. Take note that (02.30) I have also (clears throat) given you a few tips in a comment box at the side where I have said you have got the questions.... I talked to you before about this, in auditing we have mini cases and the reason that information is there is for you to apply your knowledge to it and prompt you. So, I have put 'you have information to use here, incorporate evidence from the question into your answer and you will increase your marks'. (02.58)</p> <p>So, away you go, five minutes and then we will discuss some of the points that you have got that cover the assets of that part. So, you've only got five minutes so away you go. (03.14)</p>	<p>Thematic contribution to Table 4.1:</p> <p>Identity interactions: Community of Inquiry</p> <p>Non-verbal mediators: space design/objects affordances/facial expressions/gestures</p> <p>Teaching-learning engagements: rapport/empathy/participation frameworks/joint actions/behaviour/cognitive engagement/means</p>
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		<p>turning over pages until 02.50. He then briefly glances to his left then puts his head on his right hand with elbow on table. His pen is in his right hand. He then moves his hand to cover his mouth, still holding the pen. (03.06). He again glances to his right and then left, still holding hand over his mouth with pen. This student does not look at the tutor.</p> <p>Tutor remains looking down at the table as she speaks about the task. She looks up briefly twice towards students. She rubs her hands together as she comes to the end of her instructions.</p> <p>She walks slightly to her left then right, still rubbing her hands one over the other and speaking.</p> <p>As she says 'Take note' (02.31) she picks up the original sheet of paper, puts it back down, then picks it up again as she raises her glasses from her face to read the sheet. (02.36). She replaces her glasses at 02.42, moving slightly to her left as she speaks. She holds the paper in her left hand and speaks looking up at the students. Tutor is making small gestures with her right hand as she speaks. She again raises her glasses to read the sheet (02.52). She replaces her glasses after reading out words from the sheet. Tutor then moves to her right holding the paper and speaking, looking around the room. Tutor then returns to the table, places the sheet on the table in front of her and clasps her hands. (03.14)</p>	<p>Tutor is focusing on papers more than students as she continues speaking.</p> <p>Hand gestures indicate some relish for students getting on with task.</p> <p>Tutor is restless.</p> <p>Tutor is emphasizing a point.</p> <p>Tutor is long-sighted so needs to remove glasses to read close work.</p> <p>Further display of animation.</p> <p>Tutor is now looking at all students.</p> <p>Tutor is signalling she has ended her talk and students are now to take action.</p>	<p>Hand gestures to face. Gaze direction. Holding pen.</p> <p>Gaze direction. Tutor speaking. Rubbing hands.</p> <p>Tutor walking. Rubbing hands.</p> <p>Tutor speaking. Handling paper. Moving glasses.</p> <p>Gaze direction.</p> <p>Hand gestures.</p> <p>Moving glasses. Speaking. Tutor walking. Holding papers. Placing papers down. Clasping hands.</p>		
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Table 4.10: IG5; initial set up Module B

Unlike Module A, there was no evidence of disruption to participation frameworks from students. At this point in the video, the tutor seems to have established quick control of the tutorial (*identity interactions: situated identity*), has provided artefacts to support students develop their own understanding (*non-verbal mediations: objects affordances*) (tutorial support sheet; mnemonics) and has focused these final year, honours level students on how to obtain marks, which would be of significant interest to them at this stage in the programme (*teaching-learning engagements: engagement-alienation spectrum*).

The tutorial then progresses to go through the set questions the students should have prepared answers for, but Tutor B also allows them a five-minute period for discussion in their table groups (*identity interactions: Community of Inquiry*) before leading them (*identity interactions: situated identity; teaching-learning engagements: joint actions*) through an intended discussion on each part of the questions.

The IG analysis then selects subsequent clips focused on evidence of how the tutor is supporting learning and reacting to student enquiries, particularly evidence of 'objects' affordance' (RQ1a; RQ1b; RQ1c; RQ1d; RQ1e; RQ2a; RQ2b). An example of this is presented in Table 4.11 below.

Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = student-facing camera; Blue font = tutor-facing camera)	Interpretant-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Action focus	Speech	Research object
	Materiality	Explanation of columns: coding categories definitions			
Chosen moment	List	Element/Composition Action Denotation – describes what is happening; e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Element/Composition Action/Connotation - assigns socio-culturally elaborated meaning to denotation in the context of the videoed scene (here classroom setting).	Transcription of speech	Anchorage and Elaboration – Elaboration explains what is seen from the Anchorage in the context of the RQs and visual evidence coded in previous columns. It provides the basis for inferences, generalization and critique; it supports making conclusions about the visual data, as linked to RQs.
MODULE B. Tutor support for learning objects' affordances.					
Commonalities with Module A are highlighted in Green; differences are highlighted in Blue.					
	Element/object/artefact/actor	No			
File 1: 07.51-12.32	Student-facing camera – as before	Tutor moves into camera shot as she starts to speak to bring student work to a close. She is looking around the room. White male student nearest camera is looking down at his mobile phone. BME male student (on table with two White males) is drinking from his bottle, head thrown back. Three students are visibly looking towards tutor: BME female, BME male to her right, and the Chinese student. White male with mobile phone puts it away at 08.13. BME male student (on table with BME male who moved out of camera shots) is turning pages and then picks up a pen to write (08.11). BME male (to right of BME female) starts to write after looking up at tutor (08.12). BME male (on table with two White males) is holding	Tutor is regaining student attention. Student not paying attention Tutor has not yet gained all students' attention Student getting ready to focus on work. Student is getting ready to make notes. Student is engaging with tutor's comments.	Tutor waiking. Speaking. Gaze direction. Gaze direction. Holding phone. Student drinking. Gaze direction. Student handling phone. Student handling papers and pen. Student writing. Gaze direction.	Research Questions (RQ) RQ1a; RQ1b; RQ1c; RQ1d; RQ1e; RQ2a; RQ2b This clip has been deliberately chosen as longer than would normally be selected to see how the tutor handles giving feedback to a class on work that has been prepared by students and also following a short (max 5 mins) period where it was discussed by the students in class. The participation framework (Goffman, 1981) should be clear to the students regarding tutor intent; the tutor is trying to initiate 'joint action' (Blumer, 1969 as well as a 'conversational framework' (Laurillard, 2008) to support student learning. The tutor starts by asking an 'open question (i.e. more than one answer is possible) to the whole group and does obtain a swift response from Student 1. However, the response is not an appropriate one in this specific scenario and so it is of interest to see how the tutor reacts to this. Clearly, she needs to turn the answer into something that is more technically accurate, ensure that the other students are not misled by Student 1's answer and yet does not demotivate Student 1.

<p>In terms of learning metaphors, Sford's (1998) Acquisition and Participation metaphors are relevant here. Is the tutor going to use both or allow one to dominate, and which one?</p> <p>Despite what the tutor has set up, with the paper artefacts in support of students along with a flipchart (only used once) and a whiteboard (used frequently), there is a lot of passive behaviour from students who seem content with just acquiring information from other students and the tutor. Only three students actively contribute and one of those only once.</p>	<p>Student handling papers. Gaze direction.</p> <p>Student rocking. Gaze direction.</p> <p>Student leaning, resting head on hand. Holding pen. Gaze direction.</p> <p>Student handling papers. Gaze directions.</p> <p>Gaze direction.</p> <p>Gaze direction.</p> <p>Student handling paper. Writing, Gaze directions.</p> <p>Students holding pens, writing.</p>	<p>Student is finding papers needed.</p> <p>Student displaying some agitation.</p> <p>Student is getting ready to engage; displays paying attention.</p> <p>Student is finding papers needed.</p> <p>Students' attention is gained by Student 1 who is speaking.</p> <p>Students are listening to tutor's reaction to Student 1's comments.</p> <p>Student is writing something down he has found of interest.</p>	<p>papers up by a corner after flicking through pages, then replaces papers on table and looks towards tutor. (08.26)</p> <p>Chinese male is looking toward tutor, is not writing but is rocking slightly backward and forward. (08.26)</p> <p>White male student (nearest camera, student 2) leans forward resting right elbow on desk and resting head on right hand; holding pen in left hand. Looking up at tutor. (08.21)</p> <p>BME male (on table with BME female and two BME males) picks up papers (08.26) and flicks through pages and then looks at tutor before bending head over table again.</p> <p>White male and BME male (on table with another White male) both look up and over towards student 1 briefly. (08.36)</p> <p>During the period following Student 1's response, most students in shot are looking up in the tutor/whiteboard direction but not writing. (08.34-08.51). Tutor is looking at Student 1 direction when she asks her follow up question.</p> <p>BME male (on table with two White males) picks up paper (09.05) suddenly and starts to write with left hand, bent over table then looks up towards tutor/whiteboard then bends over table again to write until 09.24.</p> <p>By 09.45 all students in shot have pens in hands and are writing, except for Chinese</p>	<p>In responding to Student 1, the tutor is careful not to say 'wrong' but elaborates on the scenario to help students come to a more appropriate response. The tutor directs her follow up question to Student 1 by looking in his direction but engagement and reciprocity (Goodwin, 1980) are not achieved as the tutor acknowledges the response from Student 2 who speaks before any response from Student 1.</p> <p>Interestingly, most students do not write after the Student 1 response until after the tutor has responded and elaborated and Student 2 has contributed. This could demonstrate their own self-evaluation and regulation of their own learning as to what is appropriate and what is not. It means students can discriminate.</p> <p>In responding to Student 2 (who has a more appropriate response to Student 1), the tutor is clear in</p>
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<p>male who is still looking up at tutor/whiteboard direction but not holding a pen nor writing.</p> <p>White male (nearest camera, student 2) leans over to his left while looking up in direction of tutor and whiteboard (out of shot). (09.48) He turns briefly to the student on his left (out of shot) then back to looking towards tutor and whiteboard. He turns again to student on his left and draws a circle in the air with his right hand, still holding pen. Then holds pen in both hands under his chin and looks towards tutor/whiteboard. (10.01). He bends over table and starts to write as tutor talks about marks. (10.19).</p>	<p>Students have found something of interest to write down.</p> <p>Student is interacting with fellow student.</p> <p>Student has found something of interest to write down.</p>	<p>Gaze direction.</p> <p>Student leaning.</p> <p>Gaze directions.</p> <p>Hand gestures.</p> <p>Gaze direction.</p> <p>Student writing.</p> <p>Tutor speaking.</p> <p>Student speaking.</p> <p>Gaze direction.</p> <p>Hand gestures.</p> <p>Moving paper.</p> <p>Pointing with pen.</p> <p>Raising hand.</p> <p>Tutor speaking.</p> <p>Student speaking.</p> <p>Student writing.</p>	<p>Student 3 (out of shot): Might get a discount for the bulk.</p> <p>Tutor: Ok..(pause) so we could use enquiry there, couldn't we? (09.36)</p> <p>Tutor: That one you want, could be a confirmation, an inspection, I am not saying you have to put these in but if you are justifying what you are doing and why you are more of what I call target audit work, then you are getting a better quality answer. And the more you write, the more you are going to turn half a mark into one mark, one and a half marks. Ok, so that is on the components. Now, we had a good point over there (10.11). Does anybody want, do you want to clarify what you said about the metre of cable?</p> <p>Student 1 (out of shot): uh, how accurate is the cutting of the cable at 0.5 and are there any wastages which therefore might cause costs. (10.22)</p> <p>Tutor: So, you want to...how would you find out about that given you've got your list of different audit techniques there? (10.37) What do you want to do? You're physically at the premises, we're applying common sense how would we inspect whether we really believe 0.5 metres is a fair... (stops talking and nods at student 2).</p> <p>Student 2: Well, if you just watch someone cutting it into metres and think how</p>	<p>acknowledging his answer and that is demonstrated by her acceptance of it on the whiteboard. The tutor is using the whiteboard as a 'means' (Norris, 2004) to pull students through to understanding more appropriate answers to the scenario set. A pattern seems to be emerging here where the tutor is following up both appropriate and inappropriate responses by further questions designed to lead students through to more complex understanding of the scenario. In terms of Initiation, Response, Follow up (IRF) (Sinclair and Coulthard, 1992, and used by Hardman, 2016), this should be enabling the discussion to develop to deepen student understanding in context of the scenario given.</p> <p>While the tutor is not responding negatively to inappropriate answers, she is clear in praising good answers. This sends a clear message to the whole group as to what is worthwhile in the discussion and useful for developing understanding.</p> <p>The tutor's reference to 'metre of cable' and looking directly at Student 1 refers to information she has obtained as she went around the class before the start of this clip (see notes on clip above of how she traversed the room). The tutor is therefore pulling through information she has gleaned from that traverse to help the discussion in this clip. However, this is not a point that would be clear to the other students as the tutor does not explain the context for the sudden introduction of this point.</p> <p>Student 2 is an example of a student who is fully engaged in the</p>
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<p>process and has self-esteem (as he 'congratulates' himself and 'shows off' to a fellow student). He actively seeks tutor attention by raising his hand (seen in tutor-facing camera, not here) when he wishes to speak, and the tutor response is evident here when she nods in his direction to encourage a response, even though she was not asking him a follow-up question.</p>	<p>many metres they could get out of a spindle. (10.47)</p> <p>Tutor: Observe production process (10.51), agree and wastage. Let's call it usage really good point by the way about wastage. (11.06)</p> <p>Any more for direct materials? (11.12)</p>	<p>Gaze direction. Student speaking. Tutor speaking. Student writing. Gaze direction. Holding pen. Writing. Gaze direction.</p>	<p>Students' attention gained by student comments and tutor response.</p> <p>Chinese student is now writing down something he has found of interest.</p>	<p>White male student (on table with BME male and White male) looks over at student 1 (10.41-10.51).</p> <p>Chinese male continues to rock slightly, looking mainly at tutor, until 10.30 when he picks up pen with his right hand and starts to write. He continues to write, with occasional glances at tutor, until 10.44 then remains looking at tutor and holding pen still in right hand. He resumes writing at 11.07 with occasional glances towards tutor and continues writing until end of clip.</p> <p>White female is either writing or looking up steadily at tutor throughout clip. She rests her chin on her left hand with elbow on desk. The Chinese male and White female, on the same desk, do not look at each other nor speak.</p>	<p>It is interesting that the tutor comes back to Student 1 who gave an inappropriate answer to the tutor's first question by praising him here for a good point about wastage.</p> <p>Although only three students have actively engaged in any discussion, there is evidence from student activity, and gaze directions, that students are paying some level of attention. There would be a concern with the Chinese male however, who took some time to start writing and his earlier rocking movements displaying some agitation. The tutor has ignored this, although he was the first student she approached in the previous clip as she traversed the room before the feedback session. It is likely the student is a direct entrant to the final year and his language skills are not sufficient. There are other strategies that the tutor could have employed to get a much wider participation in the class, for example, ask each group to say something about the question in turn then pull out the key points from that for a more open discussion. Unlike Module A classroom layout, this one is more likely to encourage discussion</p>
	<p>Tutor: Yeah? (at student 2)</p> <p>Student 2: That you, uh, the correct raw material items are missing in the direct materials list because they might have had a problem with categorisations. (11.25)</p> <p>Tutor: Ok, so it's like... we've got the um, we've got a costing schedule for the cost accounting system haven't we so it's like verify the costing, yeah, to original documents. Excellent. May be discuss with relevant personnel. Great. (11.53)</p> <p>So, if I was (clears throat) obviously I would be expecting you to be writing in full sentences, thinking</p>	<p>Students writing. Tutor speaking. Students speaking. Hand gesture. Student speaking. Tutor speaking.</p>	<p>Students are finding points of interest to note.</p> <p>Student is fully engaged and contributing to class work.</p>	<p>Most students in shot are writing as tutor deals with question set and answers received.</p> <p>White male (nearest camera, Student 2) raises hand again to attract tutor attention when she asks another question (11.15). He gestures with his hands while speaking to tutor.</p>	<p>At the end of this clip all visible student are looking up at the tutor as she talks about obtaining marks.</p>
		<p>Student writing. Gaze direction. Body posture.</p>	<p>Student is paying attention but not engaging with fellow students.</p>		
		<p>Gaze direction. Student speaking.</p>	<p>Students are paying attention to what tutor is saying</p>		

<p>File 4: 07.42-12.23</p>	<p>Tutor-facing camera – as before</p>	<p>Tutor is standing close to flipchart. She is holding a marker pen in right hand and papers in her left hand. She scratches the back of her head with her right hand as she speaks. She is looking around the room.</p> <p>BME male (at table with two White males) drinks from bottle. (07.47) then places it back on table (07.50). He then handles papers on his desk, looking down.</p> <p>Tutor moves back a bit and to her left and looks up at whiteboard (out of shot).</p> <p>Tutor moves to flipchart and points to it generally with her right hand as she holds papers in her left hand. She then moves to the whiteboard as she speaks (07.55).</p>	<p>Tutor is signalling she is ready to move class on to their answers and discussion.</p> <p>Tutor gesture indicates some relaxed attitude.</p> <p>Student is relaxed but getting papers ready.</p> <p>Tutor's gaze directs student gaze.</p> <p>Tutor is attracting student attention to flipchart.</p>	<p>Tutor standing Holding pen and papers. Hand gesture. Gaze direction. Student drinking. Handling bottle. Handling papers. Gaze direction. Gaze direction.</p>	<p>about, we've got 10 marks there to play with...uh..based on, based on expanding the detail 'cos I've only got brief notes here. Um. I might as well mark it on the board. If you went into more detail and more examples (clears throat), ..one, two, three, four and a half. Going great guns already. (12.32)</p>	<p>between peers albeit in groups of maximum of 4 around two tables. While there is evidence of this in the previous clip, when students were allowed max 5 mins to discuss the question previously given, the layout is not used to similar effect once the tutor has taken back control of the class when working on feedback. Physical layout/design is not a well understood area in HE and would need further research (Temple, 2008; Stables, 2014 in Semetsky and Stables (Eds), 2014).</p> <p>A final comment relates to the tutor's language when emphasising about obtaining marks. As has been noted, this is a professionally accredited module and there will be a 70% weighted examination. As it is not very numerical, these accounting students may be struggling more with a conceptual, discursive approach. This, therefore, may be a deliberate use of language by the tutor to keep and maintain student interest.</p>
			<p>Tutor: OK, Let's, let's try to populate something on the board and don't forget to try to add to your notes as well when people say valid points. There are a number of issues here. We can use the information in the question (turns to flipchart here) or as I have used in the tutorial support sheet, we have got to split (Turns to whiteboard here) The question is asking you for audit evidence about the materials and the direct labour. So, by reading the question carefully, already you should be able to split it down and think about maximising your marks (08.11). So, has anybody got an audit test they would like to give me or a procedure for the materials given what you have got in</p>	<p>The tutor spends all the time in this clip at the 'front' of the room nearest the flipchart (in shot) and whiteboard (just out of shot). Her gaze directions give comprehensive cover of the classroom when not looking at notes or flipchart/whiteboard. She also looks directly at certain students when she is responding to either their willingness to contribute or asking follow-up questions. While engagement and reciprocity (Goodwin, 1980) are effective in some cases here (see also student-facing camera comments above), it is likely that the tutor does not use the techniques of the student who makes no contribution.</p>		

		<p>As tutor talks about 'maximising your marks' (08.11), two students are looking up (White male and Chinese student). All other students in shot are looking down at tables.</p> <p>Tutor is looking around the room as she stands between flipchart and whiteboard having asked students for an audit test example. (08.22)</p> <p>As student 1 responds, the White male (who was looking up when tutor talked about marks) turns to his right to look at the speaker. He then looks down and writes briefly on papers in front of him with his left hand.</p> <p>White female student is now looking up at tutor resting her head on her left hand, elbow on desk (08.40).</p> <p>As student 1 responds, the tutor initially turns towards the Whiteboard holding her pen in her right hand as if about to write, then turns back to look at Student 1. The tutor speaks to Student 1, with a neutral facial expression, wobbling her pen up and down in her right hand, looking down at her papers. As she stops speaking at the end of her follow up question, she raises her head looking at Student 1.</p> <p>After student 2 responds, the tutor turns to the whiteboard to write on it. (out of shot). (08.52)</p> <p>White male (on table with BME male and White male) starts writing (08.53) looking up occasionally and stops 09.18. Other White male on this table handles papers (08.22) and starts writing at</p>	<p>Most students are not obviously reacting to information about marks.</p> <p>Tutor is inviting comments from students.</p> <p>Student's attention is towards student who is first to respond.</p> <p>Student is making some brief notes about what is being said.</p> <p>Student is paying attention to tutor's speech.</p> <p>Tutor responds to student comments.</p> <p>Tutor is acknowledging comments from student 2 by writing them down.</p> <p>Students are making notes and consulting papers as tutor and some students speak.</p>	<p>Tutor speaking.</p> <p>Tutor speaking.</p> <p>Gaze directions.</p> <p>Gaze direction.</p> <p>Tutor standing.</p> <p>Tutor speaking.</p> <p>Student speaking.</p> <p>Gaze direction.</p> <p>Student writing.</p> <p>Gaze direction.</p> <p>Body posture.</p> <p>Tutor speaking.</p> <p>Tutor writing.</p> <p>Students writing.</p>	<p>the question. Something nice and simple. (08.22)</p> <p>Student 1 (out of shot): Enquiring with the suppliers about the cost of the raw materials. (08.25)</p> <p>Tutor: Ok, so so you are saying enquiring with the suppliers about the cost of raw materials. If you were actually in that audit scenario, let's say you have got component A there for £2.50, (08.40) what would be the most quickest way you could get that independent evidence as an auditor?</p> <p>Student 2 (out of shot): Purchase invoices.</p> <p>Tutor: Purchase invoices, any other sources? (08.52)</p> <p>Student 2 (out of shot): A supplier stock list or something, like a brochure or something that you order from.</p>	<p>In responding to Student 1's inappropriate response to her question, the tutor's facial expression is neutral but the way that she is wobbling her pen up and down as she gives a follow up question, having written nothing on the whiteboard despite an initial approach to it, is a non-verbal communication that his answer is not wholly acceptable. (It is almost if the pen is a proxy for a wagging finger, as an example of embodied action.)</p> <p>Although the tutor's gaze is directed at Student 1 with her follow-up question, the tutor allows Student 1 to respond instead. Student 1 does not make any further comment at this stage, nor ask for any clarification. The tutor is not going back to Student 1 either to make sure that Student 1 understood that the way her follow-up question was answered is more appropriate. However, her non-verbal communication by writing what Student 2 said on the whiteboard was being used as her way of saying this. The fact that few students wrote anything down until the tutor had elaborated, and written on the whiteboard, is an interesting demonstration of how this artefact is being used as the receptacle for 'correct' answers – so the whiteboard becomes the embodiment of what the tutor</p>
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<p>09.13. BME male on his table smooths his right hand over his hair (09.17), looking up at tutor and whiteboard direction, briefly bends back over papers on table, then sits back, smooths hair again and looks towards tutor and whiteboard. (09.28) and writes.</p> <p>Tutor turns to write on whiteboard again after student 2 contributes.</p> <p>Tutor then walks forward to just in front of table with her papers, holding papers in her left hand and pen in right hand, speaking and looking around the room. (09.16)</p> <p>Student 3 responds to question and tutor goes back to whiteboard.</p> <p>Tutor steps back from whiteboard and continues to look up at it (09.36). Then returns to writing on it.</p> <p>Tutor walks between whiteboard and flipchart and back while talking. Still holding papers in left hand and pen in right hand. The tutor looks around the room while speaking and walking with occasional glance at whiteboard.</p> <p>Tutor points to a group (out of shot) (10.02) with her left hand and looks down at papers in her right hand.</p> <p>Tutor turns to whiteboard to write on it as student 1 speaks.</p>	<p>Tutor is acknowledging comments from student 2 by writing them down.</p> <p>Tutor is inviting contributions from the whole class.</p> <p>A new student responds who had not contributed before.</p> <p>Tutor is acknowledging comments from student 3 by writing them down.</p> <p>Tutor drawing attention to herself by her animation.</p> <p>Tutor is pleased with the contribution from this source.</p> <p>Tutor is acknowledging comments from student 1 by writing them down.</p>	<p>Hand gestures. Gaze direction.</p> <p>Tutor writing. Student speaking.</p> <p>Tutor walking, speaking. Holding papers and pen. Gaze direction. Student speaking. Tutor walking.</p> <p>Tutor walking, writing. Gaze direction.</p> <p>Tutor walking, speaking. Holding papers and pen. Gaze directions.</p> <p>Tutor pointing. Gaze direction. Holding papers.</p> <p>Tutor writing. Gaze direction.</p>	<p>Tutor: Yeah, trade price list, yeah. (clears throat) What would be the issue with using a trade price list if they were buying a large volume? (09.16)</p> <p>Student 3 (out of shot): Might get a discount for the bulk.</p> <p>Tutor: Ok..(pause) so we could use enquiry there, couldn't we? (09.27)</p> <p>Tutor: (09.37) That one you want, could be a confirmation, an inspection. I am not saying you have to put these in but if you are justifying what you are doing and why you are doing it, it gives you more of what I call target audit work, then you are getting a better quality answer. And the more you write, the more you are going to turn half a mark into one mark, one and a half marks. Ok, so that is on the components. Now, we had a good point over there (10.02). Does anybody want, do you want to clarify what you said about the metre of cable?</p> <p>Student 1 (out of shot): uh, how accurate is the</p>	<p>accepts and so is a key message to students about what is important and what is not.</p> <p>The tutor's speech is not always clear when communicating and she has some breaks in her speech display (Goodwin, 1980) which can detract from the student's 'meaning making' (Bruner, 1990). Evident at 09.37 and 11.44. and up to 12.23. The tutor does most of the talking by far and her questioning of students rarely elicits more than a few words at a time.</p>
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				<p>speaking. Gaze direction.</p>	<p>So, if I was (clears throat) obviously I would be expecting you to be writing in full sentences, thinking about, we've got 10 marks there to play with...uh...based on, based on expanding the detail 'cos I've only got brief notes here. Um, I might as well mark it on the board. If you went into more detail and more examples (clears throat), ..one, two, three, four and a half. Going great guns already. (12,23)</p>	
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Table 4.11: IG6; Tutor support for learning and objects' affordances

After File 1 12.32 (File 4, 12.23), the tutor continues with allowing the students five minutes for discussion in table groups (the tutor goes around the classroom but does not necessarily visit each group of tables) then leads the development of answers, making frequent references to marks students could obtain by specific approaches (*teaching-learning engagements: engagement-alienation spectrum*). This keeps the focus on the tutor, with many students never contributing and passive responses to the tutor's lead (*identity interactions: situated identity; Community of Inquiry*). There is a focus on exam-style questions (the tutor highlighting how to get marks) that the tutor is giving the students to prepare beforehand for discussion during tutorials. While Tutor B has more success than Tutor A in getting students to respond to her questions, only a few students do this, and discussions do not ensue with very short comments from students followed by longer explanations from the tutor (*teaching-learning engagements: monologue v. dialogue/metaphors of learning*). There is evidence of the tutor asking some follow-up questions from a student's response, but these are again very short exchanges before Tutor B provides the full details. Clips that provide evidence of these features are listed in Table 4.12.

Video clips		
File No	View	Time
1	Student	13.20-15.43
4	Tutor	13.11-15.34
1	Student	19.10-21.10
4	Tutor	19.01-21.01
2	Student	00.05-1.31
2	Student	01.37-01.52
2	Student	02.24- 02.33
5	Tutor	00.00-01.26
5	Tutor	01.32-01,47
5	Tutor	02.19-02.28
2	Student	04.12 – 06.19
5	Tutor	04.06 – 06.13

Table 4.12 - Use of verbal and non-verbal communication, and objects' affordances, to stimulate student discussion and engagement in the feedback process.

In taking stock of what had been learnt from these clips, it was clear that:

- Tutor B is doing most of the work, hence the participation framework focus is predominantly tutor-based (*teaching-learning interactions: metaphors of learning/surface learning*). When the tutor asks a question and students do not immediately respond, the tutor provides the answer rather than scaffolding the students' understanding from their responses (*teaching-learning interactions: metaphors of learning*).
- The students who respond are few and responses are short; students can 'hide' (*identity interactions: situated identity; teaching-learning engagements: monologue v. dialogue*).
- The tutor is asking follow-up questions to embellish the short student responses but makes no effort to ensure all students contribute (*teaching-learning interactions: metaphors of learning/joint actions/monologue v. dialogue*).

- The tutor is focused on assessment and obtaining marks and this appears deliberate to motivate students (*teaching-learning interactions: engagement-alienation spectrum*).
- The students are content to let the tutor provide the answers and do not ask for further information or initiate discussions (*identity interactions: situated identity/social identity*).
- The tutor is not making eye contact with all students and is not responding to students' body postures as an indication they are agitated/bored (*non-verbal mediations: gaze/gestures*).
- The tutor is not establishing how much students understand and following through to support student learning (*teaching-learning interactions: cognitive engagement*).
- The tutor uses artefacts such as tutorial support worksheets, flipchart, mnemonic sheet and whiteboard to support learning and employs an iPad to capture images of work she has done for the students. The tutor is generating the knowledge and not the students. Arguably, artefacts may not empower students but make them dependent (*non-verbal mediations: objects affordances*).

Subsequently, clips were only analysed for different features arising and the most interesting difference that occurred was how the tutor reacted when students give wrong answers or demonstrate misunderstandings. She appeared to find it difficult to deal with responses that were clearly incorrect. This is evidenced in the video clips in Table 4.13.

Video clips		
File No	View	Time
3– Table 4.14 analysis 6	Student Tutor	00.30-00.58 00.21-00.49
3 6	Student Tutor	03.21-03.35 03.13-03.27
3 6	Student Tutor	04.48-06.41 04.40-06.33

Table 4.13 - Video clips of dealing with student errors/misunderstandings

Video moment	Representamen-led ORI (Black font = student-facing camera; Blue font = student-facing camera; Blue font = tutor-facing camera)	Interpretant-led ORI (Black font = student-facing camera with sound; Blue font = tutor-facing camera with sound; Red font = student-facing camera without sound; Green font = tutor-facing camera without sound)	Action focus	Speech	Research object
Chosen moment	Materiality	Element/Composition Action Denotation – describes what is happening: e.g. people in action ascribing basic meaning to those actions, that is the 1 st level of meaning, the descriptive meaning, without getting into socio-culturally elaborated meanings within the context.	Explanation of columns: coding categories definitions Naming and listing actions for analysis	Transcription of speech	Anchorage and Elaboration – Elaboration explains what is seen from the Anchorage in the context of the RQs and visual evidence coded in previous columns. It provides the basis for inferences, generalization and critique; it supports making conclusions about the visual data, as linked to RQs.
MODULE B. Tutor dealing with student misunderstandings. Commonalities with Module A are highlighted in Green ; differences are highlighted in Blue .					
File 2: 06.19-22.01 File 3: 00.00-08.14 (end of tutorial)	Element/object/actor Student-facing camera - as before	Analysis of differences B,C & D: Differences: B. 00.30-00.58 The tutor is seated at the table with the five piles of paper with her back to the front of the class. Her hands are clasped in her lap and her right leg is crossed over her left leg. She is looking around the classroom as she says 'anything else'. The students are sat in their usual groups around tables. All students in shot re looking down at the papers on the tables in front of them except for Student 3 who is looking directly at the tutor throughout the clip, pulling slightly on his moustache and beard with his left hand while his right arm is crossed in front of his body and his right hand rests on his left upper arm. When Student 2 speaks, the tutor looks at him, and then looks forward then back to look at him again. The BME male with back to window (on table with Student 5) looks up and over at Student 2. Then the White female looks up	The tutor is adopting a relaxed body posture, ready to receive student responses. The tutor is looking around the room to encourage participation. Students are not making eye contact with tutor. Student is paying close attention to what tutor is saying. Tutor is confused by Student 2 response.	Tutor sitting down. Body posture, clasping hands and crossing legs. Gaze direction. Tutor speaking. Students sitting. Gaze directions. Student speaking. Gaze directions. Student 3 gaze direction.	Research Questions (RQ) RQ1a; RQ1b; RQ1c; RQ1d; RQ1e; RQ2a; RQ2b. The most interesting difference that occurs in the remainder of the tutorial's video clips (Files 2 and 3) is how the tutor reacts when students give wrong responses. While the tutor is generally encouraging and intends to be supportive with use of artefacts, she finds it difficult to deal with responses that are clearly incorrect. The analysis below is therefore only from File 3 – Differences B, C and D. Only Difference B selected here as an example. The first of these differences occurs in File 3 at 00.30-00.58 (Difference B). The dialogue for Difference B shows how the tutor's language is far from clear with fragmented phrases and sentences and she does not come out and say clearly that the answer is incorrect. The fragmenting of her sentences detracts from meaning (Goodwin, 1980) and it is unlikely the students had a clear understanding of the technical point. It is noticeable that there is a lot more cross-classroom gaze going on between students as they look around and at each other as the
				Difference B dialogue: Tutor: Anything else? Student 2: Bankruptcy Tutor: Bankruptcy? (word stretched out at end). Student 2: As in they can't pay you. Tutor: Yep (said quickly). .um. .yep. .ooh. .one. .there might be an issue with the debt being bad but .the .it might be it is just an old debt. .Yep. .Yep. Um, one of the other issues would be where, um, it might be that it has been misposited.	

<p>and over at Student 2. The BME female looks up briefly at Student 2 then over to tutor then back to her papers. The White male with back to wall on same table as Student 4 looks over to Student 2 briefly, down to his papers and then up at the tutor. Student 4 looks up at Student 2 briefly then across to the tutor as she continues to speak. Student 3 then looks up at the tutor.</p>	<p>Students' attention has been gained by Student 2's response.</p> <p>Student looks at tutor to see her reaction to Student 2's response.</p> <p>Student's attention has been gained by Student 2's response. Student then looks at tutor to see her reaction to Student 2's response.</p> <p>Student's attention is focused on tutor to see how she will react to Student 2's response.</p> <p>Tutor's facial expression shows puzzlement and her neck movement plus facial expression is a non-verbal indication to Student 2 to explain more. Tapping fingers indicates agitation.</p> <p>Tutor breaks eye contact with Student 2 to think how to respond and so pauses before she speaks again.</p> <p>Student 4 is fidgeting and looking at tutor as she speaks to focus his attention on her explanation.</p> <p>Student is not interested in tutor dialogue any more.</p>	<p>Tutor speaking.</p> <p>Gaze direction.</p> <p>Tutor speaking. Gaze direction. Facial expression, frowning. Body posture, bending neck forward/inclining head. Gaze direction. Body posture, unclasping hands, gesturing. Tutor speaking.</p> <p>Body posture, hands to face. Gaze directions.</p> <p>Tutor speaking. Gaze direction.</p>	<p>tutor stutters through her 'explanation'. The tutor also displays agitation from the way she is tapping her fingers as she deals with Student 2's response. Her frowning facial expression and varied gaze as she looks in one direction and then in another are further non-verbal indications of her agitation. It may be that she is more disconcerted as Student 2 is one of the main contributors in class during this tutorial and generally makes valid points.</p> <p>The manner of Student 3's unbroken gaze at tutor indicates some level of scepticism at what is being said by her.</p> <p>In addition to her fragmented sentences detracting from meaning (Goodwin, 1980), the tutor repeats variations of the word Yes (Yep, Yep) AFTER the student has spoken and that may further mislead the other students. In technical terms, the student's answer is wrong but the tutor neither explains this clearly nor uses language that avoids verifying the student's answer. There is little 'joint action' here (Blumer, 1969) to support students' meaning-making (Bruner, 1990). What concerns me also is that the students do not ask for clarification following a student-tutor interaction that was far from clear. Not even Student 2, who is usually a coherent and correct contributor comes back to ask questions of the tutor. What does this say about the students' own view of their agency and confidence let alone their ability to build up cognitive engagement (Fredricks et al.)</p> <p>However, the non-verbal response of the other students is that they are not writing anything down. This may be due to their own self-regulation and understanding that this is not an appropriate answer OR sheer confusion at how the tutor has reacted. A significant</p>
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<p>non-verbal response from the tutor when accepting a student's point as valid is writing this down either on the whiteboard or flipchart and the tutor did neither – it is likely then that the other students have taken their cue from this and are not recording this answer as it is not considered valid by the tutor even when her verbal explanation used a lot of positive 'yes' words.</p>					<p>File 5: 06.13-22.01 File 6: 00.00-08.47</p> <p>Tutor-facing camera – as before</p>
<p>Difference B: There is little to add to the analysis from the student-facing camera but there is further evidence of the tutor's agitation with her body posture as non-verbal indications of this. The range and directions of her gaze when dealing with Student 2's reply is more evident from this camera angle and she does not make frequent eye contact with him or other students as she stutters through her response. She can be clearly seen putting her finger to her mouth which is a pensive pose as she considers how to deal with this.</p> <p>There are more students looking in the direction of the tutor from this camera angle, compared to what was evident from the student-facing camera. As earlier clips have indicated students may be avoiding the tutor's gaze when she is asking them to respond to questions, the fact that more of them are looking in her direction is a non-verbal indicator they are looking for guidance from her/ are confused.</p> <p>Thematic contribution to Table 4.1: Identity interactions: situated identity/social identity Non-verbal mediators: objects affordances/facial expressions/gaze/gestures</p>	<p>Difference B dialogue: Tutor: Anything else? Student 2: Bankruptcy Tutor: Bankruptceey? (word stretched out at end). Student 2: As in they can't pay you. Tutor: Yep (said quickly). .um..yep..ooh..one..there might be an issue with the debt being bad but ..the it..it might be it is just an old debt. Yep. Yep. Um, one of the other issues would be where, um, it might be that it has been misposted.</p>	<p>Tutor sitting down. Body posture, claspng hands and crossing legs. Gaze direction. Tutor speaking. Students sitting. Gaze directions.</p> <p>Holding bottle. Body posture, tapping bottle on mouth. Student speaking. Gaze directions.</p>	<p>The tutor is adopting a relaxed body posture, ready to receive student responses.</p> <p>The tutor is looking around the room to encourage participation.</p> <p>Students are giving the tutor their attention.</p>	<p>The only analysis here is for Differences B, C and D to follow the analysis in the student-facing camera clips above. (File 6)</p> <p>Difference B: 00.21-00.49 The tutor is seated at the table with the five piles of paper with her back to the front of the class. Her hands are clasped in her lap and her right leg is crossed over her left leg. She is looking around the classroom as she says 'anything else'. The students are sat in their usual groups around tables. This camera angle shows that the White female (head rested on left hand, left elbow on table), the BME male (head rested on right hand) with back to window next to Student 6 (BME female) and the White male with back to wall (on same table as Student 4) are all looking at the tutor. The White male is holding a water bottle in his left hand and taps his mouth with it. Student 2 (out of shot) can be heard speaking.</p> <p>Student 4 looks briefly over to Student 2 (out of shot) then looks at tutor. As the tutor stutters over her reply to Student 2, she looks forward and up at the ceiling. She screws up her face while still looking forward and</p>	

		<p>gestures with her left hand holding it up to her chest. As she starts to speak again after pausing, she gestures with both hands and arms, still looking forward and not at Student 2. The BME female looks over briefly at the tutor then back to papers in front of her.</p> <p>The tutor then turns to look in the direction of Student 2 and continues her reply, ending in 'Yep, Yep'.</p> <p>Student 4 looks over at tutor for several seconds then looks back to papers in front of him. The White male, back to wall, on the same table as Student 4 now looks down at the papers in front of him.</p> <p>The tutor puts her right index finger to her mouth with her left arm hooked over the back of her chair.</p> <p>As the tutor talks about 'other issues' the BME male, back to window (same table as Student 6, BME female) looks over at her. The White male, back to wall, (same table as Student 4) looks over to his right in direction of Student 3 then back to looking at the desk, still holding the water bottle.</p>	<p>gestures indicate concern at his reply.</p> <p>Hand gestures indicate tutor agitation.</p> <p>Student's attention has been caught by tutor.</p> <p>Tutor is now making eye contact with Student 2 and addressing him directly.</p> <p>Student's attention has been caught by tutor.</p> <p>Student is now focusing on papers rather than tutor.</p> <p>Tutor is being pensive in her body posture.</p> <p>Student's attention has been caught by the tutor.</p>	<p>Facial expression, frowning. Body posture, hand gestures. Gaze direction.</p> <p>Gaze direction. Tutor speaking. Gaze directions.</p> <p>Body posture, finger to mouth, arm over chair back. Tutor speaking. Gaze direction. Gaze directions. Holding bottle.</p>	<p>Teaching-learning engagements: rapport/empathy/joint actions/monologue v. dialogue/cognitive engagement</p>
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Table 4.14: IG7; Tutor dealing with student errors/misunderstandings

In dealing with Student 2's response, Tutor B demonstrates agitation and incoherency in her verbal (fragmented speech) (*identity interactions; situated identity*) and non-verbal responses (frowning, tapping fingers) (*non-verbal mediations: gestures*). Student 2, from previous video clips, has been a frequent contributor and normally gave appropriate responses and so this must have been an unexpected occurrence. It is a short exchange, full of incomplete tutor's sentences, and she moves away from the topic by adding in something that is more appropriate at the end of the dialogue section above and is therefore answering the question herself rather than offering it around the room (*teaching-learning engagements: metaphors of learning*).

Significantly, the other students did not write anything down at the end of the exchange, which may be due to lack of verbal meaning-making by the tutor but arguably that she did not write it down as her normal non-verbal acceptance of a valid student point (see clip at File 4: 07.42- 12.23, Table 4.11, for a further example of this point) (*non-verbal mediations: objects affordances*).

4.4.2 Student surveys

Only two students completed a survey; any data is unlikely to give enough representation of views and is not dealt with further.

4.5 Comparison of Case Study data findings

In comparing Modules A and B, variations in findings were expected given the different levels of study; different structures, room layouts, and tutors for the teaching events; and different disciplines requiring a more varied skill set at

final year, honours level. While colour-coding commonalities and differences in Module B's IG analysis sheets, it became apparent that:

- Although Module B's room was laid out in small groupings of students around tables set out rectangularly, there was no inter-group peer communication. (*identity interactions: Community of Inquiry*)
- Tutor B did most of the talking during interactions with students. Questions are to the whole group with a tendency for the tutor to answer her own questions. (*teaching-learning interactions: metaphors of learning/monologue v. dialogue*)
- There was passive behaviour from students who seem content with just acquiring information from listening to other students and the tutor. (*identity interactions: situated identity/social identity*)
- Tutor B did not use gaze direction on students who made no contribution to encourage involvement but will look directly at those who are speaking. (*non-verbal mediations: gaze*)
- Student support artefacts were significant in both modules. Module A has a comprehensive booklet and a whiteboard, used extensively during class; Module B has tutorial support sheets, whiteboard, flipchart and mnemonics, used extensively during class and image captures of whiteboard notes for subsequent use on the VLE. (*non-verbal mediations: objects affordances*)
- Both tutors did not appear to have permitted enough interaction – either between student-tutor or student-student to constitute effective feedback and to allow their understanding of students' cognitive engagement. (*identity interactions: Community of Inquiry; teaching-learning engagements: cognitive engagement/joint actions*)
- Both tutors made little effective attempts to ask students if they have any questions nor do the students take any initiative to ask questions (*identity interactions: situated identity/social identity*).
- Both tutors made themselves available by walking around the room and by standing at the front of the class looking around the room at intervals. (*teaching-learning engagements: rapport/empathy*)
- Students in both modules appeared to lack confidence to 'speak up' when they do not understand. (*identity interactions: situated identity/social identity*)
- Several students in both modules adopted a body posture that has their head resting on their hand with elbow on desk which biased gaze direction downwards. (*identity interactions: situated identity; non-verbal mediations: gaze/gesture; teaching-learning engagements: engagement-alienation spectrum*)
- Both tutors displayed non-verbal embodiment of meaning through gestures and facial expressions (*non-verbal mediations: gaze/gesture*)
- Tutor B makes frequent references to 'obtaining marks' when leading whole class discussions and providing feedback on whiteboard. This would have been of significant interest to honours level students and

used deliberately by the tutor as a “means” to engage them. (*teaching-learning engagements: means*)

- Module B had no disruption to interactions from student behaviour. (*identity interactions: situated identity/social identity*)
- Tutor B's dialogue indicated she seems to understand the need for students to be in charge of their learning – self-regulation (although this was not realised in action). (*teaching-learning engagements: metaphors of learning/behaviour/cognitive engagement*)
- Tutor B asked more questions of the whole class and obtained some responses from a few students. Her questions were more ‘open’ i.e., several answers were possible. (*teaching-learning engagements: surface-strategic-deep learning/metaphors of learning/means*)
- A pattern emerged in Module B where the tutor was following up both appropriate and inappropriate responses by further questions designed to lead students through to more complex understanding. (*teaching-learning engagements: metaphors of learning/cognitive engagement/means*)
- Module B classroom layout of groups of tables in squares/rectangles was more likely to facilitate student discussions. (*identity interactions: situated identity; non-verbal mediations: space design*)

There were more commonalities than differences although there was more activity from students evident in Module B but considerably less than would be expected from honours level students and Tutor B dominated interactions, similarly to Tutor A (*teaching-learning interactions: monologue v. dialogue*).

Chapter 5 now proceeds to discuss and analyse the findings in more detail, continuing the links to themes in Table 4.1, linking to literature where relevant, and considering what support for developing reflective practitioners in Accounting can be determined.

Chapter 5 – Discussion and Critique

5.1 Overview

Given the wealth of detail produced, the case study data has been analysed drawing on the key aspects of *identity interactions*, *non-verbal mediation*, and *teaching-learning engagements* (Table 4.1) emerging from the holistic review and analysis of the videoed teaching-learning interactions and the analysis already presented, including the participants' views for Module A. In adopting this perspective, I am addressing the main aim of this study, reflecting the focus of my SoTL definition and focus in para 2.2, which is to provide insights for tutors' reflections on what is happening in classroom teaching-learning interactions (combining human and non-human objects), so they may develop their own investigations and act in their specific contexts. Links to relevant literature are discussed and example evidence presented from the data to develop discussion. The conceptual perspectives are then revisited from my experiences of this IG analytical approach to video recordings.

5.2 Discussion of Case Study data

5.2.1 Module A

Chapter 4 presented the IG sheets selected from 90 sheets analysed and the information from participants. From this, I have demonstrated how the seminar progressed and isolated recurring themes on which an analysis and link to literature has already been presented (Table 4.1). Given the inter-relationships between the three main themes of *identity interactions*, *non-verbal mediations*, and *teaching-learning engagements*, the discussion progresses holistically as it is not feasible to cleanly separate each main theme.

The initial atmosphere of Module A's classroom, from the analysis of the first three minutes (example: Table 3.1, IG1), was relaxed but identified the classroom environment foregrounded Sfard's (1998) Acquisition metaphor of learning (*teaching-learning engagements*), put limits on peer discussion, set up the tutor's identity as the expert and the identities of the students as passive recipients (*identity interactions: situated identity*).

As the seminar progressed, the ex-cathedra layout did allow the tutor to dominate with little student-student discussion beyond their immediate groups. *Identity interactions* were characterised in two key ways: disruptive behaviour (Jackson et al's (2015) "Laddism", showing their situated identity (Connell, 2010)) from four BME male students; and the passive nature of students in response to the tutor's expert identity. Both can firstly be considered from a *non-verbal mediations* theme regarding space design in classrooms.

Temple's (2008) view, in considering space design as an under-researched area, noted innovative ideas have existed for decades yet there is still a dominance of the traditional classroom despite views that 'teaching and learning should drive design rather than vice versa' (Temple, 2008, 234, citing Jamieson et al. 2000; Jamieson 2003). Nonetheless, the student survey and student interview did not raise issues with this and Tutor A's concern related solely to her physical access to students. In contrast, Module B's room layout was in small clusters of tables; while this may have been slightly easier for students to talk to each other and the tutor to get round to each group, it did not facilitate wider peer discussions and did not prevent the tutor dominating interactions (example: Table 4.11, IG6). Clustering of tables then may be a necessary condition to facilitate *non-verbal mediations* and support *teaching-*

learning engagements, but it is not sufficient. Building on the concept of “clusters”, Smith (2017) evaluated small classroom layouts against the Principles for Designing Teaching and Learning Spaces (Smith, citing Finkelstein, Ferris, Weston and Winer, 2016), concluding that ‘It is only when the geometry of the layout of a space suppresses symmetry and underlying axes that power genuinely moves toward the student’ (Smith, 2017, 65). Without favouring any one layout investigated, Smith highlighted an example of a layout (Figure 5.1) where hierarchy shifted more towards students and, importantly for this study’s context, did not have the tutor as the focal point.

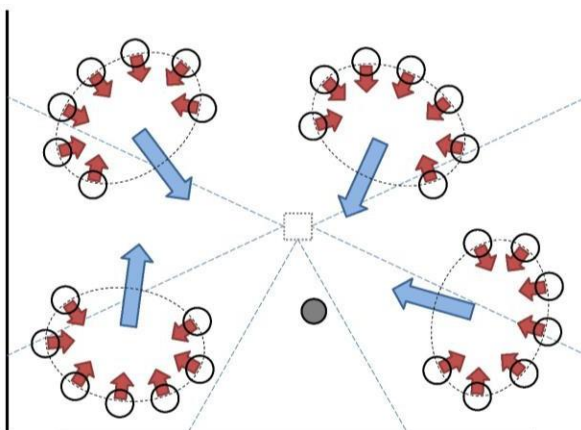


Figure 5.1 – Clustered learning areas, with a decentralised hierarchy and no focal point (from Smith, 2017, 63)

How students react to this radical change to layout is discussed by Smith (2017) and is a further factor for tutor reflection in the context of students in Module A who have come from a school environment where traditional layouts exist (a point made by the two students interviewed). Further ideas for tutor reflection have been provided by Rands and Gansemer-Topf (2017, 31), noting ‘Encouraging the movement of the instructor and students through the space to promote faculty-student and peer-to-peer interaction influences

student engagement'. Physical means of achieving this included mobile chairs and portable whiteboards; in the context of Modules A and B, these may have overcome the lack of student-student interaction and a Community of Inquiry may be more likely to be realised (Lipman, 2003). A word of caution may be needed here in "picking off" space design within *non-verbal mediations* given the identity issues previously noted in Module A; a space design with such flexibility may be exploited by "laddism" identities unless the tutor's re-design of meaning-making from joint actions could overcome this.

I now return to identity as space design does not by itself explain why students chose a seat position, a point researched by Xi, Yuan, Yunqi, and Feng-Kuang (2017). Their findings showed a link between seat position and academic performance and noted 'Students with poor academic performance prefer to sit in the back row, getting worse grades.....Teachers can estimate students' previous scores and enthusiasm for the course according to the students' choice of seating' Xi et al, 2017, 19). This is borne out in Module A as the tutor's description of student abilities rated all students on the back row to be of the lowest ability, with the four BME males there having the lowest motivation and the two BME females there the lowest confidence. Equally, the two students interviewed explained the back row is where students "hide" and engage in activities not related to classroom work (*identity interaction: situated identity/social identity*).

In discussing Social Identity Theory in educational settings and relating this to levels of student engagement, Kelly (2009, 449) noted 'Social identity theories of educational engagement are inherently theories of collective action' and then considered how this can be used to explain why some student groups

engage more. While accepting the complexity of this area, one of Kelly's (2009, 459) conclusions is that 'Problems of engagement are often problems of instruction' citing Ames, 1992. While Kelly's work was at school level, Bluic, Ellis, Goodyear and Muntele Hendres (2011), in adopting a social identity theory approach, looked at HE students and their approach to learning. A similar conclusion was reached: 'by understanding how student identities are constructed and how they work, as well as how they relate to what students 'do' in the context of learning, we can effectively help students in adopting qualitatively superior approaches to learning and implicitly improving the quality and outcomes of their learning' (Bluic et al, 2011, 571).

Arguably, the *identity interactions* in the IG analysis sheets that evidenced disruption from four BME males, back row, (Table 4.3) may have occurred even if a less hierarchical space design existed for Module A. Table 4.4 (IG2) analysed one of the several disruptive events (Table 4.3) to the participation frameworks in the *teaching-learning engagements*. In Goodwin's (2000) terms, actions are understood through a process of juxtaposed mutually elaborating semiotic fields. The *non-verbal mediations* from facial expressions, gestures and body postures, added to speech, work together here to illustrate, and help understand, the unfolding action. The tutor's hesitancy in movement, turning backwards and forwards during this exchange (*non-verbal mediations: gestures/gaze*), and the consequent hesitancy in the ensuing fragmented conversation that follows does not help her assume control. Her "hand on hip" stance could illustrate her irritation although she maintains a pleasant tone of voice and smiles, which is at variance with her *non-verbal mediations: gestures*. Even where there is engagement and reciprocity in gaze (Goodwin,

1980), the students do not comply, finding amusement in the exchange (*identity interactions: laddism*). While gaze direction research indicates action can follow a positive reciprocity (Goodwin, 1980), this is clearly not sufficient for the tutor to obtain engagement and interactional control. In discussing this clip with Tutor A, it became clear she does not like confrontation, does not perceive herself to be strict, and accepted that her attempt to 'pull them back on track' did not work. From the behaviour of these BME male students, their situated identity is revealed in the videos as "jokers" (Connell, 2010) as they display amusement, not aggression (but arguably passive aggression), when interacting with the tutor. This clearly frustrated the tutor who reported she had not realised how much sarcasm she used (*identity interactions: situated identity*).

Further comments about the identity of these BME male students would be speculative and a literature review by Richardson (2015, 287) on the under-attainment of ethnic minority students in UK higher education revealed many unknowns, but differences may result 'from the teaching and assessment practices that are adopted in different institutions and in different academic subjects'. However, that does not address behavioural issues, although these may be subsumed within those very teaching and assessment practices. Some insights come from school-based research with Jackson (2003, 595) reporting "laddishness" may act as a self-worth protection strategy, protecting self-worth and/or social worth from the implications of a lack of ability and from the implications of being seen to be "feminine".

Reinforcement of that social identity and disruptive behaviour was evidenced in another clip discussed with Tutor A (File 5: 05.50 – 07.40; [File 1: 05.50 –](#)

07.40). At this point, the 2nd latecomer arrived, creating another disruption in the *teaching-learning engagements: participation framework* and exacerbated by the BME males through prolonging an exchange with Tutor A culminating in the 1st latecomer slapping his fellow student on the back in a congratulatory manner (*non-verbal mediation: gesture*) as the tutor was walking away from the exchange. Tutor A had turned her back on the students and was therefore no longer a recipient of their embodied actions (Goodwin, 2000) through their amused expressions and the back-slapping (*non-verbal mediations: facial expressions/gestures*). Their “success” was being measured in negative behaviour patterns and not academic achievement. Tutor A viewed back slapping as male bonding, friendship, showing inclusion or possibly dominance, but also dominance over her – ‘they felt they had got one over on me by doing that’ (from tutor interview; “that” = signing in for students not yet in room) (*identity interactions: situated identity/social identity*).

Tutor A’s resumption of the class is resigned – a battle lost with “laddism” but perhaps a battle that should not have been allowed to occur; she does not look in interactional control. Tutor A was concerned at the lack of engagement by other students as she interrupts the class again. Although the two students interviewed said they were not disturbed, the tutor noticed body postures of some students showing irritation/boredom (*non-verbal mediations: gestures*).

Tutor A’s interview comment that ‘I just got really irritated with the group at the back (the four BME males) and decided to just ignore them because if they don’t want to engage then I will pay my attention to the people who do want to engage’ was not borne out by the analysis of time spent with this group (Table 4.9). Given these students tended to disrupt participation frameworks, display

negative behavioural engagement (Fredericks et al, 2004), and not respond to the tutor's efforts to support them, a strategy that did isolate them from her time may have been tempting. However, a more positive approach to breaking down this collective social identity, perhaps by creating more cross-student group work (facilitated by recreated space design) and so splitting students up may encourage participation more. The two students interviewed did consider Tutor A could do more to facilitate cross-group interactions (*identity interactions: Community of Inquiry*).

Further battles characterising the *identity interactions* with the BME male students were conducted at a *non-verbal mediation* level, relating to their inability to bring the necessary artefacts (graph paper, rulers, pens) to class to enable them to engage with the work in the module booklet. Again, the tutor capitulates and is instrumental in providing these objects, by asking other students to share graph paper. The tutor has lost again, this time due to a *non-verbal mediation* over artefacts needed. The two students interviewed provided a useful insight to the tutor's initial failure to extract graph paper from students reluctant to share with students who are not in their "group" and with whom they have an identity relationship in the classroom. In terms of these male BME students' identities, there seems to have been a shift away from their "joker" identity and attracting some attention from fellow students to being ignored (*identity interactions: situated identity*).

When discussing objects' affordances (Gibson, 1979), the expectation is normally positive in allowing, and enhancing, full participation in the *teaching-learning engagements* but here they were shown to have a negative effect given the further disruption they caused (evidence in File 5: 16.24-16.44; [File](#)

5: 16.24-16.44; File 7: 12.09-12.44; File 2: 27.53-28.19 and File 3 00.00-00.09). The tutor is supporting 'joint action' (Blumer, 1969) in *teaching-learning engagements* by facilitating the male BME students to obtain the artefacts needed but they are not engaging – so the 'objects affordances' (Gibson, 1979; Davitti and Pasquandrea, 2016) are not realised in action and a suspicion is that the students may not really have wanted the graph paper as it was an excuse for their lack of engagement. Whether intended or not, the activity created around obtaining graph paper for the male BME students, back row, was not executed by them and they effectively took interactional control.

I now move to further consider *teaching-learning engagements* and *non-verbal mediations* through objects' affordances in the context of Tutor A's reflections (4.3.4) and interview (4.3.5) on the seminar which revealed how tutors can misunderstand student engagement; while the act of doing something is necessary it is not sufficient for 'meaning-making' (Bruner, 1990). Tutor A considers the act of students filling in gaps in their booklet from information she provides is engagement but there were no follow-up activities by her to establish that there had been a change in understanding, beyond going around the class speaking to each group separately and then finally providing collective feedback by revealing answers. This is just an opportunity for students to remain passive knowing a solution will go up on the OHP screen and undermines students' ability to produce their own knowledge through effort (*teaching-learning engagements: engagement v. activity/monologue v. dialogue*). The exploration of the dimensions of engagement by Trowler V (HEA, 2010, 5), provide useful insights to the *teaching-learning engagements*

encountered in Module A. The behaviour from the four BME males, back row, is well described in Trowler V (HEA, 2010, 4), citing Krause (2005):

For some students, engagement with the university experience is like engaging in a battle, a conflict. These are the students for whom the culture of the university is foreign and at times alienating and uninviting.

Even for those students who are not displaying negative behavioural engagement, there is little cognitive engagement from their detached body postures (*non-verbal mediations: gestures*) in the videos and Mann's (2001) engagement-alienation spectrum shows most students, at some point in the videos, showing withdrawal from the *teaching-learning engagements* (alienation end of the spectrum). Mann's (2001, 8) argument is for a change from 'a focus on surface/strategic/deep approaches to learning (Marton, Hounsell and Entwistle, 1997) to a focus on alienated or engaged experiences of learning'. Tutor A's view that students are adult learners and just have to learn the material (4.3.5) accords with some commentators' views that the onus is on the student and not the institution (or tutor as proxy for the institution) (for examples, see Trowler V, HEA, 2010, 16). And although that expressed attitude is not realised in her going around the classroom to speak to *all* student groups, there is still significant evidence for both negative behavioural engagement and alienation in the videos. Therefore, the quality of the time the tutor spends with the students, or the lack of student interactions beyond their immediate groupings is called into question for part of tutors' reflections on practices.

In Accounting education contexts, the tutor does not obviously display the negative behaviours Stout and Wygal's (2010, 59) investigation of 105 award-winning accounting educators summarised as 'negative or uncaring attitudes

about students and the class; improper preparation and organization; faulty or deficient course-delivery skills; assessment mistakes; and, inflexible/inaccessible demeanor' (in decreasing order of importance to avoid).

However, in looking more closely at the detail of these categories and representative quotes from these educators, there were specific points pertinent to Module A case study data:

'Lecturing without being connected to how well students really understand. My experience is that developing effective dialogue of questions and answers is more effective, which of course is more easily done in smaller classes than in large lecture halls.' (Stout and Wygal, 2010, 68).

'the easiest way to teach is to lecture because everything is controlled' (Stout and Wygal 2010, 71).

"Communication", "Connection" and "Dialogue" were recurring themes in these educators' views of how to engage with students. Clearly, the missing voice here is that of the students in their survey, a point acknowledged in Stout and Wygal's conclusion for future research. Looking at their later paper (Wygal and Stout, 2015), this surveyed the same set of 105 award-winning accounting educators for positive aspects of teaching effectiveness and did not deal with students' views although their conclusion again, frustratingly, included reference to obtaining other stakeholders' views.

Consequently, I looked to Module A's student views obtained from the survey (Appendix 3) and interview and the students reported appreciation for her enthusiasm and preparation for class activities (*teaching-learning engagements: rapport/empathy*). The two students interviewed confirmed this, considering Tutor A was approachable and supportive of students.

Nonetheless, a student perspective here may not actually be the more appropriate if students are content to be passive; the student interview noted a

view that students may not have the confidence to ask even when a tutor shows rapport/empathy. Tutors are making a significant omission if they are interpreting students' "silence" as understanding; even Tutor A's report of her going around the room is not the equivalent of a dialogue crafted to determine whether students are learning, nor does it support extending student peer learning in the whole group. Therefore, even though Tutor A does not display the negative behaviours noted by Stout and Wygal (2010), the impact of her allowing passive students to continue with their behaviour patterns is not the teaching-learning effectiveness being sought. There is a clear case for the class activities to be constructed away from filling in gaps in booklets and looking at Powerpoint presentations to one that actively, and cognitively, engages students in meaning making (Bruner, 1990) with the tutor and a wider range of students than was revealed in the videos. Again, I consider there is a case for the negative affordance of the artefacts the tutor reports as positive help for students i.e. the booklet and Powerpoint display of solutions to work set. These are not empowering the students to make that effort required for accepted definitions of student engagement. Arguably, they have the opposite effect of dampening down student effort as there is little incentive to be other than accepting of what the tutor conveys (*identity interactions: situated identity; teaching-learning engagements: metaphors of learning*).

In considering further factors for *teaching-learning engagements* that do appropriately engage students, Norris's (2004, 133) concept of a "means" (2.6) and Erickson's (2004, cited in Jewitt et al, 2016, 102) consideration of "turning points" (2.6) are worth tutor reflection.

To illustrate points where tutors could reflect, Tutor A's use (or lack of use) of "means" and the existence of "turning points" in the IG analysis sheets have been highlighted below where the tutor missed students' reactions, or lack of reactions, during engagements (all taken from the Anchorage and Elaboration column of IG analysis sheets):

File 5 00.00-00.56; File 1 00.56-01.40

Tutor is animated when speaking evidenced by gesturing. Open gestures. However, tutor is not reacting to her view of the students who are in varying stages of readiness for class participation. There are several participation frameworks in progress in the room.

Tutor does not seem to be aware that using her outline of topic as a "means" (Norris, 2004) to pull the students through into an engaged activity is not wholly effective.

File 5: 08.55-09.55; File 1: 08.55-09.55

Gaze direction of students also indicates tutor does not have full attention so engagement and reciprocity not complete (Goodwin, 1980). Facial expression and body language of female BME student (back row) should be indicating disengagement to tutor.

Tutor's gestures in pointing to booklet and OHP slide are not an effective "means" (Norris, 2004) to improve student focus on the topic and Goodwin's (1986) work on gesture is relevant here. The tutor's pointing gesture is not, contrary to Goodwin's (1986) view, leading to 'substantive contributions to the talk and as a resource for organising orientation to the speaker' (p.39).

File 5: 10.20-11.10; File 1: 10.20-11.10

Tutor is going to some lengths to explain to students where they can find the data and what it is they need to do. Her very detailed explanation and gesturing to the booklet information that she holds in a way so that students can see it, and relate it to their own booklet, is intended to be supportive to engage students with the task set.

Although gaze direction is varied, there does seem to be more engagement with the booklet in conjunction with the tutor's speech, albeit it is rather fragmented. Most students are reacting when prompted to interact with the booklet although the various poses presented by the students could be construed by tutor as too relaxed, or casual, and not ready for any 'joint action' (Blumer, 1969). How is the tutor interpreting the students embodied 'gestures', such as the student with his head on his arm on the table; the student dangling his booklet; and the continuing posturing of the 1st latecomer? Nonetheless, the students do move into engaging with the booklet as the tutor speaks about the next steps and so this did act as a "means" (Norris, 2004) to pull the students through into the next action.

File 5: 00.00-00.20; File 1: 00.00-00.20 (Table 3.3)

Tutor starts 'joint action' (Blumer 1969) by signalling (through moving – non-verbal action) what is coming next and to get attention of students (by speaking – verbal action). Tutor trying to take control of interactions.

Tutor's initiation of a 'course of action' (Jewitt, Bezemer & O'Halloran, 2016) is not being followed by students who have not recognised this 'turning point' (Erickson, 2004, in Jewitt, et al, 2016).

File 5: 05.50-07.40; File 1: 05.50-07.40

The collective identity (Connell, 2010) of the male BME back row students appears to be willing to joke initially (see 00.21 – 00.55 time slot) and so disrupt but also now to challenge overtly. This does have the effect of distracting the tutor away from seminar work. Effectively, the students have produced their own 'turning point' (Erickson, 2004, cited in Jewitt et al, 2016) in the joint action and taken over interactional control.

Evidence that tutor is disconcerted is emerging from her fragmented speech again. Tutor's natural speech display, pauses and restarts (Goodwin, 1980) (see also time slots 00.21-00.55; 00.56-01.40; 1.41-02.10; 02.11-03.00)

File 6: 12.03-13.12; File 2: 05.45-06.54

Tutor's initiation of a 'course of action' on providing feedback (Jewitt, Bezemer & O'Halloran, 2016) is not being followed by students who have not recognised this 'turning point' (Erickson, 2004, in Jewitt, Bezemer & O'Halloran, 2016).

Gaze direction is not at the tutor so gaze and reciprocity is not realised (Goodwin, 1980) and so it is less likely that the students are following what the tutor is saying as they are engaged in other tasks.

Looking at this tutor-facing view, the tutor continues her feedback as a monologue rather than creating the dialogue (Nicol, 2010) noted above as more effective for student learning. The area highlighted in yellow* in the column immediately to the left is an example of an opportunity for the tutor to engage students in the feedback by asking them for ideas why the company may have "had a bad year a couple of years ago". This would have stopped students continuing to be bent over their tables and avoiding her gaze. It is an example of where a tutor could have facilitated a 'turning point' (Erickson, 2004).

* So this ice cream company obviously had a bad year a couple of years ago. Maybe it was bad weather, maybe they had a competitor come in, something like that.

This last clip also provides an example of how Tutor A dominates speech and does not allow students to be co-participants in generating knowledge (*identity interactions: Community of Inquiry*). She continues with her identity as expert and so provides all the answers (*identity interaction: situated identity*).

This 'turning point' would also have acted as a "means" to pull the students through into some higher-level action. Hardman (2016) used an IRF approach to analyse interactions between students and tutors with honours and masters-level engineering students who were studying an accounting and finance module. Far from producing a dialogic exchange, the tutor's approach

resulted in Hardman (2016, 73) concluding: 'Opportunities for high-quality discussion and dialogue between the tutor and students and among the students themselves for developing a deeper understanding of the topic were missed'. Module B showed more exchanges between tutor and students than Module A and this point is further discussed in 5.2.2.

5.2.2 Module B

Chapter 4 presented the IG sheets selected from 80 sheets analysed for Module B. From the selected sheets, I have demonstrated how the seminar progressed and isolated recurring aspects on which an analysis and link to literature has already been presented.

The initial atmosphere of the classroom, from the IG 5 analysis sheets in Table 4.10, was one where the tutor expressed clear expectations on student involvement and preparation for the class. This contrasted with Module A but their contexts for classroom work were very different as set out in 3.2.

Further, no preparatory work was explicitly required for Module A.

As the seminar progressed, it became clear how Tutor B structured the *teaching-learning engagements* around specific questions set previously on which students should have prepared some answers, then allowed five minutes for discussions in their student clusters around tables, which culminated in the tutor then leading a feedback session on appropriate responses. The acceptance of student answers by the tutor were signalled by her writing on either a whiteboard or a flipchart, which became the embodiment of what the tutor accepts (*non-verbal mediations*) and so was a key message to students about importance.

Further comparisons of Modules A and B are provided in 4.5 and this discussion will build more on the areas of difference but also give further evidence for some key commonalities regarding the themes in Table 4.1.

Turning firstly to the differences, Tutor B's speech indicated she understood the need for students to be in charge of their learning – self-regulation; however this was not realised in action (evidenced in Tables 4.9, 4.10, 4.13), although the participation framework (Goffman, 1981) appeared mainly whole with a physical layout of clustering of tables that would encourage student peer discussion and support for 'joint action' (Blumer, 1969) with a clear student focus of attention on Tutor B.

A pattern emerged in Module B where the tutor was following up both appropriate and inappropriate responses by further questions designed to lead students through to more complex understandings. This resulted in Tutor B asking more questions of the whole class and, given the nature of the subject, her questions were more 'open' i.e., several answers were possible. Part of Tutor B's strategy to keep the attention of students was to make frequent references to how to obtain marks and, arguably, should have served as a "means" (Norris, 2004) to pull the students through into engaging more with the work. In conjunction with the significant artefact resources produced by Tutor B to support student learning, it was disappointing to see how few students responded to tutor's questions and how the tutor did not attempt to engage more students directly, given this was an honours level module.

Now looking to key commonalities, Tutor B rather disappointingly showed similar *identity interactions* with Tutor A where tutor's monologue did not

produce co-participation. This was despite the frequency of tutor questions noted above and the tutor's further questioning of the few students who responded. As with Hardman's (2016) findings, the way the tutor structured the dialogic exchanges did not produce meaningful *teaching-learning engagements* for deeper understandings. Tutor B appeared to grasp the ideal of using dialogue as a "means" to pull students through to higher level action but the IRF-type of exchange was not well enough understood to achieve this, and the tutor kept strict control over interactions.

Even with the greater use of *non-verbal mediations* provided by the artefacts for learning used by Tutor B (tutorial support worksheets, flipchart, mnemonic sheets, whiteboard, i-pad images for VLE use), I consider this adds to the evidence for the negative impact of objects' affordances as it conspires with Tutor B's allowance of students to "hide" from her questioning further disempowering their agency to produce their own knowledge. Students are merely waiting for the tutor to produce an acceptable answer that goes on the whiteboard and at that point they will write it down (evidence in Table 4.14). This strikes me as being the non-verbal equivalent of 'monologue' rather than dialogue in *teaching-learning engagements* (Nicol, 2010). Tutor B's action of writing on the whiteboard is another example of a *non-verbal mediation* in the teaching-learning engagements, which is a powerful motivator for students' action although this is not the cognitive engagement sought. This means the tutor cannot know the level of knowledge and understanding of most of the students. The tutor does not appear to have permitted enough interaction – either between student-tutor or student-student to constitute effective feedback (Nicol and Macfarlane-Dick, 2006; Nicol, 2010).

The tutor is not proactive with all students, nor does she seem to notice when other students stop what they are doing and look in her direction when she is interacting with another group. This could be a *non-verbal* attempt by the students to get the tutor's attention if they do not have the confidence to speak up (*non-verbal mediations: gaze*) (evidence in File 2: 00.05 – 04.11; [File 5: 00.00 – 04.05](#)). Similarly, the lack of participation, and the agitation that can be seen in some students (the Chinese male in particular) neither of which are addressed by the tutor may be construed as a *non-verbal mediation* signalling that Tutor B is either not concerned or does not wish to tackle what may be difficult issues with them.

Further, in the feedback sessions, the students are still not asking questions of the tutor to clarify their understanding. This may be due, in part, to the tutor's frequent references to 'getting marks' and the view of the student that the tutor will provide the answers, so a passive response will reward them (*teaching-learning engagements: metaphors of learning*). This is not pedagogically sound as the students are not testing their understanding in generating, sharing and discussing their own data with the tutor and their peers (*identity interactions: Community of Inquiry*). It is, however, understandable that the tutor's reference to marks is also a means to pull students through into higher level actions given the professional nature of the module ***within a signature pedagogy*** where the examination is weighted 70% (*teaching-learning engagements: means*). Assessment is seen as a key driver for student learning (Ramsden, 2003) which Tutor B seems well aware of; this can result in dampening down discussions if not designed well as students can lose interest in all other knowledge other than what will support success in

assessments (*teaching-learning engagements: surface-strategic-deep learning*).

To illustrate points where tutors could reflect, Tutor B's use (or lack of use) of "means" and the existence of "turning points" in the IG analysis sheets have been highlighted below where the tutor missed students' reactions, or lack of reactions, during engagements (all taken from the Anchorage and Elaboration column of IG analysis sheets):

File 1: 07.51-12.32; File 4: 07.42-12.23 (Table 4.11)

There are other "means" that the tutor could have employed to get a much wider participation in the class, for example, ask each group to say something about the question in turn then pull out the key points from that for a more open discussion. Unlike Module A classroom layout, this one is more likely to encourage discussion between peers albeit in groups of maximum of 4 around clustered tables. While there is evidence of this in the previous clip, when students were allowed max 5 mins to discuss the question previously given, the layout is not used to similar effect once the tutor has taken back control of the class when working on feedback.

[Tutor] gaze directions give comprehensive cover of the classroom when not looking at notes or flipchart/whiteboard. She also looks directly at certain students when she is responding to either their willingness to contribute or asking follow-up questions. While engagement and reciprocity (Goodwin, 1980) are effective in some cases here (see also student-facing camera comments above), it is notable that the tutor does not use this technique on the students who made no contribution and so has missed another "means" to pull students through into higher level action.

File 1: 13.20 -15.43; File 4: 13.11 – 15.34

This clip follows the process the tutor has established when giving feedback.

Her overhead question at 15.13 is not responded to so the tutor goes on to answer her own question in terms of what additional information is appropriate. A 'turning point' has been missed here; tutor could have used this as an opportunity for student groups to discuss this specifically and then feedback to the whole class.

Tutor B is unlikely to be aware she is swamping the students and denying their agency to develop cognitive engagement (*teaching-learning engagements*) as she is likely to consider she is trying to be helpful (*identity interactions: rapport/empathy*). Participation frameworks revolve around the tutor, not the students.

As a final point for Module B, I consider there is evidence for a *non-verbal mediation* emerging from how Tutor B responds to students in a variety of ways that would signal what she thinks about students' abilities.

Paradoxically, this can emerge from verbal interactions but revealed from how the verbal interaction unfolds; so the tutor does not explicitly say what she thinks but the manner in which she speaks, and the words she chooses, will give a clear message to others; this can be accompanied by obvious non-verbal means of communication such as facial expression, gesture and/or gaze. As an illustration of this, I am setting out the contrast between IG7 clip (Table 4.14) that covers how Tutor B dealt with Student 2's misunderstanding (labelled Difference B in IG7) and how she dealt with Student 6's misunderstanding (Difference C) in a completely different manner:

File 3: 03.21-03.35; [File 6: 03.13-03.27](#) (Difference C)

The dialogue for Difference C shows a marked contrast with Difference B (Table 4.14) as the tutor is now clearly saying to the class that Student 6's response is not the right one. This is the first time that Student 6 responds (and it is the only time she speaks). It may be that the tutor's much clearer rejection of her answer is due to her view of the student as a non-contributor and one who does not understand what is going on. In technical terms, Student 6's answer demonstrates a fundamental lack of understanding.

There is little to add to the analysis above from the student-facing camera. The non-verbal communication from the tutor here is clearer however, particularly facial expression and hand gestures. Her pleasant, slightly smiling facial expression is in sharp contrast to Difference B above and it may be the tutor expected nothing more from Student 6. What was seen as a hand gesture from right to left from the tutor as she responded to Student 6's incorrect answer was actually an up and down movement of her right arm and hand indicating a negative reaction. This non-verbal communication emphasized the tutor's words as she rejected the student's answer.

What concerns me also is that the students do not ask for clarification following a student-tutor interaction that was far from clear. Not even Student 2, who is usually a coherent and correct contributor comes back to ask questions of the tutor. What does this say about the students' own view of their agency and confidence, let alone their ability to build up cognitive engagement (Fredricks et al, (2004)).

Although there is ample evidence from the IG analysis of Module B that Student 2 is a frequent, coherent contributor, he displays the same lack of agency as Student 6 whose only contribution is the above clip. The key question is what happened in that *teaching-learning engagement* that denied Student 2 his voice? Without directly interviewing him (which was not possible in the timescales), and unable to interview the tutor (due to long-term illness), I can only speculate from the available evidence: on a combination of the tutor's identity as "expert" (*identity interactions*) and dominating interactions and the student's confident view of himself that could not respond to getting something wrong. In evidence of that confidence, there is a clip where I have extracted the analysis under Anchorage and Elaboration to show:

File 1: 07.51-12.32; File 4: 07.42- 12.23 (Table 4.11)

This clip has been deliberately chosen as longer than would normally be selected to see how the tutor handles giving feedback to a class on work that has been pre-prepared by students and following a short (max 5 mins) period where it was discussed by the students in class.

In responding to Student 2 (who has a more appropriate response to Student 1), the tutor is clear in acknowledging his answer and that is demonstrated by her acceptance of it on the whiteboard. The tutor is using the whiteboard as a "means" (Norris, 2004) to pull students through to understanding more appropriate answers to the scenario set.

Student 2 is an example of a student who is fully engaged in the process and has self-esteem (as he 'congratulates' himself and 'shows off' to a fellow student). He actively seeks tutor attention by raising his hand (*seen in tutor-facing camera, not here*) when he wishes to speak, and the tutor response is evident here when she nods in his direction to encourage a response, even though she was not asking him a follow-up question.

In responding to Student 1's inappropriate response to her question, the tutor's facial expression is neutral but the way that she is wobbling her pen up and down as she gives a follow up question, having written nothing on the whiteboard despite an initial approach to it, is a non-verbal communication that his answer is not wholly acceptable. (It is almost as if the pen is a proxy for a wagging finger, as an example of embodied action.)

*Although the tutor's gaze is directed at Student 1 with her follow-up question, the tutor allows Student 2 to respond instead. Student 1 does not make any further comment at this stage, nor ask for any clarification. The tutor is not going back to Student 1 either to make sure that Student 1 understood that the way her follow-up question was answered is more appropriate. However, her non-verbal communication by writing what Student 2 said on the whiteboard was being used as her way of saying this. The fact that few students wrote anything down until the tutor had elaborated, and written on the whiteboard, is an interesting demonstration of how this artefact is being used as the receptacle for 'correct' answers – **so the whiteboard becomes the embodiment of what the tutor accepts and so is a key message to***

students about what is important and what is not. Student 2's confidence is therefore validated by the tutor.

5.2.3 Summary of points for reflection

In summarising the main points, I am considering these from the perspective of tutors who wish to develop their practices in the classroom and reflect on the lived experiences SI can reveal from putting ourselves in the place of others (as revealed by video recordings). I have structured this summary around three distinct aspects of classrooms: physical infrastructure; dialogic interactions (as non-physical structures and agentic forces); and non-verbal communication with a focus on the role of the tutor. It is acknowledged that these aspects are not mutually exclusive, and one can mediate the other. I consider this helps empirical development of Ashwin's (2009a) views on the relations between structural-agentic processes and teaching-learning interactions. My multimodal analysis has allowed aspects of structure and agency to emerge from the fine detail of the teaching-learning interactions; however, it is not a unilateral emergence as 'these forms [of structure and agency] can change depending on the shape of the teaching-learning interaction' (Ashwin, 2009a, 24), highlighting the 'shifting relations' between them (Ashwin, 2009a, 25).

From the IG analysis, there is a clear need to create an atmosphere more akin to a community of inquiry: 'Having education revolve around inquiry requires that the classroom be converted into a community in which friendship and cooperation would be welcomed as positive contributions to a learning atmosphere, rather than be the semi adversarial and competitive conditions that prevail' (Lipman, 2003, 94).

Main points for tutors' reflection

Physical infrastructure

The impact on expectations from walking into a classroom set out in rows with a tutor “station” at the front of class allows students’ identities to be set as receivers rather than co-transmitters of knowledge, even before the tutor has started proceedings. Tutors need to decide what kind of teaching-learning interactions they wish to engage students with, what kind of student identities need to emerge, and then space design should follow. In the classroom environments in this study, tutors need to be alerted to how space design can influence teaching-learning interactions and student identities, and the work by Smith (2017) is a good place to start. There may be institutional barriers and practical barriers to having a common-purpose room reconfigured significantly to suit a specific purpose – Tutor A reported on the effort she had to make to bring about a small change to the conventional layout of her classroom environment, so a significant change would have been beyond her capacity even if she had been made aware of the impact of space design for her expectations of students. Nonetheless, if some of the gains from this analysis are to be realised then flexible designs are necessary; for example, the improvement in student-student communication by making students more mobile in classrooms and breaking them out of their self-selected groupings would be easier to achieve. There may be some reluctance from students, but tutors can set up the expectations. There is evidence from the videos, particularly in Module B that students from one group are very interested in what other students from a different group are saying or indeed what the tutor is saying to them separately.

Further, the artefacts in use form part of this physical structure and this study has shown that, in undoubtedly trying to be helpful, tutors' provision of booklets, slides, tutorial handouts, etc, may unintentionally disempower students from regulating their own learning. Students become too dependent on what the tutor does. A much wider sharing of knowledge and interactions would support a Community of Inquiry more readily.

Of course, this is predicated on tutors appreciating what they can do to structure *teaching-learning engagements* to support students' cognitive engagement, including what such engagement means, *before* consideration of classroom layouts is envisaged.

Dialogic interactions

A fundamental requirement is that tutors need to be more aware that engagement is 'more than involvement or participation – it requires feelings and sense-making as well as activity' (Harper and Quaye, 2009, p.5, cited in Trowler V, HEA 2010). In both modules, students are passive, prepared to accept tutors as experts and tutors effectively conspire in this by not initiating and developing dialogues that force the cognitive engagement of students. In continuing to believe that writing things down from tutors' verbal communication provides "engagement" at any level will negate attempts to redesign teaching-learning interactions.

Physical infrastructure interacts here and how classrooms are arranged does matter (*non-verbal mediation*). As indicated above, this can give an expectation of the participants' identities (or covertly allow them to adopt an unintended identity) and the agency they should be exerting. Tutors may

perceive allowing more control by students as risky as tutors at the centre of interactions are ceding control over developing dialogues, creating uncertainty to events as they unfold. However, at any level in education, it should be permissible for tutors, as well as students, to say “I don’t know” and allow this as an empowering “means” to engage in cooperative fact-finding and deeper understandings to emerge. Equally, tutors being more alert to opportunities to bring about higher-level actions and understandings from the use of “means” and “turning points” would help avoid some of the “dead end” short verbal exchanges that typified dialogue in Module B; even such short exchanges were completely stifled in Module A.

Non-verbal communication

The multimodal approach adopted enabled non-verbal aspects to emerge that, from Module A’s tutor interview, are unlikely to be observed, and understood, during *teaching-learning engagements*. These *non-verbal mediations* can carry meaning for tutors, even to the extent of giving tutors silent feedback on how students are engaging but not all such non-verbal communications were either noticed or responded to by the tutors. For example, facial expressions, gestures and gaze directions, and the non-participation of students may not be understood by tutors as “signs” and as they keep rigid control over interactions, responding more to verbal “clues”.

Equally, tutors can be adopting non-verbal communications “signs” that convey meaning to students and these have been evidenced in both modules.

Such non-verbal communication can act in concert with dialogic interactions or occur independently (when they are arguably more likely to be missed). The

posturing and gaze directions of the four BME male students in Module A provided evidence of both of these occurrences of non-verbal communications. Through this multimodal analysis, looking for communication from non-verbal signs, tutors can become aware of the need to reflect on these occurrences and how they can become more sensitised to them. This would help develop strategies for dealing with this type of communication – or indeed, when to ignore them from students, and be more aware of the non-verbal signals they project as tutors.

Support from a Community of Inquiry

All of this may be difficult to achieve but, even in first year classes, there needs to be an expectation set out early in the programme that a community of inquiry is the principle underpinning their education. From what has been seen and heard, this will be a significant shift. It is unlikely one tutor, acting alone, could bring about such a cultural change and programme teams would need to establish how to do this so there is a commonality, as well as a community, of approaches.

In adopting this in a pervasive manner, some of the issues identified in the IG analysis regarding *identity interactions*, *non-verbal mediations* and *teaching-learning engagements* could become more apparent and therefore be addressed.

It would be naive to believe that individual tutors, or programme teams, can bring about such significant changes without a supporting infrastructure at institutional level. However, even in considering what changes could be made to programmes designed to support those new to HE teaching, or CPD

programmes, Connell's study (2010, 104) gives pause for thought on how best to do this:

'the futility of attempting to assist prospective teachers in modifying their styles of interaction by telling them about contemporary theories of teaching and learning, because such an approach invokes the very style to be modified. Instead, his classroom was a place where conversational storytelling mediated changes in their capabilities, sensitivities, and subjectivities'.

Therefore, our classrooms become **the** site for tutor development and I would argue that this is beyond common peer observation of teaching that can typify current appraisal approaches both within and outwith formal tutor-training postgraduate programmes and ongoing staff appraisals. HE practitioner literature is full of "how to" guides and my experience is that many tutors are aware of at least some of these with a significant number believing that they do emulate best practices.

5.3 Revisiting conceptual and methodological perspectives

5.3.1 SoTL revisited

What emerges is the sheer diversity inherent in SoTL, a point developed recently by Booth and Wollacott (2017) who were less concerned at the lack of accepted definitions given this diversity. They were more interested in conceptualising the domains and contexts of SoTL, reproduced in Figure 5.2:

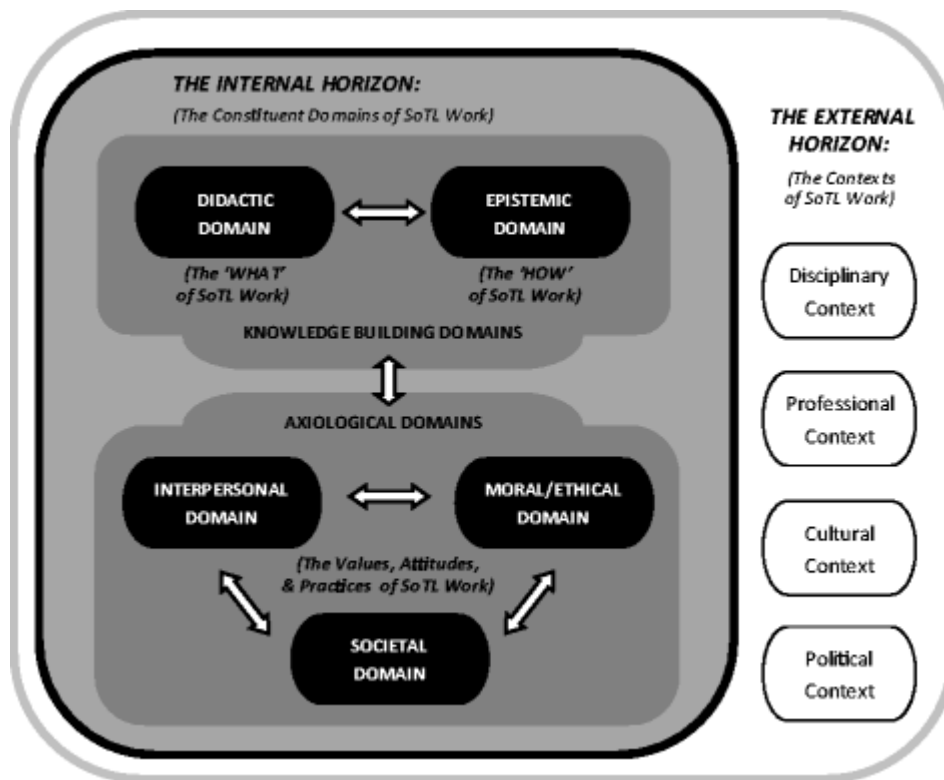


Figure 5.2 SoTL conceptual framework

The conceptual framework, showing the domains of the internal horizon and the contextual factors of the external horizon (from Booth and Woollacott, 2017, 546).

While most SoTL research can be categorised as in the Didactic and Epistemic domains, the axiological impact from the Interpersonal domain, and the external Disciplinary context, are of direct interest to my study.

Definitions can constrain and looking at SoTL more as a framework supports its development. My contribution sits with the Epistemic domain for knowledge production processes by illustrating how observation and analysis of communication in all its forms can be applied and, over periods of time, be supportive of advancing tutors' understandings and teaching practices. In using SI and EduS as a theoretical base, I have allowed the joint actions from SI, inherent in teaching-learning interactions, to be broadened out by EduS to

incorporate the affordance of objects. All of this is to support the construction of meaning and to help tutors appreciate, *in situ*, what can be demonstrated to take place compared to their perceptions during and after the events.

However, in foregrounding SI and its notion of ‘taking the place of the other’ (Crotty, 2013, 84), I am not emphasising individual experiences, as phenomenology would, and so I have lost the individual voice of students other than the two who volunteered to be interviewed. For example, I would have been very interested in the views of the four BME male students in Module A who caused frequent disruption to participation frameworks; similarly, with the many students in Module B who did not contribute to classroom discussions. I could further have allowed participants interviewed to choose their own clips to discuss with me rather than pre-select for them, reflecting only my own perspectives and areas for enquiry.

I did obtain the individual views of Tutor A and it was enlightening to see how her view of the seminar’s “success” altered from her initial reflections to the interview conducted with me. A concern with this reversal is how effectively undermining her confidence in her role is not currently able to be addressed by her as an individual and may result in her withdrawing from exposure to such analysis of actual events. It is to that analysis I now turn to consider its approach and practical application.

5.3.2 IG analysis based on SI and EduS

In terms of being a tool to help tutors think differently about every day events in our classrooms, the reaction of Tutor A to the IG analysis would show that this has been achieved, in her instance, given the reversal of her views.

For my part, the attention needed to the fine detail of events as they unfold, the iterative viewings, and the close recording and analysis of that fine detail in the IG analysis sheets is incredibly revealing of practical nuances but undoubtedly time-consuming. In analysing the data within the IG sheets, it was important to try and be as objective as possible and not speculate beyond the evidence. However, as this is like other qualitative descriptive approaches an interpretative method, one cannot escape subjectivity. This is where an IG helps as it focuses analytical attention on: observation and stating what is seen, then basic and extended descriptions of socio-cultural meanings, and finally a consideration of what conceptual and theoretical insights can be gained from it. It can be argued that the embodied Representamen observation is perhaps most objective part of the analysis that then grounds interpretation of activities. These steps can help other researchers and tutors clearly see where interpretations start to diverge, which can bring useful dialogues. As someone who knows this discipline (reflecting the Disciplinary context within SoTL from Booth and Woollacott, 2017), I was able to make comments about some of the technical aspects of the interactions when coming to a view about the event. I found it difficult to be critical of a colleague and to separate the tutor's approach to the teaching-learning interaction from the words being used technically. However, this is part of the holistic approach; how the students reacted when confusion was created based on the evidence from the videos does require highlighting for the reflective nature of the analysis. Further, from a Disciplinary context, my views of the tutors' approaches accorded with that expressed by Coetzee and Schmulian (2012) and Siefried (2012) who both noted the inherent draw to a more teaching-

centred approach for the professional and practice-oriented Accounting discipline and its signature pedagogies nature, which I have expanded from Shulman (2005) to encompass the many other influences on Accounting from its professional bodies for accreditation purposes. For example, Tutor B's focus on frequently highlighting where marks can be obtained in exam-style questions that dominate assessment in professionally accredited modules such as Module B.

In considering the holistic nature of the analysis for tutors' reflections, I decided to add in the views obtained from students and Tutor A for Module A. I think this is an appropriate addition, where the data is available beyond that from the videos alone (following Kristensen's (2018) concept of "layers"); examples in Chapter 4.

It is a useful means for reflecting on all the information in one place and in specific contexts and I believe that this is a significant contribution provided by an IG analytical approach, and particularly if the perspectives of participants are obtained to add further context to the rich data collected.

In applying the IG analysis approach, I did consider whether it could be enhanced by including "stills" from the videos and by the completion of a diary of the classroom activity by me as observer. I decided against the "stills" as it negates the dynamic nature of events I wanted to capture and could even be misleading as an action unfolds from a starting point but ends at a different point of interpretation. The diary was not possible for two reasons: the pilot showed my presence was disruptive, and I was on sick leave during the scheduled video recordings in any event. I am not confident that the lack of a diary is an important omission; I have valued more the ability to view the

videos iteratively and the act of writing while watching dynamic events could have led to significant omissions.

Further, I think another practical alteration would be to consider merging the Student-facing camera with Tutor-facing camera sheets (where more than one camera is used) to provide an almost 360-degree view – and avoid a significant amount of repetition from the transcription of the dialogue alone. I found that I was referring to tutor-facing within student-facing sections; for example, not clearly hearing dialogue from one view; or an action was not well displayed, and its interpretation was difficult until the other view was seen.

In considering this as a tool that could be used more extensively for reflection and development of practices, Tutor A commented: 'As a one-off it is interesting to know but not as a regular thing, I don't think I'd feel comfortable with that'. The tutor conclusion of a negative view of her teaching seems to have demotivated her from further reflection rather than empowering her.

Clearly, a different approach to how tutors are “sold” an IG technique, with significant support for the time-consuming nature of this analysis is going to be needed. Some options include taking photographs and short videos when observing each other's lessons, and then using the analysis as a reflection tool to inform practice. Applications can be developed in teaching to ask students to engage in interpretation, albeit Accounting is a very specific discipline, so this would be applicable in a small number of cases, but other disciplines in social sciences, arts and humanist could certainly consider the approach for student learning. Going back to the point about re-constructing practices within a Community of Inquiry, I do consider this is a more positive

and supportive approach than a solo effort and more likely to result in sustainable practices.

5.4 Credibility and Dependability

Yilmaz (2013, 312) defines qualitative research as ‘an emergent, inductive, interpretive and naturalistic approach to the study of people, cases, phenomena, social situations and processes in their natural settings in order to reveal in descriptive terms the meanings that people attach to their experiences of the world’. As such, concepts from quantitative research of reliability and validity are re-translated for qualitative research into ‘*credibility, trustworthiness, and authenticity*’ for reliability and ‘*dependability and auditability*’ for validity (Yilmaz, 2013, 319).

Considering how credible and dependable the data gathered is, the detailed and rich descriptions of the classroom settings are all demonstrable from recorded videos as source data and the steps taken to obtain data are set out in Chapter 3. Further, my thought processes on the data collected are laid out in the IG analysis, which makes this easily auditable from another’s perspective; any unconscious bias could be revealed from another’s interpretation of the same data, or indeed add in another perspective which could usefully be discussed by programme teams. I would welcome further interpretations given the recent development of an IG approach (Lacković, 2018).

By adding in the participants perspectives, I was seeking to further increase the credibility of my analysis although the range of perspectives obtained was not what I had anticipated. However, by asking open-ended questions in both student survey and participants’ interviews, I was allowing multiple views to

emerge and discussions to develop all of which added to the richness of the data. What would have taken this further, would have been to allow the participants to choose their own video clips to discuss during interviews rather than my selections, as noted in 5.3.1. However, I can only acknowledge this limitation and leave this for future consideration.

Finally, my own position as head of a department and line manager of academic staff at the time of the data collection may have affected the volunteers but there were two other modules that were recorded than those presented here; this would indicate a lack of undue pressure given the numbers prepared to participate.

5.5 Summary

In terms of addressing Schön's (1987, 28) 'reflection-in-action' and practically dealing with Trowler P's (2012, 273) 'wicked issues' in education, the IG analysis and available participants' voices studied here have enabled me to "gain territory" in finding a single tool to address my aim and SoTL definition with its focus on teaching-learning interactions with a greater potential to develop reflective practitioners than teaching interventions with a specific, but not holistic, target. The proviso is the willingness of tutors to engage with such detailed, and potentially personal, analysis along with a supportive infrastructure at programme and institutional level.

Chapter 6 – Conclusion

6.1 Research contribution to knowledge

My contribution to knowledge is at conceptual and practical levels. First, my thesis contributes to the field of SoTL concerning teaching-learning interactions, with a clear focus on nonverbal communication. Second, I contribute to the approaches of multimodality and symbolic interactionism from the perspective of embodied and material interactions in Accounting education. Third, I make a distinct methodological and analytical contribution by applying a multimodal and edusemiotic method of Inquiry Graphics for analysing videos. This is the first study to apply the method in Accounting practice to such a fine-grained level of detail. Fourth, my further practical contribution is to the practice of seminar teaching-learning that draws tutors' awareness towards the complexity of socio-material practices that classrooms can form (Fenwick, 2010; Fenwick and Edwards 2013). I aimed to provide tutors in both Accounting and across disciplines with insights for their reflections on what is happening in classroom teaching-learning interactions (combining human and non-human objects) so they may develop their own investigations and act in their specific contexts.

An applied research approach to SoTL (my definition and focus in Chapter 2) was adopted and has contributed to its expansion to illustrate how communication (and its absence) is occurring within classrooms and how a methodology that provides a holistic analysis of the fine-grained detail of interactions can reveal where tutor reflection and action may be needed. This investigation is beyond previous research approaches and represents a communication “turn” for SoTL. It expands SoTL with the multimodal and

edusemiotic view on teaching-learning interactions that can reveal to tutors various nuances of practice and how it makes meaning across a variety of modalities and embodied interaction. In taking a holistic view of communication that encompasses the verbal and the non-verbal to include material objects and their affordances led to a novel methodological contribution as to how a holistic analysis can occur. This contribution also directly responds to those (e.g. Ashwin 2009a; Case 2015), who call for not treating teaching and learning as separate processes, and so offers an empirical development on their views that has been lacking.

Further, my study contributes to understanding how communication, in all its forms, is taking place within teaching-learning interactions by explicitly recognising and addressing the multimodal and semiotic nature of communication. It presents a new way of thinking about what is happening in classroom activities, raising issues that could be lost in the moments of those activities and so denying tutors opportunities for reflection.

By clearly demonstrating how teaching-learning interactions can be captured and analysed using a multimodal approach, I am offering Accounting Education a new methodology to “see” what is happening in classroom environments and I would encourage Accounting tutors to undertake their own enquiries in their settings using this approach. From my study, specific areas for reflection (discussed in Chapter 5) emerged regarding physical infrastructure; dialogic interactions; and non-verbal communication. Key messages for Accounting tutors are dealt with in 6.3 but, first, I now address the research questions that directed this study.

6.2 Research questions revisited

By way of preface, the exploratory nature of the analysis of this qualitative research study from its pragmatist approach allows for both broadening and constraining influences on the RQs initially posed. I have reproduced the research questions below, utilising the thematic contribution in Table 4.1, and discussed my findings with them as a framework, acknowledging the overlap particularly with the sub-sets of RQ 1 and 2 from Chapter 1. The IG analysis in Chapter 4 provides links with the RQs from Anchorage and Elaboration, including the sub-sets of RQ1 and 2 and RQ3 is addressed from the information from participants also in this chapter. RQ4 has been partly addressed in Chapter 5 at 5.2.3 and is returned to in 6.2.4 and 6.3.

6.2.1 RQ1: What characterizes tutor-student verbal and non-verbal interaction in teaching-learning interactions in classrooms? In relation to:

RQ1a: tutor use of language to engage students.

RQ1b: tutor and student use of non-verbal communication

RQ1c: students' verbal and non-verbal reactions to tutor behaviour

RQ1d: tutors' reactions to student verbal and non-verbal communication

RQ1e: how tutors' reference prior knowledge during classroom activities to develop student understanding

RQ1f: if students report a 'change in understanding' after teaching-learning interactions?

From *identity interactions*, there is a clear emergence of tutor-centred

approaches characterising teaching-learning interactions from both modules.

The Disciplinary context of Accounting's impact on SoTL work, explicitly noted

in the literature and from the *absence* of research on interactions from my literature searches, appears to have a significant input to SoTL understanding and practices. Shulman's (2005) caution of the vulnerabilities of signature pedagogies to more rigid approaches to teaching, from what can be well-meaning habits further influenced by the pervasive aspects of professional body accreditation explained in Chapter 1, appears to be realised from this study. *Non-verbal mediations*, firstly from space design and also from the identified negative impact of objects' affordances, further hampers effective teaching-learning interactions to bring about engagement. Students are not being empowered to actively engage in in the classroom and "activity" is being confused with **cognitive** engagement by tutors.

Teaching-learning engagements further show that verbal interactions are mainly tutor to student when the point is reached in classroom activities of finding "solutions" and students' reactions do not convey their understanding overtly for tutor feedback; students remain as passive receivers of knowledge from the tutors' didactic approaches, which further entrenches their situated identity. Equally, tutors also react passively despite their domination of verbal interactions; their passivity comes from not dealing with the lack of participation by students and pressing on with the delivery of the curriculum and providing "solutions" so that students could leave with work completed but not evidenced understanding.

Tutors, in pressing on with delivery, are either unaware or ignore the *non-verbal mediation* signs from students from their gestures, gaze directions, and body postures. Even their silence, equally a *non-verbal mediation*, remained unchallenged by both tutors and, although they went around the class to

speak to student groups, individual students could still “hide”; attention to specific groups varied in time spent with them, nor did gaze directions comprehensively encompass all students in the case of Tutor A.

There was no evidence of prior knowledge being brought in for either module to provide context and progression of that knowledge, nor was there sufficient evidence for a change in understanding from student surveys and interview for Module A.

6.2.2 RQ2: In what ways do classroom environments affect teaching-learning interactions? In relation to:

RQ2a: Classroom (spatial) configuration (tutor-student, student-student interaction)?

RQ2b: Artefacts employed by tutor?

The impact of the classroom environment (as a physical and dialogic space), in foregrounding the tutor as “expert”, allowed tutor monologues to develop that were not challenged by either the tutor or the students.

The tutor-centred approach, referred to above, also extended to artefacts in use that served to confirm the tutor as the focal point of interactions and from whom all knowledge is received, confirming *identity interactions* that undermine a community of inquiry. This further emphasised the space design issues in the classrooms for Modules A and B; although they were configured differently, they did not mediate interactions to have focal points other than the tutor and the artefacts provided by the tutor.

The affordance of the objects within classroom environments, as *non-verbal mediations*, in use in both modules did not provide support for students to be co-participants in knowledge production and, it is argued, acted negatively by

disempowering students in their self-regulated learning. These allowed *teaching-learning engagements* to develop that did not challenge the identity of students as passive recipients of knowledge; neither tutors nor students used their agency to alter *identity interactions* that undermined a community of inquiry.

Arguably, the group of four male BME students in Module A used verbal and *non-verbal mediations* to disrupt and distract from the tasks in hand as a means of avoiding effective *teaching-learning engagements*. The absence of artefacts they should have brought to class (such as graph paper, rulers) was used as a power struggle with the tutor, promoting their identities as “laddism” challenging the tutor as “expert” to bring them back on task. Further, their gaze directions, gestures and body postures acted as non-verbal means in disrupting participation frameworks in the classroom. Such *identity interactions* would be difficult for a tutor, in the middle of these classroom environment interactions, to perceive what is happening and reflect in the moment on how to find a turning point to bring the participation framework back to one of effective engagement.

Arguably driven by tutors’ identity as “expert” at the front of the class, tutors were not picking up signs from *non-verbal mediations* that student-student interactions were constrained outside their own groups; that students were disengaging from even minimal activity to support their learning; that students, particularly in Module B, had gaze directions that displayed an active, but unfulfilled, interest in other groups’ interactions with tutor and other groups.

Module B's classroom environment, with regard to dialogic exchanges, revealed issues with honours level students similarly being as passive as foundation level students in Module A; dialogic exchanges were minimal. Students may have been confused, in both modules, but that confusion was not articulated in dialogue nor was the tutor obviously aware of that confusion and so it was not identified to be dealt with during *teaching-learning engagements* when the participation frameworks remained focused on the tutors' identities as "expert".

This identity as "expert" was empowered by the combination of the physical layout of the classrooms, with the focus on the tutor, and the use of artefacts. In both modules, students' main acts were to write down what the tutor wrote, though use of OHP screens and/or flipcharts. This was particularly evident in Module B.

6.2.3 RQ3: What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?

Given only the tutor and students of Module A provided usable information, my response to this question is in that limited context. A further caveat is that the signature pedagogies label I have applied to Accounting, will have continued to be the external influence of the didactic and epistemic domains (following Booth and Wollacott's (2017) SoTL conceptual framework, Figure 5.2) of subsequent tutors the students will have experienced.

Certainly, the initial view of Tutor A changed significantly to one of doubt that she was an effective teacher; a view not shared from the students interviewed nor the information provided in the student survey, and an unintended

consequence of my research. Tutor A was reluctant to repeat the IG analytical approach.

The students interviewed did consider the tutor could do more to engage students and this related mainly to student-student working across groups and dealing with disruptive students, although they were not able to give specific insights into what the tutor could have done for disruptive students (which they did not consider affected them).

Views on whether learning had taken place were indeterminate from both the student surveys and the student interview. This is a key area for future work.

6.2.4 RQ4: What are the implications of the findings in terms of SoTL, Higher Education teaching, and CPD for knowledge development of teaching-learning interactions?

In developing a SoTL framework (such as that in Figure 5.2), my contribution is that more attention needs to be paid to communication in its various forms. Embedding the insights on the multimodal character of communication and the existence of various material elements of interaction can inform new tutors' training and CPD activities as an expanded understanding of SoTL. With regards to this SoTL expansion, by using a novel analytical tool (IG), I have demonstrated the potential of semiotic and multimodality approaches to provide support for tutors' reflection, particularly those highlighted in 5.2.3 regarding the physical infrastructure, dialogic interactions and the impact of non-verbal communications. It is important to discuss with the tutors how all elements of interaction and their layers of meaning are operating in the classroom, as a symbolic space full of meaning-making signs.

From an Accounting Education perspective, the main implication for developing pedagogical practices in HE and via CPD activities is to firstly raise awareness that teaching-learning interactions are being characterised by didactic approaches with the tutor accepting the dominant role and not disrupting the passive roles assumed by students. Student performance is a key metric with pressure on achievement of high grades for league tables and tutors may be reluctant to cede any control of classroom activities, even if they are aware. However, the implication is tutors do not understand that students' behavioural and cognitive engagement is not obtained by tutor-centred environments. This leads to the key contribution of this study with the demonstration of a how a more holistic approach can reveal what may be hidden from tutors as they press on with delivering their curriculum. The multimodal, semiotic approach here, with SI and EduS underpinnings, as a means to reveal a deeper understanding of teaching-learning interactions can take common approaches to investigation (such as peer observation of teaching) to new levels incorporating issues of emerging identities, verbal and non-verbal communications, including re-examining frequently provided artefacts in classrooms for their effective affordances. The adoption of Si and EduS has allowed for a rich description and analysis of what is often taken for granted, and often missed, in classrooms and enabled a focus that has gone well beyond verbal interactions. In making this claim, I am not suggesting that everything has been seen, nor all perspectives obtained and further interpretations, as well as further work, are desirable. I would further caution that the time-consuming nature of the analytical approach here means it is unlikely to be used routinely by individual tutors but could become part of a

SoTL approach that allows for periodic scrutiny, then further development at programme levels.

I do not consider that individual tutors can achieve the changes needed; the structural and agentic issues that have come from investigating teaching-learning interactions in one discipline have wider implications across institutions to include the physical infrastructure as well as the dialogic and non-verbal communication structures of how classroom practices are framed. There are other related issues, not least concerning the use of VLEs, the nature of assessments driving learning, and how they would complement the findings from this study in support of effective *teaching-learning engagements*.

I would advocate for a peer support network at institutional levels that actively supports programme teams to bring about a cultural change to understanding what is occurring in classrooms, with a focus on *identity interactions; non-verbal mediations, and teaching-learning engagements* themes. This would be beyond current peer observation of teaching practices and could usefully be done across disciplines to break out of signature pedagogy dispositions.

There already exists a wealth of resources on SoTL matters; mainstream examples include the UK's Higher Education Academy (now AdvanceHE) and the significant outputs in journals and textbooks on SoTL. This raises issues of how these are accessed by practitioners, or indeed *whether* they are. Such a plethora of resources, not all in one place, is not a practical option for busy academics to access and make sense of, let alone put into practice; hence, my preference for programme teams and peer network support at institutional level.

Given the time-consuming nature of fine detailed analysis, IG analytics would not serve to analyse extensive data as practitioners would not be doing their PhD research. In terms of multimodality and edusemiotics, it was clearly shown that teaching-learning interactions are multimodal practices that happen when human actors are positioned in physical material spaces, using material resources (e.g. handouts, technology). An IG analysis can be easily appropriated to an analysis of short video snippets or photograph taken of practice, in order to bring into a tutor's consciousness the semiotic awareness of environmental complexities that an edusemiotic approach promotes. This can lead to a greater awareness and understanding of the 'wicked' issues encountered to allow for individual and group tutor reflection. As an IG has a conceptual object, this conceptual object acts as a lens with which meanings that happen in the classroom can be observed through. The conceptual object will therefore provide some theoretical notions of why some practices happen, considering for example structure (social relations) and agency (individual positioning), as well as many other issues of power, ideology, favouritism, disruption, exclusion and so on,

A top-down initiative supporting a bottom-up programme team knowledgeable about their operational context and who are empowered to bring about a significant change project is more likely to succeed. So, the use of the analytical approach applied in this study is advocated in CPD and teacher training and reflective practice as applied as mentioned above, on short video examples or photographs as the analysis is flexible in that sense and at key points determined by programme teams. An IG analysis can help teachers understand embodied teaching-learning practices and nuances of socio-

material interactions (Fenwick, 2010; Fenwick and Edwards, 2013). Although this thesis did not venture into tackling sociomateriality, the adopted approaches of multimodality and edusemiotics are related to the field. Future studies that apply an IG analysis or explore embodied and material environment structures can further develop this area.

6.3 Recommendations for Accounting Tutors and Education

There have been many observations for tutors as reflective practitioners from this study regarding classroom pedagogical practices and tutors' approaches discussed in Chapter 5. Although the intent of this study was to present insights for tutors' reflections and develop their own approaches, adopting and adapting the approach demonstrated in this thesis, I can select some key messages for the Accounting Education community in the context of their signature pedagogies that can perpetuate the more didactic approach to classroom activities noted in 6.2.4:

- Tutors need to decide what kind of teaching-learning engagements they wish to engage students with, what kind of student identities need to emerge, and space design should only then follow. Facilitating more student-student communication diminishes the reliance on tutors and so helps move away from didactic approaches. Clearly, these would be different engagements for a large lecture compared to a smaller tutorial grouping.
- Engagement may be confused with activity (examples in the study include filling in sections of handbooks; using mnemonics provided by tutor) and the provision of material artefacts with the intention of

supporting student learning may serve to encourage passive behaviours in students rather than cognitive engagement as they rely on the tutor to provide what is needed, including answers. This reinforces the tutor as the “expert” and a more didactic approach is supported.

- Preventing monologues from the tutor would support more cognitive engagement with students and between students. Ensuring all students are engaging in dialogues and, for example, using IRF-style approaches effectively to follow through meaning-making during discussions and prevent “dead end” short verbal exchanges that typified dialogue in this study.
- Awareness of non-verbal “signs” that can provide silent feedback on how students are engaging and following up on these. Posturing, facial expressions, and gaze directions featured frequently in this study as examples of these “signs” with varying reactions by tutors. Equally, the non-verbal “signs” that tutors can convey can impact on student engagement, and these can contrast with what is being spoken and how it is said. Students reluctance to “speak up” in classroom environments with the tutor displayed (consciously or unconsciously) as “expert” may leave any confusion they feel unresolved.
- A semiotic awareness that a classroom operates with a plethora of signs, which are all various modes that make meaning in communication. Classroom communication signs are diverse and as shown in this study they are an important part of teaching-learning

interactions, and these can be the verbal (speech, writing), the technology, the classroom design, the movement.

Conducting scholarly enquiry of this nature by individual tutors is time consuming and likely to be beyond the resources and time of any one tutor. Consequently, there is an encouragement for Accounting course teams to develop the analysis for staff development and link it to their own approaches so there is a commonality, as well as a community, of enquiry.

6.4 Limitations and future work

Chapter 5 addressed how I might conduct things differently and a significant point for further research is the voice of the students. While I have obtained some evidence, I think this would have been richer if I had been able to capture the student-student discussions in their small groups for both modules, in addition to more students being interviewed and completed surveys (Module B). This would have required more sophisticated equipment to either be able to isolate specific groups or have recording devices at each group; this latter approach may be too intrusive, although only one student out of both modules moved seat to avoid being visually recorded (he contributed to classroom discussions nonetheless).

My absence when recordings were undertaken is not considered a limitation given the outcome from the pilot study on Module B but, given Module B students were in their final year, it was not possible to interview them before or after their final exams. Neither would they have had time for further reflection before interview (RQ3). One of my original intentions was to interview staff and students together when showing them video clips and asking for their

reflective comments but this was not possible giving timings and availability of staff and students. Further, very few students had volunteered to be interviewed.

Generalisations from this single study would be difficult to defend in any hard science manner, but as my approach is interpretivist and represents a case study of an Accounting department in the UK, it can be indicative of the practice across Accounting departments nationally and inform teachers internationally. The novel *method and process of enquiry* as well as the conceptualisation of SoTL practice should be of interest in other institutions and other disciplines, especially in the context of seminar teaching; developments of the approach would be feasible to accommodate other contexts and foci of research interest. Further, I have made several suggestions for how the enquiry tool could be developed (see 5.3.2).

Finally, processes of change take time and transitions for students are equally important as for tutors. Students would benefit from a process of acculturation into HE and taking more responsibility for their learning from their first year so that progression into subsequent years has a strong foundation from which to build up to graduates who are equipped for self-regulation of their learning.

6.5 Summary

Teaching-learning interactions remain as 'wicked' issues. However, I adopted an approach that I hoped would challenge the status quo in understanding the pedagogies of my discipline, Accounting, in an attempt to bring about change based on new evidence presented and would expand understanding of SoTL research. This approach encompasses multimodal and semiotic enquiry to

act as a significant catalyst for tutor reflection on sign-mediated practices that encompass physical, dialogic and non-verbal communication structures. The analysis of teaching-learning interaction videos shed light on the nature and impact *in situ* of identity interactions, non-verbal mediations, and teaching-learning engagements with key areas highlighted for Accounting tutors from the specific analysis here: physical infrastructure, dialogic interactions and non-verbal communications. The thesis calls for a more pervasive, institution-wide support for programme teams to bring about greater reflection on what is occurring in teaching-learning interactions as a catalyst to develop tutors and students into co-participators in their academic endeavours. It is hoped that teams will adopt and adapt this study's approach and analysis as a means to bring about greater understanding and reflection on HE pedagogical practices, recognising their own environments as **the** site for enquiry.

References

- Abhayawansa, S., Tempone, L. and Pillay, S. (2012). Impact of entry mode on students' approaches to learning: A Study of accounting students. *Accounting Education: An International Journal*, 21(4), 341-361.
- Ahmed, N. and Teviotdale, W.W. (2008). Formative assessment in higher education. Conference paper (unpublished) BMAF Annual Conference, 29-30 April, 2008, Edinburgh UK. The Learning and Teaching Agenda in the UK: National Perspectives but Common Concerns? Available at: www.eprints.hud.ac.uk/cgi/users/home
- Akindayomi, A. (2015). Customised assessment group initiative: A complementary approach to students' learning. *Accounting Education: An International Journal*, 24(2), 102-122.
- Alyousef, H.S. and Mickan, P. (2016). Chapter 10. Literacy and Numeracy Practices in Postgraduate Management Accounting. In R. Fidalgo and T. Olive (Series Eds) and A. Archer, and E.O. Breuer (Vol. Eds.), *Studies in Writing: Vol 33, Multimodality in Higher Education*, (216-240). Leiden: Brill.
- Apostolou, B., Dorminey, J.W., Hassell, J.M., and Watson, S.F. (2013). Accounting Education Literature Review (2010-2012). *Journal of Accounting Education*. 31, 107-161.
- Apostolou, B., Dorminey, J.W., Hassell, J.M., and Rebele, J.E. (2015a). Accounting Education Literature Review (2013-2014). *Journal of Accounting Education*. 33, 69-127.
- Apostolou, B., Dorminey, J.W., Hassell, J.M., and Rebele, J.E. (2015b). Accounting Education Literature Review (2015). *Journal of Accounting Education*. 35, 20-55.
- Archer, A. and Breuer, E. (Eds) (2016). *Multimodality in Higher Education*. Leiden; Boston: Brill.
- Ashwin, P. (2009a). *Analysing teaching-learning interactions in higher education: Accounting for structure and agency*. London: Continuum.
- Ashwin, P. (2009b) in Tight, M., Mok, K.H., Huisman, J., and Morphew, C.C. (2009) in *The Routledge International Handbook of Higher Education*. New York and London: Routledge.
- Azarian, R. (2017). Joint Actions, Stories and Symbolic Structures: A Contribution to Herbert Blumer's Conceptual Framework. *Sociology*, 51(3), 685-700.
- Black, W.H. (2012). The activities of the Pathways Commission and the historical context for changes in accounting education. *Issues in Accounting Education*, 27(3), 601-625).

Bluic, A., Ellis, R.A., Goodyear, P. and Muntele Hendres, D. (2011). The role of social identification as university student in learning: relationships between students' social identity, approaches to learning, and academic achievement. *Educational Psychology*, 31(5), 559-574.

Blumer, H. (1969). *Symbolic Interactionism: Perspective and Method*. Englewood Cliffs, NJ: Prentice Hall. [Google Scholar](#)

Booth, S. and Woollacott, L.C. (2017). On the constitution of SoTL: its domains and contexts. *Higher Education*, Vol 75(3), 537-551.

Boshier, R. (2009). Why is the Scholarship of Teaching and Learning such a hard sell? *Higher Education Research & Development*, 28:1, 1-15.

Botma, Y., Van Rensburg, G.H., Coetzee, I.M., and Heyns, T. (2013). A conceptual framework for educational design at modular level to promote transfer of learning. *Innovations in Education and Teaching International*, DOI: [10.1080/14703297.2013.866051](https://doi.org/10.1080/14703297.2013.866051), 1-11.

Bovill, C., Cook-Sather, A. and Felten, P. (2011). Students as co-creators of teaching approaches, course design, and curricula: implications for academic developers. *International Journal for Academic Development*, 16(2), 133-145.

Boyer, E. (1990). *Scholarship reconsidered*. Washington, DC: Carnegie Foundation.

Brooks, J., Farwell, M., Spicer, K. and Barlow, F. (1999). Seminars and Examinations: Students' Perceptions of the Seminar in their Examination Revision Strategy. *Innovations in Education and Training International*, 36(3), 224-235.

Bruner, J. (1990). *Acts of Meaning*. Cambridge, MA: Harvard University Press.

Carillo, E.R., Gonzalez, J.L.C., Martinez, S.M. and Sanchez, L.B. (2015). Discourse Patterns at Laboratory Practices and the Co-Construction of Knowledge by Applying SDIS-GSEQ. *International Education Studies*, 8(11), 253-265.

Case, J.M. (2015). Emergent interactions: rethinking the relationship between teaching and learning. *Teaching in Higher Education*. 20(6), 625-635.

Case, J.M. and Marshall, D. (2009). *Approaches to Learning*, in *The Routledge International Handbook of Higher Education*. New York and London: Routledge.

Coetzee, S.A. and Schmulian, A. (2012). A Critical Analysis of the Pedagogical Approach Employed in an Introductory Course to IFRS. *Issues in Accounting Education*, 27(1), 83-100.

Connell, M.T. (2010). Framing teacher education: participation frameworks as resources for teacher learning. *Pedagogies: An International Journal*, 5(2), 87-106.

Cook-Sather, A. and Abbot, S. (2016). Translating partnerships: How faculty-student collaboration in explorations of teaching and learning can transform perceptions, terms, and selves. *Teaching & Learning Inquiry*, 4(2), 1-12.

Cousin, G. (2009). *Researching Learning in Higher Education – An Introduction to Contemporary Methods and Approaches*. Oxon, UK: Routledge.

Crotty, M. (2013). *The Foundations of Social Research: Meaning and perspective in the research process*. London, UK: Sage.

Curtis, S.M. (2011). Formative assessment in accounting education and some initial evidence on its use for instructional sequencing. *Journal of Accounting Education*, 29, 191-211.

Dallimore, E.J., Hertenstein, J.H. and Platt, M.B. (2010). Class Participation in Accounting Courses: Factors That Affect Student Comfort and Learning. *Issues in Accounting Education*, 25(4), 613-629.

Davis, W.E. and Chandler, T.J.L. (1998). *Beyond Boyer's Scholarship Reconsidered: Fundamental Change in the University and the Socioeconomic Systems*. *The Journal of Higher Education*, 69:1, 23-64.

Davitti, E. and Pasquandrea, S. (2016). Embodied participation: What multimodal analysis can tell us about interpreter-mediated encounters in pedagogical settings. *Journal of Pragmatics*, 107, 105-128.

Ellis, J.B., Riley, M.E. and Shortridge, R.T. (2015). Incorporating face-to-face peer feedback in a group project setting. *Journal of Accounting Education*, 33(4), 317-331.

Entwistle, N.J. (2009). *Teaching for Understanding at University. Deep Approaches and Distinctive Ways of Thinking*. Basingstoke: Palgrave Macmillan.

Erickson, F. (2004) cited in Jewitt, C., Bezemer, J., O'Halloran, K. (2016). *Introducing Multimodality*. London and New York: Routledge.

Fanghanel, J., McGowan, S., Parker, P., McConnell, C., Potter, J., Locke, W., and Healey, M. (2015). Literature review. Defining and supporting the scholarship of teaching and learning (SoTL): a sector-wide study. York: Higher Education Academy.

Felten, P. (2013). Principles of Good Practice in SoTL. *Teaching & Learning Inquiry: The ISSOTL Journal*, 1(1), 121-125.

- Fenwick, T. (2010). Re-thinking the “thing” sociomaterial approaches to understanding and researching learning in work. *Journal of Workplace Learning*, 22(1/2), 104-116.
- Fenwick, T., and Edwards, R. (2013). Performative ontologies: Sociomaterial approaches to researching adult education and lifelong learning. *European Journal for Research on the Education and Learning of Adults*, 4(1), 49-63.
- Fredricks, J.A., Blumenfeld, P.C. and Paris, A.H. (2004). School Engagement: Potential of the Concept, State of the Evidence. *Review of Educational Research*, 74 (1), 59–109.
- Gibson, J.J. (1979). *The Ecological Approach to Visual Perception*. Michigan: Houghton Mifflin.
- Goffman, E. (1974). *Frame Analysis: An Essay on the Organization of Experience*. Cambridge, MA: Harvard University Press.
- Goffman, E. (1981). *Forms of Talk*. Oxford: Blackwell.
- Goodwin, C. (1980). Restarts, Pauses, and the Achievement of a State of Mutual Gaze at Turn-Beginning. *Sociological Inquiry*, 50(3-4), 272-302.
- Goodwin, C. (1986). Gestures as a Resource for the Organization of Mutual Orientation. Downloaded from https://www.researchgate.net/publication/242368299_Gestures_as_a_Resource_for_the_Organization_of_Mutual_Orientation
Accessed 18/11/18.
- Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32, 1489-1522.
- Gordon, G. (2012). It is time to strengthen the conceptual focus of SoTL. *International Journal for Academic Development*, 17:2, 177-180.
- Guney, Y. (2009). Exogenous and Endogenous Factors Influencing Students' Performance in Undergraduate Accounting Modules. *Accounting Education: an international Journal*, 18(1), 51-73.
- Guzmán-Valenzuela, C. (2013). Challenging Frameworks for Understanding Teaching Practices in Higher Education: The End or the Beginning? *Qualitative Research in Education*, 2(1), 65-91.
- Haggis, T. (2009) in Tight, M., Mok, K.H., Huisman, J., and Morphew, C.C. (2009) in *The Routledge International Handbook of Higher Education*. New York and London: Routledge.
- Hallewell, M.J. and Lacković, N. (2017). Do pictures ‘tell’ a thousand words in lectures? How lecturers vocalise photographs in their presentations, *Higher Education Research & Development*, 36:6, 1166-1180,

- Hardman, J. (2016). Tutor–student interaction in seminar teaching: Implications for professional development. *Active Learning in Higher Education*, Vol. 17(1), 63 –76.
- Harper, S.R. and Quaye, S.J. (2009) cited in Trowler, V. (HEA, 2010). *Student Engagement in Higher Education*. New York and London: Routledge.
- Hazel, S., Mortensen, K. and Rasmussen, G. (2014). Introduction: A body of resources – CA studies of social conduct. *Journal of Pragmatics*, 65, 1-9.
- Hodgson, Y., Benson, R. and Brack, C. (2013). Using action research to improve student engagement in a peer-assisted learning programme. *Educational Action Research*, 21(3), 359-375.
- Honn, D.D. and Ugrin, J.C. (2012). The Effects of Cognitive Misfit on Students' Accounting Task Performance. *Issues in Accounting Education*, 27(4), 979-998.
- Huber, M. and Hutchings, P. (2005). *The Advancement of Learning: Building the Teaching Commons*. The Carnegie Foundation Archive website publications www.carnegiefoundation.org. Accessed 22/10/19.
- Hutchings, P., Huber, M., and Ciccone A. (2011). *The Scholarship of Teaching and Learning Reconsidered: Institutional Integration and Impact*. San Francisco, CA: Jossey Bass.
- Jackson, C. (2003). Motives for 'Laddishness' at School: fear of failure and fear of the 'feminine'. *British Educational Research Journal*, 29(4), 583-598.
- Jackson, C., Dempster, S., and Pollard, L. (2015). "They just don't seem to really care, they just think it's cool to sit there and talk": laddism in university teaching-learning contexts. *Educational Review*, 67(3), 300-314.
- Jenkins, R.L. and Rubin, M.A. (2011). Interview. *Issues in Accounting Education*, 26(4), 751-757.
- Jensen, K. and Bennett, L. (2016). Enhancing teaching and learning through dialogue: a student and staff partnership model. *International Journal for Academic Development*, 21(1), 41-53.
- Jewitt, C., Bezemer, J., O'Halloran, K. (2016). *Introducing Multimodality*. London and New York: Routledge.
- Kelly, S. (2009). Social identity theories and educational engagement. *British Journal of Sociology of Education*. 30(4), 449-462. Citing Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict, in W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (33–147). Monterey, CA: Brooks/Cole.

Kinchin, I.M., Lygo-Baker, S., and Hay, D.B. (2008). Universities as centres of non-learning. *Studies in Higher Education*, 33:1, 89-103.

Knewstubb, B. and Bond, C. (2009). What's he talking about? The communicative alignment between a teacher's intentions and students' understandings. *Higher Education Research & Development*, 28:2, 179-193.

Kreber, C. (2002). Controversy and Consensus on the Scholarship of Teaching. *Studies in Higher Education*, 27(2), 151-167.

Kreber, C. (2013). Empowering the Scholarship of Teaching; An Arendtian and Critical Perspective. *Studies in Higher Education*, 38(6), 857-869.

Kreber, C. and Cranton, P. (2000). Exploring the Scholarship of Teaching. *The Journal of Higher Education*, 71(4), 476-495.

Kristensen, L.K. (2018). "Peeling an onion": layering as a methodology to promote embodied perspectives in video analysis. *Video Journal of Education and Pedagogy*, 3(3), 1-21.

Lacković, N. (2010). Creating and Reading Images: Towards a Communication Framework for Higher Education Learning. *Seminar.Net*, 6(1). Retrieved from <https://journals.hioa.no/index.php/seminar/article/view/2462>.

Lacković, N. (2018). Analysing videos in educational research: an "Inquiry Graphics" approach for multimodal, Piercean semiotic coding of video data. *Video Journal of Education and Pedagogy*, 3(6), 1-23.

Laurillard, D. (2002). *Rethinking University Teaching. A conversational framework for the effective use of learning technologies*. London: Routledge.

Laurillard, D. (2008). The teacher as action researcher: using technology to capture pedagogic form. *Studies in Higher Education*, 33(2), 139-154.

Lipman, M.S. (2003). *Thinking in Education*. Cambridge: Cambridge University Press.
<http://web.b.ebscohost.com.ezproxy.lancs.ac.uk/ehost/detail/detail?vid=0&sid=1ac591dc-b8b5-460f-8b8f-2baf187a914d%40sessionmgr102&bdata=JnNpdGU9ZWlhvc3QtbGl2ZQ%3d%3d#AN=120645&db=nlebk>
Accessed 18/11/18.

Lucas, U. (2008). 'Being pulled up short': creating moments of surprise and possibility in accounting education. *Critical perspectives on Accounting*, 19(3), 383-403.

Lucas, U. (2011). Towards A 'Scholarship of Teaching and Learning': The Individual and the Communal Journey. *Accounting Education: an international journal*. 20(3), 239-243.

Mann, S.J. (2001). Alternative Perspectives on the Student Experience: Alienation and engagement. *Studies in Higher Education*. 26(1), 7-19.

Marton, F., Hounsell, D., and Entwistle, N. (Eds.) (1997). *The experience of learning*. Edinburgh, UK: Scottish Academic Press.

Marton, F., & Säljö, R. (1997). *Approaches to learning*. In F. Marton, D. Hounsell & N. Entwistle, (Eds.) *The experience of learning* (2nd ed., 39-58). Edinburgh, UK: Scottish Academic Press.

MODE (2012). Glossary of multimodal terms. <https://multimodalityglossary.wordpress.com/>. Accessed 23/10/18.

Nicol, D. (2010). From monologue to dialogue: improving written feedback processes in mass higher education. *Assessment & Evaluation in Higher Education*, 35(5), 501-517.

Nicol, D. and Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.

Norris, S. (2004). *Analyzing Multimodal Interaction: A Methodological Framework*. London: Routledge.

Pathways Commission (2012). Charting a national strategy for the next generation of accountants. *Pathways Commission Report*. (New York, NY: American Accounting Association, July 1).
<http://commons.aaahq.org/posts/a3470e7ffa>.

Perera, L., Nguyen, H. and Watty, K. (2014). Formative Feedback through Summative Tutorial-based Assessments: The Relationship to Student Performance. *Accounting Education: an international journal*. 23(5), 424-442.

Pierce, C.S. (1991). In Hooks, J. (Ed). *Pierce on signs: Writings on semiotic*. UNC Press Books.

Ramsden, P. (2003). *Learning to teach in higher education*. London: Routledge Falmer.

Rands, M., & Gansemer-Topf, A. (2017). "The room itself is active": How classroom design impacts student engagement. *Journal of Learning Spaces*, 6(1). Retrieved from <http://libjournal.uncg.edu/jls/article/view/1286>. Accessed 20/11/18.

- Rebele, J.E. and St. Pierre, E.K. (2015). *Journal of Accounting Education*. 33, 128-137.
- Richardson, J.T.E. (2005). Students' Approaches to Learning and Tutors' Approaches to Teaching in Higher Education. *Educational Psychology: An International Journal of Experimental Educational Psychology*, 25:6, 673-680.
- Richardson, J.T.E. (2015) The under-attainment of ethnic minority students in UK higher education: what we know and what we don't know. *Journal of Further and Higher Education*, 39:2, 278-29
- Richardson, S. and Radloff, A. (2014). Allies in learning: critical insights into the importance of staff-student interactions in university education. *Teaching in Higher Education*, 19(6), 603-615.
- Sander, P., Stevenson, K., King, M. and Coates, D. (2000). University Students' Expectations of Teaching. *Studies in Higher Education*, 25(3), 309-323.
- Savin-Baden, M. (2008). *Learning Spaces*. Maidenhead: Open University Press.
- Schön, D.A. (1987). *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass Inc.
- Seifried, J. (2012). Tutors' Pedagogical Beliefs at Commercial Schools – an Empirical Study in Germany. *Accounting Education: an international journal*, 21(5), 489-514.
- Sfard, A. (1998). On Two Metaphors for Learning and the Dangers of Choosing Just One. *Educational Researcher*, Vol. 27(2), 4-13.
- Shulman, L.S. (2005). *Signature pedagogies in the professions*. Daedalus, Retrieved from <https://www.mitpressjournals.org.ezproxy.lancs.ac.uk/doi/pdf/10.1162/0011526054622015>
Accessed 26/11/18.
- Sinclair, J. and Coulthard M. (1992) *Towards an analysis of discourse*. In: Coulthard M (ed.) *Advances in Spoken Discourse Analysis*. London: Routledge, 1–34.
- Smith, C. (2017). The influence of hierarchy and layout geometry in the design of learning spaces. *Journal of Learning Spaces*, 6(3). Retrieved from <http://libjournal.uncg.edu/jls/article/view/1485>. Accessed 20/11/18.
- Semetsky, I and Stables, A. (2014). *Pedagogy and Edusemiotics: Theoretical Challenges/practical Opportunities*. Rotterdam: Sense Publishers.
- Stables, A. and Semetsky, I. (2015). *Edusemiotics: Semiotic philosophy as educational foundation*. Proquest ebook. Oxon: Routledge.

- Stout, D.E. and Wygal, D.E. (2010). Negative behaviors that impede learning: Survey findings from award-winning accounting educators. *Journal of Accounting Education*, 28, 58-74.
- Temple, P. (2008). Learning spaces in higher education: an under-researched Topic. *London Review of Education*, 6(3), 229-241.
- Teviotdale, W.W. (2009). Teaching intervention: final report. Project Report (unpublished). Available at www.eprints.hud.ac.uk/cgi/users/home
- Tight, M. (2012). *Researching Higher Education*. Maidenhead: Open University Press, McGraw-Hill Education.
- Tight, M. (2018). Tracking the Scholarship of Teaching and Learning. *Policy Reviews in Higher Education*, 2(1), 61-78.
- Trigwell, K. and Shale, S. (2004). Student learning and the scholarship of university teaching. *Studies in Higher Education*, 29:4, 523-536
- Trowler, P. (2012). Wicked issues *in situating theory in close-up research*. *Higher Education Research & Development*, 31:3, 273-284.
- Trowler, V. (2010). *Student Engagement Literature Review*. Higher Education Academy. Available at: <https://www.heacademy.ac.uk/knowledge-hub/student-engagement-literature-review>. Accessed 16/5/18.
- Vithal, R. (2016). Growing a Scholarship of Teaching and Learning Institutionally. *Studies in Higher Education*, 43(3), 468-483.
- Vician, C. and Mortenson, K.G. (2017). Integrating Accounting Themes with Enterprise System Experiences: An Accounting Department's Journey. *AIS Educator Journal*, 12(1), 34-58.
- Walton, J. (2011). A living theory approach to teaching in higher education. *Educational Action Research*, 19(4), 567-578.
- Wygal, D.E. (2011). Teaching, Scholarship and Sharing: Perspectives on Community. *Accounting Education: an international journal*. 20(3), 227-237.
- Wygal, D.E., and Stout, D. E. (2011). The Role of Continuous Improvement and Mentoring in the Pursuit of Teaching Effectiveness: Perspectives from Award-Winning Accounting Educators. *The Accounting Educators' Journal*, XXI, 33-44.
- Wygal, D.E., Watty, K. and Stout, D.E (2014). Drivers of Teacher Effectiveness: Views from Accounting Educator Exemplars in Australia. *Accounting Education: an international journal*. 23(4), 322-342.

Wygal, D.E. and Stout, D.E. (2015). Shining a Light on Effective Teaching Best Practices: Survey Findings from Award-Winning Accounting Educators. *Issues in Accounting Education*. 30(3), 173-205.

Xi, I., Yuan, Z., Yunqi, B., & Feng-Kuang, C. (2017). An Investigation of University Students' Classroom Seating Choices. *Journal of Learning Spaces*, 6(3). Retrieved from <http://libjournal.uncg.edu/jls/article/view/1513>. Accessed 21/11/18.

Xiang, M. and Gruber, R. (2012). Student performance in their first postsecondary accounting course: Does high school accounting matter? *Advances in Accounting Education*, 13, 297-311.

Yilmaz, K. (2013). Comparison of Quantitative and Qualitative Research Traditions: epistemological, theoretical, and methodological differences. *European Journal of Education: Research Development and Policy*, 48(2): 311-325.

Yin, R. (2009). *Case study research: Design and methods (4th ed.)*. Thousand Oaks, CA: Sage.

Zimmerman, B.J. (2002). Becoming a Self-Regulated Learner: An Overview. *Theory into Practice*, 41(2), 64-70.

APPENDIX 1 – Staff reflection questions

STAFF – POST-CLASSROOM REFLECTION (captured on dictaphone)

Immediate reflection:

Q1 – How did you feel the class went – and why?

Q2 – What would you do differently – and why?

Later reflection:

Q3 - Consider some comments around ‘themes’ below but please add in any other comments from your reflection on the class.

- How the classroom was configured
- Type of resources available – what was being done with them; how used; effectiveness of resources used to achieve learning outcomes
- What was in front of students – laptops, notes, phones, anything else
- Nature of activities in class
- Discursive intention – how were questions put to students and how were answers elicited; views on how students were interacting with discussions – with other students and/or tutor
- Practical applications – views on extent of any required student preparation for class; how were students interacting with practical tasks during class; how were students interacting with other students and/or tutor; views on whether practical applications helped address conceptual understanding.
- What/who were students interacting with most
- Views on students’ levels of conceptual and practical understanding – identify any areas of activities where students had difficulty in grasping concepts/practical tasks. What helped or hindered students’ engagement with discursive and practical tasks during the class.

Q4 – Do you think there has been a ‘trigger’ to open up opportunities to a change in student understanding as a result of classroom activities? – please say why you hold your views.

Q5 – Do you think there were any external or internal influencing factors affecting student learning? Please say why you hold your views.

APPENDIX 2 - Staff interview clips and questions

STAFF INTERVIEW QUESTIONS - following tutor review of complete videos (both camera views)

BFA0034 TUTOR

Selected clips (initial focus is on clips where I identified a tutor question); video clips shown to tutor then questions below asked - asking tutor what they see not necessarily what they interpret initially. In each clip, the black font indicates the student-facing camera and the blue font indicates the tutor-facing camera.

NB Not sharing my views about clips until the end of the review of all nine clips, as would 'lead' the tutor into what I may be anticipating. Considered more appropriate to get from tutor what they 'see' before I share what I 'see'.

CLIP 1

File 5: 02.11-03.00

Questions:

1. What do you see in this 49 second clip? (prompt questions: what do you see students are doing with booklets/pens/calculators; what seen about student gaze directions; what seen about students' body postures.)
2. What do you see here (shorter clip 02.18-02.25)
3. What do you see here (shorter clip 02.47-02.52)
4. What do you see here (shorter clip 02.57-03.00)

File 1: 02.11-03.00

Questions:

1. What do you see in this 49 second clip? Then repeat questions 2-4 above.

CLIP 2

File 5: 05.50-07.40

Questions:

1. What do you see in this 1min 50 sec clip? (same prompt questions as above.)
2. What do you see here (shorter clip 05.50-06.10)
3. What do you see here (shorter clip 06.20-06.40)
4. What do you see here (shorter clip 07.22- 07.30)

File 1: 05.50 – 07.40

Questions:

1. What do you see in this 1min 50 sec clip? (same prompt questions as above.)

Then follow with same questions 2-4 in student-facing camera clip.

CLIP 3

File 5: 16.24-16.44

Questions:

!. What do you see in this 20 sec clip? (same prompt questions as above, plus elicit response about seen relating to range of student abilities in class)

File 1: 16.24-16.44

Questions:

1. What do you see in this 20 sec clip? (same prompt questions as above.)

CLIP 4

File 6: 13.00-13.15

Questions:

!. What do you see in this 15 sec clip? (same prompt questions as above.)

File 2: 06.44-06.59 (same as File 6: 13.00-13.15)

Questions:

1. What do you see in this 15 sec clip? (same prompt questions as above.)

CLIP 5

File 7: 12.09-12.44

Questions:

1. What do you see in this 35 sec clip? (prompt questions as above plus asking for what seen about how other students reacted to tutor's appeal for graph paper.)

File 2: 27.53-28.19 and File 3 00.00-00.09

Questions:

1. What do you see in this 35 sec clip? (prompt questions as above plus asking for what seen about how other students reacted to tutor's appeal for graph paper.)

CLIP 6

File 7: 16.30-17.18

Questions:

1. What do you see in this 48 sec clip? (same prompt questions as above plus asking what seen about how students perceive other students' behaviour patterns (make no judgement about what that might be at this point).)

File 3: 03.52-04.40

Questions:

1. What do you see in this 48 sec clip? (same prompt questions as above plus asking what seen about how students perceive other students' behaviour patterns (make no judgement about what that might be at this point).)

CLIP 7

File 8: 05.31-06.27

Questions:

1. What do you see in this 56 sec clip? (same prompt questions as above plus asking what seen about her body posture/facial expression and what seen about other students' behaviour during the clip.)
2. What do you see here (shorter clip 05.38-05.53)

File 3: 14.55-15.51

Questions:

3. What do you see in this 56 sec clip? (same prompt questions as above plus asking what seen about her body posture/facial expression and what seen about other students' behaviour during the clip.)
4. What do you see here (shorter clip 15.02-15.17)

CLIP 8

File 6: 12.03-13.12

Questions:

1. What do you see in this 1min 9sec clip (same prompt questions as above plus what tutor sees about how students are reacting to her feedback; anything that she expected to happen that did not).

2. What do you see here (shorter clip 12.03-12.20)
3. What do you see here (shorter clip 13.02-13.12)

File 2: 05.45-06.54

Questions:

1. What do you see in this 1min 9sec clip (same prompt questions as above plus what tutor sees about how students are reacting to her feedback; how does tutor know if students are learning; anything that she expected to happen that did not; opportunity for students to ask questions; tutor gaze direction).
2. What do you see here (shorter clip 5.45-06.02)
3. What do you see here (shorter clip 06.45-06.54)

CLIP 9

File 7: 09.37 – 10.55

Questions;

1. What do you see in this 1min and 18 sec clip? (same prompt questions as above plus what tutor sees about how students are engaging with working on their own on a specific task from booklet.)
2. What do you see in (shorter clip 10.44-10.55) – BME female back row ignored and tutor goes unprompted to two White males middle row. How does tutor choose who to approach?

File 2: 25.21-26.39

Questions;

1. What do you see in this 1min and 18 sec clip? (same prompt questions as above plus what tutor sees about how students are engaging with working on their own on a specific task from booklet.)
2. N/a as students not in shot from this tutor-facing camera.

GENERAL QUESTIONS FOR TUTOR

1. Views on thinking like this when reflecting on classroom activity? Eg. Have you considered role of material objects around you as part of the facilitation of student learning and tutor teaching approaches? Views on the 'affordance' of handbooks. Views on seeing again how students are engaged/not engaged in work rather than 'at the time'.

DISCUSSION OF WWT VIEWS TO ELICIT TUTOR OPINION ON THESE

If not already discussed, cover the following

1. Physical layout hinders peer support outside small groups.
2. Behavioural engagement – issue with back row of BME males; how students react to each other.
3. Cognitive engagement – tutor-led information transmission.
4. Tutor understanding of student learning happening.
5. Facial expressions – students and tutor.
6. Body postures – students.
7. Artefacts in use – booklets, graph paper, calculators, pens; OHP slides; issues with positive and negative 'affordance'.
8. Student identities – how revealed to tutor.
9. Tutor time spent with groups of students – how decided.
10. Tutor gaze direction – more to left and OHP than right. Aware?

APPENDIX 3 Student survey document

STUDENT SURVEY - CLASSROOM ACTIVITY: Tutorial or Seminar

Module Title and Code.....Module A

Date of tutorial/seminar.....25/2/16.....(13 students responded)
.....

Note: *Please just provide your initial thoughts on this classroom activity. There are no right or wrong answers – just what your expectations were and what you have experienced – so these are mainly open-ended questions. Please be as specific as possible when responding. There is also space at the end to express any other views not brought out by the questions set. **Many thanks!***

At start of class, could you please reflect on:

Question 1

- (a) If you had set work to prepare for this class, please say if you did this:
'in full'; Responses: 6
partly; or : Responses: 1
'not at all'. Responses: 5; No response to this question: 1 (total = 13)
Please circle one.

If you responded 'partly'; or 'not at all', could you please briefly say why?

Responses: No response: 1; N/A as circled 'in full': 6; 'We do the work in class/work not set': 5; ' Looked at topic only' as response to 'partly': 1

(WWT comment: need to check with tutor if no homework is set for this class; it may be the case as there was no clear reference to work set for students in advance).

.....
.....

- (b) If you reflected on the work from the previous week's class and engaged with the topic outside class (such as: interacting with fellow students by discussions/exchanging notes; contacting your tutor; reading material on Unilearn/textbooks, etc), please briefly say what you did and why.

Responses: Went over work done in class: - 4; discussed with classmates: 3; used material to help with fortnightly FORTS test: 4; No response: 2.

.....
.....

If you did not reflect on this work, please briefly say why you did not
Responses: only one of the two 'No response' commented here to say 'It's Maths'.

PLEASE

TURN OVER

Immediately after class, could you please reflect on:

Question 2

What did you think was the topic area covered in class and the main learning outcomes of the seminar/tutorial?

.....Responses: No response: 2; 'Time Series Analysis': 10; 'Time Series Analysis plus some further comment/insight: 1.

.....(WWT comment: no insights into learning outcomes)

Question 3

- (a) Please identify a specific example of a concept or theory discussed in class where this was followed up by a numerical or other example to illustrate how this concept/theory is applied in practice. If you do not consider this happened, please state 'None'.

...Responses: No response: 1; Only describing what happened in class: 6; Students did not consider any theory/concept used: 4; Just repeating topic 'time series analysis': 1; Odd comment, not clear: 1

.....
.....

- (b) Please explain whether this example helped your understanding to see how concepts/theories are applied in practice and how it helped.

Responses: No response: 3; No effective response, just said 'was helpful': 6; No response as had said 'none' in Part (a): 4.

.....
.....

Question 4 – interaction with fellow students and tutor

(a) Please give an example of the extent to which you think you interacted with your fellow students and/or tutors during class and whether that helped further your understanding of the topic.

...**Responses: No response: 1; Spoke to fellow students sat next to: 3; Asked tutor: 5 Vague answers: 4.**

.....
....

If you did not understand aspects of the topic in class and drew this to your tutor's attention before the end of the class, please explain if your tutor's response helped your understanding.

.....**Responses: No response: 9; Tutor did help: 4.**

.....
.....

PLEASE

TURN OVER

If you did not draw this to your tutor's attention, please explain what prevented you from asking questions.

.....**Responses: No response: 13**

.....
.....
.....
.....

If you did not need to ask questions as everything was clear, please tick here.

6 ticked

Question 5

Please underline **all** factors which made the class activities work well.

(Tutor's enthusiasm (**responses: 8**), tutor's preparation for class activities (**responses: 10**); your preparation for class activities (**responses: 1**); interaction with fellow students before class (**responses: 2**); interaction with fellow students during class (**responses: 8**); interaction with tutor during class (**responses: 4**); layout/size of classroom(**responses: 2**); timing of seminar/tutorial (**responses: 3**); types of visual aids in use (**responses: 6**)). **Nothing underlined: 3.**

Please note here any other factors not listed above which you consider made the class activities work well.

.....**Use of tutorial/seminar booklet: 2; Working with own notes: 1; Good examples in class: 1. No suggestions made: 9**
.....

Question 6

If you think your understanding of the topic improved from the beginning of the class to the end of the class activities, please comment on what specifically helped and the extent to which the class activities brought in prior knowledge of this area to support understanding. Please say what prior knowledge specifically helped.

No responses: 9; Working through detailed examples: 2; Getting explanations/answers: 1; Prior knowledge of Maths: 1; Well taught: 3 (Total is 14 as one student made two comments).
.....
.....

If you do not think your understanding of the topic improved, please comment on what kind of class activity would have helped you achieve a better understanding.

No responses:

13......
.....
.....
.....
.....

PLEASE

TURN OVER

Question 7

Please list any factors which you think would have improved the work done in class including anything you would have done differently. You may use this question to add any other points you would like to highlight that have not arisen in earlier questions.

**No response : 8;
More practice calculations: 3;
Size of classroom: 1;
“I would have shown more enthusiasm and interaction in class”: 1.**

Question 8

For the purpose of developing profiles of groups of students (not attributed to any one individual), could you please indicate:

- Your entry qualification to your current course (type, **not grades**)
.....

- Your age
 • Your gender (circle one please) Male/female
 • Your ethnic origin

If you would be willing to be involved in future discussions about your learning, please just provide your student ID number here:(3 students provided ID numbers)

Many thanks for completing this. Please return to Wilma Teviotdale, Room BS1/24 (please just ask if you would like a copy) and it will be kept securely.

Analysis of demographic data from student responses to Q8 is:

Entry qualifications

BTEC: 1
 A levels: 4
 Mix BTEC/A-level: 1
 Apolytirion (Cyprus): 1
 Not given: 6

Age

18/19: 6
 20/21: 2
 Not given: 5

Gender

Female: 4
 Male: 7
 Not given: 2

Ethnic origin

White British: 5
 Asian: 2
 African: 1
 Not given: 5

APPENDIX 4 – Student interview clips and questions

INTERVIEW QUESTIONS – for Students from Module A

25/2/16 AND 14/4/16

Based on mainly video recordings 25/2/16, with some reference to new features from 14/4/16 recordings.

Main RQ being addressed is RQ3: : *What are tutor and student views on effectiveness of teaching-learning interactions to develop student learning and engagement, following a period of reflection and participation on the programme?*

GENERAL

- 1 (a) Views on approach of two-hour seminar?
 - (b) Views on classroom layout? What influences choice of where you sit in class?
 - (c) Views on use of tutor voice when changes – do you notice? What about use of humour? When tutor seems irritated?
- 2 (a) Level of preparation required for class? Use of prior knowledge obvious?
 - (b) What is most valuable aspect of seminar? What stands out in your mind?
 - (c) What could be better now on reflection?
 - (d) Do you think your level of understanding improved?
 - (e) Teaching approach – noticeable from 14/4/16 seminar video that tutor talked about ‘learn the rule’ – views on this? Does this encourage rote learning? What are views on tutor asking some to help others in class?
 - (f) Do you respond truthfully when asked if ‘all right’; all OK?; etc as tutor checks students understand as she goes round the class?

NB Colour coding relates to interview transcript and student comments.

Video clips identified – and specific questions

25/2/16

File 1 Tutor view & File 5 student view

15 – 19 minutes

Questions:

Your reaction to students not fully prepared to be in class. Do you perceive tutor as cross – any impact?

Views on peer support happening – any? Impact?

Not all students working at same pace – impact?

File 2 tutor view & File 6 student view

3- 6 minutes

Questions:

Views on what tutor is doing here? – is class engaged?

Anything specifically helpful?

Views on tutor comment about smartboard?

Lack of student response to tutor asking if anyone with a different answer? Student (male) stressed? Confidence to ask Qs? How does tutor help build your confidence, does she?

9 – 14 minutes

What is especially helpful here? Tutor refers to booklet – useful? And why useful?

Views on what tutor is doing when going around class – does she always come to every student?

File 7 student view

11 – 14 minutes

Tutor keeping students 'on task' – tutor goes around class. Does her interaction with students in the video work in your view? What else would work?

18 mins to end

Attracting tutor attention by putting up hand? Done as a 'last resort' or is this normal in class.