TEACHERS IN TRANSITION: DEVELOPING ACTIONS, KNOWLEDGE, AND PRACTICE IN THE EAP CLASSROOM.

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TABLE OF CONTENTS:

TABLE OF CONTENTS............................................................................ 2-8
LIST OF FIGURES.......................................................................................9
ABSTRACT.................................................................................................10
DECLARATION............................................................................................11
COPYRIGHT STATEMENT.............................................................................12
ACKNOWLEDGEMENTS..............................................................................13
ABBREVIATIONS........................................................................................14

CHAPTER 1: INTRODUCTION & BACKGROUND

1.1 Rationale for this study.................................................................15-16
1.2 Research questions and design..................................................17
1.3 Overview of the study.................................................................17-18
1.4 Context of my own interest in teaching and technology.................18-21
1.5 The particular context under investigation.................................21-23
1.6 The actual teachers in this study..................................................23-24
1.7 Developing a teaching team........................................................25
1.8 The route of development chosen..............................................25-26
1.9 Simultaneous opportunity for research.......................................26
1.10 Decision to conduct workshops...............................................27
1.11 My role as researcher.................................................................27-28
1.12 Broad picture of the investigation..............................................28

CHAPTER 2: REVIEW OF RELEVANT LITERATURE

2.1 Overview of the literature review.................................................29
2.2 What is EAP and how has it evolved?........................................29-32
2.3 Knowledge expected of EAP teachers......................................32-33
   ii Content knowledge within EAP..................................................33-35
   iii Pedagogical knowledge within EAP.........................................35-36
iv Need for technological knowledge in EAP..........................36-38
2.4 The tradition of CALL and need for transition..................38-41
2.5 Use of blended learning in higher education......................41
2.6 The particular tools available in my research context...........42
i Moodle........................................................................42
ii Interactive whiteboards............................................43
iii Other tools found in EAP practice...............................44
iv Word processing and presentation software.....................44-45
v Resources on the Internet...........................................45-46
2.7 Sociocultural factors’ impact on usage of technology.........46-48
2.8 Educating teachers to use this range of resources..........48-50
ii Historical approaches to English teacher education...........50
iii Teacher education in the specific EAP context.................51
iv Finding a spark for self-directed development...............51-52
2.9 Frameworks of teacher knowledge...............................53
i Pedagogical Content Knowledge..................................53-56
ii TPACK – a new framework for teacher knowledge.............56-60
2.10 Potential strengths of TPACK in an EAP context.............61-62
2.11 Addressing a potential drawback of TPACK.................62-63
2.12 Defining Engeström’s vision of Activity Theory..............64
ii Major influences on systems of activity........................65
iii Relating Activity Theory to this study...........................65-68
iv Explaining workings of the locally adapted activity system
.........................................................................................68-69
2.13 Additional contextual influences on practice...............69
i Institutional context......................................................69-70
ii Time and busy classroom lives.....................................70
iii Speed of advancement in learning technologies...............70-71
iv The impact of social media.........................................71
v Communities in the workplace.....................................72
2.14 Conclusion of the literature review...............................72

 CHAPTER 3: METHODOLOGY
3.1 Overview of the research study.....................................73
3.2 Characterisation of case studies....................................73-74
ii Foundations of the case design......................................74
iii Formulation of the research questions............................75-76
3.3 Positioning the research in the qualitative paradigm...........76
Capturing a sense of the everyday..........................76-77
Bringing together different sources of data..................77-78
Rich and thick descriptions.....................................78
Characteristics of the qualitative case study...............79-80
Benefits of case studies for EAP/TPACK research........80-81
Identifying and choosing the pool of cases.................81-82
Criteria for selection of possible cases....................82-83
Narrowing the pool of cases..................................83-85
Travellers on the research expedition.......................85-89
Data generation and collection...............................89-90
Starting out with focus groups................................90-92
Choosing cases for the next stage of data collection....92-93
‘Semi’-structured interviews as a further method.........93-95
Observations as a third source of data collection........95-96
Rounding off the sources of data analysis.................96-97
Interplay of methods on the research journey.............97-98
Case Study Data Analysis....................................99
Building a framework for the analysis of data............99-100
Wedding the framework to an analytic process...........100-101
Familiarising myself with the data..........................101-102
Production of initial codes from the data...................102-104
The evolution of themes in the coded data.................105-108
Maintaining a settled direction throughout...............108-109
Establishing trustworthiness.................................109
Being aware of my role as researcher.......................109
Reflexivity..........................................................110
Credibility through triangulation.............................110-111
Transferability of findings in this study.....................111-112
Reliability and confirmability.................................112
Concluding remarks............................................112
- Research questions mapped to data collection...........113

CHAPTER 4: CHALLENGES IN MY ROLE AS MANAGER RESEARCHER AND INSIDE-RESEARCHER

4.1 Introduction and overview................................114
4.2 Being a manager in the research setting...............114-115
4.3 Definitions and challenges of insider research........116-117
4.4 Strategies to address challenges of insider research........................117-119
4.5 Ethics as a pervasive presence......................................................120
ii The need for informed consent....................................................120-121
iii The aftermath of informed consent..............................................122-122
iv Practical examples of taking an ethical approach.........................122-123
4.6 Conclusion of the chapter..............................................................123

SECTION II: THREE TEACHERS’ PRACTICE COLLECTIVELY AND INDIVIDUALLY.................. 124

CHAPTER 5: VICTOR’S DEVELOPMENTAL JOURNEY

Introduction to Victor as a person.................................125

5.1 Starting out on the journey.........................................................126
i Victor’s sense of EAP practice at the outset.............................127
ii Actions and knowledge regarding technology’s usage in EAP practice.................................................................127-128
iii Victor’s goals in terms of knowledge.................................128-131
5.2 Vignette of Victor’s practice at the outset..............................131-133
5.3 Deeper into the journey (Developments in practice)
   i Usage of blended learning....................................................133-135
   ii Addressing challenges in activity..............................................136
   iii Shared knowledge and experimentation.............................136-138
   iv Early developments in Victor’s practice..............................138
5.4 Developments towards the end of workshops.........................139
   i Reshaping of practice through new instruments.....................139-141
   ii Becoming a broker of change in practice.............................141
   iii Summary of developments in knowledge.........................141-142
5.5 Vignette of Victor’s practice after the programme.............142-144
5.6 Discussing developments in practice
   i Resources and support for purposeful usage......................144-145
   ii Integrating a sense of CLIL into his practice.......................145-146
   iii Technology as a greater part of his practice....................146-147
5.7 Overview of developments in Victor’s practice...............148-149
5.8 Closing vignette of Victor’s practice.................................149
CHAPTER 6: MATTHEW’S DEVELOPMENTAL JOURNEY

Introduction to Matthew as a person.................................150

6.1 Starting out on the journey...........................................151
   i Matthew’s sense of practice at the outset..........................151-152
   ii Actions and knowledge regarding technology’s usage in EAP practice.................................................................152-154
   iii Matthew’s goals in terms of knowledge..........................154-155

6.2 Vignette of Matthew’s practice at the outset...............155-157

6.3 Deeper into the journey (developments in practice)
   i Usage of blended learning.............................................157-159
   ii New perspectives on use of social media..........................160
   iii Early developments in Matthew’s practice....................161

6.4 Developments towards the end of workshops
   i Changing use of instruments in practice..........................161-163
   ii Influences on changes in practice..................................163-164
   iii Summary of developments in knowledge........................165

6.5 Vignette of Matthew’s practice after the programme
...........................................................................................165-167

6.6 Discussing developments in practice
   i Opportunities afforded by resource.................................167-169
   ii Matthew’s focus on language as content......................169-171
   iii Technology as a greater part of his practice................171-172

6.7 Overview of developments in Matthew’s practice......172-173

CHAPTER 7: KELLY’S DEVELOPMENTAL JOURNEY

Introduction to Kelly as a person.................................174

7.1 Starting out on the journey...........................................175
   i Kelly’s sense of practice at the outset..............................175-176
   ii Actions and knowledge regarding technology’s usage in EAP practice.................................................................176-177
   iii Kelly’s goals in terms of knowledge...............................178

7.2 Vignette of Kelly’s practice at the outset......................178-180

7.3 Deeper into the journey (developments in practice)
   i Moving towards blended learning approaches................181-182
ii  Shifting perspectives on the nature of communication ..................................................................................................................................................................................183-184
iii  Strategies shaped by language needs of students........................................184-185
iv  Early developments in Kelly’s practice..........................................................186
7.4  Developments towards the end of the workshops
i  Changing usage of instruments in practice......................................................186-188
ii  Sparks and snowballs – influences driving change ........................................189-191
iii  Summary of developments in knowledge....................................................191
7.5  Vignette of Kelly’s practice after the programme...........................................192-194
7.6  Discussing developments in practice
i  Freeze in some areas of Kelly’s practice..........................................................194-195
ii  Consolidation and change in other areas of practice .......................................196-197
iii  Technology as a greater part of Kelly’s practice............................................197-198
7.7  Overview of developments in Kelly’s practice..............................................198

CHAPTER 8: CROSS-CASE COMPARISON OF DEVELOPMENTS IN THE PRACTICE OF THE THREE TEACHERS

8.1  Aggregating findings of the individual case studies...........................................199
8.2  Overview of the individual cases....................................................................200
8.2-i  Developments in Victor’s practice.................................................................200-202
8.2-ii Developments in Matthew’s practice.........................................................203-206
8.2-iii Developments in Kelly’s practice.................................................................206-209
8.3  Cross case summary of developments...........................................................210-212
8.4  Key areas of practice that have been reshaped..............................................213
8.4-i. Changing sense of teachers’ practice............................................................213-214
8.4-ii Embedding of technology in teaching........................................................214-215
8.4-iii Different understandings of content..........................................................215-216
8.4-iv Increased sharing of practice in the workplace..........................................216-217
8.4-v Reshaping the blend in EAP practice.........................................................217-219
8.5  Developments in the system of activity..........................................................219
8.5-i  The primary influence of tools on practice..................................................219-222
8.5-ii The influence of other tenets of activity.....................................................222-224
8.6  Overall construction of professional knowledge..........................................224-226
8.7  Influence of the pre-existent ELT knowledge base........................................226-229
8.8 Positioning of content knowledge in EAP and ELT...229-232
8.9 Conclusion of the cross-case comparison.........................233

CHAPTER 9: CONCLUSIONS AND CONTRIBUTIONS

9.1 Overview of findings from the research study..................234
9.2 Contributions to capturing knowledge in action.............235-236
9.3 Professional contribution to teaching as a whole.............237-238
9.4 Professional contribution to EAP and ELT.................239-240
9.5 Contributions to teacher development..........................240
9.5-i Contributions at a local level.................................240
9.5-ii Contributions to the wider context..........................241
9.6 Conceptual and methodological contributions...............242-243
9.7 Limitations of this research study..............................243
9.7-i The element of subjectivity.....................................243
9.7-ii The double edged sword of insider research...............244
9.7-iii The question of transferability..............................245
9.7-iv Confinement to an EAP/ELT audience.......................245
9.7-v Uncritical usage of Competency Framework...............245-246
9.8 Closing thoughts and future directions.........................246

REFERENCES.................................................................247-276

APPENDICES.................................................................277-294

Appendix One – BALEAP Competency Framework (2008)
Appendix Two – ISTE Classroom Observation Tool
Appendix Three – Further examples of coding
Appendix Four – Personal code of ethical practice
Appendix Five – Steps to ensure ethical design of consent forms
Appendix Six – Consent form used in this study
Appendix Seven – Information sheet on nature of focus groups
Appendix Eight – Victor’s training materials for iPads
LIST OF FIGURES:

Figure 1 – Shulman’s major categories of teacher knowledge
Figure 2 – The TPACK framework and its knowledge components
Figure 3 – Context influence on TPACK framework
Figure 4 – A second generation activity system model
Figure 5 – Locally adapted EAP/TPACK activity system
Figure 6 – Typology of cases in the research study
Figure 7 – The bounded frame of time and activity
Figure 8 – Interaction between forms of data collection
Figure 9 – Sample codes from the first analytic cycle
Figure 10 – Mapping themes in the stages of analysis
Figure 11 – Research questions mapped to data collection
Figure 12 – Extract from email regarding iPad project
Figure 13 – Summary of main developments in Victor’s actions, knowledge and practice in the research journey
Figure 14 - Summary of main developments in Matthew’s actions, knowledge and practice in the research journey
Figure 15 - Summary of main developments in Kelly’s actions, knowledge and practice in the research journey
ABSTRACT

This study investigates developments in the practice of teachers who have engaged in a series of workshops on the integration of new technologies into their work in the English for Academic Purposes (EAP) classroom. It looks specifically at developments in actions and knowledge during and after a teacher education programme, and how these developments shape or reshape teachers’ specific professional practice of using technology in EAP teaching. Added to this, it explores ways in which teachers articulate their sense of EAP as a subject and EAP teaching as a profession, and tries to situate technology’s role within that. Drawing on a theoretical framework of Technological Pedagogical Content Knowledge (TPACK) (Mishra & Koehler, 2006; Koehler & Mishra, 2009), and second-generation Activity Theory (Engeström, 1987), this story of development unfolds through a case-study narrative over the bounded timeframe of eighteen months. The setting is a university language centre in the United Kingdom, where the workshops took place, and three teachers have been selected as cases to represent the story of developments, and changes in practice occurring in line with the delivery and aftermath of this teacher education programme.

Significant changes were noted in the teachers’ specific professional practice of using technology in their teaching, and the study suggests that as technology becomes embedded in EAP teaching, there is an associated re-thinking of practice in other areas, particularly the role played by, and nature of, EAP content. As such, this supports one of the central arguments for the development of TPACK, in that the introduction of technology to existing conceptualisations of Pedagogic Content Knowledge (PCK) (Shulman, 1986) has demanded that teachers question their existing pedagogy, and lay the foundations for development in their practice as a whole (Mishra & Koehler, 2006, p. 1063). This study then is a story of development and teachers’ personal reflections on practice, giving shape to a final report that hopes to make a contribution to understanding, defining, and opening the way for further research into EAP practice in the digital age.
DECLARATION

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### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CALL</td>
<td>Computer Assisted Language Learning</td>
</tr>
<tr>
<td>CLT</td>
<td>Communicative Language Teaching</td>
</tr>
<tr>
<td>COP</td>
<td>Communities of Practice</td>
</tr>
<tr>
<td>CELTA</td>
<td>Certificate in English Language Teaching to Adults</td>
</tr>
<tr>
<td>DELTA</td>
<td>Diploma in English Language Teaching to Adults</td>
</tr>
<tr>
<td>EAP</td>
<td>English for Academic Purposes</td>
</tr>
<tr>
<td>EFL</td>
<td>English as a Foreign Language</td>
</tr>
<tr>
<td>EGAP</td>
<td>English for General Academic Purposes</td>
</tr>
<tr>
<td>ELT</td>
<td>English Language Teaching</td>
</tr>
<tr>
<td>ESAP</td>
<td>English for Specific Academic Purposes</td>
</tr>
<tr>
<td>ESL</td>
<td>English as a Second Language</td>
</tr>
<tr>
<td>ESP</td>
<td>English for Specific Purposes</td>
</tr>
<tr>
<td>GE</td>
<td>General English</td>
</tr>
<tr>
<td>HE</td>
<td>Higher Education</td>
</tr>
<tr>
<td>IWB</td>
<td>Interactive Whiteboard (Smartboard)</td>
</tr>
<tr>
<td>PCK</td>
<td>Pedagogical Content Knowledge</td>
</tr>
<tr>
<td>PPK</td>
<td>Personal Practical Knowledge</td>
</tr>
<tr>
<td>TPACK</td>
<td>Technological Pedagogical Content Knowledge</td>
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<tr>
<td>TK</td>
<td>Technological Knowledge</td>
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<tr>
<td>PK</td>
<td>Pedagogical Knowledge</td>
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<tr>
<td>CK</td>
<td>Content Knowledge</td>
</tr>
<tr>
<td>TPK</td>
<td>Technological Pedagogical Knowledge</td>
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<tr>
<td>TCK</td>
<td>Technological Content Knowledge</td>
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<tr>
<td>PCK</td>
<td>Pedagogical Content Knowledge</td>
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<tr>
<td>VLE</td>
<td>Virtual Learning Environment</td>
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CHAPTER 1: Introduction & Background

1.1 Rationale for this study

The use of technology in teaching is not so much about the tools which are used, but rather the knowledge and skills being taught or shared, and the pedagogy or strategies used to deliver these. Teaching had been taking place for a great length of time before the present wave of technologies came upon the world, and will continue to do so long after the next wave of instruments has usurped these with increasing speed. Technology, after all, has been around before the dawn of the electronic age (McGrath et al, 2011), but has radically changed the landscape of teaching in recent years, particularly in the context of higher education (Laurillard, 2002), which is the domain in which I am primarily interested. This change and its increasing speed has driven the need to understand ways of teaching with technology that are not dependent upon the latest phase of individual tools, but rather on what Warschauer, as early as 1996, described as personal philosophies of teaching, where pedagogy is at the centre.

This is particularly salient in the context of English for Academic Purposes where there is not only a battle to identify technology’s place within the teaching of the subject, but also an enduring challenge to define the subject’s present and future directions. Although the integration of technology has been a feature of English Language Teaching for the past couple of decades, it has still not found a settled place within EAP’s ecosystem (Fenwick & Edwards, 2010, p. 9). Added to this, there is no single formal qualification in EAP (Alexander, 2010), let alone a standard sense of how much technological knowledge teachers should possess.

Despite this, groundwork for such a qualification has been laid by BALEAP (2008), which outlines eleven criteria for core competencies expected of EAP teachers. These eleven criteria pertain to knowledge of (1) Academic contexts; (2) Disciplinary differences; (3) Academic discourse; (4) Personal learning,
development, and autonomy; (5) Student needs; (6) Student critical thinking; (7) Student autonomy; (8) Syllabus and programme development; (9) Text processing and text production; (10) Teaching practices; (11) Assessment practices (ibid, pp. 4-9); and are presented in Appendix One in their summarised form.

Despite technology not being explicitly mentioned in the titles of the criteria, it does feature in the sub-domains and indicators of some competencies, particularly ‘Teaching Practices’ (BALEAP, 2008, p. 8). Therefore within EAP, and the broader context of higher education, the discussion has moved beyond a straightforward debate about the adoption of technology and its benefits, as is often found in the literature of the late 1990s and early 2000s. Nowadays EAP teachers, in the context of UK Higher Education, are working in a highly digitalised landscape. Increasingly then, the focus is on integrating the pedagogical rationale for using technology into the meta-language of effective teaching (Borg, 2006a, p. 96) and about helping teachers to incorporate pedagogically sensible decisions about the use of technology into their “favoured practice” (ibid, p. 94).

This study takes place within the contemporary landscape of UK Higher Education, in the specific context of EAP teaching on pre-degree and degree level programmes of study. The actual physical setting in which the research has been conducted is in the English Language centre of a higher educational organisation based in the United Kingdom. The participants in the study are teachers within this language centre who have generally embarked on a career journey, familiar to the profession, of moving through the ranks, over time, from General English teaching to an EAP environment. In order to get to grips with this new ecosystem (Fenwick & Edwards, 2010) they required some form of ‘training’ which, to date, has been formally absent in EAP (Alexander, 2010). It is on the basis of these needs and subsequent training/education that this study has been conceptualised, designed, and conducted.
1.2 Research questions and design

The research questions that have guided this study consist of two main questions, and two associated sub-questions, which have been articulated in the following manner:

**Main research questions:**

(1) *What developments occur in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technologies in the classroom?*

(2) *How do these developments shape or reshape EAP teachers’ specific professional practice of using technology in EAP teaching?*

**Sub-questions:**

*How do teachers articulate their sense of EAP as a subject and EAP teaching as a profession? (to inform RQ1)*

*Does technology become embedded in teaching to a greater extent after the workshops? (to inform RQ2).*

These questions will be addressed through a multiple case study, so as to provide information on approaches to the integration of new technologies into teachers’ practice in the English for Academic Purposes classroom. The overall purpose is not to generalise from this, but to generate practical knowledge, for possible application in other contexts, and leave scope for personal interpretation of findings, on the part of interested readers.

1.3 Overview of the study

The thesis is organised into two parts, and nine chapters. Part One starts out with an exploration of the contemporary terrain of EAP through presenting a contextualisation of my own position as researcher and teacher educator in the field of EAP, with a particular passion for technology, and then an up-to-date analysis.
of EAP’s evolution and present state of play in the UK higher educational landscape. This is then followed up with chapters on the methodological underpinning of the study, and an outlining of my adherence to ethical procedures, including a defence of my position as insider researcher. Section Two then moves on to an analysis of the three cases at the heart of the study, before progressing to a cross-case comparison that culminates in a conclusion and discussion of the overall findings.

1.4 Context of my own interest in teaching and technology

Technology has been a constant presence on my journey through the various layers of education from primary to postgraduate studies, even if it came slightly later than it does for today’s “digital natives” (Prensky, 2001). The images presented below capture a sense, in my mind, of how far technology has developed in my lifetime, and in my studies, from early schooling in the 1980s to the present context in which today’s and tomorrow’s students live. Each image depicts a journey, and a way of learning, one group of learners at a heritage centre, and another using the Internet.

Images taken from my own personal collection of photographs

My learning journey has its origins in the first, rather than the second, of these images. Born a generation before nursery schools
were either fashionable or available in Ireland’s border country, I first encountered chalkboards and colour televisions when starting Primary School at almost five. Progressing to grammar school, computers came upon the scene, more suited to novelty and gaming than anything purposeful at this stage. Even when reaching Queens University, and an English Department once graced by Seamus Heaney, everything was still handwritten – notes, assignments, and exams. I too, as a student, wrote most of my work in notebooks and scraps of paper stored in desk drawers.

Half a decade later, after brief stints at the basement level of old media employment, in newspapers and television, I found myself back in classrooms. I had travelled across the water, to undertake a postgraduate teaching degree in Huddersfield, and chosen Media Studies and English Literature as my main subjects. This was an exciting time to be studying Media, and one of my professors would often describe it as a ‘sexy’ subject, far more so than for colleagues engaged in the dry world of EFL/ESL teaching.

During lessons, I’d take my students out on the streets to make short films, produce a radio show, or go to the recording studio to simulate news’ broadcasts. This was a world away from the evening classes of my EFL/ESL colleagues, often going into prisons and sixth form colleges armed with scissors and dictionaries, building conversations from a jigsaw of broken English.

Amongst those of us teaching ‘specific’ disciplines, there was a misguided view of EFL/ESL teaching as belonging to those without a vocation for a ‘real’ subject. That was until the second semester when I chose to do EFL as an elective module, which was delivered by a very inspirational woman. Over the course of a few months, we learned of exciting travel opportunities provided by the teaching of English, and several classmates applied for jobs in places as diverse as Barcelona, and South Korea. Along the way, I decided to do the same – just for a couple of years before coming back to the British Isles to settle down to ‘proper’ teaching again.
My travels would last two years, taking in the high-tech atmosphere of Tokyo, and language schools on the edge of Australia’s rainforests. Upon coming back, I sought out work in regular teaching but none was forthcoming. My two years of travel seemed to have burned a mark of Cain through my CV, and my only route back into work came about through language schools. Wanting to escape these dreadful places (in terms of prospects), I embarked on a part-time Masters degree in Education with the University of Manchester, focusing on a combination of English Language Teaching and Educational Technology.

At this stage I was becoming more entrenched in the profession of ELT and seeing technology as an escape from, and supplement to, generic textbooks. Often, these seemed mundane and disconnected from “sociological realities of learners’ lives” (Tomlinson, 2003a). Seeking to make lessons fun, I arranged frequent trips to the few computer labs available, or brought authentic video and audio materials into the classroom at every opportunity. Then, through a combination of circumstances, I ended up moving from ELT to EAP, via two years in a South Korean university of technology, and a summer pre-sessional course in the University of Greenwich.

Here, I found what seemed a natural home for my teaching. Having experienced formal teacher education, I had always felt that something was lacking, in terms at content, at the heart of ELT. Suddenly, there was specific material giving lessons a depth of substance, and new ways of engaging students with subject matter. I found new purpose and satisfaction in marrying together elements of language and discipline-specific work in an environment commensurate with my motivation for becoming a teacher in the first place, which was to share knowledge with others, and help them progress in their education and their lives.

Teaching EAP then had given me a professional identity that I could be proud of, a craft that I could hone and develop. To do so might necessitate further knowledge, I felt, so I undertook doctoral studies – once again at The University of Manchester. Now, coming to the end of a research journey that has lasted over half a
decade, there is a certain irony in how I finished this thesis. Equipped with a MacBook, storing ten years of documentation, I retreated to my parents’ holiday home in a town called Bundoran on the west coast of Ireland. There, without the distraction of the Internet, at the intersection of sea, cliffs, and shore, I wrote, reflected, wrote and reflected some more for several weeks. There too, less than fifty miles from where I first encountered chalkboards, colour televisions, sandpits, and arithmetic, I reflected on the words of T.S. Eliot, in that “the end of all our exploring will be to arrive where we started and know the place for the first time” (1943, pp. 143-145), as I returned to the origins of the study, and traced out the journey from the very beginning.

1.5 The particular context under investigation

Since this study is concerned with forms of knowledge used in the practice of EAP teaching, it is naturally situated in a context where such teaching takes place. The participants are a group of EAP teachers working for a language centre preparing overseas students for progression to UK higher education institutions. They are part of a teaching team within this organisation and also part of a “broader TESOL community” (Edge, 2005, p. 186), which entails shared histories, practices, discourse, and developmental experiences. Many of these, including two of the three cases chosen in the final analysis also happened to be teachers making a recent transition from General English to EAP, like those described in such works as Alexander, Argent, & Spencer (2008).

Through a range of backgrounds and career paths that reflect the uniqueness of ELT as a profession (Borg, 2006b, pp. 4-5), these individuals are part of an equally unique project, which is a partnership model employed by a 1960s “plate-glass” university (Beloff, 1970), alongside a private-sector provider of English Language and Foundation courses. This form of arrangement has become increasingly common within UK higher education where such groups as INTO, Kaplan, and Study Group have taken charge of language centres, and the recruitment of students onto pre-degree courses. Many organisations, particularly teaching unions,
have been vociferously opposed to this development, and the arguments on both sides have recurred frequently in higher educational public debate. Aspects of this debate have featured in such works as Hadley (2013), and Velliaris & Willis (2014).

There are several ways in which public-private partnership models impact upon staff working for them. The first is that even though they are educational organisations, they have many corporate features and expectations that have an impact upon their structure. As such they can also be top-down organisations, as described in Handy (1996). White (2003, p. 45) has spoken of the dangers of a “bifurcated system” that places corporate representatives at the top of the hierarchical pyramid and teachers in a position of struggle at the bottom. Badat (2004), writing about the African context, similarly warns against developments being driven by business interests rather than educators.

Wenger (1998, p. 46) further illustrates how, within such organisations, there is often a dichotomy in the reality of practice on the ground and the perception of management about what is realistic in terms of outcome or workload. Additional questions are raised in Butler (2007) who asks whether such organisations belong to the category of “profiteer” or “prophet”. However Gilmour (2010) argues that there has traditionally been very little emphasis on continuous development in some English Language Centres within universities, and that public-private partnerships can “place much greater focus on staff development and the student experience.” Although there were times in which the latter seemed to take primacy over the former in this particular partnership, I would argue that my emphasis on staff development served to keep attention focused on the classroom rather than the boardroom, and the ethos far more educational than corporate.

In practical terms, the language centre at the heart of this study provides Foundation courses onto which students enrol with the aim of matriculation to “target”, or partner, universities (Martin, 2014, p. 5). These courses involve a combination of subject-specific work (Business, Law, Economics etc) and EAP in order for
students to cross the bridge between pre-degree and actual degree studies. Such courses were first provided for the January 2010 academic intake, one month after the language centre was opened in a satellite campus that was built from scratch, in the heart of London’s financial district. Since the language centre was brand new, at the start of 2010, the teaching team was similarly new, with all of us having been hired the previous autumn by a panel representing the public-private partnership. Again, this added to the uniqueness of the situation; the fact of there being no prior history to the language centre in terms of its employees.

Yet, there was no doubt that the public-private partnership did have an impact on the workings of the language centre in terms of expectations and ethos. Teachers were expected to do up to 800 hours of teaching per year, which worked out at around 20 hours per week, and as such had “busy classroom lives” (Burns, 1999, p. 14). Coordinators and Programme Managers taught less, though for the first few terms I taught at least eight to ten hours a week on top of my management responsibilities, my research, and the extra work of facilitating opportunities for teacher development. The language centre was thus a busy place in which I often had to fight strongly for the interests of teachers over more corporate concerns. The fact that I was able to do so further supported my ability to build a team, and to foster a close relationship with colleagues.

1.6 The actual teachers in this study

As one of the managers in this brand new language centre, I was in a prime position to get to know this similarly new group of teachers. I had not been involved in the recruitment of the first who arrived, but would play a part in hiring those who came in the spring and summer semesters of 2010, and in trying to develop a team from this collection of individuals who shared commonalities of the TESOL/TEFL profession as listed by Edge (2005, p. 186).

Over the course of nine months, fourteen English Language teachers would arrive in the centre, with a further four arriving by Christmas. This was staged according to needs and student numbers, which had an impact on recruitment in that teachers
hired at short notice tended not to be as qualified or experienced as those hired over a longer process. By the end, the gender split was precisely equal, nine male, nine female, with an age range from early twenties to upper fifties. Regarding countries of origin, we had twelve English, two American, one Scottish, one Welsh, one Irish, and one Singaporean. Of the teachers who were from England, one was of Chinese ethnicity, whilst the rest were from different regions of the country. Four had spent time in the Arab world, three in Japan, three in China, one in south-east Asia, two in Spain, two in Italy, one each in Turkey and Poland, and one recent graduate had never left Britain; although several had passed through other places at various stages of their careers.

Mirroring my own career path, most teachers had undertaken professional journeys that included a considerable amount of certification. At the very least, they possessed a Bachelor degree and a Certificate of English Language Teaching to Adults, which is the minimum requirement accepted by the British Council for teaching EAP/ELT. Mainly though, the qualifications of more experienced teachers were at Masters level, or the alternative Diploma in English Language Teaching to Adults, which in the UK context is often seen as equivalent to a Masters (Sokol, 2011).

Those teachers who possessed DELTA or Masters qualifications had most likely followed a career path which involved prior work in either British or overseas universities, whereas “novice” teachers (Alexander, 2010, p. 4) tended to come from a private language school background. As a consequence of this, they would have less opportunity to develop awareness and practice of the core criteria and competencies detailed by BALEAP (2008), including “the key differences between the content and processes required for teaching and learning in an EAP class compared with a general ELT class” (p. 8). Significantly, this is listed under the heading of ‘Teaching Practices’, which incorporates the importance of “the methods, practices, and techniques of communicative language teaching” in “an academic context” (ibid).
1.7 Developing a teaching team

The fact of everyone being new at almost the same time created a sense of egalitarianism, as we got to know one another. As one of the managers in the workplace (an issue I shall return to in more depth) my role and responsibility was to build on this and develop a functioning team, in terms of delivering EAP instruction to students. In order to do so, I identified a need to run development sessions for staff in areas that would have direct relevance to their classroom lives (Burns, 1999, p. 14), and be attuned to participants’ emergent needs, as in Wenger (1998, p. 251), and Brooks-Harris & Stock-Ward (1999, pp. 48-51). Needs analysis can be conducted either formally or informally (ibid, pp. 49-50), and in this instance I opted for a semi-formal approach of direct experience and observation. This was done through group discussions with staff, and secondly, by reviewing work samples gathered, by consent, during and outside of lesson observations. Technology, time management, familiarisation with a new environment, and understanding of courses and learning objectives emerged as recurring themes and issues in this identification process.

The depth of teachers’ knowledge was apparent, not just in terms of pedagogy, language and academic practice, but also cross-disciplinary knowledge through previous studies, work, or teaching in this field. Pedagogy and content then appeared to be areas where experienced teachers felt comfortable. Less experienced colleagues had acquired the rudiments of pedagogy through a combination of CELTA training/education, and subsequent teaching experience, but lacked content knowledge, and perhaps an overarching sense of their own identity as teachers.

1.8 The route of development chosen

Technology, being an area in which I had some expertise as a consequence of experience, and study in the University of Manchester, appeared to have the potential to provide the bedrock of development. Through focusing on this area, I could draw on teachers’ existing knowledge to develop awareness of using technological resources to assist in the areas of time management,
course familiarisation, and lesson delivery. Virtual Learning Environments, for example, could be used as a means of structuring, organising, and mapping out courses. Underpinning this was a philosophy of “EFL teaching as profession” (Pennington, 1990, p. 134), and an aspiration to forms of “cognitive self-direction” espoused by Vygotsky (Manning & Payne, 1993, p. 369), and supported by empirical experience of teacher development.

Rubin (1978, p. 136) states that “teachers need to be involved in the articulation of their own training needs whenever possible.” Thus I conducted further discussions, on an individual and communal basis, to understand my colleagues’ perception of their placement on the professional continuum, where they wanted to be, where they needed to be, and how to reach such a point. Again, references to technology’s ubiquitous presence featured strongly, and a desire for ‘training’ in how to best utilise the institution’s resources. As a consequence of this demand, I decided to run educational workshops with direct relevance to teachers’ classroom lives, and the technological tools at their disposal, particularly the Hitachi Cambridge Smart Boards with which each classroom was equipped, and the shared learning platform of a Moodle Virtual Learning Environment. However in setting out my goals for action, I paid heed to the suggestion of Laurillard (2002), and Motteram (2004, p. 1) that “academic conversations” must take primacy over technologies that service institutions.

1.9 Simultaneous opportunity for research

As I began organising the development project, I sensed that there was an opportunity to integrate it with my PhD studies, which were at an early stage, and needing a more solid focus. Mercer (2007) describes such a scenario as being common in today’s doctoral context, whilst Burns (1999, p. 24) speaks of research often being prompted by “concrete and practical” issues of “immediate concern” in the workplace. Indeed such a tradition goes right back to Kurt Lewin (1946) who championed the benefits of “research which will help the practitioner” (p. 34).
1.10 Decision to conduct workshops

Having identified an opportunity to combine teacher development with doctoral research, the next step was to decide on practical approaches. Historically, within teacher education, workshops have served as a platform of development going back to the 1930s (Richards & Farrell, 2005, p. 23). These are commonly recognised as “an intensive, short-term learning activity” which facilitates longer-term developmental impetus (ibid).

However good workshops are more than just “cookbooks for effective teaching” (Crandall, 2006, p. 37) delivered by means of a “traditional episodic, fragmented approach” (Darling-Hammond & Richardson, 2009, p. 3). The age of the “drive-by” workshop model has evolved to more sustained approaches to development (ibid, p. 46), which are more experiential and reflective than the ‘one-shot’ formulas of the past (Meltzer, 2010; McGrath et al, 2011).

Thus, workshops could not be limited to the ‘training sessions’ teachers themselves had requested. In order for them to be successful, it was my responsibility as teacher educator to provide a contextualised and ecological process of learning linked to practice, offering opportunities for experience, reflection, and construction of knowledge, through time. Furthermore, the emphasis would be pedagogic rather than “technocentric” (Papert, 1987). From the start I had a sense of the types of workshops required, from discussions with the teachers, and the technological resources at our disposal. Interactive whiteboards and Moodle would play a central role, and from these, other areas would take shape, according to contemporary developments, needs, and demands. Pedagogy though would take primacy over technology.

1.11 My role as researcher

Rubin & Rubin (2005, pp. 83-86) stress the importance of defining the role of the researcher, with factors such as “biography” (Silverman, 2005, p. 123), and social realities (Wenger, 1998, pp. 123-24) deemed as crucial prerequisites for describing the research process. In this instance, I fit Coghlan & Brannick’s (2009, p. x)
definition of someone doing research in the organization where I work, at the same time as seeking certification on an academic programme, and thus assuming an “explicit research role” in addition to a “normal, functional role.” This everyday functional role, in my case, was that of manager of EAP programmes, and manager of teachers, alongside such responsibilities as setting up and providing education on the usage of the Moodle VLE.

Furthermore, as a consequence of moving into this public-private partnership from a background in London’s former polytechnics, I had an approach to management more consensual and participatory than hierarchical. For some colleagues, this was a familiar approach. For others, whose experiences had been mainly in the private ELT/TEFL sector, with Director of Studies’ top-down approaches, it was new. This was why it was important for me to talk to teachers, as a colleague, whilst recognising that by virtue of my position I had more power and responsibility. This will be discussed further in Chapter Four, but I feel that in the spirit of the research, and for the sake of the research story, it is important to clarify my position at the outset.

1.12 Broad picture of the investigation

On the whole then, as I embarked on my research journey, I wanted to understand, improve, and possibly reform practice in the EAP context. Through a process of needs analysis, I had identified a desire amongst teachers to better understand ways of integrating technologies with traditional pedagogic approaches that had served them well. These were experienced professionals feeling “in the fog” of a new situation (Lewin, 1946, p. 34), and my role was to guide them through; sensing that this experience might contribute to broader knowledge in educating EAP teachers.
CHAPTER 2: Review of relevant literature

2.1 Overview of the literature review

Having defined the characteristics of the research context, this chapter presents a discussion on the literature that has supported and informed the genesis of this study; expanding upon areas touched upon briefly in the previous section. The review reflects, as much as possible, my journey towards establishing a settled theoretical framework for this study. Giving consideration to the forms of knowledge required of EAP teachers, I draw on ideas from the BALEAP 2008 Competency Framework, Lee Shulman’s (1986) Pedagogical Content Knowledge framework (PCK), and its subsequent extension by Mishra & Koehler (2006) to Technological Pedagogical Content Knowledge (TPACK), before moving towards the addition of Activity Theory. The key areas explored over the course of the chapter relate to defining EAP; understanding forms of knowledge required of EAP teachers; the use of technologies in EAP teaching; teacher education; and sociocultural/contextual influences on professional practice.

2.2 What is EAP and how has it evolved?

Dudley-Evans & St. John (2009, p. 6) situate English for Academic Purposes (EAP) as a division within English for Specific Purposes, which is also part of the broader “acronym-rich” (Martin, 2014, p. 2) field of English Language Teaching. This sense of placement is critical because most EAP teachers begin their careers in other fields of ELT (Alexander et al, 2008), and there is a recurrence throughout the literature of attempts to differentiate between these two parts of the same broad family (Jordan, 1997; Flowerdew & Peacock, 2001; McCarter & Jakes, 2009; Bruce 2011; Campion, 2012; Martin, 2014). Alexander et al (2008, p. 3) cite the main difference as being that EAP is more “goal-driven” than other forms of ELT, as a consequence of its end objective being to teach the language and skills required in specific academic contexts. Increasingly though, the emphasis has moved away from defining and positioning EAP towards greater attention to the Teaching of
English for Academic Purposes (Watson-Todd, 2003; Alexander, 2010). This has been defined as a “leap into TEAP” by Kirk (2012) who contends that for it to become consolidated, there has to be a shift in EAP teaching philosophy as well as teaching practice.

Definitions of EAP abound in the literature, with particular attention paid to working on students’ ability to “communicate effectively in academic environments” (Watson-Todd, 2003, p. 149), to provide a “foundation for the acquisition of academic literacy” (Braine, 2002, p. 60), and preparing “non-native speaking learners for academic study and research in English-medium courses and institutions” (Gilbert, 2013, p. 119). Gillett & Wray (2006, p. 7) further describe EAP courses as being those that “prepare lower level students for entry to higher education” through a combination of language and subject-specific work.

Blue (1998, p. 41) categorises two main broad types of EAP classroom as being EGAP (English for General Academic Purposes) and ESAP (English for Specific Academic Purposes), which are differentiated by increased emphasis on subject-specific tasks within ESAP, compared to general skills work within EGAP. This is further described in the work of Jordan (2002), and Gilbert (2013), with subject-specificity becoming increasingly important (Alexander, Sloan, & Porter, 2011; Macallister & Kirk, 2013), as universities seek to better tailor and embed language provision within the specific context of particular academic disciplines.

However, in order to best define EAP, Watson-Todd (2003, p. 147) suggests understanding why it has come into historical existence. Such analysis has been presented in considerable detail in the works of Jordan (2002), Hyland & Hamp-Lyons (2002), and Hyland (2006). From humble beginnings, EAP has risen to a major player in a multi-million pound industry because of “the gradual growth of English as the leading language for the dissemination of academic knowledge” (Hamp-Lyons, 2011, p. 92). Yet, the literature also suggests that there was a need for EAP within higher education long before this recent explosion of growth took place.
Alexander (2010) explains that EAP emerged as an entity distinct from ELT in the 1960s (p. 2), when it was used mainly for language support (ibid) and seen as a branch of English for Specific Purposes (Jordan, 2002). Jordan (p. 69) goes on to point out that even though BALEAP was formed in 1972, under its original name of SELMOUS\(^1\) (pp. 70-71), the British Council were the first organisation to use the acronym ‘EAP’ between 1974 and 1975 (p. 73). Over several decades, teachers of this new subject worked hard to establish a clear identity for it but it was often seen as “the poor relation” of more ‘specific’ subjects in higher education (Hamp-Lyons, 2011, p. 91). Hamp-Lyons (ibid, p. 89) captures a sense of this through delineating how EAP has been an “eclectic and pragmatic discipline”, often having to adapt in order to survive.

Even today, according to Macallister & Kirk (2013), EAP has not found a consistent ‘home’ within universities, and is still seeking to define/refine its relationship with other disciplines. However others such as Hamp-Lyons (2011, p. 92) claim that EAP has now “come of age as an independent academic field ... with an identity and community of its own.” Much of this may have to do with the work of BALEAP which has fostered a strong research culture going back decades (McDonough, 1986), and a more recent emphasis on “academic culture” which Jordan defines as “the higher education system, subject specialist conventions regarding staff and student relationships and expectations, and writing conventions (2002, p. 73). Hamp-Lyons (2011) adds to this in referring to a more recent movement towards “the linguistic, sociolinguistic, and psycholinguistic description of English as it occurs in the contexts of academic study and scholarly exchange” (p. 89). This then suggests that the subject is becoming increasingly multi-dimensional as it incorporates elements of “EAP linguistics” (Martin, 2014), alongside academic acculturation and development of literacy skills (Jordan, 2002; Jones & Lea, 2008), learner-centered approaches (Alexander et al, 2008; Alexander, 2010), and discipline specific work (Dudley-Evans & St. John, 2009; Alexander, Sloan, & Porter, 2011; Gilbert, 2013).

\(^1\) Special English Language Materials for Overseas University Students
On the whole then, within the literature, there is an established recognition of why EAP exists and what function it serves for students, and for the universities within which it operates. Having established this basis, there is now a need to consolidate and build for the future of our eclectic and pragmatic discipline. The foundations for building on this already exist because there has always been a strong research culture in EAP, going back as far as work within IATEFL Special Interest Groups in the 1980s (Freeman, 2002), to the creation of the BALEAP Research Register in 1995, highlighted in Hamp-Lyons (2000), and Jordan (2002).

Teacher development though is an area which requires further work, as argued by Alexander (2010, p. 6) who advocates “a shared understanding of what is involved in teaching EAP and a more rigorous approach to teacher recruitment, induction, and professional development, especially for novice teachers and teacher educators.” This developmental gap within EAP, as a profession, has similarly been highlighted in the earlier work of Scott (2001), Errey (2001), and Jordan (2002). As a result of the consequential need for professional development to keep abreast of change, there appears to be a growing need for the integration of other new, and versatile forms of knowledge, into the BALEAP Competency Framework (2008). Such a demand can be found in the contemporary work of Khamis et al (2014), and Knight (2014). In order to examine this further, the next section focuses on forms of knowledge expected and required of today’s EAP teachers.

2.3 Knowledge expected of EAP teachers

Mann (2005, pp. 106-108) investigates the knowledge base of English Language Teaching, which incorporates various constructs to include “content knowledge, pedagogical knowledge, curriculum and materials’ knowledge, knowledge about second language acquisition (SLA) and learners, and knowledge about context.” Many of these components echo BALEAP’s (2008) eleven core competencies, and the values found in Shulman (1986/1987). Indeed Shulman (1987, p. 4) advocates the creation of a periodic table of knowledge for teachers. This, he argues, is necessary but
has not yet been fully defined; comparing it to early formulations of Mendeleev’s periodic table, which contained “distinct gaps for the then unknown elements” (Schwerdtfeger, 2011, p. 93). Shulman though provided a “rudimentary” (by his own admission) outline of teacher knowledge (Ball et al, 2008, p. 397) with his formulation of the PCK (Pedagogical Content Knowledge) framework. Drawing on this framework, in line with the literature, the following elements can be related to the work and forms of knowledge expected of EAP teachers in today’s digital age.

2.3-ii Content knowledge within EAP

The content of EAP classes can be difficult to define since they are “goal driven” (Alexander et al, 2008, p. 3); focused on “the continually shifting needs of students” (Gilbert, 2013, p. 121); and often shaped by particular disciplinary needs (Afful, 2007). Indeed, a small-scale study conducted by Martin (2014) revealed that EAP teachers in the UK are increasingly concerned with introducing students to the discourse of their future disciplines. This need for awareness of context, disciplines, and discourse again parallels BALEAP’s (2008) synthesis of core competencies, and its “overall competency statement” (p. 3).

Essentially, EAP teachers should be able “to facilitate students’ acquisition of the language, skills and strategies required for studying in a further or higher education context” (BALEAP, 2008, p. 3). Secondly, they should be able “to support students’ understanding of approaches to interpreting and responding to the requirements of academic tasks and their related processes” (ibid). It follows then that an EAP teacher will have a “reasonable knowledge” of the disciplinary contexts in which they work, the disciplinary differences across these contexts, and “a high level of systemic language knowledge” including knowledge of text, genre, and discourse analysis (pp. 4-5). These points echo key literature such as Jordan’s (2002) emphasis on understanding academic culture; the primacy of language and context in the work of Hyland & Hamp-Lyons (2002); and emphases on text analysis and genre in works such as that of Pennycook (1997/2000).
Alexander though argues that content is not prioritised in EAP, as any instance of language could be used in the context of a lesson (pp. 4-5), but there are voices in the literature who challenge this, and argue that language as content is a critical part of a teacher’s actual knowledge base. Support for this comes in the notion that in other subjects such as Maths or Business, language is the vehicle for knowledge, but in EAP the fundamental process of instruction is grounded in an understanding of linguistic structures, as voiced in Hyland & Hamp-Lyons (2002). Through understanding and analysing EAP linguistics, teachers can demystify academic discourse (ibid); teach students to craft arguments in a style conducive to particular disciplines (Hyland, 2006 & 2008); introduce the communication skills required of particular situations they will encounter in their future studies (Gillett & Wray, 2006, p. 3); and make them aware of political (Pennycook, 1997/2000), subject-specific (Bell, 1999), and sociocultural (Borko & Putnam, 1996) dimensions of language.

Yet, in making this argument, it is important to show that language, in the EAP context, is used differently to other areas of ELT, variously described as General English (Alexander et al, 2008), and English for General Purposes (Campion, 2012). Teaching language in EAP is about facilitating the acquisition of academic literacy, rather than what Hyland & Hamp-Lyons rather bluntly define as “a few hours of fixing up grammar in the language centre” (2002, p. 6), or teaching language purely for language’s sake. Perhaps this is why references to language teaching within the BALEAP framework are carefully constructed, with emphasis firmly on discourse analysis, sub-technical vocabulary, and systemic language knowledge (2008, p. 5).

On the whole, the literature suggests that in terms of content knowledge for EAP, teachers must go beyond a functional understanding of language, and know how to use and teach it critically in the context of specific disciplines. They are not always expected to know the language of these disciplines (Khamis et al, 2014), but should understand the context, and academic purposes for which they are engaged in teaching and preparing students
The fact that EAP content is more than language also addresses the concerns of those such as Freeman (2002, p. 6) who states that “when applied to language as subject-matter” Shulman’s PCK framework “becomes a messy and possibly unworkable concept.” However, when interacting with other elements of knowledge, that messiness can be further reduced.

2.3-iii Pedagogical knowledge within EAP

Watson-Todd (2003, p. 149) stresses that the ‘how’ and ‘why’ aspects of EAP as a subject are as important as ‘what’ is delivered in terms of content. Pedagogy is generally recognised as the ‘how’ aspect of teaching, and Shulman (1986) describes pedagogical knowledge, at its most basic, as being the practitioner’s awareness of how to teach what they know. Koehler & Mishra (2009, p. 64) expand on this to define it as “teachers’ deep knowledge about the processes and practices or methods of teaching and learning.” This encompasses such areas as classroom management, awareness of aims and objectives, audience awareness, strategies, techniques, and understanding means of assessment (ibid). The latter point is echoed in BALEAP’s “Assessment Practices”, which require the EAP teacher to be able to “assess academic language and skills tasks using formative and summative assessment” (2008, p. 9). The “Teaching Practices” section also incorporates elements of pedagogical knowledge in requiring teachers to be “familiar with the methods, practices and techniques of communicative language teaching” and relate these to context-specific tasks (ibid, p. 8).

Increasingly, in the literature, there is a focus on pedagogy, going back to Pennycook (1997) demanding a broader philosophy than simply “the local and the everyday defining what we do” (p. 255). Both Watson-Todd (2003, p. 149) and Alexander (2010, p. 5) speak of a movement towards more learner-centered approaches where the methodology of teaching takes precedence over micro-techniques in the classroom. Watson-Todd goes on to argue that “since student learning is the end goal, perhaps it makes more sense to talk about Teaching EAP, or TEAP, rather than just EAP” (2003, p. 148). His rationale for this is that “approaches, which
involve the application of sets of principles to guide teaching, allow more flexibility than methods” (ibid). This again could be seen to link into Warschauer’s reference to “pedagogical philosophies” (1996, p. 6) where it is not “the what” that matters, whether tools or content, but rather “how” we put these artefacts into practice.

Regarding the tools of EAP teaching, another shift has occurred in recent times wherein there has been a drive towards a broader achievement of academic literacy which has seen an increased focus on the addition of digital resources (Jones & Lea, 2008). This has meant that traditional EAP practices, found in such works as Hutchinson & Waters (1987), or Jordan (1997) are having to be adapted in light of this new digital age, and doing so requires not just a knowledge of pedagogy and content, or both combined. Teachers may also require awareness of technological knowledge.

2.3-iv Need for technological knowledge in EAP

It is now almost universally recognised in the literature, and in practice, that teachers need some degree of technological knowledge in order to cope with the demands of today’s educational environment. This is alluded to in contemporary works such as Hamp-Lyons (2011), Gilbert (2013), and Motteram (2013) but has been an accepted reality for decades. As early as 1993, Diana Laurillard advocated greater integration of technology into the higher education curriculum, although others point out that technology has been a feature of education for decades, perhaps even centuries (Koehler & Mishra, 2009; McGrath et al, 2011).

Borko et al (2009, p. 4) define this broad sense of technology as being “the knowledge, creation, and use of tools and techniques to control and adapt to our environment.” Motteram (2013) cites a practical example of how text messaging has evolved, and been shaped by its social usage. Technology changes the environment, and simultaneously the environment changes technology. For example, EAP classrooms of today tend to be well resourced with technology (Watson-Todd, 2003, p. 151), and as a consequence today’s teachers are seeking out innovative ways of using this, as in Bonk (2010), Kirk (2012), Watson (2012), and Gilbert (2013).
Julie Watson, Head of eLanguages at the University of Southampton, presented a paper to a BALEAP session in November 2012 entitled ‘A to Z of technologies useful for EAP’. Such tools include Academic Content Online Dictionaries, Blogs, Content Curation Tools, Data Capture Tools, Immersive Virtual Worlds such as Second Life, Kindle, Learning Objects such as the online EAP Toolkit for teachers, Questionnaire Making Tools, of which Survey Monkey is the best known example, Social Walls such as iTunesU, Video Capture Management Systems, VLEs, and Word Cloud Tools. Alannah Fitzgerald (2013) further adds to this extensive list of available resources with a case study examining the usage of Open Educational Resources in EAP contexts, ranging from blogs and dedicated websites to corpus-based tools.

However, despite this range of tools, other voices in the literature argue for a broader definition of technologies to include analogue and older technologies (Borko et al, 2009, McGrath et al, 2011). By taking this view, they argue that the focus is not on the tools themselves, but on the purpose of their usage, which echoes Warschauer (1996), and Motteram (2013). In this way, the tools listed by Watson (2012), and Fitzgerald (2013) can become an invisible, and perhaps indivisible, part of learning (Bax, 2003), which helps to transform both the sociocultural context (Warschauer, 2002), and the pedagogy (Motteram, 2013).

Despite this desire to see new technologies become as integrated as the chalkboard (McGrath et al, 2011), or the periodic table (Mishra & Koehler, 2006) in the classrooms of today, there are voices in the literature who advocate more radical transformations. These include Tapscott (1998), and Prensky (2001) who argue that the digital age is so radical that the nature of academic study itself is so outdated that it requires absolute reconstruction. More academic, rather than technocorporate, voices advocate integration of the new rather than absolute abandonment of tried and tested techniques (Laurillard, 1993; Franklin & Peat, 2001; Sutherland-Smith, 2002; Davis & Fill, 2007; and Motteram & Sharma, 2009).
Although Prensky’s (2001) argument is perhaps now outdated in its assertion that students are *natives* of the digital age and teachers are *immigrants*, many teachers remain confused about the amount of technological knowledge that they are expected to have. This has been a recurring theme in the literature on not just ELT/EAP but also teaching in general for over a decade (Lam, 2000; Keating & Evans, 2001; Ertmer, 2005; Velliaris & Willis, 2014). Yet the most significant literature echoes a long tradition in computer-assisted language learning which sees the computer “as an optional tool among many to be exploited for language learning purposes” (Warschauer, 2000, p. 521). This, in turn, ties in with a drive towards TEAP, and the eminence of holistic strategies over micro-techniques (Watson-Todd, 2003; Alexander, 2010).

### 2.4 The tradition of CALL and need for transition

In order to get a stronger sense of the philosophical position that I have adopted from the literature and personal experience, it is important to define the terms tradition and transition. The **tradition** is the long-established usage of technologies in education and in society (Warschauer, 1996; Warschauer, 2000; Borko et al, 2009; McGrath et al, 2011; Motteram, 2013), and the **transition** is the change brought about by the digital age. This digital age can be defined as the era of Web 2.0 technologies (Di Nucci, 1999) being used to facilitate “collaborative practices”, “participatory media”, and “relationship technologies”, as described in Greenhow et al (2009a/2009b). Others who have contributed literature on this new age include Warschauer (2000/2002), Lankshear & Knobel (2006), Bull et al (2008), Jones & Lea (2008), Maddux & Johnson (2011), Watson (2012), and Jarvis & Achilleos (2013). Warschauer (2002) goes as far as saying that contemporary changes in education are as major as earlier revolutions in language, writing and print (p. 521).

One major revolution stressed in the literature is the change in the students we teach. Though there is no hard science to suggest any form of biological rewiring of their brains as in Prensky (2001), Lea & Jones (2011) point out that today’s students experience the
almost “total immersion” (p. 378) of technology in their broader lives. This sense of technological immersion is a recurring theme throughout much of the literature where there has been a proliferation of such terms as “the net generation”, “Wiki fledglings”, “millennials”, and ‘Google generation” (ibid). Warschauer (2002, p. 521) makes the further point that a knock-on effect of this has been a change in the literacy and language skills required in today’s society, although the underlying critical pedagogy (p. 520) requires adaptation rather than overhaul.

This argument for adaptation rather than overhaul is supported by a host of other voices which remind us that there were technologies being used in teaching, including ELT and EAP, before the advent of those highlighted by Watson (2012), and Fitzgerald (2013). Mishra & Koehler (2006, p. 1023) point out that these range from “textbooks to overhead projectors, from typewriters in English Language classrooms to charts of the periodic table on the walls of laboratories.” Each of these came along at a different point in history and were absorbed into the fabric of education (ibid), albeit at a much slower pace than what is happening today (Warschauer, 2002) as a consequence of broader socio-political circumstances.

Echoing Warschauer (2002), Motteram & Sharma (2009, p. 86) describe these new technologies as a further step in the culture of education and society’s use of technology, rather than something wholly radical, and compare them to past developments such as “the Socratic method”, “manuscripts in early monastic education”, and then books in the wake of Caxton’s printing press. Likewise, McGrath et al (2011, p. 7) nominate the chalkboard as an example of a traditional technology which has evolved since its invention in 1801 to its present interactive, electronic adaptation; “the form and function” of which is essentially the same as its ancestors. Similar themes have been explored in Eshet-Alkalai (2004) and Soffer & Eshet-Alkalai (2008) who discuss a pendulum-like historical swing linking the reading of ancient hieroglyphics to today’s HTML.

Therefore, a substantial amount of literature supports the notion that the tools of classrooms might be different but the underlying
rules are similar. Besides, there has long been a tradition of incorporating technology into English Language classes (Warschauer, 1996; Bax, 2003; Beatty, 2003; Chapelle, 2010; Motteram & Sharma, 2009; Motteram, 2013), and thus EAP teachers can draw on pre-existing strategies for doing so. Traditional phases of CALL (behavioural, communicative, and interactive) also broadly relate to a combination of language teaching methodologies, and software available (Warschauer & Healey, 1998; Warschauer, 2000/2003; Motteram, 2013).

Bax (2003) further amended the categories of CALL development to ‘Restricted, Open, and Integrated’, and spoke of a normalisation of technology’s usage in the classroom to a point where it would be as natural and “unremarked” as “the coursebook or the whiteboard” (Motteram, 2013, p. 182). This evolution of CALL in the English Language classroom is exemplified in Motteram’s (ibid, pp. 183-86) charting of how technology has shaped teaching of reading and writing; especially in making aspects of the writing process easier, different, and better. Despite this difference, students are still being taught the traditional skills of reading, planning, and producing written texts of an academic standard.

However, Chapelle does suggest that it is also wrong to measure CALL against what has been labelled “traditional instruction” (2010, p. 66), partially because of the speed of change, and also the changes it necessitates in the planning of lessons (p. 51). Yet, the solution for this could be an acceptance of the fact that change is an inevitable part of teaching, not just in terms of tools but also levels of literacy, and the way in which we present and interpret knowledge. Coiro et al summarise the present era “as a rapid and continuous process of change in the ways in which we read, write, view, listen, compose, and communicate information” (2008, p. 5).

This fits in with Motteram’s (2013) argument that education cannot be divorced from the sociocultural context in which it occurs, and thus “technology’s role has been socially shaped within the field of language teaching, and language teaching has changed profoundly too” (p. 184). This could suggest that in order for
teachers to develop their technological knowledge, they need to
draw on traditional understandings of how to manage change, to
adapt to change, and view their practice as being socially shaped.
Indeed, in line with the heading of this section, there is perhaps
not so much a need to develop as to transition current knowledge.
Much of this could be down to resources and as Watson-Todd
(2003, p. 151) points out, EAP has been ahead of the field for some
time in terms of the resources that it provides to its teachers.
Furthermore many of these are highly compatible with the
underlying values and strategies of English Language Teaching.

2.5 Use of blended learning in higher education

One of the chief examples of technology becoming an indivisible
part of the higher education landscape is in the usage of blended
learning through Virtual Learning Environments (VLEs), as
defined in the works of Inglis (1999/2001), Barajas & Owen
(2004), and Oliver & Trigwell (2005). However, early literature
focused on facilitating student learning (Moore, 1995; Mason,
1998; Salmon, 2000; White, 2003; Davis et al, 2004), rather than
educating teachers in their usage (Anderson & Henderson, 2004).

Mason (1998) provides a framework for guiding students towards
asynchronous learning opportunities, which takes the form of a
three-tier hierarchy of usage. The first stage is a “content + support
model” which “supports the notion of relatively unchanging
content materials which can be tutored by other teachers than the
content authors” (p. 5). It then progresses to a “wrap around” or
“50/50” model where some work is predetermined by the teacher
and some evolves semi-naturally from the students, before
developing to the level of the “integrated model” which “is at the
opposite end of the spectrum from the first” in that content is co-
created by the teacher and the students (ibid). This framework
served as a useful guideline for the first of the workshops in the
teacher education programme, because this was related to Moodle,
which was the VLE used by the language centre in this study.
2.6 The particular tools available in my research context

i. Moodle

This history and usage of Moodle has been increasingly depicted in the literature (Robb, 2004; Brandl, 2005; Breen, 2007/2008; Cole & Foster, 2008; Munro, 2010.) Essentially, its name is an acronym for Modular Object Oriented Dynamic Learning Environment (Moodle, 2014), and is “a verb that describes the process of lazily meandering through something, doing things as it occurs to you to do them, an enjoyable tinkering that often leads to insight and creativity” (Cole & Foster, 2008, p. ix). Born out of a PhD project in Australia (Robb, 2004), Moodle is a self-paced flexible learning platform that allows for easy navigation (Brandl, 2005, p. 17), and the integration of a wide range of resources (ibid, p. 18). These include “any kind of text-based or html-formatted documents, multimedia resources such as graphics, video, or audio (e.g. MP3 files), SCORMs (Godwin-Jones, 2004), and PowerPoint, or Flash-based exercises” (Brandl, 2005, p. 18).

Thus, Moodle offers what Munro (2010, p. 51) describes as “a broad palette of IT options” that are most effective when “teachers integrate a range of techniques using a judicious mix of hardware, software, and connectivity to develop innovative learning and teaching approaches.” This meets the criteria of “a fifth generation mode of educational delivery” (Taylor, 2001, p. 12), and possibly a sixth (Breen et al, 2011). It also meets Garrison’s (1988) criteria of blended learning being a “balanced approach between teacher-centered relationships found in face to face education” and “the tendency to stress learner centered relationships in the emerging electronic environment.” Further to this, it places an emphasis on self-access for students, which has been an important focus for BALEAP (2008), and ELT, in general, for over two decades, as highlighted by White (2003, p. 26). In addition to this, since socio-constructivist pedagogy has shaped Moodle’s creation (Brandl, 2005; Cole & Foster, 2008), it facilitates learning approaches based on community (Robb, 2004); inquiry and discovery (Brandl, 2005); and project work as in Jarvis (2009), and Gilbert (2013).
ii. Interactive whiteboards

There is much less in the literature about Interactive Whiteboards (IWBs) in the context of higher education, as the bulk of work on them has been done in the primary and secondary school contexts. Branzburg (2008, pp. 1-2) describes such boards as “being connected to a computer and LCD projector” which can be used for purposes of display, input, annotation, projection, and recording. He goes on to describe Hitachi Starboards, which are the particular resource supplied by management in this research context. These offer classrooms “the next generation interactive whiteboard” through multi-touch gestures similar to those of an iPhone (ibid, p. 3). However he does note that this brand originates in the corporate world, unlike those such as Promethean’s Activboard designed “by teachers for teachers” (ibid, p. 7).

Yet, some of the literature suggests that within higher education, the forms of usage advocated by Branzburg (2008) are not being realised. Dickenson (2014, p. 14) criticises IWBs as being a “low-level” form of technology, facilitating integration at an “adoption” level without “significantly altering pedagogy (Cuban, 2003)”. This is echoed in the work of Munro (2010), McGrath et al (2011), and Kirk (2012), with the latter writing in an EAP-specific context. The main issue cited by these authors is the lack of innovation, and these boards being used no differently to traditional chalkboards.

However, there is an underlying sense that IWBs have the potential to reach a level of “invention” (Cuban, 2003); “interactive engagement” (Kirk, 2012); and usage from a “project-based perspective” (Dickenson, 2014), if teachers are given the requisite theoretical and practical training (McGrath et al, 2011). Within the literature, positive examples of usage can also be found. Slaouti et al (2013) present a vignette of a teacher in the UK Further Education context making a PowerPoint lesson more interactive for students on an IWB, whilst Pim (2013) presents an instance of a board being used as a karaoke-type device that allows students to “digitally visualise rhymes and songs” (pp. 22-23).
iii. Other tools found in EAP practice

Further to the two main technologies provided by the language centre, the literature abounds with examples of instruments that readily appear in EAP teachers’ everyday practice. These range from the traditional textbook and tape recorder to the mobile technologies described in Tapscott (2009), Bonk (2010), and Watson (2012). Bonk lists such technologies as including phones, laptops, iPods, MP3 players, digital cameras, flash memory sticks, and lecture recording pens (2010, p. 63). Such tools facilitate new forms of visual and textual interaction inside and outside of class, “including texting, phoning, social networking, instant messaging and emailing” (Jones & Lea, 2008, p. 210). Thus, they inevitably play a part in the EAP teacher’s “ecosystem” (Fenwick & Edwards, 2010, p. 9), whether or not they actively encourage this usage.

iv. Word processing and presentation software

Vignettes and instances of practice throughout the literature abound with references to PowerPoint, defined by Cole & Foster (2008, p. 44) as “the most widely used presentation-creation software.” Several authors, aside from the aforementioned Dickenson (2014) highlight the drawbacks of this. Garber (2001), writing in the Business context, is credited with coining the now-ubiquitous catchphrase “death by PowerPoint” whilst Scott Adams (2000) refers to “PowerPoint poisoning”. This though can be avoided with self-awareness, as shown by the teacher in Slaouti et al’s (2013) vignette of practice, and by purposeful usage in serving as a vehicle for students’ oral presentations (Jewell, 2006).

Jewell (2006) also discusses word processing in the EAP context, and this is something featured extensively in the ELT literature of the past couple of decades (Piper, 1987; Pennington, 1996; Tribble, 1996; Motteram, 2013). Motteram’s emphasis is on how the word processor has culturally and physically changed the practice of writing whilst underlying pedagogic principles remain largely the same (ibid, pp. 183-85). This again ties in with Warschauer’s
(1996/2002) notion of technology as an advanced medium through which “a variety of methods, approaches, and pedagogical philosophies may be implemented” (Garrett, 1991, p. 75). Of course, this has not just benefitted the teaching of writing but also the creation of print resources born out of a perceived need to supplement traditional textbooks, as has long been a feature of ELT (Krajka, 2003; Askari-Arani, 2004; Kern, 2013).

Other tools, which belong to the same ‘Word’ family, and have been incorporated into the world of EAP, ELT, and education in general include Microsoft Word itself (Bonk, 2010); Microsoft Excel (Guzey & Roehrig, 2009, p. 36); Windows Media Player (Kern, 2013, p. 93), and Microsoft Movie Maker. The latter can be seen in another vignette of practice described by Slaouti et al (2013, p. 73) in the context of teaching English to Sociology students at a Slovenian university. This linkage of English and Sociology has further relevance to my study, in light of one of the cases to be described at a later stage.

v. Resources on the Internet

Throughout the literature of the past decade there are countless references to the benefits that the Internet can bring to education as a whole, and ELT/EAP specifically. Listing them all seems fruitless, so I shall refer to domains rather than authors. These domains are connected to the early phases of CALL in ELT and online learning (late 90s/2000s); the growing literature on TPACK (2006-present); and more contemporary work on the advent of Web 2.0 technologies (2008-present). Within the latter I have taken a specific interest in finding instances of practice where the Internet has been used innovatively in EAP and ELT classrooms, aside from its linkage to mobile technologies as already discussed.

One feature of its usage in the ELT context that recurs through the literature is in the creation and sourcing of online quizzes and grammar activities such as Hot Potatoes in Slaouti et al (2013, p. 72). Other common forms of usage are listed in Kern (2013) who speaks of the use of videos and the Internet (p. 93), specifically YouTube (p. 110); the use of Internet news channels (p. 96); the
incorporation of web-based manuals, journals, and publications often created for other, non-teaching purposes (p. 103); and websites such as Macmillan’s [www.onestopenglish.com](http://www.onestopenglish.com) (p. 104). Added into this are the affordances of email (Koehler & Mishra, 2009; Pim, 2013), and the ability to download software such as that related to concordancing, which has become increasingly common in EAP (Watson-Todd, 2003; Hamp-Lyons, 2011).

The Internet also opens up scope for innovative projects such as those I have come across in the literature on education as a whole. One such example is seen in a decade-old initiative described by Gourley (2004) where teachers in Chile worked on a project called *Hyperstories* which “exposes blind children to a learning methodology that uses 3D sound interactive software to help them construct cognitive structures that represents their surrounding space” and aims to move the participants from darkness to what they describe as “aural vision.”

### 2.7 Sociocultural factors’ impact on usage of technology

Although there are clearly many technological resources available at the present time, some teachers struggle to keep pace with the newest of these technologies (Velliaris & Willis, 2014). Adaptation is as much of an issue as integration, and this is accounted for in the literature by an emphasis on the “protean”, “unstable”, and “opaque” nature of today’s Web 2.0 technologies (Koehler & Mishra, 2009, p. 61). These characteristics appear to overwhelm teachers, and even turn them off technology; which causes unnecessarily “wicked problems” in their classrooms (Borko et al, 2009, p. 3). This is evidenced in a study by Velliaris & Willis where one teacher speaks of consciously making a decision to avoid “technological nightmares” because of technology’s failure to “stand-in for capable instruction” (2014, p. 16). Other voices echo these sentiments from an anti-technology perspective, or caution regarding advantages it brings to education. Within the ‘anti-technology’ literature, there is a genuine and often socio-political discontent with what some describe as a “technocorporate matrix” (Johnson et al, 2008, p. 278) pushing particular forms of
technology into the educational milieu. Such concerns are not new and historical critics are listed alongside the disparaging phrases they have coined, in Cummins (2000, p. 537) who draws upon the metaphor of Proteus, God of the Sea in Greek mythology, to state that “IT assumes different shapes in different contexts and when viewed from different perspectives.” He goes on to outline how Postman (1992) talks of “technopoly”; Barlow & Robertson (1994) refer to “the disinformation superhighway”; and Stoll (1996) speaks of “silicon snake oil”.

More recent criticisms have come from Neil Selwyn in his 2010 publication ‘Schools and Schooling in the Digital Age.’ In writing about teachers’ resistance to digital technology use, he states that technologies such as VLEs could be argued (2010, p. 108) “to depend on the deskilling of teachers and their students, engendering a ‘tool’ mentality where technology is used to ‘yield mechanical tasks and situations of social disconnect’ (Monahan, 2005, p. 290).” This echoes Johnson et al (2008) who assert that despite good intentions “the advent of blended learning and e-learning innovations has ostracised, marginalised or ignored those who cannot afford or who are unable to access the latest hardware and software to take advantage of these opportunities” (p. 275).

Alternatively, those who integrate commendation and criticism come across as far more reasonable. This includes Zhao et al (2002) who admit to “the messy process of classroom technology implementation” whilst Beetham & Sharpe see the dangers in an “often uncritical attitude to internet-based information, and the cut-and-paste mentality of a generation raised on editing tools rather than pen and paper” (2007, p. 5). Similarly, Lea & Jones (2011, p. 377) raise concerns about “undergraduates being so immersed in web-based technologies in their broader lives that they have difficulties engaging in more conventional study practices such as academic reading and writing essays.” However, critics such as these generally agree that the above issues can be addressed with pragmatic pedagogic strategies. Essentially, computer technology should never be seen as a panacea for language teaching but rather as providing the means “to help
reshape both the content and processes of language education” (Warschauer & Meskill, 2000, p. 315). Consequently, this allows for a “more thorough integration of language, content, and culture than ever before” and an emphasis on “humanware” over hardware or software (ibid). This sense of teachers being in control, and driving the “vehicle” of technology goes back as far as Clark (1983).

Chapelle (2010) adds to this by calling for a broader sociocultural perspective on how technology usage intersects with a range of other factors (pp. 57-61). The sociocultural dimension referred to in Motteram (2013) also provides an excellent counter-argument to Postman (1992) who states that computer technology had “not yet come close to the printing press in its power to generate radical and substantive social, political and religious thought” in the manner of the press which he calls “the gunpowder of the mind” compared to technology’s “talcum powder” (p. 116). Significantly too, technology is both allowing information to be brought into today’s classrooms on news websites (Kern, 2013, p. 96), and fostering new levels of criticality regarding language and society, as advocated by Pennycook (1997). It can also empower those students described by Bonk (2010, p. 64) as “Alexandrian Aristotles” in giving them free and readily available access to a body of encyclopaedic knowledge they no longer have to internalise. Thus, rather than being disenfranchised by technology, as suggested by Johnson et al (2008), today’s students are becoming increasingly empowered by mobility, portability, and free, open-source learning (Bonk, 2010).

2.8 Educating teachers to use this range of resources

The BALEAP Competency Framework (2008, p. 5) stresses the importance of continuing professional development as a key component of personal learning, development, and autonomy for EAP practitioners. This continuous development can hopefully pave the way to ongoing competency defined as “the technical skills and professional capabilities that a teacher needs to bring to a position in order to fulfil its functions completely (Aitken, 1998)” (BALEAP, 2008, p. 2). In the case of this study, there is an extra
dimension to teachers’ professional development that Pierson & Borthwick (2010) term as **ETPD** – Educational Technology Professional Development. Herein, I am interested in a double ‘ET’ – PD, which can be called *English Teacher Educational Technology Professional Development*.

In order to understand the directions that this **ET-ETPD** could take, it was firstly important to consult the historical literature on teacher education alongside its more contemporary voices. Steve Mann’s (2005) paper on language teacher development in *Language Teaching 38* became the lens through which I could get an accurate and up to date perspective on each. This paper looks at modern contributions to the subject of teacher development and growth, “focusing particularly on our understanding of some of the processes and tools that have been identified as instrumental and supportive in teacher development” (ibid, p. 103).

Within this paper, he articulates distinction between the key terms that proliferate: “teacher training, teacher preparation, teacher education, teacher development, professional development, continuing professional development (CPD), and staff development” (2005, p. 104). He goes on to describe these as all being part of “a detailed topography of the development landscape” (ibid). However, his preference is for usage of the term ‘education’ rather than ‘training’, echoing Edge (2003, p. 7) who states that “to train is to instil habits or skills, and the word collocates just as happily with dogs and seals as with teachers.” However, despite this, the use of ‘training’ to describe education still proliferates within and across the literature on teachers and teaching.

Mann (2005, p. 105) suggests that teacher education is a “bottom up process” that values the “insider” view whilst training is “top down” and places more emphasis on the “outsider” view. Diaz-Maggioli expresses similar disdain for top-down ‘training’ when she suggests that too many professional development days have come to represent little more than workshops which conjure “images of coffee breaks, consultants in elegant outfits, and schools barren of kids” (2004). She further suggests that there needs to be
a greater emphasis paid to tailoring professional development to the teaching and learning styles of teachers themselves, which ties into Mann’s emphasis on self-awareness which he also labels “self-direction” (2005, p. 104), as opposed to courses where teachers are “surreptitiously pushed in pre-determined directions” (Tomlinson, 2003b, p. 2). On the whole then, teaching is best viewed as “a continuous process of becoming” and one which “can never be finished” (Mann, 2005, p. 105), since it is part of a journey along a continuum which should be both “professional” (Goodwyn, 1997, p. 115), and “developmental” (Richards, 1998, p. 48). Part of that journey though, for teacher educators, is to understand the history that has shaped these perspectives on teacher education.

2.8-ii Historical approaches to English teacher education

Literature on English language teacher education has been a microcosm of that related to historical approaches to teacher education in general (Wallace, 1991; Freeman, 1996; Widdowson, 1997; Roberts, 1998; Crandall, 2000; Motteram, 2004). However, there are specific qualifications expected in the UK context in which this research occurs. Most teachers will start out with the Cambridge Certificate in English Language Teaching to Adults (CELTA), which is a TEFL-initiation course described in Alwright & Hanks (2009), and Martin (2014), which can serve as the basis for a Diploma in English Language Teaching to Adults (DELTA).

This DELTA qualification, in the UK context, is considered one of the highest qualifications in ELT, through being “the only teaching diploma placed at Level 7 of the UK’s Qualification and Credit Framework (QCF)” (Sokol, 2011). Candidates must have completed two years of teaching before embarking upon this course, since teachers have to acquire both ‘received’ and ‘experiential’ knowledge so as to reflect on classroom practice in the manner espoused by those such as Strevens (1974), Schön (1983), Ellis (1986), Pennington (1990), Richards & Nunan (1990), Wallace (1991), Woodward (1991), Ur (1992), and Roberts (1998). Thus, reflection (Kelly, 2005), self-awareness (Breen, 2013), and a sense
of good practice in language teaching (Borg, 2011) are essential components for undertaking, and completing the DELTA.

2.8-iii Teacher education in the specific EAP context

Though there is an extensive body of literature on generic English Language teacher education, specific work on EAP teacher education has mainly begun to emerge in the past decade. However, as far back as 1989, BALEAP had created a formalised code of practice “to help promote the professional development of staff” (Jordan, 2002, p. 73). Despite this Hamp-Lyons (2011) points out that “teachers with specific training in EAP are rare” and that BALEAP’s progress and tradition of materials development has not been matched by “progress in developing and delivering professional training courses for future teachers of EAP” (p. 100). This in part is due to the genesis and evolution of BALEAP as an organisation created for the sharing of ideas and materials (Jordan, 2002), rather than education of new teachers.

Alexander (2010, pp. 3-5) pursues a similar line of argument on the lack of formal qualification with her description of a (2006) research study in which routes into EAP were investigated through a survey of teachers, examining ways of entering their career and how they had developed since entrance. This study revealed that many teachers ended up as EAP practitioners almost as much by accident as design, with pre-sessional experience being the main route into the field. A smaller-scale study by Martin (2014) has also found instances of teachers following the same career trajectory of entering the profession through pre-sessional courses, and then being largely responsible for their own development thereafter.

2.8-iv Finding a spark for self-directed development

Literature on self-directed development goes back several decades, to form an important part of the “detailed topography of the development landscape” (Mann, 2005, p. 104). The importance of self-direction is further highlighted in the work of Brockett & Hiemstra (1991), Manning & Payne (1993), Stuart & Thurlow (2000), Bailey, Curtis, & Nunan (2001), Crookes & Chandler
Diaz-Maggioli (2004), Mishra & Koehler (2006), and Gibbons & Norman (1987, p. 110) who use the term “self-directed professional development.” Manning & Payne’s (1993) Vygotskian-based study of teacher cognition provides a further framework to help teaching professionals become more “proactive” (p. 362), and self-regulated (p. 369). They attribute the origins of self-directed professional development to Vygotsky’s (1934) work on thought and language, and recommend that in order for development to occur, teachers need some form of prompting to move from within their “zone of proximal development” (1993, p. 361).

This prompting or scaffolding generally takes place through a combination of support from more experienced practitioners in the first instance and then socially-shaped interactions with others. Kimble et al (2010, p. 437) see innovation as stemming from “collaboration and knowledge sharing across professional or organizational boundaries”. Warschauer (1998) also refers to personal philosophies of teaching, and how these are shaped by the social contexts in which learning is taking place. Mann (2005) further adds that a crucial first step is for the individual to establish foundations for their own development.

Vygotsky (1978, p. 56) suggests that development is not circular but proceeds “in a spiral, passing through the same point at each new revolution while advancing to a higher level.” This means that development comes about through an interaction of past knowledge and new experience (Manning & Payne, 1993, p. 362). Similarly, Mann (2005, p. 108) talks about the creation of “a cognitive space” where teachers take mental charge of their own development. This sense of new learning occurring at a juncture with existing knowledge interlinks the teacher education and cognition literature, as in Clandinin (1985), Freeman (2002), and Borg (2006). It also supports an argument made by Wilson & Berne (1999, p. 194) that “teacher learning ought not to be bound and delivered but rather activated” and that this activation is triggered only when teachers come to an understanding of their own knowledge (ibid). There is a similar emphasis on understanding the role and complexity of the individual in the

2.9 Frameworks of teacher knowledge

Since the research questions are concerned with developments that occur in terms of action and knowledge, and the impact of these developments on a specific area of professional practice, it was important that I reviewed frameworks of teacher knowledge, to serve as a lens through which developments could be analysed. This could have been done through the juncture of teacher cognition and language teacher education literature. However, since this study is concerned with the specific professional practice of using technology in EAP teaching (RQ2), the most appropriate framework is one that is relatively new, created by Punya Mishra and Matthew Koehler (2006). Drawing on the earlier work of Shulman (1986) in the area of Pedagogical Content Knowledge (PCK), this new framework is named Technological Pedagogical Content Knowledge, and more commonly known as TPACK.

This has been described as one of “the most important and influential 21st century conceptual developments in the area of technology and teacher education” (McGrath et al, 2011, p. 2). Its emphasis on reflection and self-direction makes it particularly relevant to teacher education, as it encourages teachers to “ask questions of their pedagogy” (Mishra & Koehler, 2006, p. 103). It is also seen as a framework that can “build EAP scholarly knowledge” (Kirk, 2012) through increasing “teachers’ understandings of how technology, pedagogy and content can interact with one another to produce effective discipline-based teaching with educational technologies” (Harris et al, 2009, p. 397). Therefore it has particular salience to the context and focus of this research study.

i. Pedagogical Content Knowledge

The PCK framework, which has been much discussed in the literature of this past thirty years, was originally proposed as a source of answers to questions in Lee Shulman’s seminal (1986) ‘Those Who Understand: Knowledge Growth in Teaching.’ Such
questions included “What are the sources of teacher knowledge? What does a teacher know and when did he or she come to know it? How is new knowledge acquired, old knowledge retrieved, and both combined to form a new knowledge base? “ (ibid, p. 8), and “What are the domains and categories of content knowledge in the minds of teachers?” (ibid, p. 9). Ball et al (2008, p. 391) summarise Shulman’s subsequent categorisation of teacher knowledge into seven distinct sections, as outlined below in Figure 1.

**Figure 1**

Shulman’s Major Categories of Teacher Knowledge – Taken from Ball et al (2008, p. 391).

- General pedagogical knowledge, with special reference to those broad principles and strategies of classroom management and organization that appear to transcend subject matter
- Knowledge of learners and their characteristics
- Knowledge of educational contexts, ranging from workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures
- Knowledge of educational ends, purposes, and values, and their philosophical and historical grounds
- Content knowledge
- Curriculum knowledge, with particular grasp of the materials and programs that serve as “tools of the trade” for teachers
- Pedagogical content knowledge, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding (Shulman, 1987, p. 8)

This framework depicts the interconnected forms of knowledge deemed essential in the teaching profession (McGrath et al, 2011). Rather than seeing pedagogy and content as two separate bodies,
Shulman links these to a third body created through the interaction of content and pedagogy, known as Pedagogical Content Knowledge (ibid). The great strength, and at the same time potential weakness of PCK is in the scope that Shulman (1986, 1987) leaves for adaptation (Ball et al, 2008). Freeman (2002), for example, suggests that “when applied to language as subject-matter, PCK becomes a messy and possibly unworkable concept” due to the nature of what is being taught, and to whom (p. 6). However, teaching itself can be an ill-structured activity (Spiro & Jehng, 1990; Koehler & Mishra, 2009; McGrath et al, 2011), and EAP does have compatibility with PCK.

Firstly, by Freeman’s own admission, PCK derives from a hybrid of “discipline-based content” and “training-based pedagogy” (2002, p. 6). This echoes contemporary characteristics of EAP as outlined in such works as Dudley-Evans & St. John (2009) and Hamp-Lyons (2011) where there is an increasing emphasis on discipline-specific work being integrated with skills and language work. Added to this, the forms of knowledge described by Shulman (1986) are highly transferable across contexts, and can be readily mapped to BALEAP’s (2008) competencies.

The following characteristics of PCK, summarised by Ball (2008, p. 391), appear particularly compatible – “knowledge of educational contexts”; “knowledge of educational ends, purposes, and values”; “knowledge of learners and their characteristics”; and “principles and strategies of classroom management and organisation.” Another significant category within both the PCK and BALEAP models is ‘curriculum knowledge’ described by Ball et al (ibid) as the “particular grasp of the materials and programs that serve as tools of the trade for teachers.”

BALEAP (2008, p. 7) stipulates that “an EAP teacher will understand the main types of language syllabus” and be able to transform such a syllabus into a context-specific programme based on student needs. Further to this, I would argue that propositional knowledge, as described by Shulman (1986, p. 11) plays a major part in ELT and EAP. Stake (1978, p. 5) defines this as “the
knowledge of both reason and gossip” based on “interpersonally shareable statements.” Shulman lists the sub-categories of this as being “principles, maxims, or norms” (1986, p. 11), and all of these are commonly found in the EAP domain, as evidenced by areas referred to in the sub-domains of the BALEAP Competency Framework (2008). These include engagement with academic research and literature “to inform own practice and communicate these ideas to colleagues” (ibid, p. 5), having an awareness of broader university policies and procedures (p. 1), and an understanding of the cultural backgrounds of students (p. 6).

Finally, there are two more categories of knowledge within Shulman’s (1986) formulation that have as much significance in the EAP context as in any other. The first of these is case knowledge defined as knowledge of “specific, well-documented, and richly described events” which can be further sub-divided into “prototypes, precedents, and parables” (1986, p. 11). However, of greatest significance to this study, in light of my second research question, is strategic knowledge, which he defines as having as much to do with actions as knowing, and coming into play “as the teacher confronts particular situations or problems” (ibid, pp. 12-14). This form of knowledge thus connects actions to practice, and has relevance to each of the main research questions.

2.9-ii TPACK - a new framework for teacher knowledge

Since Matthew Koehler and Punya Mishra first produced the TPACK framework in *Teacher College Record* in 2006, there has been a great deal in the literature about its theory, practice and usage, with an increasing emphasis on means of measuring it (Graham et al., 2009; Guzey & Roehrig, 2009). Essentially, this is a framework for teacher knowledge and technology integration, which was originally known as TPCK, or technology, pedagogy, and content knowledge (Koehler & Mishra, 2009, p. 60). It is intended as “a professional knowledge construct” designed to create “expert” teaching in the classroom (ibid, p. 66). This adaptation of Shulman’s (1986) framework has been variously described in the literature as a teaching model for the 21st century (Pierson & Borthwick, 2010; McGrath et al, 2011), and an extension of PCK for
the digital age (Kirk, 2012). It has also been defined as a useful tool for educators navigating “the rapid changes prompted by emerging technologies” (Spires et al, 2012, p. 8), in order to get a better sense of “the big picture of technologies’ integration” (ibid, p. 13).

Where Shulman’s (1986) framework involved the interaction of two main bodies of knowledge, this involves the interaction of a third; technology working in “dynamic equilibrium” with the others (Mishra & Koehler, 2006, p. 1029). This then creates a set of sub-domains represented as PCK, TCK (technological content knowledge), and TPK (technological pedagogical knowledge), which together form TPACK (Mishra & Koehler, 2006; Koehler & Mishra, 2009), which is itself part of what Piaget (1970) referred to as a broader “schema of knowledge”. Through practical and theoretical interaction of these knowledge bodies, there is creation of the flexibility “needed to successfully integrate technology use into teaching” (Koehler & Mishra, 2009, p. 60), and a description of how understanding of educational technologies and PCK interact to produce “effective teaching” (ibid, p. 62). The original depiction of the TPACK model, as originally published in Teacher College Record (2006) is provided below in Figure 2.

**Figure 2 “The TPACK framework and its knowledge components”**

Knowledge components within TPACK

Within the framework there are six categories of knowledge, which intersect to form Technological Pedagogical Content Knowledge. These are summarised briefly below, with more extensive definitions to be found in Mishra & Koehler (2006), Angeli & Valanides (2008), Koehler & Mishra (2009), Guzey & Roehrig (2009), Harris et al (2009), Ward & Kushner Benson (2010), McGrath et al (2011), Spires et al (2012), and Koehler et al (2014).

**Pedagogical knowledge (PK)** – This is very much in line with Shulman’s (1986) categorisation and represents “teachers’ deep knowledge about the processes and practices or methods of learning and teaching” (Koehler & Mishra, 2009, p. 63). Similar to elements of BALEAP’s categories of ‘Teaching Practices’, ‘Assessment Practices’, and ‘Academic Contexts’ (2008), this necessarily entails an understanding of “overall educational purposes, values, and aims” and “understanding how students learn, general classroom management skills, lesson planning, and student assessment” (Koehler & Mishra, 2009, p. 63).

**Content knowledge (CK)** – Again, this draws heavily on Shulman’s original definition (1986, pp. 8-9). At its most fundamental it is “teachers’ knowledge about the subject matter to be learned or taught” (Koehler & Mishra, 2009, p. 63). Shulman (1986, p. 9) had previously defined this as “the amount and organization of knowledge per se in the mind of the teacher” which goes beyond “knowledge of the facts or concepts of a domain”, and requires a deeper understanding of “both the substantive and the syntactic structures” of a discipline (ibid). Substantive structures are those that give shape to the body of knowledge within a discipline, whilst syntactic structures establish the rules of a discipline, much as grammar establishes the rules of language (ibid). Content knowledge thus needs to include “knowledge of concepts, theories, ideas, organizational frameworks, knowledge of evidence and proof, as well as established practices and approaches toward developing such knowledge” (Koehler & Mishra, 2009, p. 63). Significantly for EAP, it also involves knowledge of the differences in content across disciplines (ibid).
**Pedagogical Content knowledge (PCK)** – Koehler & Mishra (2009, p. 64) summarise this as being knowledge of pedagogy applicable to the teaching of specific content and creation of associated materials. This is essentially the same as Shulman’s original (1986) formulation, depicted in Figure 1 by Ball et al (2008), and goes beyond subject matter per se “to the dimension of subject knowledge matter for teaching” (Shulman, 1986, p. 9), thus allowing both theory and practice to inform teachers’ work. Early versions seemed to place greater emphasis on content, but later adaptations appear to have found a stronger equilibrium with pedagogy, and incorporation of student needs (Shulman, 2012).

**Technological knowledge (TK)** – The integration of technological knowledge is what sets the TPACK framework apart from PCK, and therefore plays a critical role in understanding the overall model. Koehler & Mishra (2009, p. 64) summarise this as being a productive working knowledge of technology, alongside a deeper understanding of how it can be used from a practical perspective. This though is not limited to “the traditional definition of computer literacy” but requires “a deeper, more essential understanding”, “mastery”, and ability for adaptation (ibid).

**Technological Content knowledge (TCK)** – This entails an understanding of “the deep historical relationship” between technology and content, plus “understanding the impact of technology on the practices and knowledge of a given discipline” (Koehler & Mishra, 2009, p. 65). It is the disciplinary emphasis that separates TCK, from TK alone (Ward & Kushner-Benson, 2010). Kirk (2012) adds to this by speaking of how the simple act of setting up “a Facebook site or a blogging space for EAP learners” is a form of TK. However, this evolves to TCK if teachers understand “how academic blogging may change relationships with knowledge, readership, dissemination, notions of academic style, and publication” (ibid). In order to fully enact such instances of TCK, Koehler & Mishra (2009, p. 65) argue that teachers not only need to understand how to relate appropriate technologies to specific content but also “how the content dictates or perhaps even changes the technology – or vice versa”.

Technological Pedagogical knowledge (TPK) – Koehler & Mishra state that this involves “an understanding of how teaching and learning can change when particular technologies are used in particular ways” according to purpose, and disciplinary context” (2009, pp. 65-66). Unlike TCK, the emphasis in TPK is on how technologies shape teaching and learning, rather than how they shape content, as they are used in particular ways. As with Motteram’s (2013) examples of technologies being used for different purposes to those for which they were originally created, Koehler & Mishra go on to cite ways of using popular software programmes not designed for educational purposes (2009, p. 66). TPK thus requires an ability to reconfigure tools for “customized pedagogic purposes”, and “a forward-looking, creative, and open-minded seeking of technology use, not for its own sake, but for the sake of advancing student learning and understanding” (ibid).

Technological Pedagogical Content Knowledge (TPACK) – The six categories of knowledge that I have described intersect to form the core of the TPACK framework. Technological Pedagogical Content Knowledge is defined as “an emergent form of knowledge that goes beyond all three ‘core’ components (content, pedagogy, and technology knowledge)” and is based on their purposeful integration – (Koehler & Mishra, 2009, p. 66). Serving as the basis for effective teaching, this “professional knowledge construct” (ibid, p. 66) establishes “a dynamic equilibrium” (ibid, p. 67) amongst all of its component parts, and they must all be brought into play before an instance of TPACK is enacted. Going back to Kirk’s (2012) examples of blogging, as instances of TK and TCK, there is a greater need for “knowledge in action” (ibid) before something can be defined as TPACK. One possibility that he offers is “scaffolding a group blogging project that centers around collaborative reflection on and critiquing of a selection of journal papers on a theme of disciplinary relevance to learners” (ibid). Through doing so, teachers enact what Hofer & Swan (2007, p. 181) describe as going beyond a process of design and action, to a form of knowledge in action that involves understanding the specific needs of students, and then facilitating a learning experience around these needs, which is the essence of TPACK.
2.10 Potential strengths of TPACK in EAP context

Once again, drawing on BALEAP’s (2008) Framework, it is fair to say that key words in the TPACK schema strongly echo those of the eleven core competency statements. Terms such as disciplinary context, purpose, knowledge, creation of materials, and integration of ICT resonate across the descriptors of both. Discipline-specific content is of particular salience to the contemporary direction of EAP, as in Dudley-Evans & St. John (2009), Sloan & Porter (2010), Alexander et al (2011), Gilbert (2013), and Kirk (2013). Furthermore, even though EAP and ELT are not ‘subjects’ commonly featured in TPACK literature, there are many references to disciplines supported by EAP. These include History and Medicine (Koehler & Mishra, 2009); Physics, Engineering, and Sociology (Harris et al, 2009); and Education (Dickenson, 2014).

In the specific context of EAP, Steve Kirk (2012) talks about using technology in synch with discipline-specific work by getting “our hands dirty with e-AP tools”, which are those electronic tools available for use in the teaching of English for Academic Purposes. He goes on to define TPACK in this context as being “knowledge that develops to enhance EAP practice through technology” which needs to be turned into “techknowlogy, before it can be enrolled into pedagogical practices” (ibid). This new sense of practice amalgamates EAP and e-AP (Fenwick & Edwards, 2010) which come together and connect to make technology an essential part of a new “EAP practice ecosystem” (Kirk, 2012), where new tools are not simply applied to past pedagogy (Koehler & Mishra, 2009).

This new ecosystem can create “a new learning environment” (Spires et al, 2012, p. 4) where teachers’ professional knowledge can make a “pedagogical shift to accommodate learning that is continuous, changing, and above all exponential” (Spires et al, 2009, p. 10). The emphasis on learning for both students and teachers again links TPACK’s underlying values to those of BALEAP (2008). Further to this, and particularly salient to the EAP context, where there has been a historical demand for sharing of ideas and practice (Johns, 1981; Jordan, 2002), Mishra &
Koehler (2006, p. 1019) argue that TPACK can help connect “isolated pieces of the puzzle in our separate classrooms and discrete research studies.” However, in making this claim, the door is opened to potential criticisms of TPACK because it assumes a popular knowledge of the framework that does not come across in the broader literature as yet, because of its relative newness.

2.11 Addressing a potential drawback of TPACK

Mishra & Koehler, from the outset, have admitted that it is “extremely difficult” to represent teacher knowledge “within one overarching framework or theory” and that any such representation of knowledge needs to reflect its socially constructed and dynamic nature” (2006, p. 1045). McGrath et al (2011, p. 1) agree that TPACK “does not appear to be a model that can be used as a single source of conceptual guidelines” and go on to cite Angeli & Valanides (2008) who question “whether TPACK is an adequate analytical theoretical framework” if used on its own (2011, p. 9). TPACK’s creators have tried to address this by more latterly placing their framework within the broader domain of teacher cognition, with direct reference to the work of Jackson (1968), and Clark & Peterson (1986). Through doing this, they aspire to bringing technology integration into play with other forms of knowledge in teaching (Koehler & Mishra, 2009, p. 67).

However, there still appears to be something missing in terms of capturing the broader complexity of how teachers’ mental lives (Clark, 1986; Borg, 2003), and social environments (Warschauer, 2002; Motteram, 2013) shape the actual practice of teaching. There is also the question of where the role of ‘personal knowledge’ as examined in such works as Golombek (1998) sits in relation to these other forms of knowledge relating to pedagogy, technology, and content. More recent adaptations of the TPACK model have included sociocultural elements, as in Figure 3’s model of ‘Context Influence on TPACK Knowledge.’ This model takes a new set of variables and interlinks these in an outer ring composed of the labels ‘teacher training’, ‘experiences’, ‘students’, ‘resources’, ‘objectives/aims’, and ‘attitudes’. Some of these resonate with
labels in the teacher cognition literature whilst ‘objectives’ is one of the key tenets in Engeström’s (1987) second-generation activity theory, which is presented in its most basic form in Figure 4.

**Figure 3 – Context Influence on TPACK framework**

![Context Influence on TPACK framework](image)

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**Figure 4 – A second-generation activity system model**

![A second-generation activity system model](image)

*Accessed in Flavin (2012) – adapted from Engeström (1987).*
2.12 Defining Engeström’s vision of Activity Theory

Once described as “the best kept secret in academia” (Engeström, 1993, p. 64), Activity Theory is shaped around theories on the development of human nature, drawing on the works of Vygotsky (1978), and Leontiev (1981), in particular. It is centered on human “mediation” (Nardi, 1996, p. 5), and the relationship of “everyday actions” to “societal activity” (Engeström, 1987, p. 174). Nardi (1996, p. 7) argues that “consciousness is located in everyday practice; you are what you do” and everyday actions are “firmly and inextricably embedded” in the broader socio-cultural matrix. According to Engeström (2001, p. 84), this matrix needs to be broken down into “smaller categorical elements” to reveal interrelationships between structure, agency, and developments.

Activity Theory takes the premise that individual and group actions are best understood when “interpreted against the background of entire activity systems” (Engeström, 2001, p. 136). It is also important to note that the characteristics of activity systems echo certain features of Communities of Practice as discussed in the work of Lave & Wenger (1991) and Wenger (1998). One such feature is that both activity systems and COP overlap with other systems, (e.g. an EAP teacher in our language centre being a member of BALEAP, and then a Special Interest Group within BALEAP) and no person or organization is limited to belonging to a single system. Furthermore, uniformity is not a prerequisite of either system. Engeström (2001, p. 136) actually defines an activity system as “always a community of multiple points of view, traditions, and interests” that takes shape and gets transformed “over lengthy periods of time”, which he then goes on to define. Time, in the context of an activity system, is not limited to the lifespan of one particular system, such as the language centre in this study. If it were, there would be little “historicity” in terms of “local history of the activity and its objects” (ibid), as the centre was very new. Rather, a sense of ‘history’ needs to go beyond this, to “history of the theoretical ideas and tools that have shaped the activity” (ibid), which is why I have expanded upon key areas such as EAP, teacher education, and CALL in this literature review.
2.12-ii Major influences on systems of activity

With such an embedded emphasis on history, Activity Theory is particularly useful when looking at developments over time, and how these have come to the fore against a backdrop of context and constraints (of rules) as discussed by Engeström (2001, p. 137). Often, it is the emergence of “contradictions” and “tensions” that serves as a spark for innovative attempts to change activity, and reshape activity systems (Murphy & Rodriguez-Manzares, 2008, p. 134). Such contradictions though should not be misunderstood as simply being problems or conflicts (Engeström, 2001, p. 137). Rather, they are “historically accumulating structural tensions within and between activity systems” (ibid).

One such tension of the present era is the rapid evolution of educational technologies and teachers having to find new ways of integrating these into their practice, as in Spires et al (2012). Technologies are particularly conducive to placement within an activity system because one of the central nodes of Engeström’s original model (1987) is the label of Tools, which “mediate the object of activity” (Murphy & Rodriguez-Manzanares, 2008, p. 443). These tools can be “external” or “material” (ibid), as in the case of a textbook, or a piece of technology - a VLE or iPad - or they can be “internal” and “symbolic” (ibid), such as language – a shared conversation, or an extract of text for analysis in an EAP class. What they do, irrespective of being internal or external, is to transform the Object of an activity into an Outcome for the Subject of said activity, whose viewpoint is adopted as being central (ibid).

2.12-iii Relating Activity Theory to this study

The particular context in this study offers a prime example of what Engeström (2001, p. 137) describes as arising when “an activity system adopts a new element from the outside (for example a new technology or a new object)” and this leads to “an aggravated secondary contradiction where some old element (for example, the rules or the division of labor) collides with the new one”. Though this may “generate disturbances or conflicts in the first instance” it can also foster “innovative attempts to change the activity” (ibid).
This can happen when individuals “deviate” from “established norms” of the system (ibid), and often assume the form of “brokers” of new activity, as discussed in the work of Wenger (1998), Brown & Duguid (1998), and Kimble et al (2010). Essentially, the broker’s role is that of “interlocutor” who takes knowledge from one context and applies it to another (ibid, 2010, p. 439), so that in its most transformative enactment, there is a collective adaptation of practice (Engeström, 2001, p. 137).

In the case of this study, the new elements that have been incorporated into the system are technologies, and their availability as resources, because such technologies, applicable to EAP, have thoroughly permeated the lecture theatres of contemporary institutions within higher education (Hamp-Lyons, 2011, p. 96). However, contradictions or a “misfit within elements” (Murphy & Rodriguez-Manzares, 2008) can exist in situations where teachers are not given the requisite ‘training’ to incorporate these resources into their practice, or where such ‘training’ has a technocentric focus (Papert, 1987), very different to that envisioned by Mishra & Koehler (2006) in their creation of the TPACK framework as a knowledge base for effective teaching. There appears then a natural synergy between TPACK and Activity Theory as a means of addressing developments in practice.

Furthermore, throughout the literature there is an almost constant reference to the tools of teaching, and a sense of accumulated history behind this, with Koehler & Mishra, for example, talking about “the deep historical relationship between technology and content” (2009, p. 65) in teaching. Others who use this terminology of tools for teaching include Warschauer (1996), Bax (2003), Beetham & Sharpe (2007), Ball et al (2008), Kirk (2012), Watson (2012), and Kern (2013). Others such as Borko et al (2009) talk about a combination of tools and techniques in teaching, which captures a sense of how the object of classroom activity is transformed into an outcome. This emphasis on transformation, as highlighted in Murphy & Rodriguez-Manzares (2008), has echoes of Shulman’s original depiction of PCK as involving the transformation of the subject matter for teaching (1986, pp. 8-9).
Aside from its natural fit with the activity of teaching, the integration of TPACK with Activity Theory is not unique, and has therefore been used as an effective conceptual framework in other studies such as those of Tatum (2009), and Schul (2010). Activity Theory has also been used as a framework for analysing the social impact of new technologies in various educational contexts in the work of Hardman (2005), Scanlon & Issroff (2005), and Flavin (2012). Kaptelinin & Nardi (2006) further justify the application of Activity Theory in the context of “understanding technology as part of the larger scope of human activities” (p. 5).

Gay, Rieger and Bennington (2002) further explain that the theory “draws attention to the dialectical process by which consciousness, learning, and development simultaneously shape and are shaped by technology” (p. 509), which is again an essential part of Mishra & Koehler’s original conceptualisation of their framework (2006). TPACK, having itself emerged in a time of contradiction between new technologies and traditional pedagogy, and its emphasis on context and history, then has a “synergistic capacity” to integrate instances of “teachers’ technological, instructional and historical practices” within an activity framework (Schul, 2010).

Furthermore, activity theory focuses on practice, placing emphasis on interaction between consciousness and activity (Nardi, 1995), and with its distinct boundaries is suited to case study research. Added to this, the practice of EAP teaching provides a unique context for a system of activity, as supported by Lantolf & Genung (2002, p. 175) who point out that what transpires in classrooms is one form of activity system interlinked with a broader network of others. Although Engeström’s later work has moved towards developing third-generation systems of activity, to examine motivation and reasons for behaviour, second-generation systems are more concerned with activity, and best suited to this study. However, because the context is unique, there is still a need to adapt and create a specific model of the Activity System in this study, and I have done so through the creation of Figure 5 below.
Figure 5 – Locally adapted EAP/TPACK activity system

2.12-iv Explaining workings of the locally adapted system

The above diagram depicts the activity system of the language centre that is the setting for this study, as described in Section 1.5. Within this system, the EAP teacher is the subject of the main activity, which is to facilitate the object of learning so as to work towards academic progression, and a positive student experience. The instruments available to teachers include those described in Section 2.6, alongside more traditional resources such as the textbook. Teachers though do not work alone, and are part of a broader workplace with its own particular rules, community, and divisions of labour. In this instance, the rules include those of the public-private partnership and its component parts (the pathway...
provider & the university partner); the rules of academic convention and language teaching; and the expected competencies of EAP teachers. The community includes the student body, teaching professionals, and other staff, such as the IT department, Student Services, and senior management. Finally, in terms of the division of labour, though they play a key part, the responsibility for meeting the outcomes is not down to teachers alone. Students are increasingly expected to share responsibility, as teachers scaffold them towards greater autonomy over time (BALEAP, 2008). Similarly, Student Services assist with looking after their welfare, and the IT department provides technical assistance in setting up access to email accounts, getting passwords, and so on. Therefore, on the whole, this activity system involves close intersection between its component parts, and is linked to broader subsets of activity, as described in Engeström (2001). Added to this, it is important to consider additional contextual variables.

2.13 Additional contextual influences on practice

Contextual factors are hugely important in terms of what happens in teachers’ lives, whether in classrooms or the broader picture (Borg, 2003; Borg 2006a). Borg (2003, p. 106) lists these as being “institutional, social, instructional, physical” factors that “are central to deeper insights into relationships between cognition and practice,” and “shape what language teachers do.” Since it has already been established that EAP teaching, teaching in general, and teaching with technology are all context-specific, the key factors that recur in the literature are summarised as follows.

i. Institutional context

Diaz-Maggioli (2004) argues that “school culture” and “school climate” are key contextual factors in teachers’ professional development. Sergiovanni & Starratt (2002, p. 82) define school climate as “the enduring characteristics that describe the psychological character of a particular school”, distinguishing it from other schools. School culture, on the other hand, “is the set of norms, values and beliefs, rituals and ceremonies, symbols, and stories that make up the ‘persona’ of the school” (Peterson, 2002).
Essentially, teachers work in an environment of “these students in this situation and a this set of concerns” (Burns, 1999, p. 3). Furthermore Laurillard (2002) and Borg (2006a) both outline the influence of institutional policies on what happens in classrooms. Watson-Todd (2003) also speaks of provision and availability of resources, echoing ideas within Engeström’s (1987) activity theory.

### ii. Time and busy classroom lives

Anne Burns (1999, p. 14) talks of a social reality in which teachers lead “busy classroom lives” and as such require “pragmatic” learning experiences. Darling-Hammond & Richardson (2009, p. 48) argue that “although time is not the only variable that matters, it is often a prerequisite for effective learning” in teachers’ professional development. Warschauer & Meskill (2000, p. 307) elaborate further on this with the statement that the long-term benefits of technology may seem “little consolation to an individual teacher who is spending enormous amounts of time learning constantly changing software programs and trying to figure out the best way to use them in the classroom.” Added to this, there is a fear that devoting substantial periods of time to this process “brings no guaranteed results” (ibid, p. 315), and can serve as a barrier to both access and integration (Diem, 1997; Hicks et al, 2002; Cuban, 2003). Time is also raised in Velliaris & Willis (2014); and Wenger (1998) who laments the professional scenario where employees “focus on their work, but they keep glancing at the clock, waiting for the moment they are free to leave” (p. 45).

### iii. Speed of advancement in learning technologies

Jones & Lea (2011) point out that “in a fast-moving technological world, applications being heralded by learning technologists in higher education are constantly being overtaken by new ones” (p. 391). Borko et al (2009, p. 4) argue that a culture of “instability” grows up around environments of rapid change. This instability, they argue, comes about as a consequence of “the rapid pace at which new technologies are developed and disseminated” and thus “the knowledge required to use digital technologies is never fixed” (ibid). Koehler & Mishra (2009, p. 61) discuss differences in
standardized and specified technologies of the past, using such examples as microscopes and chalkboards, and those of the increasingly digital present time. Essentially technologies of the past were specific, stable (Simon, 1969), and transparent (Papert, 1987) whilst new technologies are protean, unstable, and opaque (Koehler & Mishra, 2009; McGrath et al, 2011). This gives rise to sentiments such as those of Alvesson & Sandberg (2013, p. 20) who warn against embracing “fashion and fads” in society which are a “hot” topic today, but in danger of going “cold” tomorrow.

iv. The impact of social media

In contrast to Alvesson & Sandberg (2013), Spires et al (2012) argue that “educational systems have to stay abreast of the changes in online research, communication, and social media in order for students to be prepared for 21st century work and citizenship (Trilling & Fadel, 2009).” One of the greatest changes of the past decade is the ubiquitous presence of social networking, and the almost “total immersion” of technology in the lives of our students today (Jones & Lea, 2011, p. 378). Presently, the web 2.0 era and “the rapid adoption of the web” has enabled people to maintain such networks “beyond their immediate location” (Kear, 2011, p. 2) through “a mesh of connections” such as Facebook, MySpace, Bebo, and Twitter (ibid, p. 38). Julie Watson (2012) also lists Twitter in her A to Z of technologies useful for EAP, as does Kern (2013, p. 106) from the perspective of how educators have been “creatively reappropriating many of these tools for their and their learners’ purposes.” Kirk (2012) discusses the use of Facebook in such a scenario, whilst cautioning that usage alone is not a demonstration of TPACK unless there is some deeper form of knowledge-in-action that possibly incorporates “a theme of disciplinary relevance to learners”. Other references to Facebook and associated forms of social media can be found in Cole & Foster (2008), Spires et al (2012), Stanley (2013), Nisiforou & Eteokleous (2014), and Velliaris & Willis (2014). Finally, Fitzgerald (2013, p. 2) provides a salient illustration of Twitter’s usage as a discussion tool for teachers themselves in her description of #EAPchat sessions.
v. Communities in the workplace

Darling-Hammond & Richardson (2009, p. 47) suggest that research on “effective professional development” highlights “the importance of collaborative and collegial learning environments.” Sometimes these evolve organically to form Communities of Practice (COP) as described in the work of Lave & Wenger (1991), and Wenger (1998). Such communities integrate well with an Activity Theory Framework as detailed in Schlager & Fusco (2003, p. 208). This is because they are a natural part of everyday existence shaped through “mutual engagement” on an “indigenous enterprise” (Wenger, 1998, pp. 125-126). Sometimes, as voiced in Wenger’s later work, this enterprise does not have to be organic, but can be “cultivated” (Wenger & Snyder, 2000) as a “practical way to manage knowledge” (Wenger et al, 2002, p. 6).

The shift in perceptions on the origins of such communities is significant in this study of development shaped around introductory workshops designed to cultivate knowledge. Furthermore the COP literature is particularly salient to the EAP context, which has historically encouraged collegiality, as detailed in Hyland & Hamp-Lyons (2002), and Hamp-Lyons (2011). Furthermore, it has to be stressed that BALEAP itself is a collegial organisation and the Competency Framework (2008) was born out of collaboration across institutions and contexts. Therefore, EAP practitioners have long strived to create such types of collegial environments, detailed throughout the literature from Johns (1981), through to Jordan (2002), up to Fitzgerald (2013).

2.14 Conclusion of the literature review

Through this literature review, I have undertaken a journey across landscapes of EAP, teacher knowledge, PCK’s adaptation into TPACK, teacher education, activity theory, and the usage of technology in EAP teaching. Doing so, I have gained a clearer picture on what has already been written, so as to have a stronger foundation for understanding and analysing the knowledge, actions, and practice which lies at the heart of the research questions giving shape and direction to the study as a whole.
CHAPTER 3: Methodology

3.1 Overview of the research study

Following on from the positioning of the research, through the contextualisation section, and the review of relevant literature, including conceptual frameworks, this chapter features a discussion of the investigation’s methodological underpinning. Starting out with the decision to conceptualise the research as a case study and the formulation of research questions, it progresses to situating the study within a qualitative paradigm, the selection of methods for data collection, and the process of data analysis. In closing, the means of establishing trustworthiness is discussed.

This will then feed into Chapter Four, which focuses on challenges in my role as manager-researcher and inside-researcher, with particular attention paid to ethics.

3.2 Characterisation of case studies

Though the history of case study research goes back to the field of Sociology in the early 1900s (Tellis, 1997), two of the most prominent advocates of its contemporary usage are social scientist Robert Yin, and educational psychologist Robert Stake. Of the two, Yin draws more heavily on quantitative or mixed method approaches, whilst Stake’s work is more specifically ensconced within the qualitative paradigm. Yin (2009) focuses on the strategies employed in case study research whereas Stake (1995) emphasises the object of investigation.

Thus, whilst Yin (2009) uses the definitions “explanatory”, “exploratory”, and “descriptive” to categorise different types of case study (pp. 9-10), Stake (1995) uses the labels “intrinsic”, “instrumental”, and “collective.” However, Creswell (2009) stresses the importance of combining both perspectives in a “strategy of inquiry” so as to envisage case study research incorporating strategic and descriptive aspects alongside the object of exploration (p. 13).
In this context, Stake’s categorisations and Creswell’s suggestion of a synthesised approach seems most conducive, as the study bears hallmarks of an instrumental study reported in a collective manner. The instrumental case study explores an issue of interest where the case selected is studied in depth but “the main focus is on something else” (Silverman, 2005, p. 127), whilst the collective case study extends this to an examination of multiple cases in order to investigate some general phenomenon (ibid).

3.2-ii Foundations of the case design

Baxter & Jack (2008, pp. 550-2) suggest that case studies often begin with a proposition, as do Miles & Huberman (1994) and Yin (2009), whilst Stake (1995) uses the term ‘issues’ which he defines as being “intricately wired to political, social, historical, and especially personal contexts” (p.17). These issues help define the scope of the study, and usually come from “the literature, personal/professional experience, theories, and/or generalizations based on empirical data” (Baxter & Jack, 2008, p. 551). In this instance the issues have been shaped by my experience in the fields of EAP, educational technology, and teacher education, alongside information gained through the literature, and a combination of personal and observed practice in the classroom.

Entwined with this requirement to identify the issue, there was a need for application of an appropriate conceptual framework. This, for a long period of time, involved a mental wrestling match with a range of possibilities, before establishing foundations from which to progress. Moving the EAP teacher into the role of subject in an Activity Theory model (Figure 5), this could then be further informed by theories regarding social context, personal development, and knowledge (TPACK). Having identified a general research domain, moved towards specificity, and established a theoretical rationale, the next stage was to formulate research questions (Silverman, 2005; Alvesson & Sandberg, 2013).
3.2-iii Formulation of the research questions

Research questions, constructed effectively, establish a solid foundation for “knowledge development” (Alvesson & Sandberg, 2013, p. 15), reduce complexity (Shulman, 1986), and detect answers to an intellectual puzzle (Alasuutari, 1995; Mason, 1996; Silverman, 2005). They also create signposts of the research plan (Creswell, 2009, p. 129), and provide the crucial link between what the researcher wants to know, and how they are going to access that information (Miles & Huberman, 1994, p. 42).

Thus, as I want to ‘know’ about a particular set of developments in the work of EAP teachers, I voiced the research questions in the form shown below, to make them as “answerable” as possible (Miles & Huberman, 1994, p. 36). ‘Development’ and ‘practice’ are situated at the heart of the two main questions. This then marks the start of the research expedition, which Yin (2009, p. 29) likens to Christopher Columbus setting out to find the New World.

**Main research questions:**

(1) What developments occur in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technologies in the classroom?

(2) How do these developments shape or reshape EAP teachers’ specific professional practice of using technology in EAP teaching?

**Sub-questions:**

How do teachers articulate their sense of EAP as a subject and EAP teaching as a profession? (to inform RQ1)

Does technology become embedded in teaching to a greater extent after the workshops? (to inform RQ2).
Drawing on Dillon’s (1984) classification of questions, as descriptive, comparative, explanatory, and normative, the first is descriptive as it aims to “generate knowledge about what characterizes a phenomenon” (Alvesson & Sandberg, 2013, p. 15). This is the development that occurs in terms of EAP teachers’ actions and knowledge during and after a teacher education programme. The second, on the other hand, is a combination of comparative and explanatory because it is examining associations between phenomena – technology and traditional teaching strategies – in order to generate knowledge about the underlying factors that shape their relationship, in practice.

3.3 Positioning the research in the qualitative paradigm

“The qualitative river has many currents and pools, such as constructivism, phenomenology, ethnography, oral history, critical theory, and symbolic interactionism. Each current is distinct from others, forever intermingling with them and yet part of the same river. And as they flow on, so they change, merge, and diverge.” (Arksey & Knight, 1999, p. 20).

Arksey & Knight (ibid) further describe qualitative research as covering “a multitude of non-positivist research stances”; shaped by epistemological position regarding interpretation, understanding, and reporting of a highly complex and multi-layered social reality (Cohen et al, 2013, pp. 5-17). Miles & Huberman (1994, pp. 7-9) add that “in some senses, all data are qualitative; they refer to essences of people, objects, and situations.” Since I am interested in stories of how practice develops over time, in the work and lives of teachers, this study is better suited to the qualitative paradigm for reasons listed below.

3.3-ii Capturing a sense of the everyday

Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 1994, p. 2). This facilitates a holistic account of the research journey through developing “a complex picture of the problem or issue under
study”, which involves “reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges” (Creswell, 2009, p. 176). It is a situated activity locating observers in authentic settings that they strive to represent through interpretive, naturalistic approaches (Denzin & Lincoln, 2005, p. 3; Cohen et al, 2013, p. 17). By doing so, it creates the conditions, defined by Stake (1978, p.7) as the process of imagining oneself in another person’s place.

Eisner (1991, pp. 30-31) goes on to add that qualitative research manages to strike the right balance between hard facts of scientific reality, and the multiple realities through which people make sense of their lives. This gives researchers access to “the nitty-gritty reality of everyday life viewed through a new analytic lens” (Silverman, 2005, p. 171). However, this emphasis on the ‘everyday’ does not mean that qualitative research is an easy option. It still requires a great deal of rigour and systematic procedures to be followed throughout (Arksey & Knight, 1999).

3.3-iii Bringing together different sources of data

Another strength of qualitative research, which can be a weakness if not managed correctly, is in its ability to “reconcile conflicting findings from different data sources (e.g. surveys and interview data” (Chapelle, 2010, p. 63). The research literature emphasises the need for qualitative researchers to “employ a variety of strategies and methods to collect and analyze a variety of empirical materials” which should be “meaningful” rather than “simplistic” (Coffey & Atkinson, 1996, p.4). In order to demonstrate how this idea works in practice, I will return to the teacher education literature, and an issue of crucial importance to this study.

Chapelle, writing about research in the ELT context, sees a need to triangulate information (2010, p. 63) to ensure its accuracy. Triangulation will be discussed later, but basically it is a means of reconciling “conflict” by looking at different data sources (ibid). This is important in the context herein, because what people say they do in practice, and what they actually do, may be quite different (Freeman, 2002; Donaghue, 2003; Silverman, 2005).
Donaghue (2003, p. 345), writing in the specific context of ELT, discusses the notion of “espoused theory” versus “theory in action”, which has evolved from a combination of Kelly’s (1969) Personal Construct theory, and earlier work in the field of espoused theories versus theories in use, as introduced by Argyris & Schön (1974), and also referred to in the work of Penny Ur (1992). Espoused theory, in the context of teacher education, involves the actions people claim to engage in whilst theory in action is what a participant really does in the classroom (Donaghue, 2003, p. 345). Thus, if I were to gather data from interviews alone, I would only have access to espoused theory. However, because of the qualitative emphasis on reconciling data from different sources (Chapelle, 2010), I am aware of the need to access further data that can provide information on theory in action. This emphasis on multiple sources of information is another strength of qualitative research, particularly in a case study such as this one.

3.3-iv Rich and thick descriptions

A further strength is highlighted in Miles & Huberman (1994) who stress how naturalistic contexts such as the one herein are “attractive”, in that qualitative data serves as a “source of well-grounded, rich description and explanation of processes occurring in local contexts” (p. 21). This lends itself to the “thick description” (Geertz, 1973; Lincoln & Guba, 1985; Creswell, 2009) brought about “through an intense and/or prolonged contact with a “field” or life situation” (Miles & Huberman, 1984, p. 6). Furthermore, “with qualitative data, one can preserve chronological flow, assess local causality, and drive fruitful explanations.....often far more convincing to a reader than pages of numbers” (ibid, p. 22). Added to this, within this study there is “an emphasis on providing a holistic description of the social scene as it emerged from the qualitative data sources, and a close and empathic relationship between the observer and the program participants” (Teddlie & Tashakkori, 2009, p. 11). That means that the “phenomenon” which I am seeking to understand is highly “context-specific” (Hoepfl, 1997), and this further necessitates a rich and thick description, which is a key feature of qualitative case studies.
3.4 Characteristics of the qualitative case study

Gerring (2007, p. 36) states that although case studies may be either qualitative or quantitative, they are generally seen as having “a methodological affinity” with the qualitative paradigm.

Creswell defines case studies as “a strategy of enquiry” which involves an in-depth exploration “using a variety of data collection procedures over a sustained period” (2009, p. 13) that must be framed in a “bounded system” of time and activity (Stake, 1995). Regardless of the study’s focus, whether the object of enquiry is a single entity, instance, phenomenon, or social unit (Merriam, 1988), or institution, program, responsibility, collection, or population (Stake, 1978), prominence must be accorded to what is and what is not the case (ibid). Shulman (1986, p. 12) stipulates that borders must be clearly drawn. Setting these boundaries can also be achieved through time and place (Creswell, 2003, Gerring, 2007); understanding the parameters of context (Miles & Huberman, 1994, p. 18); or key variables such as participants’ functions and roles (Hitchcock & Hughes, 1995, p. 319).

However, because qualitative research designs are “evolving” (Robson, 2002, p. 166), and “emergent” (Creswell, 2009, p. 175), researchers can commence with a wide field of focus to capture the dynamics of unfolding situations (Nisbet & Watt, 1984, p. 78). Moving forward, without prejudgement or selectivity, the focus is narrowed, clarified, and delimited on its gradual passage towards the data analysis stage; a process which has been likened to a “funnel” by Bogdan & Biklen (1982, p. 55), and Hammersley & Atkinson (1983, p. 175). This narrowing of the funnel, though, should not mean loss of depth in the reporting of the research.

Qualitative case studies require descriptions that are complex, holistic, and aware of interrelationships between variables (Stake, 1978), including that of the researcher to the subject (s) under investigation. This facilitates “intersubjective depth” (Miller & Glassner, 1997, p. 106) and places the emphasis on participants’ stories. There were clear benefits to entering the scene with “a sincere interest in learning how people function in their ordinary
pursuits and milieus” (Stake, 1998, p. 1). Firstly, I could add to “existing experience and humanistic understanding” (ibid, p. 7) of the specific context under investigation, and secondly come to a better understanding of how individual stories and instances of practice related to the broader phenomena (Fidel, 1984, p. 275).

3.4-ii Benefits of case studies for EAP/TPACK research

The purpose of this study is not to generalise (Flyvbjerg, 2006), but to understand a complex social phenomenon within a particular discipline (Yin, 2009). Though that discipline is EAP, there is crossover with teacher education, and its linkage to educational technologies. Three decades ago, Shulman suggested that teacher education programmes needed to employ a growing and diverse body of case literature, across contexts, so as to “provide teachers with a rich body of prototypes, precedents, and parables from which to reason” (1986, p. 14). Such cases could serve as “exemplars” (Kuhn, 1987) of EAP practice, and better inform the broader field of ELT than larger scale quantitative summaries that can sometimes lack “the detail needed to use research results to improve instruction” (Chapelle, 2010, p. 60).

Chapelle (2010) is certainly not a lone voice in trumpeting the benefits of case studies within English Language teaching contexts. Case studies have also featured, or been mentioned in the work of Belcher (1994), Jordan (2002), Tsui (2003), Richards & Farrell (2005), Mann (2005), Kiely (2009), Kwan (2009), Curry & Lillis (2010), and Stapleton (2010). There has also been a tradition of case studies used in research relating to technology in education, such as those mentioned in Cummins (2000, p. 546) who highlighted “the growing number of case studies that illustrate how IT can amplify the power of transformative pedagogy to develop students’ academic language and critical literacy.”

Further to this, Gary Motteram’s (2013) edited publication “Innovations in learning technologies for English language teaching” cites a growing number of contemporary case studies which specifically connect the use of technologies to ELT. Indeed Martin Peacock, in the foreword, describes this volume as being
“grounded in the realities of practising teachers using technologies in innovative and exciting ways” through being “supported by numerous case studies” (2013, p. 3). These include several of the authors mentioned in the literature review such as Gilbert (2013), writing specifically about EAP, Kern (2013), and Motteram (2013). This fits in with a tradition of linking ELT and CALL, as far back as Warschauer (1996) and Warschauer & Meskill (2000).

Finally, in the context of TPACK, Mishra & Koehler (2006, p. 1018) suggest that case studies can serve as “the first step towards the development of unified theoretical and conceptual frameworks” to act as examples of best practice; which they perceive to be sorely lacking. One such instance comes from Guzey & Roehrig (2009) who examine “the development of technology, pedagogy, and content knowledge (TPACK) in four in-service secondary science teachers as they participated in a professional development program focusing on technology integration into K-12 classrooms to support science as inquiry teaching” (p.25). They use a descriptive multi-case study design to track teachers’ development over the course of a year, using data that included “interviews, surveys, classroom observations, teachers’ technology integration plans, and action research study reports” (ibid). This has relevance for my own study, which also tracks developments over time.

### 3.5 Identifying and choosing the pool of cases

Having found “a settled theoretical orientation” (Silverman, 2005, p. 39), it was now important to make decisions on the actual cases. Yin (2009) suggests that researchers should choose the cases which best “illuminate” the research questions, in light of other issues such as access to potential data and the form of methods employed (p. 26). Thus, at the most basic level, the case (s) had to feature EAP teachers participating in, and then acting on the impact of a teacher education programme on the use of technologies in the classroom. Starting at the wide end of Bogdan & Biklen’s (1982) funnel, I established that the case (s) would take shape around the teaching population within this context, whether as individuals or within an institutional case study.
Mertler (2006) justifies this by suggesting that “the researcher begins to collect data while concurrently exploring, analyzing, and reviewing those data in order to make decisions about the future direction or next steps for the study” and that “during this process, teacher-researchers may discard old ideas and plans for the study and develop new, more appropriate ones, based on the nature of the data collected to that point in time.” Taking this approach also leaves scope for “narrowing of the funnel” through continually specifying and modifying the research design and data collection procedures throughout the life of the project, allowing time for decisions on the “true focus” (p. 8).

3.5-ii Criteria for selection of possible cases

Seawright & Gerring (2008, pp. 295-96) insist that there has to be a “methodological justification for choosing a case.” In this instance, Patton’s (1990) guidance on choosing cases fitted the “theoretical apparatus” of the study (Silverman, 2005, p. 130), although initial desires to select a “small homogenous sample” (Patton, 1990, p. 173) seemed contrived and at variance with the values of qualitative research being “evolving” (Robson, 2002, p. 166), and “emergent” (Creswell, 2009, p. 175). Thus my final decision was to allow selection of cases to emerge naturally, alongside judgements made by me, as researcher, along the way.

However, Silverman (2005, pp. 129-30) suggests setting out a typology of cases and this is provided in Figure 6. This focuses on experience and context, rather than such variables as age, gender, and ethnicity (ibid, p. 131). Doing so concentrates attention on “issues of central importance to the research purpose” (Patton, 1990, p. 169), and can add richness to the information provided in the overall case narratives. Although this was not essential it again shows careful consideration and understanding of the “parameters of context”, as discussed in Miles & Huberman (1994, p. 18).
Figure 6 - Typology of cases in this research study

3.5-iii Narrowing the pool of cases

The bounded system of interest (Stake, 1978) in this study is the workplace, within a specific timeframe shaped around a teacher education programme, and a year in the life of EAP teachers in a language centre; thus binding the case by time, place (Creswell, 2003), and context (Miles & Huberman, 1994). Also, since this study draws on a bedrock of Activity Theory in line with TPACK, it is important to stress again that the bounded system is also operating in the context of a public-private university partnership.

The cases are individual teachers whose experiences and voices, gained through the data, serve to address the research questions.
By focusing on individual teachers I could establish a framework through which to compare similarities and differences across cases, thus providing a rich sketch of multiple perspectives shaping the larger picture (Creswell, 2009, p. 176).

At the outset, eighteen teachers participated in the programme; organised as a series of workshops regarding the integration of learning technologies with traditional approaches to the teaching of English for Academic Purposes (EAP). These workshops took place over an eight month period and featured the specific subjects of *Introductory usage of Moodle; Pedagogic Approaches to Interactive Whiteboard Usage; Adapting traditional approaches to feedback in the electronic age; Advanced usage of Moodle; Blogs & Wikis on Moodle; & Use of technologies as a means of capturing lectures and recording feedback.*

Though there were eighteen participants at the outset, nine members voluntarily opted to participate in the first stages of this research study. Over time, as the research journey took shape, this group became smaller and three cases were eventually selected in a multi-case study approach; allowing analysis to occur across and within cases (Baxter & Jack, 2008, p. 550). In order to reach the selection stage, I opted for a set of methods appropriate to my methodological paradigm, namely focus group sessions, individual interviews, teaching observations, and analysis of teaching materials, with the ultimate objective being to analyse the data through a systematic process of thematic analysis, using a combination of pre-determined and emergent codes.

The focus group sessions came first, in which participants took part in a semi-structured discussion, arranged into groups of three, or four when circumstances dictated that this was required. These occurred during, and after the teacher education workshops. In the beginning, and through the focus group sessions, data was collected from all nine participants, with four of these participants then providing further interview data, and three being selected as the cases through which to report the study’s findings.
These nine participants are detailed below, under pseudonyms, with the first three forming the eventual cases (Kelly, Matthew & Victor), the fourth being part of the interview process (Rosemary), and the remaining five participating in focus group sessions, but not the study’s final stages. They are though a part of the story, rather than a mere appendix. Justification for this comes from Seawright & Gerring’s (2008) discussion on the role of “background cases” in small-scale qualitative studies, which “are not cases per se” but “are nonetheless integrated into the analysis in an informal manner” (p. 294). I have chosen to situate the description at this point in the thesis because of a desire to illustrate how the story and methodology evolved in harmony. I have also heeded the advice of Hitchcock & Hughes (1995, p. 319) who suggest taking into account other key variables such as participants’ functions and roles, and their work responsibilities.

3.6 Travellers on the research expedition

(1) KELLY—Teaching for five years, in English Language schools, Kelly’s first degree was in Criminology & Sociology. After completing this, she studied a CELTA course and spent a year working in China, teaching English and organising social activities. Returning to the UK, she assumed a position as a Senior EFL and Business teacher, in which she participated actively in what she terms as ‘training’ sessions with other staff. During her time there, she also completed a Masters degree in Sociology and then moved to her present position as an EAP teacher, where her background in Sociology also meant that she was invited to teach some Humanities-related subjects on Foundation and Graduate Diploma programmes. Kelly, compared to the other main cases under investigation, was quite unique in having been in the English Language teaching profession all of her working life, since completing her university studies. In the language centre, throughout the study, Kelly was teaching approximately 20 hours per week, but did have a reduction in hours between semesters in the months of May to July (10& 11 in Figure 7) as a result of teaching on an academic pathway Pre-Masters programme.
(2) **MATTHEW**—As another CELTA-qualified EFL teacher, Matthew’s background featured a combination of language teaching, freelance work in the music industry, and children’s workshops’ facilitation. Having completed BA/MA degrees in Film Studies & Philosophy, and then a CELTA, his earliest work in English teaching was a means of supplementing freelance work in the music industry. After six years of this, he became an Assistant Director of Studies in a language school, for four years, before a two-year return to the music industry. Then, after twelve years of dipping in and out of English teaching, Matthew came to work as a General English teacher in the language centre. Seeing the opportunity to make a career of this, and move into EAP, he undertook a DELTA course at the same time as these workshops. Like Kelly, throughout this study, Matthew was mostly teaching 20 hours per week, though did not have the same reduction in the summer months because he was not working on pathway courses, but rather a course known as *English for University Study* (EUS), which ran in four ten week blocks across the entire academic year.

(3) **VICTOR**—Having graduated with a BA in Politics and Modern History, Victor spent the first two and a half years of his working life as a charity fundraiser, during which time he completed a CELTA though did not move into English Language teaching immediately. However, eventually, he found a position as a teacher in an international language school, where he moved into EAP through a Foundation Year programme, and then to a management position three years later. This was a role as University Pathways Manager where he was responsible for the delivery and organisation of a Foundation Year course, providing international students with access to UK universities. In this role and others, he was a self-professed advocate of using as much technology as possible in the classroom, and when he joined the language centre herein, five years into his teaching career, he expressed excitement at the prospect of working within an environment with considerable technological resource. In the early stages of the education programme, Victor also had a full 20 hour workload, but as he became more involved in developments on an *International Diploma Programme* his teaching was reduced.
(4) **ROSEMARY**-Similarly to Matthew, Rosemary’s background involved dipping in and out of English Language teaching. After completing a BA in Business Management, she spent six years working in sales and customer services, before going travelling and completing a Trinity TESOL course in Prague. Following a brief return to customer services, she moved to Japan where she spent eighteen months as an English Language Instructor and Kids Trainer, before coming back to the UK to work in administration for another year. Having a self-professed love of travelling, and a growing interest in teaching, she spent two years working in language schools in Spain and Portugal, before returning home to work on a pre-sessional; thus entering EAP through the route described by Alexander (2010, pp.3-5). Having been considered a very good teacher on this course, she was recommended to the language centre as a prospective employee, and soon after took up a full-time position teaching Foundation EAP. Like the others Rosemary was on a full teaching workload of 20 hours, and despite being actively involved in several projects in the workplace, she did not get any reduction in her hours at the start. However, eventually, she would progress to a Deputy Manager’s role.

(5) **Derek**-Teaching for over thirty years, in both the British Isles and Japan, Derek wanted to participate in the workshops and focus group sessions as a means of learning more about the use of technology. As a self-confessed technophobe, much of his experience was in EFL, initially, and later ESOL, in the context of UK Further Education, to which he would eventually return. Over the course of this study, Derek had a full teaching load on *EUS*.

(6) **Emily**-Different to the other members of the group, in the sense of coming from south east Asia rather than ‘the west’, and being fully bilingual, Emily holds two Masters degrees, one in Education and one in Linguistics, a portfolio of academic publications, and around fifteen years of teaching experience across various educational contexts in Singapore, the United States, Japan, and the United Kingdom. She had joined the language centre at a very early stage and progressed to an ELT/EAP management position, prior to starting the workshops.
At the start of the study *(months 1-3 in Figure 7)*, Emily was on a full teaching load but then became EUS coordinator and had a 50% reduced workload, before becoming a Programme Manager in the later stages, and having an 80/20 management/teaching ratio.

(7) **Frank**—One of three non-British teachers, Frank’s introduction to teaching was in American elementary schools, after graduating as a certified teacher of ESOL, and foreign language instruction. This was followed by half a decade of English language teaching, and management positions in China, before moving to the UK, for personal reasons, where he first taught IELTS in a private language school, and then found work in the language centre herein. Again, as with Emily, Frank joined the language centre at an early stage and had assumed a more senior management role *(non-EAP)* prior to the workshops. Like Emily, Frank was on a full teaching load at the start of the study but became a Programme Manager in the early stages on the new *International Diploma* course *(with few students)* and was given a 60/40 management/teaching ratio.

(8) **James**—Having moved into English Language teaching six years after his initial graduation in English Language & Literature, James had over ten years of teaching experience in various contexts. These included spells in Poland *(two years)*, China *(seven years)*, and then London *(one year)*. Again, as with Rosemary, his entrance into EAP, in the UK context, came about through work on a pre-sessional, and then some sessional lecturing in various places, before he took up a full time position in the language centre six months before the workshops began. He too was on a full teaching load for much of the education programme.

(9) **Patricia**—Another American teacher, Patricia, like Rosemary, had spent the early part of her career in administration before moving into English Language Teaching where she worked in the Middle East and completed a Masters degree in TESOL, before settling in the United Kingdom for personal reasons. Until taking up a position in the language centre, she had spent a year doing sessional teaching. Patricia was also on a full teaching load for the
first half of the study and then took on some management responsibilities for a period, before taking time out due to illness.

3.7 Data generation and collection

Capturing a rich sense of context is crucial to the reporting of case studies, particularly in an instance where activity, and knowledge in action drive the theoretical framework. Therefore, keeping in mind the characteristics of a qualitative case study (Stake, 1978, 2005), the aspiration to gain multiple perspectives, and ensure a holistic account, (Creswell, 2009), and the need for systematic procedures (Golafshani, 2003), I opted to use three main methods of data collection, and two secondary choices. These were focus group sessions, individual interviews, and observations as the main methods, with analysis of learning materials and a field diary as a further means of accurately representing the “methodology in action” (Mercer, 2004, p. 138). Since the study was originally prompted by “concrete and practical” issues of “immediate concern” in the workplace (Burns, 1999, p. 24), this research was driven by the need to address research questions shaped around “a given problematic” (Flyvbjerg, 2006). Thus, the first step was to gain insight into existing usage and perspectives on technology, in the workplace, and this was done through the distribution of an in-house questionnaire to identify teachers’ educational needs.

Since this questionnaire was anonymous, the primary purpose was to get a sense of the key areas that needed to be addressed in the subsequent technology workshops. These, framed within the context of this study, took place over a period of eight months, during which time I also conducted focus group sessions and observations (with all nine participants) before moving on to individual interviews and further observations (with four participants chosen through a process of selection described later). The timeframe and activities of the data collection process, and activities surrounding it, is illustrated in Figure 7 below.
Figure 7 – The bounded frame of time and activity.

<table>
<thead>
<tr>
<th>TIME</th>
<th>KEY ACTIVITY</th>
<th>DATA GENERATED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months 1-3</td>
<td>Needs analysis; planning of research &amp; workshops; publicising workshops; getting ethical approval &amp; consent.</td>
<td>Field notes – from analysis of questionnaires, classroom observations, &amp; discussions.</td>
</tr>
<tr>
<td>Months 4-6</td>
<td>Workshops one &amp; two – Introductory usage of Moodle/Pedagogic approaches to IWB usage.</td>
<td>Data from three focus group sessions, classroom observations, and field notes (diary records); analysis of work on Moodle.</td>
</tr>
<tr>
<td>Months 7-9</td>
<td>Workshops three &amp; four – Adapting traditional approaches to feedback in the digital age/ Advanced usage of Moodle.</td>
<td>Data from three focus group sessions, classroom observations, and field notes (diary records); analysis of work on Moodle.</td>
</tr>
<tr>
<td>Months 9-11</td>
<td>Workshops five &amp; six – Blogs &amp; wikis on Moodle/ Use of technologies as a means of capturing lectures and recording feedback</td>
<td>Data from three focus group sessions, classroom observations, and field notes (diary records); analysis of work on Moodle.</td>
</tr>
<tr>
<td>Months 12-14</td>
<td>Selecting cases &amp; setting up of interviews, and observations.</td>
<td>Individual interviews with four participants and observations of their lessons, &amp; analysis of learning materials.</td>
</tr>
<tr>
<td>Months 15 on</td>
<td>Data analysis</td>
<td>Clarification <em>(if needed)</em> from participants.</td>
</tr>
</tbody>
</table>

3.7-ii Starting out with focus groups

Focus groups typically involve “bringing together people of similar backgrounds and experiences to participate in a group interview about major program issues that affect them” (ibid). Relating these to the context of language teaching, Mann (2005, p. 111), states that they “create opportunities for sustained concentration and discussion.” Borg (2006) highlights benefits of “verbal commentaries” where teachers “talk about their beliefs, thoughts, and similar mental constructs” (p. 189), whilst Freeman (2002, p. 10) strongly advocates teachers’ “right to speak for and about
teaching.” Darling-Hammond & Richardson (2009, p. 5) add that “an understanding of the particular ways teachers talk and collaborate can provide insight into the role of professional learning communities in improving teacher practice.”

However, so as to generate data that is rich and experiential, (Asbury, 1995; Mann, 2005), there has to be a rigorous emphasis on focused discussion (Beaumont & O’Brien, 2000), rather than “particular and parochial knowledge” (Hargreaves & Tucker, 1991, p. 498). Furthermore, Kennedy (2008, p.357) expresses the view that teachers do not categorise knowledge in the same language as the literature so researchers/analysts have to “match the sources of teachers’ ideas with the kind of knowledge these sources tend to provide.” This echoes warnings from Clark (1986), and Kagan (1992) that teachers’ articulation of cognition can be very different from theoretical discourse (Hargreaves & Tucker, 1991, p. 494). It was therefore critical to make the groups as natural, conversational, and cumulative (Mercer, 2004) as possible, in order to foreground a narrated reality of context-rich, and “locally produced accounts” (Silverman, 2005, p. 154) which again goes to the heart of what is required from qualitative case studies.

Having considered the literature’s guidance, and my own empirical, contextual knowledge, the sessions were scheduled at regular intervals during the programme of workshops. They were arranged in as natural a manner as possible, with participation in groups being fluid rather than rigid, and having a non-threatening atmosphere, where the aspiration was to allow the dialogue to emerge and take shape naturally. I would say that, on reflection, this occurred to different degrees in each session and had much to do with the balance of personalities, and workplace politics (Finch, 1984; Ball, 1994; Punch, 1994; Mercer, 2007; Coghlan & Brannick, 2009.) Regarding workplace politics, Mercer (2007, p. 2) points out that the literature in this area is not as significant as it perhaps ought to be, and thus I had to use my own judgement alongside practical considerations of participants’ circumstances. The nine participants characterised in 3.6 took part in three sessions each, where they were divided into “mini-focus groups” (Krueger, 1994),
over the timeframe outlined in Figure 7, in comfortable, quiet, secluded, non-teaching areas of the workplace. Ideally, these would have been arranged in groups of three but one occasion had to be scheduled as two groups of four due to the absence of one member for unavoidable personal reasons. At the outset of every session I highlighted the purpose of the research, my role as researcher, and the right of freedom to withdraw. I then instigated discussion, and allowed conversations to proceed, prompting or interrupting only when circumstances required.

I recorded the sessions through a sophisticated Olympus Digital Voice Recorder, which eliminated many of the traditional problems with audio-recording, and I also took notes simultaneously. As immediately as possible after sessions, which lasted from as little as fifteen minutes to as much as thirty five, I transcribed the dialogue so as to not only capture “the whole of the conversation verbatim” (Arksey & Knight, 1999, p. 105), but also to recall the “emotional dynamics” (Poland, 1995, p. 221), while they were still freshly in mind. Further to this, I added in notes regarding non-word utterances and interactions so that when returning to the data, at later stages, I had preserved a sense of the naturally occurring interaction (Silverman, 2005, p. 157), which facilitates the qualitative researcher’s requirement to see the world from the subjects’ perspectives (Glassner & Loughlin, 1987, p.37).

3.7-iii Choosing cases for the next stage of data collection

At the outset of the study, nine participants volunteered to take part, but after the focus group sessions there was a need to reduce these participants to a more manageable number, and also a specific group that would form the basis for a multiple case study. Going back to Yin’s (2009, p. 29) research expedition analogy, the role of all passengers on this journey was significant but, for the sake of a rich and thick description of the context, it was necessary to focus on less than half in the final analysis. There was a need though, for purposes of rigour, to avoid “convenience” selection of the chosen group, even if it would have been fast and straightforward (Patton, 1990, p. 180), and to present a thorough
justification of choices to capture the “exclusive distinctiveness” of the chosen group (Cohen et al, 2013, p. 161).

Selection was based on a combination of pragmatic and data driven realities. In pragmatic terms, extrinsic factors such as pregnancy, illness, promotions, and change of career intervened. For example, James found work in one of London’s more established and traditional universities, whilst Frank became a programme manager, and his classroom hours were reduced. Such factors can be expected in a longitudinal study. Thus, from a combination of these factors, and decisions made on the strength of their data, **Kelly, Matthew, Rosemary, and Victor** emerged as participants in the next stage. This was because I felt that the data I had collected in their observations and discussions would serve to best “illuminate” the research questions (Yin, 2009, p. 26). Later on **Rosemary** would be eliminated from this group, as there was less consistent data gathered in her focus group sessions as a consequence of missing the first session, and having an individual interview instead. Although the research story may have been enriched by some of her ideas, as with the other cases left out of the final narrative, there was a need to maintain consistency and a settled direction throughout, as advocated by Silverman (2005).

### 3.7-iv ‘Semi’-structured interviews as a further method

The focus group sessions were used “as material for thought, reflection, and further investigation” (Arksey & Knight, 1999, p. 77). This further investigation featured the use of interviews, observations, and analysis of learning materials, particularly those placed on the public space of a Virtual Learning Environment. Aside from prolonging engagement, in the study, and providing material to facilitate thick descriptions of the setting, this incorporation and analysis of additional sources served as “triangulation techniques” to ensure trustworthiness (Lincoln & Guba, 1985, pp. 359-60). Though some characteristics of these “multiple methods” (Patton, 2002) overlapped in terms of their positioning in the timeframe, as illustrated in Figure 7, interviews served as a bridge between focus groups and observations.
Taking into consideration three major formats of interview, structured, semi-structured, and unstructured (Powney & Watts, 1987, p. 16), I opted for a position on the continuum straddling the first two choices. Thus, they were “directed by a set of general themes, rather than specific questions” (Borg, 2006a, p. 190) while being flexible enough to allow for emergence of, and elaboration on, other areas of discussion. This allowed the interview to proceed in the manner of an active partnership (Holstein & Gubrium, 1997), and a conversation (Kvale, 1996) “rather than as a formalized exchange” (Borg, 2006a, p. 203).

Further to this, I followed extensive guidance from the research literature regarding ways of conducting interviews effectively. Paradigmatic values and approaches took primacy, alongside historical and contextual aspects, particularly in light of this being insider research (N. Mercer, 2004; J. Mercer, 2007) as discussed in greater depth in Chapter Four. However, at a fundamental level, this again involved creation of the right atmosphere, paying attention to the needs and circumstances of the interviewees, being conscious of my own role as researcher, reflecting on that role, and making the process as transparent as possible so participants understood why they had been chosen.

Key strategies employed in the course of the interviews included methodologies for ‘critical listening’ (Glassner & Loughlin, 1987; Arksey & Knight, 1999, pp. 99-100; Silverman, 2005, p. 157); careful preparation and patience; emphasis on interviewer neutrality (Holstein & Gubrium, 2003), and shared meaning-making (Ellis & Berger, 2003); and being able to digress or reorder questions where necessary (Lam, 2000). It was essential to “generate plausible accounts” of the context, rather than attempting to “treat respondents’ accounts as potentially ‘true’ pictures of ‘reality’” (Silverman, 2005, p. 154). To support this, I had to create a comfortable environment for generation and recording of dialogue, as with the group sessions; then to instigate conversation, sit back, listen, prompt where required, and hope for the emergence of data to help address the research questions, which are primarily concerned with developments in actions and
knowledge (RQ1), and how these shape or reshape teachers’ specific practice of using technology in EAP teaching (RQ2).

3.7-v Observations as a third source of data collection

Focus group sessions and interviews helped address particular aspects of the research questions, but they did not fully evaluate instances of action. Therefore, each teacher was observed several times during the course of the study, and during the series of workshops, so as to provide enough information for me to describe and analyse typical examples of their practice. These observations were evaluated through a framework adapted from an ISTE Classroom Observation Tool, shown as Appendix Two. This is a free online instrument that provides a set of questions to guide classroom observations of a number of key components of technology integration. Through using this approach I was able to see if developments arising in the dialogue were being put into practice in the classroom, and whether or not there were changes in teaching activities during, and after the programme.

It was also important to make observations systematic because TPACK is a complex construct that is “difficult to tease out in practice”, and seeing its instances in action requires “a nuanced understanding of teaching” (Koehler & Mishra, 2009, p. 66). Others also voice the need to link theory to practice; Roberts (1998), Freeman (2002), Donaghue (2003), and Pierson & Borthwick (2010, p. 130) who argue that any successful evaluation of professional development involves “observing and documenting teacher behaviours ‘in the thick’ of classroom practice.”

Borg (1998, p. 278) stipulates that “data should portray what teachers do in ELT classrooms, as well as how they talk about the rationale for their work.” Elsewhere, he argues that events and activities observed in classrooms can serve as a better method of data collection than teachers’ retrospective accounts (Borg, 2003, p. 34). This echoes Silverman who questions whether it is better to “observe what people do rather than asking them what they think about it” (2005, p. 48) and also states that “many qualitative case
studies combine observation with interviewing” (ibid, p. 121); providing further rationale for its usage in this study.

Borg (2006a, pp. 229-230) also points out that “observational data need to be recorded in some way”, whether technologically or through narrative approaches and the use of “diaries, journals, field notes, and similar forms of non-categorical representations.” In the end I opted for written records that may seem outdated in the digital age, but are less intrusive, and thus less likely to engender reactivity, than electronic recordings (ibid). These written records then formed a basis for the final report in which I present vignettes of practice from each of the three main cases. Instances of practice have been similarly presented in Motteram & Sharma (2009), and Slaouti et al’s (2013) study of three teachers working at the interface of technology and language learning.

3.7-vi Rounding off the sources of data analysis

Borg (2006a, pp. 235-239) suggests linkage between observing practice in the classroom, and analysis of artefacts such as teaching materials. This supported my decision to draw on materials and usage of the language centre’s Moodle VLE as a subsidiary means of analysis. Though not absolutely essential to the study it was a further source of triangulation, and a means of differentiating between espoused theory and theory in action (Argyris & Schön, 1974; Donaghue, 2003). Again, as with other methods, consent was required, objectives clearly outlined, and teachers made aware that this analysis, or anything involving the Moodle VLE, would have no connection to institutional performance appraisal.

Additionally, I built up a collection of field notes (Silverman, 2005, p. 158) to further serve as “a productive form of reflection, introspection, and self-evaluation” (Mann, 2005, p. 109). These notes were informal, and more of a diary than a journal (Richards, 1992), sometimes recorded in notebooks and often in electronic format. Over the full duration of the study, this assumed the form of “personal tale of what went on in the backstage of doing research” (Ellis & Bochner, 2000, p. 741). These also served as “a memory prompt” (Watt, 2007, p. 83), and a form of “stimulated
recall” (Mann, 2005, Borg, 2006a), defined by Calderhead (1981, p. 212) as a technique used to “aid a participant’s recall of his thought processes at the time of that behaviour.” They were also a good means of tracking developments in the actions of participants over time, and in recording casual or informal instances of action with potential future significance such as in the extract below, noted down on my iPhone calendar.

**Extract from diary notes on Victor’s work**

February 25th - Victor today tried to get others interested in a Facebook group he’s set up for students to get a bit of remedial help with English. Wants to create and upload a whole bunch of language ‘McNuggets’, he calls them, where students get grammar points in small, digestible chunks. Got a range of responses from colleagues, some in favour, some not; one pointing out (snappily) she’d done similar things, without video, on Moodle.

### 3.8 Interplay of methods on the research journey

Having chosen appropriate data collection strategies (Hoepfl, 1997; Yin, 2009), their practical application also reflected underlying values of the study’s methodological perspective (Shulman, 1986, p. 14); particularly in trying to sketch a rich, holistic picture. Very often this involved managing methods, in parallel, reflecting upon and analysing events as they unfolded, and establishing links between, and across, situations. Taking this pervasive approach to analysis, I was better able to study individual cases, and the final cross-case comparison.

One example of this can be seen in tracking teachers’ developments with Moodle, which was an important theme. The diagram below illustrates how data gathered through the various methods sketched and corroborated a fuller picture of Matthew’s usage, perceptions, and relationship to the VLE. Through this brief snapshot, offered as a taster of the broader process of data analysis, it is possible to track Matthew’s development in firstly using Moodle primarily for “content + support” towards the higher level of Mason’s (1998) framework.
**Figure 8 - Interaction between forms of data collection**

<table>
<thead>
<tr>
<th><strong>FIRST FOCUS GROUP SESSION – Sample reference to Moodle</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew – There are lots of ideas .... regarding using interactive learning environments like the one we’ve got here which is Moodle and I know some of the things that it’s used for but I think we’re at the very beginning of a really exciting period of change in terms of integrating those technologies into the classroom.</td>
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<thead>
<tr>
<th><strong>FIRST OBSERVATION – Notes related to the usage of Moodle.</strong></th>
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<tbody>
<tr>
<td>(1) Matthew made reference in the lesson to self-access and the use of Moodle for preparation in advance of the lesson. (2) Made use of the desktop computer, the IWB, PowerPoint, and a Moodle Virtual Learning Environment which was used by some students in advance of the lesson. (3) A class page has been set up for students to access, where they can add, share, or compare resources.</td>
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<tr>
<th><strong>SECOND FOCUS GROUP SESSION – Sample reference to Moodle</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew - I’ve been uploading audio files of class seminars .... I’ve been recording and putting them on Moodle for them to transcribe which has been really useful. In terms of the more interactive element of using the class audio, taking the audio from class and getting them to listen back, that’s something I’ve done in the past but this gives them the chance to do it in their own time. ..rather than in the class.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ANALYSIS OF LEARNING MATERIALS &amp; NOTES – On the Moodle VLE.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Term One English for University Studies class (EUS) – shared between Matthew &amp; Emily. Within the EUS category, they have each created sub-categories for their own classes; Emily (writing &amp; reading) &amp; Matthew (speaking &amp; listening). Matthew using this to post materials and to engage in discussions on forums with the students, about particular topics they research for their homework.</td>
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</tbody>
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<thead>
<tr>
<th><strong>SECOND OBSERVATION – Notes related to the usage of Moodle</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Created a Microsoft Word document, based on a text from Stephen Bailey’s Handbook on writing for international students, and said that he was going to put this up on Moodle for the students to access after class.</td>
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<tr>
<th><strong>THIRD FOCUS GROUP SESSION – Sample reference to Moodle.</strong></th>
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<tbody>
<tr>
<td>Matthew - I’ve worked closely with Emily because we were sharing a class and she was the real instigator of a lot of new things on Moodle so that was very much of a collaborative effort and also stuff that Paul had shown me originally and then that’s kind of caught on ..... because everyone’s been using it.</td>
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</table>

<table>
<thead>
<tr>
<th><strong>INDIVIDUAL INTERVIEW – Sample reference to Moodle.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew- Use of Moodle has changed as have various other things I’ve integrated in terms of technology. One recent thing of note is the iPad, and using that in the context of gaining, of emergent language, which is what I was doing before but before I was using the computer and using it and using Word.</td>
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<tr>
<th><strong>FINAL OBSERVATION – Notes relating to the usage of iPad.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>He also used an iPad. Amongst other things, this was used to write down student corrections .... an adaptation of traditional notebooks &amp; pen/paper .... moved around classroom using this as a means of demonstrating and eliciting vocabulary from the students as they worked in groups on a warm-up task.</td>
</tr>
</tbody>
</table>
3.9 Case Study Data Analysis

Silverman (2005, pp. 149-187) offers one of the most comprehensive accounts of data analysis found in the literature, drawing on Coffey & Atkinson (1996, pp. 10-11) who define analysis as being a “pervasive activity” throughout the life of a research project. This means that analysis does not begin when the data is collected, but rather at the conceptualisation of research questions. Creswell (2009, p. 184) similarly describes data analysis as “an ongoing process involving continual reflection about the data.” He goes on to suggest asking key questions about the data right from the outset (p. 153) whilst Basit (2003, p. 143) defines qualitative data analysis as “a dynamic, intuitive and creative process of inductive reasoning, thinking and theorizing.” Leedy & Ormrod (2005, p. 133) talk about digging deep to reach “a complete understanding” of the phenomenon under investigation.

O’Connor (2012, p. 259) asserts that case study data analysis incorporates these same features of being a deep, inductive, iterative, cyclical process proceeding from general to specific observations. Creswell (2012, p. 182) compares this to a spiral and describes a series of steps, or loops, in the process; the first of which is data management. Following this guidance, I recorded, transcribed, and then organized my first data sets (focus group sessions and observations) into text units stored, then secured as computer files. Following the organisation of data, which increased over the bounded timeframe, the next step was to get a pervasive sense of the whole database (p. 183). The greatest challenge I found was in the construction of a framework to communicate the essence of what the data revealed (Denzin & Lincoln, 2000), so as to identify recurring themes, patterns, and categories becoming evident enough to gradually link together into a coherent whole.

3.9-ii Building a framework for the analysis of data

O’Connor (2012) warns that a major challenge for the researcher is the choice of a suitable and justifiable mechanism to analyze case study data (p. 259). As stated in the research questions, I was
exploring developments that occurred in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technology in the classroom, and how these developments shape or reshape the specific professional practice of using technology in the classroom.

Thus, through the research questions placing an emphasis on activity and knowledge, themes connected to collaboration, communication, and use of tools (technological & traditional) began to emerge in analysis; carried out right from the outset (Creswell, 2012). This then is the point when I created the locally adapted Activity system shown in Figure 5 wherein the EAP teacher is the subject and the outcomes are focused around the needs of students. It should be noted, in case of misunderstanding, that these are the outcomes of an EAP activity system and not the outcomes for the teachers as a consequence of the education programme. That, being a time-bound activity, is not a fixed part of the teachers’ regular activity system, and the purpose of this framework is to support data analysis rather than finding a way of depicting the subject’s TPACK as a central node in the system.

3.10 Wedding the framework to an analytic process

Having adapted the framework, the next step was to choose a systematic and replicable technique for compressing the volume of original data, so as to explore underlying concepts. Braun & Clarke (2006, p. 8) recommend the use of thematic analysis, as it is “not wed to any pre-existing theoretical framework” and lends itself to the flexibility required of qualitative research design. Through having this theoretical freedom, thematic analysis can provide a “rich and detailed, yet complex account of data” (ibid, p. 5). Joffe & Yardley (2003, p. 56) further emphasise the potential of this qualitative form of content analysis to unwrap the richness of “messages contained in talk data.” Significantly for studies such as mine, where there is a large volume of data, particularly from the focus group sessions, Braun & Clarke (2006) stress differentiation between the data set and the data corpus with the corpus being the whole data collected and the set being that which is used for a
particular analysis (pp.5-6). Using a smaller data set, they argue, can allow for a richer, focused description, and helps to provide “an accurate reflection of the content of the entire data set” (p. 11).

Although there is no clear moment when ethnographic data analysis begins (Stake, 1995; Silverman, 2005; Creswell, 2009), I chose to follow stages of analysis outlined by Braun & Clarke (2006, pp. 15-23) which are not so radically different from Creswell’s (2012) “data analysis spiral”, but are more exclusively focused on thematic analysis. Braun & Clarke’s stages begin at “familiarising yourself with your data”, and progress towards an endpoint of reporting content and meaning of patterns (themes) in the data, where themes are abstract constructs the investigators identify before, during, and after analysis. This involves a constant moving back and forward between the entire saturated data set, coded extracts of data, and the production of analysed data for “repeated patterns of meaning” (2006, p. 15).

**3.10-ii Familiarising myself with the data**

Braun & Clarke’s first stage of thematic analysis involves a process of “immersion” characterised by an “active” reading of the data, repeated until a “bedrock” for subsequent analysis has been established (2006, pp. 16-17). Agar (1980, p. 103) suggests that researchers read the transcripts in their entirety several times, whilst Creswell (2009, p. 183) likens this process of deeper understanding of the data to “peeling back the layers of an onion.”

Following this advice, I read the transcripts repeatedly, supported by notes and memos, and repeatedly listened to the recordings as well, asking such questions as “How did X say that?” or “When Y and Z’s speech overlapped, who was it that actually spoke first?” This of course was slow and painstaking at times, cutting across data sources, but was invaluable in capturing a whole sense of the dataset. The fact that it had been digitally recorded as well meant that storage and retrieval was made easier, and that I could cut back and forwards across sessions to cross-reference, compare, interpret, and re-interpret particular instances of dialogue.
Returning to Creswell’s onion analogy, another springs to mind as a means of encapsulating this stage of analysis; scenes from a sonnet sequence by Seamus Heaney, entitled ‘Clearances’ (1987). Therein, the child-poet is peeling potatoes with his mother in a scene of such intimacy their separate breaths and “fluent, dipping knives” (ibid) operate as one, even though, at the same time, there’s a sense of the poet’s objective distance from the scene, as he surveys life and history’s bigger picture. Thus, in the poem, his reflections on the scene are both close and distanced. As researcher, I had to maintain the same sense of equidistant closeness and separation so as to move from description to interpretation (Patton, 1990), and semantic to latent analysis (Braun & Clarke, 2006). To do so would require a systematic coding frame.

3.10-iii Production of initial codes from the data

The second stage of Braun & Clarke’s (2006, p. 17) framework of thematic analysis is labelled as “generating initial codes” so as to unpack primary ideas within a voluminous text, and delineate units of general meaning (Cohen et al, 2013, pp. 555-60). This is done by “taking chunks of text and labelling them as falling into certain categories, in a way that allows for later retrieval and analysis” (Joffe and Yardley, 2003, p. 59). All of us code what we see and hear around us, according to Silverman (2005, p. 182), and through doing so we “make the world observable and reportable.”

Codes peel back layers of Creswell’s (2009) metaphorical onion, and provide clarity, structure, and systematic ways of finding information most salient to the research questions (Cohen et al, 2013, p. 556). Although case study data analysis is most commonly associated with data-driven approaches (Stake, 1995), the choice of TPACK and Activity Theory as the conceptual framework necessitated a theory-driven (deductive) element as well. Thus, I opted for a strategy outlined in Fereday & Muir-Cochrane (2006) of incorporating the “data-driven inductive approach of Boyatzis (1998) and the deductive a priori template of codes approach outlined by Crabtree & Miller (1999)”.

This echoes Miles &
Huberman’s (1994, p. 111) description of codes deriving from a dual process of induction and deduction; Bauer’s (2000) assertion that codes need to flow from principles underpinning the research; and Creswell’s recommendation of using some combination of predetermined and emerging codes” (2009, p. 187). Creswell also advocates using “in vivo” coding, where appropriate, based on the actual language of the participants (ibid, p. 186).

Having adopted Fereday & Muir-Cochrane’s (2006) strategy, I then went through the data systematically, assigning descriptive codes line by line, in an open coding process of using labels that enabled straightforward denotation and memorisation of issues they resembled (Cohen et al, 2013, p. 560). Some codes were general, others more specific, but I tried to keep them as discrete as possible (Miles & Huberman, 1994), working through an iterative process, rather than a “one-off exercise” (Cohen et al, 2013, p. 560), of going back and forwards through the text, reading and re-reading, assigning and reassigning, placing and replacing labels to the point of refinement.

Although I could have utilized information technology (Cohen et al, pp. 542-545), I opted for a manual approach so as to make the process feel more natural, and less “mechanistic” (Coffey & Atkinson, 1996, p. 37). Even if this may have been more time consuming, it gave me a better handle on the data, and a sense of reducing the material without losing any of “the quality of qualitative data” (Cohen et al, 2013, p. 559). In some respects it may seem strange that a study so concerned with technology would not employ its affordances in the key area of data analysis, but I would argue that in making this choice I am staying true to values espoused in the literature review. Through the work of Warschauer (1996) up to Motteram (2013) there is an emphasis on choosing tools when appropriate rather than for the sake of doing so. This is what I have done and I believe that the depth and richness of my interpretation is no less for having done so. Indeed I would hope it is stronger for it has given me a deeper, more personalised understanding of the data at each analytic cycle, as detailed in
Figure 9 shown below, which serves as a snapshot of codes produced in the first cycle.

**Figure 9 - Sample codes from the first analytic cycle**

<table>
<thead>
<tr>
<th>DATA (from focus group)</th>
<th>CODE &amp; RATIONALE</th>
</tr>
</thead>
</table>
| Yeah that’s true because in a way it’s a new medium so the teacher training with the new medium has to be there to avoid some of the bear pits that you’ve got with that kind of static presentation style that most teachers would never normally use. *(Matthew’s dialogue – FG1)* | New medium (technology) – *inductive/in vivo*
| | Need for new knowledge/new medium training – *inductive*
| | Bear pit – (avoiding static presentation style)- *in vivo/inductive*
| | Bear pits (more than one) - *in vivo/inductive*
<table>
<thead>
<tr>
<th></th>
<th>Norm of teaching (non-static) – <em>Deductive code from (T) PCK conceptual framework.</em></th>
</tr>
</thead>
</table>
| Sometimes with technology there’s a thing that you don’t want it to become a one way communication such as just looking at OHPs or whiteboard ..... and just copying it down I am interested in how it can really be interactive and communicative. I’d be worried that I’ll just slip into a way where I’ve just got a million kinds of PowerPoint projections and it might become very static in the classroom.’ *(Kelly’s dialogue - FG2)* | Norm of EAP teaching (avoiding one way communication) – *inductive & deductive*
| | Tools (OHPs, whiteboard, PPT) – *inductive*
| | Interest in interactivity – *inductive*
| | Concern about loss of interactivity – *inductive*
| | Resource (quantity, not quality) – *inductive*
| | PPT drawback (static) – *inductive* |
3.10-iv The evolution of themes in the coded data

Figure 9, shown above, serves as a snapshot of assigning codes to datum in the early stages of the analysis, allowing as much of the process to be inductive as possible, but at the same time searching for associations with, and reference to, knowledge and activity. At the start, one of the challenges I faced was in my pacing of the analysis, and this was a source of frequent discussion with my supervisors Gary Motteram and Diane Slaouti. Perhaps at times I fell into the novice researcher’s mistake of trying to jump across stages too quickly which could have been seen as forcing the data to fit the framework; peeling back the layers, seeking the flesh of Creswell’s (2009) onion too fast.

There was a need to go through a systematic, careful thematic analysis. Braun & Clarke label their third phase as “searching for themes”, which begins when all data have been initially coded and collated, and you have a long list of the different codes you have identified across your data set” (2006, p. 19). This phase gave me a sense of how different codes were coming together to combine and form overarching “theme-piles” (ibid). Some initial codes would form main themes, whereas others might form sub-themes, and others would be discarded, as I moved towards the fourth phase labelled as “reviewing themes” (ibid, p. 20).

By the time of the fourth phase, I was delineating and refining themes in such a way that Kelly’s reference to concerns regarding interactivity was taking shape as a tension, and her possible ways of addressing this were now defined as strategies so that these tensions and strategies could then be mapped against one another as the analysis progressed. Similarly, Matthew’s reference to “bear pits” would translate to a tension, but that in itself was not enough because even though there was common linkage in the tensions both teachers were talking about, there was a need to more succinctly categorise the nature of these tensions, which will be further discussed in the actual chapters on the specific cases.
Though Braun & Clarke (2006, p. 21) suggest that you should only move onto the next phase if each step of the thematic map works, there was considerable crossover between the review stage, and the fifth. This was the point of “defining and naming themes” (p. 22), which captures the essence of what each one is about. A prime example of this is the inductive theme of Drivers for the uptake of technology that was further subdivided into positive drivers, negative drivers, and neutral drivers. These labels identify “the essence of what each theme is about” (the deeper story of the theme) and determine “what aspect of the data each theme captures” (p. 22). However they do stress that “as well as identifying the story that each theme tells, it is important to consider how it fits into the broader overall story”, particularly in relation to answering the research questions (ibid), so as to feed into the sixth and final stage of “producing the report” (p. 23).

One means of ensuring accuracy was to summarise each theme in a couple of lines, and another was to map themes out across cases. In doing so I could illustrate gradual movement from code to category to theme, so as to reduce the tendency to jump across stages and show that the process was systematic and carefully considered at all stages. Figure 10 provides a snapshot of how the analytical procedure is tracked from the first cycle of codes through to the final categorisation of themes, using the example of Victor, since previous excerpts have featured Kelly and Matthew. This snapshot helps address issues pertinent to research question two which examines the specific practice of using technology in association with traditional EAP teaching strategies. The first two extracts focus on the role that community plays in shaping EAP teachers’ actions, knowledge, and professional practice during and after a teacher education programme on the use of technologies in the classroom. The third extract focuses on the tracking of knowledge through the stages of analysis. The purpose of the diagram then is to show how the raw data (Victor’s words in the focus group sessions and interviews), progresses through an ongoing organic process of categorisations until it reaches a point of identifying a broader story’s essence in a few words (Braun & Clarke, 2006).
Figure 10 – Mapping themes in the stages of analysis

<table>
<thead>
<tr>
<th>DATA EXTRACT</th>
<th>CODE</th>
<th>CATEGORY</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeah I’ve always found it most useful just asking someone .... but it’s kind of impossible in a classroom situation but if there’s someone in the staffroom who’s really good at one programme maybe you can go and ask them. (FG1 Victor)</td>
<td>Benefits of peer collaboration</td>
<td>Role of collaboration in shaping knowledge &amp; practice</td>
<td>COMMUNITY</td>
</tr>
<tr>
<td>In the staff room a few things have come up .... we’ve looked at that and thought about how that might work. (FG3 Victor)</td>
<td>Shared environment &amp; circumstance shaping activity</td>
<td>Interaction of everyday activity &amp; community in shaping knowledge &amp; practice</td>
<td>COMMUNITY</td>
</tr>
<tr>
<td>I guess if people are taught not so much about how to use programmes themselves but more about the link between the programme and the classroom ....so that the teacher can then go and play around with programmes. (FG1 Victor)</td>
<td>Need for knowledge of linkage in tech &amp; pedagogy (TPK)</td>
<td>TPK knowledge developed with experimentation</td>
<td>CONSTRUCTION OF KNOWLEDGE- (TPK)</td>
</tr>
</tbody>
</table>

Within the above excerpts of dialogue, which serve as a brief snapshot of a far more extensive dataset, it should also be pointed out that there are often themes that interlink and overlap. This is particularly salient to themes relating to knowledge, and the construction of knowledge, where sociocultural influences are often shaping these developments. An example comes in the role
played by community in fostering the construction of knowledge, and the above examples show how these interrelate. Looking across the whole dataset, the experimentation that helps teachers to establish linkage between the technology and the pedagogy often comes about through a process of shared experimentation. As such, this supports Braun & Clarke’s (2006) call to maintain a sense of the whole dataset throughout, and to be able to map these out against one another in the final analysis. This is done not so much in the form of a diagram but in stories of the cases, told individually, and then brought together in cross-case comparison. Further examples of coding are provided in Appendix Three to demonstrate that my analysis has been consistently systematic.

3.10-v Maintaining a settled direction throughout

In summarising the process of data analysis, it is important to highlight again that the research questions and the conceptual framework served as a constant reference point throughout. The key issue, at hand, was to address the two main research questions, and the associated sub-questions. TPACK and Activity Theory stabilised this process by providing the lens through which I could do this, giving shape to the deductive codes at the outset, and a means of unearthing the inductive codes running parallel to these. In the early stages I was trying to get a sense of the teachers’ place on the EAP developmental continuum, and then the developments that occurred in their actions and knowledge during the teacher education programme. Later, I was more interested in developments that occurred after the programme, and how this shaped or reshaped practice. However, it is important to stress that it was not a case of first answering RQ1 and then moving to RQ2. I also had to be alert to the possibility, and likelihood, that practice would be shaped during the teacher education programme as well, since the programme was concerned with the specific professional practice of using technology in EAP teaching. It was particularly important to be aware of the emergence of references to actions and change, which form key parts of the discussion when it comes to the stories of the individual cases. However, to close this chapter
on methodology, it is also important to establish trustworthiness in my claims of being systematic throughout the research process.

3.11 Establishing trustworthiness

In sketching the larger picture in qualitative research, as suggested by Creswell (2009, p. 176), there is a need to avoid purely subjective judgements in the collection and analysis of data (Yin, 2009, p. 41). Creswell & Miller (2000) speak of presenting evidence to gain credibility, whilst Lincoln & Guba (1985, p. 290) talk of persuading audiences that the findings of a study “are worth paying attention to.” Creswell (2009, p. 190) separates “qualitative validity” and “qualitative reliability” into distinct categories, whilst Cohen et al (2013, p. 179) argue that each is conditionally dependent upon the other, and a research study without either is ineffective and invalid. At the same time though, they do accept that other voices in the literature contest the use of these terms in qualitative research studies (ibid, p. 201).

Teddlie & Tashakkori (2009, p. 26) prefer the global term “trustworthiness”, in line with Lincoln & Guba’s (1985) shift away from traditional positivist terminology associated with quantitative research. Trustworthiness incorporates four criteria, namely “credibility, transferability, dependability and confirmability” as direct replacements for “validity”, “generalizability”, “reliability”, and “objectivity” (Teddlie & Tashakkori, 2009, p. 212). Thus, I have opted to use terms associated with trustworthiness whilst also emphasising the role of reflexivity due to the context of the research, so as to avoid overly stiff application of pre-determined criteria (Miles & Huberman, 1994).

3.11-ii Being aware of my role as researcher

Even though the next chapter discusses my role in more detail, it is important to reiterate that I am crucially aware of my own place as the central instrument (Hammersley & Atkinson, 1993; Watt, 2007; Creswell, 2009); and “main measurement device” (Miles & Huberman, 1994, p. 7) in the qualitative research process.
3.11-iii Reflexivity

Reflexivity is a recurring guideline throughout the literature on qualitative research studies (Stake, 1995; Merriam, 1998; Russell & Kelly, 2002; Watt, 2007).” It is a process beginning with the identification of the case study’s issue (Stake, 1995), and the formulation of research questions containing a sense of “where the chosen research approach originates, where it may be heading and what may be problematic about it” (Alvesson & Sandberg, 2013, p. 7). This involves an acceptance that researchers are inescapably part of social worlds they research, and that perspectives on the ‘realities’ of our surroundings are subjective, multiple, and never neutral (Hammersley & Atkinson, 1993; Cohen et al, 2013). Miller & Crabtree (1999, p. 10) describe this as recognising “the importance of the subjective human creation of meaning” without rejecting outright notions of objectivity.

Though the voices of teachers are central to this study, it is an over-simplification to think they speak for themselves alone (Mauthner & Doucet, 2003, p. 418). I have had to ensure that my choices and interpretations, throughout every stage of the research process, have been subject to the same level of scrutiny and critical reflection as the rest of the data. Again this was particularly important in the context of insider research because in order to make clear what my motives are, it was important to be clear about who I am, as a person, and as a professional. I not only had to be aware of this, but also had to make it clear to the research participants not just through my words but also my actions.

3.11-iv Credibility through triangulation

Miles & Huberman (1994, p. 278) define credibility as “the crunch question: truth value.” The term refers to the representation of multiple realities as opposed to internal validity, which assumes the manifestation of a pre-existent reality that must be tested. This credibility is based on the richness of the information gathered (Patton, 1990; Hoepfl, 1997) and the ability of both myself, as researcher, and others to have confidence in the data. This was
done through different forms of triangulation (Lincoln & Guba, 1985; Patton, 1990; Merriam, 1998; Creswell & Miller, 2000; Creswell, 2009; Cohen et al, 2013). Arksey & Knight (1999, p. 21) define this as combining “different techniques to explore one set of research questions” which originates from “a technical term used in surveying, military strategy, and navigation to describe a technique whereby two known landmarks or reference points are used to define the position of a third” (ibid).

Silverman (2005) states that building various devices into the overall research strategy ensures the “accuracy of your interpretation, so you can check the accuracy of what your respondents tell you by other observations” (p. 154). He then adds a point of particular significance to the bounded context of case studies in suggesting that researchers focus triangulation around a “concrete point” in history (ibid, pp. 7-8). Since this study, as with all case studies, has to take place within “a bounded system” of time and activity (Stake, 1995) that concrete point is very clearly mapped out to begin with, as illustrated in Figure 7. Furthermore, Arksey & Knight (1999, p. 22) outline the need to “explain whether the goal is to confirm or complete the resulting data set”. In this case study, the range of methods was used to complete rather than confirm the findings, whilst also taking into consideration the fact that completeness, in itself, is a term that should be used carefully in the context of teacher development. In practical terms, triangulation was applied across the methods used to address the research questions, and the types of data generated through these, namely focus group and interview transcripts, observation notes, learning materials, and field/diary notes; all of which meet Shenton’s (2004, p. 64) criteria of being well-established.

3.11-v Transferability of findings in this study

The second criteria of trustworthiness has been addressed by the fact that the goal of this study is not for me as researcher to specify what is transferrable but rather to allow the reader to determine whether the findings are applicable to another situation beyond the local context described in the case study. Eisner (1991, p. 205)
defines this as a form of “retrospective generalization” whilst Stake (1998, p. 6) refers to it as “naturalistic generalization.” The importance of the ‘reader’ in judging the value of qualitative research is further analysed in Glaser & Strauss (1967), Patton (1990), and Eisner (1991). Glaser & Strauss argue that readers and researchers share a joint responsibility in judging the value of the qualitative research product (1967, p. 232). Patton stresses that pragmatic validation [of qualitative research] means that the perspective presented is judged by its relevance to and use by those to whom it is presented: their perspective and actions joined to the [researcher’s] perspective and actions” (1990, p. 485).

3.11-vi Reliability and confirmability

Cohen et al (2013, p. 202) state that in qualitative research, reliability can be regarded as “a fit between what researchers record as data and what actually occurs in the natural setting that is being researched.” One way of ensuring consistency in this is the creation of an audit trail (Lincoln & Guba, 1985). In the case of this research the audit trail was created through a clear recording and storage of the various forms of data generated, and diary notes to back this up where required. This also assisted with ensuring confirmability, which is the process of demonstrating that findings have emerged from the data rather than from my own predispositions and suppositions (Shenton, 2004). Through doing so, this can add further value to the research study.

3.12 Concluding remarks

In conclusion then, and in advance of Chapter Four’s discussion on ethics and insider research prior to the subsequent case descriptions and comparison, Figure 11 provides a diagrammatic reminder of the research questions, data required to answer them, and methods used to gather this data. Although I initially incorporated the sub questions into this diagram, in the final depiction I have presented only the two main questions as these best capture a sense of what this study has sought to investigate.
## Figure 11 – Research questions mapped to data collection

<table>
<thead>
<tr>
<th>KEY RESEARCH QUESTIONS</th>
<th>DATA AND INFORMATION REQUIRED TO ANSWER QUESTION</th>
<th>METHODS OF DATA COLLECTION</th>
</tr>
</thead>
</table>
| Research Question One  | Information about teachers’ actions, and knowledge at the outset and during the early stages of the workshops. | a. Focus group early dialogue  
b. Lesson observations  
c. Analysis of teaching materials esp. MOODLE.  
d. My own diary records. |
|                        | Information about teachers’ actions, and knowledge after the workshops. | a. Focus group later dialogue  
b. One to one interviews  
c. Lesson observations  
d. Analysis of teaching materials  
e. My own diary records |
| Research Question Two  | Information on previous attitudes to technology & traditional strategies in EAP teaching. | a. Early focus group dialogue |
|                        | Information on later attitudes to the practice of using technology. | a. Later focus group dialogue  
b. One to one interviews |
CHAPTER 4: Challenges in my role as manager-researcher and insider-researcher

4.1 Introduction and overview

Coghlan & Brannick (2009) describe research in and on your own organisation as being “a complex process” (p. 49), especially when holding “dual roles” of manager and researcher (p. 65). In order to address the concerns there are a number of steps should be taken. The first of these is to demonstrate awareness of my role, and the deepening effect (Edwards, 2002, p. 71) this can have on the already contentious issue of being an insider, or inside, researcher. Further to this, there is a need to establish an “ethical code” (Coghlan & Brannick, 2009), and a framework for staying true to the process, and underlying values of the study (pp. 78-79).

4.2 Being a manager in the research setting

As stated in Chapter Three, there is a need for honesty (Cohen et al, 2013, p. 179) regarding my position as researcher. Therefore, from the outset, I have been clear about my role as a manager conducting what has been variously defined as “backyard research” (Glesne & Peshkin, 1992; Creswell, 2009), “a double-edged sword” (Mercer, 2007), and “the original sin” of ethnographic research (Moore, 2007, p. 27). This “forbidden fruit” (ibid) involves studying the researcher’s own organization, or friends, or immediate work setting; wherein role conflicts can compromise transparency, disclosure and reportage (Creswell, 2009). In this case, I was a practicing manager in the research setting; as discussed in Coghlan (2001), and in the contextualisation chapter at the start of this report. It must also be stated that I am no longer working for the same organisation at the time of this report, and the fact of that changes the picture slightly.

Coghlan (2001) states that the dual role of manager and researcher can potentially cause conflict and ambiguity. This is then discussed more extensively in Coghlan & Brannick (2009) who outline the different roles that manager-researchers assume, and the potential
pitfalls of this. These include issues of identifying more strongly with the organisation than the research participants or vice versa, and thus losing a sense of subjectivity; making judgements based on tacit rather than explicit knowledge; and being too close to the data in physical and emotional terms (ibid, pp. 61-66.) Furthermore, Moore (2007) suggests that the focus could shift from the research questions and the overall findings to justifications about my own role as manager-researcher; diverting attention away from the main thrust of the investigation.

In this scenario, my role could become an Achilles heel; a source of blood to be drawn on the “double-edged sword” described by Mercer (2007). However, deeper analysis of the literature suggests this does not have to be the case. Indeed, any aspect of a research study can be an Achilles’ heel if left exposed. Ways of protecting against this exposure are listed in Coghlan & Brannick (2009). The first of these is to highlight the back story to the research and to repeat the fact that this study has been conducted in my capacity as PhD candidate with the contribution to the workplace coming in the form of professional development, rather than disclosure of information and findings to, or about, the organisation.

Mercer (2007, p. 2) highlights how such PhD studies have shaped the growing incidence of “small-scale practitioner research” by insiders. Like the growing number of students in the digital age, my story is one of part-time study whilst continuing with regular employment. The consequence is that my workplace became the research site, and I had to “embrace the inherent conflict of being both an insider and a researcher” (Moore, 2007, p. 27). This involved travelling along “a continuum with multiple dimensions” within which I had to “constantly move back and forth along a number of axes” (Mercer, p. 1), at the same time as discovering and developing “my own interpretation distinct from the orthodoxy of the organization” (Moore, p. 27). Coghlan & Brannick (2009, p. 68) also point out that doing research as a PhD candidate effectively takes on the form of “third-person research” in the organisation, wherein the insider is temporarily playing an outsider’s role. To better understand this, I will now define insider research.
4.3 Definitions and challenges of insider research

Though the concept of insider research is not new, its usage in education has increased substantially in the past couple of decades, particularly in fieldwork-based anthropology and sociology (Bartunek & Louis, 1996). Mercer (2007) illustrates how this echoes the shift in social anthropology research methods in the twentieth century, from the study of exotic societies to those closer to home, within researchers’ own “social and cultural backyards”. Bartunek & Louis summarise this as “going native” in order to capture native perspectives (1996). Doing so facilitates ease of access, “informed knowledge”, “authenticity”, closer relationships, and “richer data” (Arksey & Knight, 1999, p. 67). Edwards (2002) highlights further strengths in terms of knowledge concerning the meta-language, history, and organisational culture (pp. 72-73).

However, such an approach is not without its critics because it offers a challenge to traditional orthodoxies of scientifically sound research being that in which objective outsiders study subjects from a detached, external perspective (Denzin & Lincoln, 2000). Despite this, there are several established ways of enhancing trustworthiness when managing a project where the researcher has a direct involvement or connection with the research setting (Robson, 2002; Rooney, 2005). Aside from honesty about my position, a further means of addressing problems is to have a solid foundation of support from the literature (Platt, 1981).

Establishing these foundations reduces the tendency to “dive-bomb” into an impressionistic alternative to “more arduous” quantitative methods rooted in more traditional objectivist epistemologies (Watson-Gegeo, 1988, p. 575). That though does not confer subjective freedom on the insider researcher. Systematic approaches are required, alongside reflexivity, as echoed throughout the literature (Platt, 1981; Kvale, 1995; Hammersley, 2000; Robson, 2002; Silverman, 2005; Cohen et al, 2013). Silverman (2005) acknowledges that practicalities of access and familiarity commonly shape decisions regarding the research setting (p. 132), whilst Richardson (1990, p.24) admits that true
participation in any culture involves deep immersion. However, this deep immersion had to be counter-balanced with systematic “strategies of validity” (Creswell, 2009, p. 177) in order to underpin reader confidence in the accuracy of the findings, as interpreted.

4.4 Strategies to address challenges of insider research

Despite the importance of a solid foundation from the literature, Creswell (2009, p. 175) warns that the researcher must keep “focus on learning the meaning that the participants hold about the problem or issue, not the meaning found in the research literature or subjective judgements about people and issues.” By doing so, insider research can have considerable benefits in terms of generating a rich description of the setting and the study (ibid).

In practical terms, the means of addressing challenges had to be systematic and pervasive, as well as ethical. From the outset I sought to reduce possibility of coercion. I began with the design of an information sheet as part of a call for volunteers, sent out to all teachers in an email by a colleague. Within this, we emphasised “confidentiality” (Arksey & Knight, 1999, p. 68), alongside the “pluralism” of my role (Mercer, 2007, p. 7). This issue of “overlapping personae” (Young, 2005, p. 158) was one stressed repeatedly to those teachers volunteering to take part in the study. For example at the start of every focus group session, I made clear that “I am doing this in the capacity of doctoral student in The University of Manchester.” To have added the phrase “rather than as your manager” would have been paradoxical to the concept of assuming another role, and illustrates the crucial nature of language, and its construction, in fostering an environment where participants felt free to speak.

Fostering such an environment was assisted further by the nature of the setting, as described in the contextualisation chapter. Most situations would have a weight of prior history (Platt, 1981; Edwards, 2002). However, because this was a newly formed environment, we had been working together for less than a year when this research study was conceptualised, which reduced the potential for existing beliefs, expectations, presuppositions, and
politics to have undue influence. Furthermore, this newness allowed me to portray the research study as a journey of learning and development for each of us. My approach to management was characterised by a style of consensus, and emphases on team-building and individual strengths, as in Seed (1958).

Stenhouse (1975, p. 143) speaks about “the uniqueness of each classroom setting” as a place of research and also each individual teacher’s development as being unique. Therefore, as a manager, a colleague, a person, and a teacher, I was interested in the individual stories and needs of those who spend their time in classroom settings. Cultural background played an important role too in that having worked in former polytechnics, I was more used to flat, democratic structures than hierarchical systems. I would also add that, through being in a position of manager, I was able to influence the organisational culture in a positive way by bringing these values into play, which is another strength of being a manager-researcher (Coghlan & Brannick, 2009, pp. 109-115).

This consensual democratic approach manifested itself in the informal, but organised, atmosphere of the focus group and interview sessions. Similarly, in the observations, I emphasised my roles as doctoral student and teacher developer, distancing these from any appraisal process; made easier by the fact that as a new organisation the language centre had no formal appraisal system in place. Indeed, it did not have anything official for the four years I was there. As a consequence, all observations were conducted from a developmental stance, using a range of creative, contemporary techniques such as ‘catching somebody doing something right’ (Blanchard, 2004). Aside from this, by using the ISTE Classroom Observation Tool (Appendix Two) for observations I was further able to separate work from study, which is particularly important for two reasons. Firstly there must be a clear line where research stops and the rest of life begins (Scott, 1985, p. 120). Secondly, the issue of researcher disengagement (Ashforth et al, 2000; Labaree, 2002) is critical to insider research, but particularly so when reporting findings in the bounded context of a case study.
Moving from data collection to data analysis, I heeded Cohen et al’s (2013, p. 179) call for honesty, depth, and richness of interpretation and reporting; seeking credibility rather than absolute truth (Glaser & Strauss, 1967). Here, being an insider was a strength for I was able to speak with participants, collaborate, and corroborate my interpretations, as suggested in Creswell & Miller (2000). One example of this comes from the final stages of analysis where a phrase from Kelly’s initial focus group session was echoing and re-echoing in my mind “the bit I really like about teaching.” In order to understand this better, I went back to her, for a second individual interview, and very informally asked for clarification; stressing that this was in hindsight, and using the actual interview transcript as a source of stimulated recall (Calderhead, 1981; Mann, 2005; Borg, 2006a).

From the original dialogue I had interpreted ‘the thing she likes’ as being close interaction and engagement with students. Kelly’s response when I asked her for clarification was as follows.

**Extract of dialogue requested for clarification**

```
KELLY - It is a difficult question, what I really like about teaching. Maybe energy or excitement in the classroom, if it feels like all of the students are involved or interested in the moment. I think that’s definitely the case now, if everyone’s really involved and into it, even if it’s difficult or not. If they’re fully involved in the activity and you know, or the theory and whatever, and you know you’ve included it or thought about that because it’s important for them and you feel as if you’re doing the right thing and that they’re learning (II2).
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Similar strategies were enacted for all cases, as required, and this collaboration proved invaluable; highlighting the benefits of relationship-based research, which can be more difficult for outsiders. Of course, there was no competition between the two. Rather it was a matter of choosing what worked in this context, and applying systematic, and ethical procedures throughout.
4.5 Ethics as a pervasive presence

Ethics is the common ground that unites all research, as reflected in the abundance of regulatory codes of practice and related literature (Cohen et al, 2013, p. 75). Contemporary literature on ethics covers such a broad canvas it connects Nuremberg to the Northern Ireland Police Service, social research to medicine, and the Stanford Prison Experiment (Zimbardo, 1972) to Jean Piaget’s (1959) study of his own children. Miles and Huberman (1994, p. 290) categorise ethical frameworks as being “deontological”, “utilitarian”, “relational”, and “ecological”. However, others argue that there is “no one framework that can be agreed upon to ensure ethical research” (Richardson & McMullan, 2007, p. 1116), and “no single set of rules or practices that govern the ethics, truth and politics of a research project” (Sooobrayan, 2003, p. 107). Thus, I have chosen to follow the guidelines of Cohen et al (2013) who dismiss “Procrustean” systems of ethics, and recommend a “situated approach (Simons & Usher, 2000)” (p. 76), and the design of a personal code of ethical practice (pp. 102-103). This personal code of ethical practice is provided in Appendix Four.

Aside from a personal code of practice, there was also a need to accept the pre-eminence of ethics above all else, including revelations of truth (Lincoln & Guba, 1989). Although the main goal of my study was to find credible answers to the research questions, such answers were only acceptable if I ensured the participants’ wellbeing (Teddlie & Tashakkori, 2009, p. 198). Therefore, from the outset, ethical issues were kept firmly in line with the guidelines of both the British Educational Research Association (2002), and the Economic & Social Research Council whose (2005) Research Ethics Framework serves as the basis upon which most universities establish their ethical policies.

4.5-ii The need for informed consent

As an important ethical measure, the literature consistently calls for “informed consent” as the basis for participants choosing to take part in research studies (Howe & Moses, 1999; Malone, 2003; Richardson & McMullen, 2007; Hammersley & Traianou, 2012;
Cohen et al, 2013). However, others have argued that this concept fails to take into account “the multiple ethical dilemmas that can arise in qualitative inquiry” such as “the myths of confidentiality and anonymity”, particularly in “home” settings (Malone, 2003, p. 800), and the human dimension of research (Shea, 2000).

It is also possible to argue that in this digital age the boundaries of anonymity and identity have shifted, and though I have chosen to give the teachers pseudonyms, this was not such a major concern for them. Talking about technology is not the same as talking about corporate policy, for example. I would go so far as to argue that many EAP teachers aspire to having their voices publically heard in the broader ELT community’s debate about technology; as evidenced by the proliferation of contemporary blogs in this area, and BALEAP’s (2008) emphasis on the sharing of ideas.

Therefore, though I opted to offer anonymity as a means of reassurance, this was less of a concern for me than ensuring that the teachers understood what they were getting into, and what was being done with them, and the data generated, as advised by the British Social Research Association (2002). Creswell (2009, p.89) advocates the design of “an informed consent form for participants to sign before they engage in the research”, and cites Sarantakos (2005) in nominating elements to be included. These are detailed in Appendix Five as part of a table demonstrating the necessary steps taken to protect “the subject’s right to freedom and self-determination” (Cohen et al, 2013, p. 77). This is then followed up in Appendix Six with a copy of the actual consent form used at the outset of the research study.

4.5-iii The aftermath of informed consent

Once the forms were distributed, discussed, and signed, I had established an “implicit contractual relationship” with participants (Cohen et al, 2013, p. 81). This would serve as a foundation on which subsequent ethical considerations could be structured, but was never intended to be a “one shot, once and for all affair” (ibid). It was also important that “no group should be disadvantaged by routinely being excluded from consideration” (British Social
Research Association, 2002, p. 14), and so all teachers were invited to participate, which resulted in nine choosing to volunteer. The next stage involved gaining official permission to undertake the research. Since I was doing the research on the inside, this involved a process of getting access through “gatekeepers” (Creswell, 2009, p. 90) in my workplace. To gain this, I wrote emails to the relevant people identifying the extent of time required, the purpose, and likely impact of the research (ibid). Furthermore, since the research was doctorate based, I stressed the support of my supervisors, and university (Cohen et al, 2013, p. 82); ensuring that there was an acceptance of me conducting observations in the classroom, and accessing materials via new technologies, as in British Social Research Association (2002, p. 5).

Though participants could be potentially entering a fog, blind to the discourse of research (Williams, 1996; Malone, 2003), I was fortunate that EAP teachers share a professional understanding of it, and probable “methodological sophistication” allowing for a “covenantal” partnership between me, as researcher, and the study’s participants (Malone, 2003, pp. 805-6). However, it was important to heed Soobrayan’s reminder that “the research instrument in qualitative research is the person” conducting the research, and “confronting ethical issues in qualitative research is a confrontation with the self” (2003, p. 107). This is why there was a need for continual reflexivity; through fieldwork in focus groups, observations and interviews, writing things down, writing things up, making judgements, and reaching decisions about actions to take, things to include, and things to leave out (Malone, 2003, p. 801). I also provided detailed information on the nature of focus groups as shown in Appendix Seven.

**4.5-iv Practical examples of taking an ethical approach**

Though the research journey was relatively smooth, a potential area of concern could have been the handling of withdrawals, and informing participants about case selection decisions. At the outset there were nine members of the focus group sessions, whittled down to four interview participants, from which three final cases
were selected. As explained in the previous chapter, the choice of cases was shaped in part by unavoidable variables. Derek, the first to withdraw, just after the focus groups ended, found work elsewhere, and informed me of his decision, though expressed an interest to make a final contribution. Thus, I conducted a one-to-one interview in which he provided an overview of thoughts on the research process, not as a tool for analysis, but of keeping to the spirit in which the research was conducted, and giving him the chance of having his ‘final say’, as requested.

Others did not request this, as they withdrew from both the study and the workplace for different reasons; which should remain confidential. The remaining two candidates were informed of not being selected, and given clear, specific reasons. Both said they accepted this decision, and looked forward to seeing the final report. Kelly, Matthew, Rosemary, and Victor were then informed of my decision to conduct further interviews with them, from which three would emerge as the cases chosen for the basis of this report. Choosing these final cases involved ethical considerations too, including the need to triangulate and justify decisions, alongside discussing the selection process, carefully and analytically, with my supervisors. Eventually, on the basis of data generated, Rosemary was the sixth participant whose story, though important, will not be shared in detail in closing chapters.

4.6 Conclusion of the chapter

On the whole then I would argue that far from being a potential Achilles’ heel, my role as manager-researcher has been a strength for many of the reasons outlined in Edwards (2002), and Coghlan & Brannick (2009), echoing the general literature on insider-research. Now that I can approach the research context from the benefit of hindsight, through no longer working there, I am also in a position to see how my role created the potential for this study, which may not have been possible if I had not had the opportunity to manage a programme of teacher development, and conduct research which was governed, and guided by, ethical practice as further summarised in Appendix Four.
SECTION II: THREE TEACHERS’ PRACTICE INDIVIDUALLY AND COLLECTIVELY

The three chosen cases are described in greater detail in this section, followed by a cross-case comparison leading into the conclusion and discussion of findings. The individual cases are reported in the following order – Victor in Chapter Five, Matthew in Chapter Six, and Kelly in Chapter Seven. Each of these chapters will open with a short vignette from the life of the individual, as this is essential to getting a sense of their character and story.

The chapters are then constructed around a common framework of narration, even though the themes that emerge might differ. This structure mirrors the flow of the research journey, tracking developments chronologically through the focus group sessions, observations, individual interviews, and analysis of other materials. Vignettes of practice are shown at the outset of the teacher education programme, and at the end. Although there were more instances of observation, only two to three have been chosen for each case, depending on the value they add to the story. Excerpts of dialogue are also numbered for easy retrieval from the full transcript if required, and are generally self-explanatory, with FG denoting Focus Group, II denoting Individual Interview, and the associated numbers denoting the order in which they occurred.

The case studies are essentially sequenced as follows – (1) Starting out on the research journey (2) Vignette of practice at the start of the journey (3) Deeper into the journey (4) Reaching the end of workshops (5) Observations after the education programme (6) The closing interview (7) Conclusion or overview of practice. When all three cases have been reported, there is then a comparison of each, which starts off with an overview of developments, and then looks at the main developments in greater detail. This serves as the basis for outlining my overall contribution to knowledge, and conclusions in Chapter Nine, which brings the story to an end.
CHAPTER 5: Victor’s developmental journey

Victor, amongst other things in life, is a musician. Just a month before the completion of this report, I made a journey to London Bridge to watch his band performing. The setting was a replica ship on the borders of the Thames and the City’s financial district. Under the boat’s low ceilings there was barely room to move, as Victor’s three-piece folk group took to the stage as darkness set in. Tuning up, and setting up, they took several minutes to switch roles from spectators of other acts to main performers themselves. Then, as the show started, Victor, an EAP teacher for most of the day, transformed to purveyor of folk songs, some traditional, some he’d written, and others cleverly adapted. Down below, I watched eagerly, in the company of another former colleague, for it was several months since I had left the language centre in this study.

On stage, Victor’s performance had echoes of English teaching. He’d stand up, sit down, change positions, and move around the stage according to the resources at his disposal; whether his voice, guitars, or the harmonica he’d sometimes choose. Of all the instruments on show, this was one of the most simple and yet the piece of technology that had travelled furthest in musical history. Starting out as “a resurrection charm” against evil spirits in 3000 BC in China, this wind instrument had been reinvented in the music halls of northern Europe in the 1800s (Sachs, 2012). From there, it made its way through the United States, where it assumed multiple roles – fashion accessory for Abraham Lincoln, comfort for soldiers on the battlefields of the Civil War, and then an integral part of 1920s ‘black’ music (ibid).

Now, on a warm night by the edge of the Thames, Victor was using this ancient instrument for his own purposes, as a vehicle for the message in his songs, and the overall outcome of entertainment. Comparisons could be drawn with teaching, technologies, and the theoretical framework, but this vignette of Victor, the musician, outside of the classroom, serves mainly as a snapshot of who he is as a person, and how that too might feed into his practice.
5.1 Starting out on the journey

5.1-i Victor’s sense of EAP practice at the outset

In the first focus group session, where Victor was teamed up with Derek, Emily, and James, he makes the assertion that “EAP is all about writing essays, and those essays are written on computer” (FG1b, p. 21). Proceeding to describe the teaching of writing, his ideas resonate with Motteram’s discussion on how computers have enhanced the way that students read and write (2013, pp. 183-85). “Access to technology makes it a whole lot easier” according to Victor (FG1b, p. 21), in such areas as “redrafting”, and having “access to things like Google documents and shared documents.” Here, he seems to be talking about the shared activity of students being guided towards reading, and researching for writing.

However, he goes on to suggest that teachers have also benefitted from access to technology. This is because “we can use computers to demonstrate that to them” and it “makes editing students’ writing really interesting because you can get down to doing things like annotations, and they can see what they need to do in redrafting an essay” (FG1b, p. 21). Through this extract of dialogue, it seems that Victor is already positive about the use of computers in his classroom, and sees two aspects to the process of writing essays, and a partnership between teachers and students. The first part is the reading, researching, and putting together a first draft, and the second is the corrective stage, where the teacher demonstrates examples of work and makes annotated corrections.

Interestingly too, in the same section of dialogue, Victor suggests that this process of electronic adaptation, which clearly takes place in a public/group setting, rather than a private/individual setting, has replaced the once ubiquitous “red pen”. Annotation through PowerPoint, and the IWB, is now as normalised (Bax, 2003), in his practice as the red pen once was, and a new instrument has been introduced into a long-established practice, and activity, of EAP and ELT. Relating this to the research questions, it then appears that, from the start, Victor has a clear sense of how and why he is using technology for specific aspects of teaching EAP.
5.1-ii Actions and knowledge regarding technology’s usage in EAP practice

During an interchange of ideas with other focus group members, Victor suggests that technology should be used “in a more interactive way and not just because you can” (FG1b, p. 20). If not used properly, he states that “if you’re just going through a whole bunch of slides, it’s kind of putting a barrier between you and the students” (ibid). Even at this early stage, his activity is student-centered and his words have echoes of Koehler & Mishra’s assertion that TPK requires “a forward-looking, creative and open-minded seeking of technology use, not for its own sake but for the sake of advancing student learning and understanding” (2009, pp. 65-66). He blames this potential barrier on the fact that “PowerPoint is very presenty and that’s like, that’s fine if you’re doing a lecture” but not “if you’re doing anything language related” (FG1b, p. 20).

Here, the suggestion is that language-related work is different from lectures, and PowerPoint is not an entirely suitable vehicle for facilitating learning in this purpose and context. Keeping in mind Freeman’s (2002) discussion on language as content, there are already elements of TPK and TCK in Victor’s thinking. In terms of TPK, he is showing awareness of how particular technologies are used in particular ways, according to purpose and context, (Koehler & Mishra, 2009, p. 66). Then, in terms of TCK, he is showing an understanding of the impact technology can have “on the practices and knowledge” (ibid, p. 65) of a given subject. In this case, technology is seen as a potential barrier to the teaching of language, which is somehow different from other subjects. I can only assume at this stage, the difference is in the teacher’s relationship with students, which is one where there must not be “a barrier between you and the students” (FG1b, p. 20).

The fact of there not being a barrier and the teacher working with the students to produce output, as in the redrafting stages of the writing process (FG1b, p. 21), again echoes Victor’s sense of EAP as a subject, and EAP teaching as a profession. He appears to place an
emphasis on working with students, and authentic materials, such as their texts, and on using technology to enhance this process. Further evidence for this comes in a discussion on the uses of technology, particularly video, in the context of developing presentation skills, which his colleague James describes as “obviously a very important element of EAP courses” (FG1b, p. 22). Victor replies that “video is just really, really useful when I’ve had it” such as “within the context of IELTS” (ibid), which he describes as a similar thing to EAP since these courses are also used by universities as a means of entrance to degree programmes. The reason he gives for its usefulness is “just seeing, allowing students just to see someone doing it and criticising what’s good and what’s not I think that’s a really good resource” (ibid).

From the above extract, and from other instances of dialogue in FG1b, Victor touches on another key point related to actions and knowledge regarding technology’s usage in EAP practice, which has particular salience in light of this study’s theoretical lens of Activity Theory in conjunction with TPACK. He explicitly talks about the impact of having ‘resource” on two separate occasions, in the case of the benefits of video in IELTS classes, and about how in the early stages of his career, in language schools, he had “fairly limited technological resources” at his disposal (FG1b, p. 16). Despite this, it is apparent in his dialogue, that he does have a “working knowledge of technology, alongside a deeper understanding of how it can be used from a practical perspective (Koehler & Mishra, 2009, p. 64). This almost equates to their definition of technological knowledge, but the “deeper, more essential understanding and mastery” (ibid) is not yet in evidence, because the education programme/research study has only begun.

5.1-iii Victor’s goals in terms of knowledge

In the first focus group session, I asked all participants what they hoped to “gain from the teacher education workshops that we’ll run here” (FG1b, p. 18). Victor responded that “it has to be something useful”, and that “I think the most useful ones I’ve been to are the ones where there’s a speaker there who has something
that they really want to say or want to put across that’s a bit different, as opposed to like as you say, more adminny workshops” (FG1b, p. 19). Such workshops, as those described in Diaz-Maggioli (2004), are less favourable to Victor than those “where teachers are sharing ideas.” He goes on to cite one such example from his previous work at a language school “where Mike McCarthy came and gave a talk on corpuses and how to incorporate that in class which was incredibly useful and something I hadn’t really looked at much before.” Thus he says that “when it is someone who is actually a speaker or a presenter and is coming to tell you something about the profession that you don’t already know, then that is really useful” (FG1b, p. 19).

Within this, the reference to “sharing of ideas” is significant for the activity system, and also for building on an existing knowledge base of technological knowledge, and pedagogical knowledge, so as to build towards TPACK at some possible, future stage. One way in which to build knowledge of more productive usage of technology is “if people are taught not so much about how to use programmes themselves but more about the link between the programme and the classroom” (FG1b, p. 25). This, he later argues, would help to link together “theory and technological applications in the classroom” (FG1b, p. 30), as happened in his own example of Professor Michael McCarthy’s talk. He says that “I was shown how to use corpuses....and thought this is fun and went into the classroom and went and did it, but I said I don’t know why”. This lack of knowing ‘why’ meant that he “then basically never did it again until I looked at why it’s important to look at different uses of words and how collocations and stuff can help build students’ vocabulary and how you can use that” (p. 31).

In his present practice, at this stage, one area where he recognises his lack of knowledge is in the use of the language centre’s official Virtual Learning Environment, despite having gone through an introductory workshop on its usage. He states that “I still have very little idea about how to use Moodle by the way, so anything on that will be really useful for me”, and “at this stage it’s just a

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2 Michael McCarthy, Professor of Applied Linguistics, University of Nottingham
word for me” (FG1b, p. 31). This firstly suggests that there is a tension between provision of resource, and education of teachers in usage of that resource, as suggested in Anderson & Henderson (2004), and Munro (2010). Secondly, relating back to my earlier suggestion about Victor’s technological knowledge, he has not quite reached Koehler & Mishra’s (2009, p. 64) definition of being able to “continually adapt to changes” over “a lifetime of generative, open-ended interaction with technology.”

Perhaps, by his own suggestion, knowing the why as well as the how would help him achieve this over the course of the teacher education programme. One area where he seems quite strong at the outset is in trying to find strategies to address particular issues. This is seen in the extracts of coded dialogue below, where there is a sense that he tries to find practical solutions to adversity, especially when he detects tensions in the system of activity.

**Extracts of data from Victor’s first focus group session**

<table>
<thead>
<tr>
<th>Extract of data</th>
<th>Initial codes</th>
<th>Themes arising after coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>We did a lot of sessions there on using the fairly limited technological resources at our disposal (FG1b, p. 18).</td>
<td>Training sessions (frequency &amp; amount), Amount of resource &amp; access to it – (impact on practice)</td>
<td>TENSION (Limited technological resources), STRATEGY – training sessions on how to use resources</td>
</tr>
<tr>
<td>The most useful ones I’ve been to are the ones where there’s a speaker there who has something that they really want to say or want to put across that’s a bit different as opposed to like as you say more adminny workshops; more workshops where teachers are sharing ideas (FG1b, p. 18).</td>
<td>Need for alternatives to ‘adminny’ workshops, Guest speaker benefits, Sharing of ideas</td>
<td>TENSION – Administrative workshops not being so useful, STRATEGY – Using the sharing of ideas/community to aid development.</td>
</tr>
</tbody>
</table>
Finally as regards the knowledge he wants to build, he talks about how he is waiting for things to become more “advanced and user friendly” (FG1b, p. 24), but sees schools as being slow to “adopt” (ibid) the new instruments that can make teachers’ work easier and gives the example of the struggle to use and understand interactive whiteboards. He talks about how the school or the teacher has got “a big touch screen whiteboard” whilst students are “sat there with their iPhones shifting things around” (p. 24), and goes on to predict that the “next generation” (ibid) of technologies might well see a linkage of the two, working in harmony. At this point, such an aspiration seemed to be slightly outside the context of the teacher education programme, but would be of significance later.

5.2 Vignette of Victor’s practice at the outset

Having conducted the initial focus group session and gained a sense of Victor’s espoused practice, it was then important to get a glimpse of actual practice in the classroom, taking into account his actions, pedagogical strategies, and content being taught (Shulman, 1987) – particularly as he had spoken of differences in “lectures” and “language-related” work (FG1b, p. 20). Though I observed a couple of lessons, I have chosen to present the following as a typical example of Victor’s practice at this stage, which does include a specific instance of using technology in his teaching.

On this typically hectic day in the workplace, Victor was teaching Foundation students the EAP component of a Business & Humanities course. The lesson unfolded in a standard classroom equipped with computer, projector, and interactive whiteboard, though there was limited space for movement, as the room was too small for a class of eighteen students. Those students were of mixed ability, gender, and nationality, but mostly Russian, Arab, and Chinese, all of a similar age. Victor’s aim was “Teaching differences in facts & opinions” through a lesson adapted from Oshima & Hogue’s academic writing textbook (2007).

I entered the room ten minutes after the lesson had started, took a seat, and observed what was happening. Students were engaged in reading a text and analysing information so as to find answers to
exercises in the textbook, concerned with finding supporting evidence in paragraphs. At this stage the technology in use, recorded through the ISTE Classroom Observation Tool (as in Appendix Two), was a straightforward combination of desktop computer and interactive whiteboard, with these being used for the purposes of presentation. Interestingly, PowerPoint’s potential “barrier” was the main vehicle of demonstrating information. However, rather than simply lecturing students and “going through a whole bunch of slides” (FG1b, p. 20), he engaged in conversational information exchange with the class, through eliciting examples of facts and opinions at whole-group level.

Still though, this did essentially feel like a “chalk-and-talk presentation” style of writing on a board whilst delivering a standard textbook lesson (Mayer, 2005, p. 2). There was none of the innovation that he had aspired to in getting students shifting things around interactively, in partnership with the teacher, as in FG1b (p. 24). Even though there was fifteen minutes’ worth of engagement and negotiation of meaning with the students in the post-reading task, echoing his focus group examples of working on the writing process, and IELTS speaking tasks, his emphasis seemed to be on “comprehension” rather than “output” (Mayer, 2005, p. 476). The primary instrument of teaching was ‘Oshima & Hogue’, to whose exercises the students returned post-discussion.

Again, once this new set of exercises was completed, answers were elicited at whole-group level, and the process of exercise followed by answers, and back to exercises continued. Thus, on this day, in this particular instance, there was not so much usage of technology, or indeed “the methods, practices and techniques of communicative language teaching” related to the tasks of an academic context (BALEAP, 2008, p. 8). However, in a post-lesson discussion, Victor pointed out that the purpose of the tasks and exercises was to stimulate knowledge of using supporting evidence in academic essays. As such, he felt that he had introduced the students to this concept, and was “getting what I wanted done with the lesson done.” Therefore, even though on first impressions, it might seem that he was not drawing on a base of TPK or TCK, in
this vignette, it could be argued that he was showing knowledge of pedagogy applicable to the teaching of specific content (Koehler & Mishra, 2009, p. 64). As such, this goes back to Shulman’s original conceptualisation of PCK where there is an emphasis on providing the “most useful forms of representation” of particular ideas, and “formulating” the subject to “make it comprehensible to others” (1986, p. 9). With these particular students, in this particular classroom situation, Victor had actually opted not to use the technology “just because you can” (FG1b, p. 20). Rather, he taught the students what they needed to learn, with the resources at his disposal, and the main resource in this particular lesson happened to be a standard textbook.

5.3 Deeper into the journey (developments in practice)

5.3-i Usage of blended learning

When the next focus group session took place, the participants had taken part in three workshops; namely Introductory usage of Moodle; Pedagogic Approaches to Interactive Whiteboard Usage; and Adapting traditional approaches to feedback in the electronic age. This session began with me asking about what had been happening in the period since the last focus group session and the present workshops. Victor started off the discussion by saying that although the system remains new for him, he has been putting up course materials, posting links to useful websites, and using the forum to allow his students to set up tutorial meetings at times convenient to them. This is a change from FG1b when Moodle was “just a word” to him. Now it seems a regular part of his activity.

He states that although “the whole system’s quite new for me” he has been “putting course materials up, like presentations I’ve done and links, like posting links to useful websites” (FG2a, p. 35). Aside from this, he claims to be “using the forum to allow my students to set up tutorial meetings so that they can just post a time that is convenient for them within a time that is convenient for me” (ibid). Through doing this, he is enacting newly acquired technological knowledge, from the introductory workshops, and also changing the division of labour within the learning process. By
getting students to schedule times for tutorials, and providing them with self-access materials, he appears to “foster student autonomy through group activities as well as one-to-one tutorials”, which is a sub-competency in BALEAP’s framework (2008, p. 7).

Interestingly, he has ambitions to build on this further, and increase his knowledge of how Moodle can be used from a practical perspective. He suggests that “it would be nice on the forum to just set a discussion question and almost have a debate; something written and everybody has to reply to keep it going” (FG2a, p. 38). Again, within this, there is an onus on the students to share some of the labour, and to keep the discussion going. There is also a sense of this being more of an aspiration than an action, at present, because he says “I’ve done that before but haven’t seen how you can do that with Moodle; maybe with the wikis” (ibid).

There are a couple of points of interest in this last statement. The first is the sense that he has previously enacted a method of learning and teaching with different unspecified instruments. Therefore, he is drawing on existing pedagogical knowledge by Koehler & Mishra’s (2009, p. 63) definition, but needs to see this done, or work out how this is done, with Moodle before he can develop the TPK of understanding “how teaching and learning can change when particular technologies are used in particular ways” (pp. 65-66). The second key point is that he is talking about the wikis, which were also studied in the workshops, and comparing these to Moodle, so he is broadening his knowledge of instruments.

Still though, at this stage, there is a sense that he remains unconvinced by tools such as Moodle or wikis, because they don’t have “that satisfying thing which really addictive technology has, something like Facebook or Twitter have, which keeps you going back to do it” (FG2a, p. 38). Preferring these forms of media over school technologies though does not mean that he is rejecting the institutional drive towards blended learning, and the language centre’s provision of Moodle as a resource. Rather, he appears to be considering other options for creating a blend, and this was evidenced in the following extract of coded dialogue below.
Extract of dialogue relating to Victor’s experimentation

<table>
<thead>
<tr>
<th>DATA EXTRACT</th>
<th>CODE</th>
<th>CATEGORY</th>
<th>THEME</th>
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<tbody>
<tr>
<td>Em what has surprised me is that what I have been using a lot more is Microsoft Word, a lot actually, because I’ve tried to stop using the whiteboard and to use the interactive whiteboard instead.... James showed me a programme which allows you to take notes and put them into a flow, like mind maps and things so I’ve sort of used those to bring notes together and conduct reviews with that and that’s been, that’s been quite helpful actually.</td>
<td>Using Word + IWB a lot (surprise) Stopped using WB switched to IWB. Getting idea from James Bringing notes together – conducting reviews (helpful)</td>
<td>Linkage of instruments – traditional &amp; non-traditional. Role of collaboration in shaping knowledge &amp; practice. Using new instruments for traditional outcomes.</td>
<td>Instance of TPK – (matching tools to teaching needs) Same rules, different tools. Community (shaping knowledge base)</td>
</tr>
</tbody>
</table>

The above instance of experimenting with Microsoft Word, in new ways, was not the only example of experimentation in his practice, where he also created a Facebook page as a means of additional support for students, running alongside the more formal Moodle system. In doing so, he was still making use of blended learning strategies, and enacting TPK as outlined in Koehler & Mishra (2009, p. 66), trying to use different tools to meet the same outcomes, whilst still following norms and rules of EAP teaching. Yet, at this stage, and of relevance to the holistic developments in his case, Victor had not yet managed to find a satisfying blend.
5.3-ii Addressing challenges in activity

The instance of Victor creating a discrete Facebook page for his students is an example of addressing a challenge in the activity systems of the classroom, and the broader language centre by drawing on his TK, PK, and TPK. He is also addressing a tension, or contradiction, such as those discussed in the literature review. This contradiction is the drive towards integration of tools such as Moodle, designed to be of benefit to the students, but not actually being used consistently by students, who prefer social media (FG2a, p. 38), and mobile technologies (FG1b, p. 24). Victor suggests that even if the Moodle forum “seems like a good way of getting them to use the technology for their own ends” it is still “a case of encouraging them to do that, which is the challenging aspect of the situation” (FG2a, p. 37). Victor’s solution for this standard challenge of motivation, familiar to EAP teachers, is to seek ways of reshaping the blend so as to get students “to do it off their own backs”, which not only has the benefit of fostering autonomy, but also “helps them build argument skills as well” (FG2a, p. 39). Again, Victor is addressing a challenge that goes back to his vision of “what EAP is all about” (FG1b, p. 21), which is helping students to write essays. That is essentially his vision of the object and outcome of the language centre’s activity system, and perhaps also the broader activity of EAP as a subject. Thus, he has the pedagogical knowledge of what he wants and needs to do, but has not yet found the vehicle to fully enact this in practice.

5.3-iii Shared knowledge and experimentation

In FG1 Victor had spoken of such issues as integration, experimentation, and collaboration, and made reference to teachers being alone in the classroom. Through his second focus group session, there is less of a focus on the teacher being alone, and more of a sense of partnership with students. This was manifest in the response he gave to my question of “how have the workshops affected your attitudes to using technology in the EAP classroom?” (FG2a, p. 37). His response was that “I don’t think it has changed my ideas towards using technology in the EAP
classroom but it has shown me a few ways in which it could be used more collaboratively” (FG2a, ibid). Importantly, he cites an example of such collaboration when he turns to Matthew and suggests that this can be done through “that idea of posting students’ work or homework and then getting them to post on it” which he describes as being “a good way of getting them to use the technology for their own ends” (FG2a, ibid). Interestingly, in relation to collaboration happening outside of education sessions, that idea had not been discussed in the focus group sessions.

Perhaps the above-mentioned idea came from the staffroom, the kitchen, the pub, or anywhere else teachers get together informally. The reason I stress that is because this new sense of collaboration seemed not to be happening just at a classroom and student level. Victor further supports this with references to dialogue in the workplace occurring both inside and outside of the research context of workshops, and focus groups. The instances of sharing ideas outside of the workshops and focus groups were recorded in written form in my diary notes, and those within the workshops were recorded in the form of actual dialogue, and written notes.

One instance of sharing ideas during the focus group sessions comes in an exchange with Kelly about the theories of Scott Thornbury, which are associated to a greater extent with generic ELT rather than EAP contexts. This discussion was particularly in relation to Thornbury’s Dogme EFL approach (2000), and the perception of it being anti-technology. This is because of its original emphasis upon conversation-driven teaching, the use of student-produced materials being preferable to other forms of resource, and emergent language linked in to the notion of “grounding the experience” of learning in the real world, and the here-and-now (Thornbury, 2000). According to Victor, Thornbury initially displayed “a very old-fashioned view of what technology in the classroom is” but has more recently moved towards saying “in some of his articles that he would like to see technology used in the way that we’re discussing using it” (FG2a, p. 39).
There is an inference in this statement that we are doing something very different with technology, than perhaps the way that Victor experienced in his previous workplaces, as he discussed at the outset of FG1b, and also from the way that Thornbury sees it as a source of reducing real-life interaction. Significantly too, Victor does not say where exactly the discussions have taken place. Though this one was happening in the focus group session, there were also discussions, of this nature, taking place in the teacher education workshops, and amongst colleagues in the staff room, as recorded in my diary notes, and supported through references to this in other focus group sessions, and individual interviews.

5.3-iv Early developments in Victor’s practice

On the whole, at the halfway point of his journey, Victor’s main developments were coming in the form of knowledge, aspiration, and collaboration rather than action. However, that does not mean that the developments were any less significant. Knowledge is central to practice (Shulman, 1987), and Vygotsky’s (1978) model of psychological processes in the development of self-directed awareness includes internalization of knowledge, and verbal mediation with others (Manning & Payne 1993, p. 363).

Although he had not yet managed to transform his TK into PK’s “pedagogical representations and actions” (Shulman, 1987, p. 7) in all areas of his practice, he was seeking to reconfigure tools for “customized pedagogic purposes”, which is an essential part of TPK, as in Koehler & Mishra (2009, p. 66), and also a feature of what can happen when new resources become a part of more established activity systems, as described in Kimble et al (2010), and Motteram (2013). This was evidenced in Victor’s work with Moodle, though not so apparent in observed lessons so far, including the one chosen as a vignette of his practice. There had been gradual developments in his actions and knowledge during the teacher education programme (RQ1), but as yet these had not significantly reshaped his specific professional practice of using technologies in the EAP classroom (RQ2).
5.4 Developments towards the end of workshops

5.4-i Reshaping of practice through new instruments

One of the advantages of being an insider-researcher was in my ability to get a sense of the whole picture of the research context, and to be better equipped in presenting a valid picture of events. In Victor’s case, my stance is supported by developments taking place between the two focus group sessions, of which I kept a journal record that has proven useful in the final analysis, because Victor does not explicitly discuss these developments in shared sessions.

By the time of the final workshops, Victor was moving towards greater usage of mobile technologies in his lessons. He had aspired to this in FG1b (p. 24) and was now actively pursuing that interest by encouraging the language centre to make mobile technologies an established part of activity, by purchasing a set of iPads for students, for specific use on an International Diploma course.

Figure 12, below, is an extract from an email sent in late July; designed to give teachers a sense of how he visualised the use of the iPads in class, and the issues that needed to be addressed before and during their implementation. I have copied in parts of the email below, having requested permission from Victor to do so, without breaching any form of confidentiality. Interestingly, this was driven as much by ‘content’ as by language needs, if not more so, as can be seen in his assertion of the aim of this iPad project.

**Figure 12 – Extract from email regarding iPad project**

```
Hi all,
Here at _________, we have taken delivery of 75 iPads which will be used by students and staff on the Business Diploma programme, with the aim of increasing student participation and understanding of academic content.
If you are receiving this email you are either involved in the programme or have expressed an interest in being kept up to date with developments. You will probably get one or two of these a month from me detailing some of the stuff that we’re doing and providing links to relevant articles from around the web....... Some of the things that we’ve been looking at with the iPad so far include:
• Use of e-textbooks (We have a book pack from Pearson, and use the VitalSource bookshelf app).
• Apps that can be used to help students with organisation and timetabling.
• Integration with existing schemes of work.
• The infrastructure and administration challenges of 100+ mobile devices in the building.
```
In his email Victor highlights the “aim of increasing student participation” as one of the two main reasons for introducing the iPads, which helps address the tension and possible contradiction of students not using Moodle, which he himself has been using “a lot less this term” (FG3b, p. 52). This is because his interest has “tapered off as well actually in certain respects”, and he has only been using it for “sending messages to my students and making sure they all know about homeworks and eh sending emails about when assessments and things are” (ibid).

Here, it seems that as his interest and work with the iPads increased, his use of Moodle, as the institutional VLE, decreased. Relating this back to his FG1b (p. 20) reference to differences in lectures and language-related work, he appeared to now have found an instrument that facilitates the integration of this, without the “barrier” of PowerPoint, which contradicted the EAP rules of emphasising interactivity, and communication with students.

This usage of instruments to fit the purpose also echoes the choices made in his musical performance, although here the iPads could be seen as the equivalent of today’s high-tech guitars compared to the more humble mouth organ. Also, relating this to the literature, it has echoes of Koehler & Mishra’s (2009, p. 66) reconfiguration of tools, as a feature of TPK, and Motteram’s (2013) examples of technologies being used for different purposes to those for which they were originally created. Furthermore, in light of the activity system and its earlier contradictions, Victor seems to be finding a way to address some of the “challenging” aspects of teaching with Moodle, as discussed in FG2a (p. 37).

However, looking at the study holistically, it is important to note that he did return to the use of Moodle at a later stage of the study, when he found ways of integrating the VLE and the iPads. He managed to do this through the use of an app that incidentally would only work with an upgrade of Moodle, which eventually happened, and again caused change in the language centre’s system of activity, not just for himself, but for all users of the VLE.
5.4-ii Becoming a broker of change in practice

Through this introduction of iPads into the language centre, and then the subsequent reshaping of activities around this, such as the need for the language centre to get a newer version of Moodle, Victor could be seen as acting as a broker of activity (Wenger, 1998; Kimble et al, 2010), through having introduced and integrated new tools into the practice of the system. Echoing Brown & Duguid (1998), he has opened up new possibilities for learning and exchange, and, at this stage, is trying “to cause learning by introducing into a practice, elements of another” (Wenger, 1998, p. 109). As in Wenger’s statement, Victor is not introducing a new practice. Rather, he has sought permission from senior management and the IT department to use, and get the funding for iPads on his particular programme. This then entails a need for new learning, which he helped to facilitate through the design of training materials such as those in Appendix Eight, offering information on using mobile devices in the classroom.

5.4-iii Summary of developments in knowledge

Relating these developments to the TPACK framework, there is one very significant development within this, and that comes in the aim of “understanding of academic content”, outlined in his email. During the first two focus group sessions, Victor made no reference to content, in its relationship to disciplines, and as such was not meeting either Shulman’s (1986) PCK criteria, or Mishra & Koehler (2006), and Koehler & Mishra’s (2009) definition of TCK. Furthermore, up until this point, he had not shown evidence of meeting BALEAP’s (2008) expectations of linkage between the EAP classroom, and students’ future disciplines. At earlier stages of the study, his sense of professional practice was that essay writing was what EAP was “all about” (FG1b, p. 21). Now, he seemed to be going beyond knowledge of the basic components of EAP, in terms of purely focusing on language and study skills, to an understanding of the broader academic environment, which is advocated by BALEAP (2008), and an essential part of Shulman’s original conceptualisation of content knowledge (1986, p. 9). That
content knowledge, once again, is not limited to simple facts or language from a discipline, but a form of knowledge “that embodies the aspects of content most germane to its teachability” (ibid). As with TPK and TCK, the emphasis within PCK is on the transformation of the subject matter for teaching, and Victor has chosen to transform subject matter through the iPads.

Therefore, as he was beginning to reshape the blend in terms of instruments, he was also beginning to reshape the blend in terms of the “equilibrium” amongst the component parts of what Koehler & Mishra (2009, p. 67) recommend as the knowledge base for “effective teaching” (ibid, p. 62). These were signs of obvious development in bringing together the component parts of his knowledge base, and in translating these into actions. This suggests a significant reshaping of specific parts of his professional practice, not just in developing his own TPACK, and in brokering new activity for others in the system, but in what he was actually doing in the classroom, as shown in the next vignette.

5.5 Vignette of Victor’s practice after the programme

After the workshops, and before the individual interviews, I observed Victor teaching a group of students on the International Diploma programme. Again the class was composed of various nationalities, and both sexes, with approximately 50% of students being Chinese. Since these students had progressed beyond Foundation level, they were in an IELTS range of at least 5.5 to 6.0. As before, the lesson was taught in a standard classroom equipped with a desktop computer and IWB, but Victor had adapted the system by connecting his iPad to the board. Aside from the change of instruments, there was a change in content, in line with Figure 12’s email. This time around, the focus was on a combination of essay writing and subject-specific work in the area of Economics.

This approach, which he labels by the acronym of CLIL (Content and Language Integrated Learning), originates, in name, from such work as Marsh (1994), but has featured for decades in actual usage in second language instruction, as in the work of Krashen (1981 & 1987), and Hutchinson & Waters (1987). Brinton, Snow, &
Wesche (1989) talk of a similar construct known as Content-Based Second Language Instruction (CBI), which bears some hallmarks of ESP. However Victor had embraced his definition of CLIL with the enthusiasm of a new romance, and for him it was a shift in practice, assisted by the iPads serving as a repository for subject-specific materials. Thus what I was witnessing was an interplay of pedagogy, technology, and content in the style discussed by Kirk (2012), where it is not the technology driving the lesson, but the content dictating how the technology is used and matched to the pedagogy, as envisioned by Koehler & Mishra (2009, p. 65).

The lesson got underway at 12.35 with students shuffled around to create mixed nationality pairs, as has long been common practice in English Language classrooms (Harmer, 1991). Once this was done, Victor displayed the class Moodle page showing a homework task. This was related to Porter’s 5 forces model (Sloman & Wride, 2009), and could be accessed through an embedded YouTube link. As such this was his example of CLIL, and the “flipped classroom” (Sams & Bergmann, 2012), where students do core work in advance of classes, rather than during their classes (Tucker, 2012).

There then followed some work with the IWB, and students being asked to use iPads to access a document on Dropbox, looking at a case study to “refresh” their memories. After opening this document, students were assigned one of two roles in a paired activity; reading or mind-mapping. Readers were instructed to open up their Economics textbooks at pages 70 & 71, whilst mind-mappers opened or downloaded a free version of SimpleMind+. In pairs, they mapped definitions of key terms, as Victor monitored the task until it was saturated and then elicited responses at whole-group level, using the technologies for display purposes.

Though this usage of technology as a means of display, and other underlying characteristics remained the same, there had been notable developments in Victor’s actions and knowledge (RQ1), which had reshaped his specific professional practice of using technology in EAP teaching (RQ2). Here, ‘social’ tools were being used in school to get a grasp of subject-specific knowledge in an
English Language classroom that had been ‘flipped’ from the outset. Relating this to earlier discussions on school versus social media (FG2a, p. 38), perhaps he had finally found a way of loosening the boundaries, and touching upon “the satisfying thing” offered by technologies found outside the context of the classroom.

5.6 Discussing developments in practice

5.6-i Resources and support for purposeful usage

Through the iPad project, Victor had brought changes to his own teaching and the broader activity system of the language centre by introducing new instruments, which were used formally on his course, and used informally by teachers on other courses. Therefore, in the interviews, I asked about these developments and their impact on his practice, starting out with a question on what had happened to bring about specific developments with the iPads, which had been explicitly discussed in the focus group sessions.

Immediately he suggested that there were two interconnected factors – the availability of resource, and the opportunity to explore. His exact words were: “Well, partly access to more resources because I think when you first talked to me I was fairly new here so in terms of resources that I got to play with was very limited so having more chance to use it gives me more chance to sort of explore different things” (II1, p. 84). There was though a third factor to which I will return shortly, and that was the ease of getting things done with the iPads, which once again echoes Motteram’s (2013) description of technologies reshaping the nature and speed of the writing process. Victor’s use of resource has made certain aspects of his teaching much easier and helped him to deliver a “finesse version” (II1, p. 90) of lessons.

He has moved from aspiration to actions by the end of the programme, as regards integration of technologies he wants to use in the classroom, as voiced in FG1b (pp. 24-25), where he spoke of incorporating the next generation of tools. Yet, despite this change, he had been consistent in his belief that technology had to be meaningful in order to be worthwhile, and not just a case of
resources for resources’ sake (Brooks-Harris & Stock-Ward, 1999, p. 58). From his dialogue, there is a consistent theme of using the resource purposefully, and this is further strengthened in the individual interview by explanations of what he actually does with the technology in the classroom, and how it helps in an EAP-specific context – through presentation skills (II1p. 84); integration of content and language (p. 87 & p. 89); pronunciation work (pp. 87-88); and producing reports, or working on a literature review (p. 89). It seems then that Victor is very conscious of using the resource in a purposeful manner, but it should be stressed that his use of resource is not limited to iPads alone.

In the individual interview he also speaks about how he is using “students’ textbooks themselves a lot more” II1p. 88), and that he does not mean “their English textbooks” but rather “their Business textbooks” which is “something that has come from training sessions that we’ve done here” (ibid). Further to this, he talks about integrating “a lot more real materials” and “authentic” materials when classes are “really good” (ibid). Here, he can be seen to amend his pedagogic strategies according to the needs of the students, showing awareness of outcomes, and this supports the emphasis that the Activity Theory literature gives to the interdependence of elements. It also echoes Shulman’s emphasis on PCK requiring “a veritable armamentarium of alternative forms of representation” of subject matter that makes it “comprehensible to others” (1986, p. 9). Though Victor admits that he prefers working with the iPads and authentic materials, he follows the requirements in the PCK and TPACK literature of expert teachers being able to choose instruments appropriate to specific tasks.

5.6-ii Integrating a sense of CLIL into his practice

During the first individual interview, conducted shortly after the lesson observation described in Section 5.5, I asked Victor “what did you want to do with the last lesson I observed?” (p. 84). His response was that it was “an integrated kind of CLIL kind of thing” and he was using the iPads and the technology “to deliver the ‘c’, to deliver the content” (ibid). The focus of the lesson was not the
technology, which allowed him “to get the students on task” so as to facilitate “understanding and seeing the relevance” (pp. 84-85). Rather, it was the ‘content’ delivery at the start and then “to help create the content afterwards” (p. 84). Victor thus appears to see the input of ‘content’ in EAP as meaning generic knowledge that students require for other subjects on the pathway programme, and output as the subject-specific materials they produce.

Though this is different to Shulman’s (1986, p. 9) conceptualisation of disciplinary content, and even Marsh’s (1994) definition, Victor’s objective in what he describes as “CLIL” lessons is in “reviewing concepts” from subject classes “ensuring the comprehension of those concepts”, and integrating this with an EAP skills focus, so the object of activity remains the same. This was seen in his objective of integrating CLIL with “a practice of presentation skills as well” (II1, p. 84), which was helped by having access to the technology (p. 83), and knowing how to use it (p. 86). Such knowledge, and increased TK and TPK, facilitated by resource within the activity system, goes right back to his learning goals at the outset, where he aspired to knowledge of linking programmes and theories to classroom practice (FG1b, p. 25).

5.6-iii Technology as a greater part of his practice

In his interview, Victor goes on to talk about how “you can’t just experiment with technology” because “you need to have the way of teaching to go with it” (II1, p. 86). To me, this echoes Steve Kirk’s (2012) assertion that “practitioners first need to turn technology into techknowlogy, before it can be enrolled into pedagogical practices.” Victor has made technology very much a part of his practice and a part of his life too, as he explained to me in his second individual interview, conducted to address slight gaps in the first, where he traced his life’s interest in technology back to being a child playing games on his father’s computer (II2). This may help explain why, from the start, he had demonstrated a passion, or what some might term an “avocation” (Frost, 1934), for bringing technology into his classroom in a meaningful way.
When I then asked him if he felt that his practice has changed, he insists that it has “remained reasonably consistent” whilst once again stressing that “the resources I’ve been able to use to implement that approach have been better” (II2). Yet, despite what he espouses, it could be argued that Victor’s philosophy, and activity, has changed. In FG1b (p. 21) he talks about EAP as “all about writing essays.” However, by the time of the individual interview, he appears to have a deeper sense of EAP needing more of a disciplinary focus, though still argues that “it’s teaching students to communicate” and introducing them to tasks they will have to do at university, albeit “in a more restricted way” (II1, p. 87). He has also begun to pay greater attention to the teaching of language, and is showing awareness that “all my students have different language needs so if they’re working towards that then that’s good”, regardless of the means (II1, p. 89).

This increased emphasis on language allied to student needs suggests he is going back to the spiral of what he knows (Manning & Payne, 1993), and developing his practice as a consequence of that. This is evidenced in his statement of creating situations where “the students are being exposed to real language, the kind of language that they need to understand” (II1, p. 88), and “making the most of student knowledge and emergent language, the language teaching, integration of content and language” (p. 87). Here, Victor appears to be at a point in his developmental continuum (Richards, 1998, p. 48), where he is trying to make sense of the messy concept of language as subject matter (Freeman, 2002, p. 6). While he may not quite have achieved this, some of the instances of practice that he cites suggest that he is trying hard to find the synergy of pedagogy, technology, and content, as discussed by Koehler & Mishra (2009).

One such instance comes in “pronunciation classes with very small groups of Chinese students” (II1, p. 88). Here, he is “recording very short pieces of text, like very short introductions and focusing in on the pronunciation areas within there” (ibid). In doing this, he is using the technology and the pedagogy to teach the content, which is language-related, but his pedagogy remains
central to everything that he is doing, and this has been a consistent feature of his sense of practice throughout this study.

5.7 Overview of developments in Victor’s practice

On the whole, there have been significant developments in Victor’s actions and knowledge over the course of the programme, and these have also reshaped the specific professional practice of using technology in the EAP classroom. This reshaping though has not just occurred at an individual level, but at a broader level of activity in the language centre’s teaching system as a whole. This has been most apparent in his integration of “the next generation” (FG1b, p. 24) of technologies into his work, and the sharing of this practice, and associated teaching activities, as in Appendix Eight.

However, despite significant changes brought about through the availability of new resource, Victor’s practice has also involved the application of what I coded as same rules with different tools. This is what he claims himself when he says in his final interview that, at times, he could conduct a similar lesson, with paper and pens, as opposed to iPads, but the technology allows for a greater sophistication that better reflects the world outside the classroom. In his closing interview, he stressed that his “classroom approach has been reasonably consistent” throughout the programme, but “the way that I teach has refined” and “the resources I’ve been able to use to implement that approach have been better.”

This approach that he talks about still appears to involve drawing on foundations of an ELT knowledge base, which is constantly open to adaptation and further development, as was evident from the start of his developmental journey, and his FG1b dialogue. This emphasis on continuing professional development is part of what shapes the “unique art” of being a language teacher (Hammadou and Bernhardt, 1987, p. 305), and establishes a solid pedagogic base, from which to build a synergy with other categories of knowledge, as detailed in Shulman (1986), Mishra & Koehler (2006), and Koehler & Mishra (2009). Victor then appears to have established a strong synergy between TK and PK to enact TPK, and
also elements of PCK and TCK, despite the apparent challenges of applying definitions of content to the specific context of EAP.

Though this study is not about finding TPACK in the practice of teachers, Victor’s journey serves as a useful example of what happens when synergy is established between different categories of knowledge, and how this synergy could be further developed. In Victor’s case, an increase in TPACK has simultaneously given new shape to activity, even if underlying rules may remain the same, and this in turn has had an impact on the broader activity system.

5.8 Closing vignette of Victor’s practice

To close this chapter and show how developments in Victor’s actions and knowledge have been enacted in the specific professional practice of integrating technologies into EAP teaching, it is necessary to show a final vignette of his teaching. This was a further observation conducted at the time of the individual interviews that ironically, and not intentionally, happened to be taking place in the classroom featured in the first vignette.

This was the room where limitations in space had left things messy. However, this time around things were very different; hence why I have chosen to include this as a closing vignette. Though the location remains the same, the boundaries are altered for the students are in the break-out areas of the corridor beyond, working in small groups as Victor mingles amongst them. They are rebranding London in preparation for the forthcoming 2012 Olympics and using a set of iPads for different purposes; as a research device, as a presentation design tool, and as a recording facility. Differently to the first lesson I observed where so much was teacher led, here the students are taking charge of their own lessons in a less constrained space, pedagogically, physically, and even psychologically. Victor, having already introduced research and presentation skills, is now a facilitator, sitting in the background, letting the lesson take shape, around the technology, the content, and the learning outcomes. His actions, in practice, seem to have now been reshaped to fit the philosophy he espouses.
CHAPTER 6: Matthew’s developmental journey

When leaving the workplace in which I had conducted this research study, Matthew was one of several teachers who gave me a gift, individually. His choice of farewell present was something very personal, a CD of his own instrumental music on which was handwritten “Best of luck and thanks for your help.”

Outside of teaching, Matthew is a composer for theatre and film, creating soundtracks for shows and festivals on the Arts scene throughout the country and beyond. His music is experimental, a combination of natural resources and uncommon instruments to produce what he describes as ‘layers of melody’. Added to this, the accidental and the improvised are integral parts of his music, echoing 1920s jazz, and in the ELT context, Scott Thornbury’s advocacy of Dogme (2000), based on the cinematic approach of the Dogme 95 movement (Von Trier & Vinterberg, 2002).

This CD then contained a range of sounds such as I might find on the cliffs and by the sea of the Irish coastal town where I had come to write my thesis. The emphasis was on the natural and the atmospheric. This was a form of storytelling without words, or using no more words than necessary to get the meaning across. Listening to these ‘songs’, studying the ornate artwork of the cover, I recalled Matthew’s arrival at the language centre four years ago. Then he was on his way to Italy to perform in a festival of theatre and music, but seeking work for September when this was done.

After a decade of drifting between language schools to feed the hunger of his avocation, he wanted steady work, though not just yet. He was looking for someone to give him a chance, to explore new areas of teaching, and develop for the future. At the time, we needed a General English teacher, and preferably one who might ‘progress’ to EAP after some further experience and ‘training’.

On that basis, we decided to give Matthew a career opportunity, sensing that he was as passionate about teaching language, as he was in composing and producing those songs without words.
6.1 Starting out on the journey

6.1-i Matthew’s sense of practice at the outset

Matthew, at the outset of the teacher education programme, was fairly new to EAP, and finding himself on “a kind of a steep learning curve” (FG1a, p. 7) not just in terms of the subject, but also the technological landscape in which he was now working. Previously, he had “worked in lots of places where they just don’t have that stuff”, and this was “kind of an exciting time to be a teacher because there are things that will allow us to catch up with what’s happening in the outside world” (ibid). The reason he offers for this sense of excitement is that “if we can create that kind of interactivity within the classroom through technology then that would be an exciting thing” (ibid).

It is significant here that he talks about interactivity as being crucial, as if drawing on a knowledge base of generic English Language Teaching, and the beliefs of those such as Thornbury (2000), whose primary focus is on natural communication, interaction, and use of real-life resources. He adds to this with the suggestion that students, in the real world, are currently getting “a reduction of face to face interaction, and so potentially what they are getting in the classroom is compensating for the lack of that” (FG1a, p. 9). Again, when talking about the dangers of chalk-and-talk style teaching, as described in Mayer (2005), he refers to how this goes “against everything that you have ever been taught about how people learn, that they have to think for themselves, that they have to do guess work and they have to predict and they have to do all of those things” (FG1a, p. 12).

Speaking in this way, his sense of practice appears to reflect the values of ELT/CLT much more than EAP, on the surface, at least. Yet, within the last extract of dialogue, there are intimations of working towards “tasks, processes, and interactions that require students to demonstrate critical thinking skills” (BALEAP, 2008, p. 3). Furthermore, an important component of ‘Teaching Practices’ within the Competency Framework is familiarity with “the methods, practices, and techniques of communicative language
teaching” as a means of being able to “locate these within an academic context and relate them to teaching the language and skills required by academic tasks and processes” (ibid, p. 8). Matthew, then, at the outset, showed awareness of the teaching practices of CLT, but from his dialogue did not give an impression of consistently locating these in a more academic context. However, it should be noted that the discussion in this particular session was predominantly about technology’s impact upon practice, rather than practice itself.

6.1-ii Actions and knowledge regarding technology’s usage in EAP practice

In terms of technology’s usage in teaching situations, Matthew stated that “we’re at the very beginning of a really exciting period of change in terms of integrating those technologies into the classroom because they’re being used by the students anyway in their everyday lives through social networking” (FG1a, p. 5). As a result of this changing dynamic in society he sees a need to use “interactive learning environments” such as Moodle, which he claims to have some knowledge of, particularly in terms of seeing the benefits that it can bring to the writing process. One suggestion for improving students’ writing is to use the forum on Moodle, “which gives them the opportunity to put stuff online and have online debates stroke arguments, which is really good because as soon as you give them the pressure of publishing this online, suddenly it’s like I better write this properly” (ibid).

However, he goes on to say that “at the same time, there’s an element of me that’s slightly, there’s a daunting element as well” (FG1a, p. 7). Here though, the daunting element comes not from concern over his pedagogical knowledge, but from the technical aspect of technological knowledge, and the advent of newer digital technologies, which Koehler & Mishra (2009, p. 61) describe as being “protean, unstable, and opaque.” Matthew states that his fears are not with regards to “coming to, getting to grips with it, but in terms of perhaps its taking over to the extent that...if all the systems are massively integrated and one thing goes wrong then
you are left literally with nothing, not even any standard whiteboards in the classroom” (FG1a, p. 7). He describes this as “a personal sort of fear, a technophobia” (ibid). Again, this is not so much to do with specific EAP practice, but more to do with the practice of using technology in teaching, and seems to be shaped not just by perception, but actual events in the classroom. He gives an example of this as being “the missing PPT, which I had the other week which just sent me into a spiral of despair” after “it just completely disappeared, and I had a whole class based on it, and I was just trying to recover it” (FG1a, p. 8). Interestingly though, he adds that “I suppose it’s the same thing as if you lose anything” including “the book that you’re going to use”, and his suggested strategy for coping is “to think on your feet” (ibid).

By thinking on his feet when the PPT went missing, Matthew was bringing into play processes and practices from his existing ELT and CLT pedagogical knowledge base. Although the tools may have changed, from textbook to technologies, his strategies remain the same, in adapting delivery in the absence of resource. Here, drawing on his pedagogical knowledge, he was addressing less of a technological issue, than a lack of preparation, just the very same as forgetting the teacher’s book, with answers to grammar exercises, or the tape player in the old days of cassettes.

At this stage though, most of the problems and barriers in Matthew’s practice appear to be “technocentric” (Papert, 1987), apart from the issue of education lagging behind “the outside world” which is a social and cultural issue. Though this could be a barrier, it can also be an opportunity “if” technology is used to replicate “that kind of interactivity within the classroom” (FG1a, p. 7). However, he does foresee problems in the unprecedented speed of change as discussed in McGrath et al (2011). He talks about how, just as teachers get used to contemporary tools, such as PPT and interactive whiteboards, “the next thing comes along and makes us all look like yesterday’s news” (FG1a, p. 14). This implies that a necessary part of being able to use and know technology is to be aware of its most up-to-date applications and incarnations.
Matthew, in his dialogue, does make reference to actions that suggest he is using contemporary tools in his practice, but still fears falling into “some of the bear pits that you’ve got” such as the “kind of static presentation style that most teachers would never normally use” (FG1a, p. 12). Perhaps here he is being too self-critical for he talks about using Moodle, as referred to earlier, (p.5), and ways of annotating with PowerPoint rather than the Star Board\(^3\), which he had been using previously “to underline and do other such things by hand” (p. 13). Therefore despite the bear pits, and the daunting element, technology is part of his practice, but not in a way that has him asking questions of its specific role in his own subject, and pedagogy, which is a vital factor in developing TPACK (Mishra & Koehler, 2006, pp. 1029-1030).

### 6.1-iii Matthew’s goals in terms of knowledge

Whilst talking about the possibility of integrating technologies such as social networking into the classroom, Matthew suggests that “there’s loads of potential there and it’d be great to have these workshops leading to the kind of opening up of those potentials” (FG1a, p. 5). At several points he goes back to his earlier idea of bringing the outside world into the classroom, and gives an example of “an argument I’ve actually had in the classroom when we were talking about Facebook pros and cons” (FG1a, p. 11). This has led him to think about “the social networking potential of the interactive learning environment” and how it “can actually offer them the opportunity to get together online, and then hopefully something more substantial” (ibid).

Aside from this, he talks of wanting to learn about ways of using PPT and making it more interactive, because he says “at the moment mine are a little bit two-dimensional” (p. 12). Again, this is about interactivity and seems to go back to values from his existing ELT and CLT pedagogical knowledge base. When he talks about what “I would like to learn” (ibid), he says that he is “trying to find ways of leaving gaps and getting them to still guess what’s going to come up on the screen and things like that” (pp. 12-13).

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\(^3\) Matthew’s use of terminology for the IWB, which is actually a SmartBoard
Within these two suggestions as to what he wants to learn, there are subtle similarities and differences. From the way he speaks about social media, he has a passion for it and probably the sort of “productive working knowledge” that is a feature of technological knowledge, as described by Koehler & Mishra (2009, p. 64). In wanting to integrate this with the VLE, he is seeking a deeper understanding of how it can be used from a practical perspective, which is also a part of TK (ibid), and then a reconfiguration of both these tools would be a development in his TPK (ibid, p. 66).

It would also be a form of brokering, as described by Wenger (1998), in seeking “the ability to link practices by facilitating transactions between them and to cause learning by introducing into a practice, elements of another” (p. 109). Matthew sees a contradiction between forms, and possibly rules, of communication inside and outside the classroom, and wants strategies to address this. In the case of acquiring knowledge about PPT, his focus is slightly different. This has become a ubiquitous part of teaching practice, and a potential bear pit for teachers, but his main problem appears to be a lack of technological knowledge, which is inhibiting his ability to enact the interactive practices and methods that seem an essential part of his pedagogical knowledge, and what Shulman terms strategic knowledge (1986, p. 9). Overall then, Matthew was seeking different forms of knowledge for different purposes, as if wanting to get to grips with some tools such as PPT, and reshape the activity of others, such as the VLE, which he wanted to realign with the affordances of social media.

6.2 Vignette of Matthew’s practice at the outset

Having completed the first focus group session, Matthew’s dialogue suggested a desire for innovation that was sometimes frustrated or inhibited by a lack of TK and TPK. It was interesting then to see him, for the first time, in an EAP teaching situation, having previously observed him in the General English classroom. There are two points of note here, which I should first explain. To begin with, the course that he was teaching on this day was one known as English for University Study, which is almost a pre-
foundation course, designed as a bridge into more demanding academic pathway programmes, and is thus a cross-breed of General English, and English for General Academic Purposes. Secondly, at this stage of development, Matthew was fond of bringing his interests into the classroom, through activities related to theatre, music, and film; which echo Thornbury’s (2000) focus on bringing the self into the classroom.

The class was composed of students with a mix of nationalities and an IELTS range of around 4.5 to 5.0. The lesson, which was taking place in a standard classroom equipped with computer, projector, and interactive whiteboard, began with feedback on homework. Students had to find an article “of reasonable complexity” (Matthew’s words) and upload this onto Moodle, which was an instance of “putting stuff online” as advocated in FG1a. However, not all students had managed to upload their work. As a consequence of this, Matthew then had to think on his feet, as also referred to in FG1a, by appearing to draw on what Shulman (1986, p. 12) defines as “strategic pedagogical knowledge”, which is “brought into play as the teacher confronts particular situations or problems” (p. 13).

He did this by fitting the task to the situation at hand, arranging students into groups, where they verbally summarised the homework, as he monitored progress. When this was complete, fifteen minutes into the lesson, students presented two items of vocabulary from their article, giving the word, meaning, and part of speech. Matthew pointed out that the purpose was to build and demonstrate knowledge of vocabulary across a range of topics. Ten minutes later, when this was done, he moved onto another vocabulary exercise, facilitated by PowerPoint. In teams, students had to guess the endings of words related to relationships (e.g. beaut_______ - noun, beaut_______ -adjective). This exercise was time-bound, and completed quickly, before Matthew explained the importance of predicting the form of missing words in a gap-fill activity (e.g. tasks common in language proficiency exams).
Once the various tasks of contextualisation and reinforcement were completed, the focus shifted to a reading task in the textbook on the theme of relationships between people. When this was done, students were required to complete another reading, which Matthew had designed himself, and take on the role of characters enacting a relationship, such as a conversation between Macbeth and the witches from Shakespeare’s famous tragedy (1606).

Generally, this could be difficult to set up in an EAP classroom with students of such a low IELTS level. However, in FG1 Matthew had spoken of “fun” in the classroom, and this was what he was trying to create; bringing something of “the outside world” into class, and facilitating the “interactivity” he had spoken of in the same session. Furthermore, there was linkage across earlier lessons because students appeared to be familiar with the concept of role-playing, and with the characters they were reading about. In terms of the interaction that he aspired to in FG1a, this certainly worked, but there was very little evidence of technology’s usage and his attempts, for example, to use PPT in a more interactive manner. Although this was only one observation, it was typical of the stage he was at in terms of moving gradually from General English, to the teaching of EAP, perhaps like those teachers described by Martin (2014, p. 18) as being at a “mid-way point” of transition. Just as in his FG1a dialogue, there was a sense of drawing on a CLT/ELT knowledge base rather than showing awareness of the key differences between the content and processes required for teaching and learning in an EAP class compared with a general ELT class (BALEAP, 2008, p. 8).

### 6.3 Deeper into the journey (developments in practice)

#### 6.3-i Usage of blended learning

At the start of the second focus group session Matthew was alongside Kelly and Victor, although I had made no decision at this stage that they would form the final cases. The session opened with a question about what had been happening in the period since the last focus group session and workshops, particularly on Moodle. Matthew’s response was that “I’ve been uploading audio files of
class seminars that we’ve had, so they’ve done individual long
turns which I’ve been recording and putting them on Moodle for
them to transcribe, which has been really useful and that’s the
most recent change but I’ve, before our last meeting, I was using
it for a variety of other tasks” (FG2a, p. 35). He then goes on to say
this is “the one thing that’s changed, that’s new for me” (p. 36).

There is a clear suggestion here that his practice has been reshaped
as a consequence of new technological knowledge, of Moodle, and
technological pedagogical knowledge, through his use of these
technologies to shape teaching and learning, as in Koehler &
Mishra (2009, pp. 65-66). Having spoken about the need for
interactivity in FG1, he has now found a new way of facilitating this
through technology, as evidenced in the next section of dialogue.
Here, he talks about what he has done in the past, and how this has
been adapted to assume a new self-access dimension for students.

He defines this as being “in terms of the more interactive element
of using the class audio, taking the audio from class and getting
them to listen back, that’s something I’ve done in the past, but this
gives them the chance to do it in their own time rather than in the
class” (FG2a, p. 36). He goes on to say that previously his usage of
audio involved “bringing in recordings and listening as a group in
the class” but now “students can listen to their own work
individually and stop it where they need to, outside of class time”
(ibid). This seems to be a clear espousal of developments in
practice, caused by Moodle, as a teaching instrument, and a change
in the division of workload to put greater emphasis on self-access.
Though the traditional emphasis on listening and note-taking
remains, students have greater control over their own learning.
This is exemplified in giving them audio recordings of the actual
lectures “so that they can go back home, listen to it....listen very
carefully and stop where they want to” (ibid). The following
extract of dialogue shows how Matthew has moved from what I
have chosen to label as ‘raw knowledge’, and awareness of
‘prospects’ to a greater sense of ‘connection’, which of course
echoes Mishra & Koehler’s stress on the essential synergy between
categories of knowledge in the TPACK framework.
<table>
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<tr>
<th>EARLY STAGE DATA</th>
<th>CODES/CATEGORIES</th>
<th>THEMES</th>
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<td>We have the forum <em>(on Moodle)</em> which gives them the opportunity to put stuff online and have online debates stroke arguments which is really good because as soon as you give them the pressure of publishing this online suddenly it’s like I better write this properly. And there’s some other stuff so there’s loads of potential there and it’d be great to have these workshops leading to the kind of opening up of those potential <em>(pauses as if in self correction)</em> potentials.</td>
<td>Opportunity for improving students’ writing through own online activity</td>
<td>RAW KNOWLEDGE <em>(of opportunity)</em></td>
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<td></td>
<td>Possibility of building knowledge and potential through workshops</td>
<td>PROSPECTS <em>(of developing classroom activity through new Knowledge)</em></td>
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<td>Demand for pedagogical knowledge in workshops to develop potential of blended learning</td>
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<th>MID STAGE DATA</th>
<th>CODES/CATEGORIES</th>
<th>THEME</th>
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<td>Whereas the forum and so on you can get it to become a really regular classroom-linked thing and it could be a really really beneficial activity…. getting them, they have to go on and find out when something is rather than being given stuff in class and saying you do this.</td>
<td>New knowledge of Moodle feeding into classroom activity</td>
<td>SYNERGY <em>(between new TPK &amp; change in focus of classroom activity)</em></td>
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<td>Strategic knowledge of linkage between classroom and Moodle forum</td>
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<td></td>
<td>Teacher’s TPK building student autonomy</td>
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Matthew, in FG1a, could see opportunities and potential in blended learning, but spoke as if the onus was on students to make use of Moodle facilities. At that stage, he seemed to have raw knowledge of what Moodle could do, and awareness of pedagogic possibilities, but had not achieved what Shulman (1987), or Hofer & Swan (2007, p. 181) define as “the intersection and synergy” of different knowledge bases. By FG2a, in comparison, he has developed the strategic knowledge to direct and guide students in usage of Moodle, and make this a regular part of classroom activity. This then is a change in his specific practice of using technology in EAP, and has come about through synergy of technological knowledge and strategic knowledge, which is a component of PCK, and together forms a base of TPK.
6.3-ii New perspectives on use of social media

In FG1 Matthew had spoken of opportunity and potential, whilst concurrently expressing concerns about speed of change, and loss of control. Again, in FG2, he returns to similar themes but this time, it is more about seeking solutions rather than highlighting potential “bear pits” (FG1a, p. 12). Later, he describes technology as “the great equaliser” but states that “it’s competing with existing networking potential”; comparing Moodle to Facebook (FG2a, p. 37). He suggests that it would be great if the students used Moodle “in the same way as they used Facebook to interact ... rather than going onto Facebook and other social networking sites to interact in their own language” (ibid).

This resonates with discussions in the literature of Jones & Lea (2011) and Spires et al (2012), and mirrors Kear’s reference to creating mixed social and academic spaces (2011, p. 41). Matthew, though, goes on to echo Jones & Lea (2011) in asking whether students prefer demarcation to crossover. This is because Moodle is seen as “school and Facebook isn’t school so it’s whether or not you can make those boundaries a bit more fluid” (FG2a, p. 37). This resonates with Kear’s (2011) emphasis on the blurring of boundaries, and appears to be a challenge Matthew is seeking to address; a tension for which he is seeking a strategy. Going back to the theoretical framework, it also raises questions about the role of the outside world’s “mesh of connections” (Kear, ibid, p. 38), and what part this could play in a school’s activity system. In FG1a, Matthew seemed interested in brokering a role for social media in EAP classroom activities, but now seems less sure about it.

Perhaps this is because he has found a form of contentment in working with a new medium, which is the forum on Moodle, which should be “a really good way, an excellent way of improving fluency and accuracy” (FG2a, p. 38), which is “hopefully something that they care about as well so it should be motivating” (p. 39). Yet, the fact that students have to be ‘forced’ to use this in some ways, unlike other forms of social media, suggests Matthew still faces the age-old problem of motivation.
6.3-iii Early developments in Matthew’s practice

Having reached the halfway mark of his journey, Matthew appears to have developed aspects of his technological knowledge, and found synergy with his existing knowledge of pedagogy, and strategy, drawn from a CLT/ELT background. This new sense of TPK has helped facilitate interactivity and connection between activities, which is an essential part of generic ELT. These developments in actions and knowledge, as referred to in RQ1, have impacted on his specific professional practice of using technology in his teaching (RQ2), and led to Moodle becoming more embedded after the workshops, as in sub-question 2.

There is also a suggestion of subtle change in his sense of EAP as a subject, and his role as a teacher. His actions in fostering better linkage between the classroom and self-access suggests building up a stronger sense of what it means to guide or scaffold students towards autonomy. The move away from social media, and towards greater integration of Moodle, could also be seen to suggest a movement towards using English for Academic Purposes rather than English for generic communicative purposes. Technology, on the whole then, seems to have become less of a bear-pit for him, and more a vehicle for what he wants to deliver.

6.4 Developments towards the end of workshops

6.4-i Changing usage of instruments in practice

By the time of the third session (FG3a, pp. 46-52), there were further changes in Matthew’s knowledge, actions, and professional practice. Starting off with a discussion on the exploration of new technologies such as Camtasia, the focus shifts once again to further developments with Moodle. It appears that Matthew is continuing to build on his sense of increasing the amount of interaction for, and with, students, and guiding them towards autonomy. He states that “with Moodle I’m putting more and more, I’m using it more and more each term so there’s more and more structure to it” (FG3A, p. 51). Reflecting back on what he used to do, he says that “at the beginning I was just putting stuff
up there for students” and “it was an easy way for them to get access to materials” (ibid), which echoes Mason’s (1998, p.3) commentary on how teachers often use a VLE for little more than “content + support”, rather than more interactive forms of usage.

Matthew though seems to be going through Mason’s “pedagogical evolution” (1998, p. 3), as he speaks of “an increasing interaction now, an increased kind of giving them the opportunity to upload their assignments” (FG3a, p. 51). Again, a synergy is coming into play here because there is not one solitary variable or single knowledge base seemingly shaping these actions. Rather, he cites a range of factors such as facilitating authentic situations, to “engage them with extended material and so on” (p. 50), to have more virtual interaction outside of class (p. 51), and, on a pragmatic level, reducing “hard copy” and “actual printing” (pp. 50–51). Therefore, once again the synergy of knowledge and activity is coming into play, as discussed in Schul (2010) who talks about how teachers’ technological, instructional, and historical practices are set against the broader framework of activities around them. Matthew’s increase in TPK then shapes not just his own activity, but also the forms of activity undertaken by students.

However, it is not only in usage of Moodle that Matthew demonstrates new synergy of TK and PK. During a discussion with James and Kelly, talking about a programme named Camtasia, Matthew claims to have used “the same thing” (FG3a, p. 49). However, he is not talking about the actual programme. Rather, he is referring to his actions, the pedagogic strategy of uploading pre-recorded lectures onto Moodle, with the intended purpose of building listening and note-taking skills. This was done “for both Bank Holidays”, and involved uploading “lectures and all the PDFs to go with the lectures” to be used for “lecture practice, pre-recorded lectures for note taking skills” (p. 49). Thus, the choice of instrument is not the key issue. Rather, in this case, the technology is mediating his engagement with the object of activity, which is to facilitate student understanding of a particular set of core skills.
When he goes on to talk about how “at the beginning of term there’s more scaffolding” (FG3a, p. 49), while towards the end of term students are placed “in more of an authentic situation” (ibid), he seems again to have a better sense of the bigger picture of activity (Spires et al, 2012), which is the longer-term outcomes of teaching EAP. The technology is not the centre of the lesson, as perceived at the outset of FG1a, but has been reconfigured “for customized pedagogic purposes” (Koehler & Mishra, 2009, p. 66). Warschauer & Meskill (2000, p. 315) define this as a movement from emphasis on “hardware” to “humanware”; making a critical transition towards greater awareness of technology’s intersection with the planning of instruction (Chapelle, 2010, p. 51).

6.4-ii Influences on changes in practice

From Matthew’s discussion about pre-recorded lectures, it seems that the main drivers for changes in his practice include a changing sense of the rules of what is important in the EAP classroom. Student needs, as related to course outcomes, are now taking primacy. He appears to have moved away from trying to broker incorporation of social media, to using Moodle as a vehicle for interaction and authentic communication, and as a means of changing the division of labour in the classroom, creating more student autonomy. However, the role of collaboration, and community, is also significant. Towards the end of the session, Matthew talks about working with Emily, as regards usage of Moodle, and describes her as being “the real instigator of a lot of new things” (FG3a, p. 50). He explains that they share a class and the new developments have been “very much of a collaborative effort” (ibid), which suggests a change in the division of labour.

Emily, of course, was also a participant in the research study, and was very active in running additional support sessions in Moodle for teachers on the EUS Programme that she managed. Her influence as someone he could liaise with, over time, appears to have shaped developments much more than the one-off workshops (Meltzer, 2010; McGrath et al, 2011). However, he does make reference to what “Paul had shown me originally” (FG3a, p. 50),
which suggests that the function of workshops is to provide “an intensive, short-term learning activity” that facilitates longer-term developmental impetus (Richards & Farrell, 2005, p. 23).

Therefore, one of the main developments that occurred after the education programme was the creation of a stronger workplace community, and this was a crucial development in reshaping practice. Again, this shows the importance of the synergy between knowledge and activity, and how practice is socially shaped, as discussed in such works as Motteram (2013). Support for this comes in Matthew’s assertion that “new things on Moodle” have “caught on to some extent, or it has caught on because everyone’s been using it” (FG3a, p. 50). He goes on to add that “there seems to be more sharing”, and “I’d say it’s quite collaborative as well” (ibid). This collaboration though is not limited to teachers, and again seems to suggest a changing sense of EAP practice.

This is exemplified during an exchange with James, where Matthew suggests that demonstration leads to demand, as in “when you hear about something, you think well, what’s that? I want to get my hands on that, that sounds like I could use that in the classroom” (FG3a, p. 50). As he continues, it becomes clear that such interest is shaped by student needs, when advocating “interaction between yourself and the class outside of the class so there’s a virtual interaction” (ibid). He goes on to say that this is because of the need to engage students with “extended material” and “if you can get them interested in doing that through technology, so say the Moodle forum, then that’s good” (FG3a, p. 50). Yet, despite his increased knowledge and actions of using Moodle, he still remained interested in bringing other resources into the classroom, as was evident in observations of his interactions with colleagues. One such instance came about through the collaboration and exchange of ideas that he spoke of in FG3a, where he began to develop a growing interest in iPads. Possibly this came about as a result of collaboration with Victor, and seems to have been a desire to explore these as one tool amongst many, rather than as a centrepoint of his practice.
6.4-iii Summary of developments in knowledge

As the programme came to an end, Matthew’s knowledge of technologies, and pedagogic strategies to use these inside and outside the classroom, suggested a considerable amount of change. Having seemed concerned with bear-pits at the outset, he was now discussing and using technologies in more creative, and proactive ways, enacting the “knowledge in action” spoken of by Kirk (2012). Of course there was also a sense that he remained on “the learning curve” that he had spoken of in FG1a, but he was now showing more interest in newer technologies, and less of “a personal sort of fear, a technophobia” (FG1a, p. 7) of investing time in learning about something that would be “superseded” (ibid) very quickly. Now, he was starting to use newer technologies as naturally as EAP teachers have been blending technology into their lessons for decades, as described in the literature review’s history of CALL. I would see one such example of this in his next observed lesson.

6.5 Vignette of Matthew’s practice after the programme

Although Matthew had shown an interest in a range of technologies, outside the regular system of activity, such as Camtasia, Podcasts, and non-educational online resources, he was experimenting with an iPad in the lesson described in this section. Once again, the programme was English for University Study, with the focus being on listening and note-taking this time around. There were eleven students in the room, which was equipped with an IWB and computer, though some students had their own personal laptops and iPads. Having these was not a formal rule of the class, but it could be argued that they brought them there, through knowing there may be an opportunity to use them.

In Victor’s lesson, described in Chapter Five, every student had equal access to iPads, but in Matthew’s observed lesson there was “less than a class set” (Bennett, 2012). Matthew himself had an iPad though, which he mostly used as an electronic version of the English teacher’s traditional pen and paper employed in monitoring, and noting corrections. Though the instrument had changed, the ELT pedagogy remained the same; eliciting, listening,
and correcting students’ language. The lecture, at the centre of this listening and note-taking lesson, was about phobias, so the lesson started off with contextualisation of this. The topic of the lesson was ‘lecture styles’ which Matthew described as being reading, conversational, and interactive. He gave the students minimal handouts and the subtext of the class was about practicing note-taking skills. Images were used on screen to stimulate discussion – indeed the lesson had an almost constant backdrop of PPT images. Even during discussions these were left visible and while activities were happening sometimes an online stopwatch was used.

The emphasis was very much on a form of partnership in producing the language. Matthew followed standard procedures in arranging students into pairs and groups, depending on tasks, and constantly monitored their work, with the iPad at hand, acting as an electronic form of the traditional pen and notepad. Sometimes, in his monitoring, he wrote down errors for correction, at whole group level, at a later stage. Other times, he corrected aspects of language individually, using the iPad as a demonstration tool. Here, different to his conceptualisation of bear-pits in FG1a, the technology was a mobile presence that enabled him to avoid transmission style teaching. His whole presence and lecturing style was conversational and interactive, rather than chalk-and-talk.

Students were engaged and on-task, learning vocabulary that they required for the generic lecture on phobias, at the heart of the lesson. Interestingly, when it came to this lecture, from the textbook, Matthew chose to read it rather than use the audio resource, for what he claimed to be reasons of authenticity. Whether that was the correct decision or not for these students, again he was drawing on his TPK base, on choosing when, or when not to, apply technology to particular teaching situations.

Relating this to the first vignette of practice, and others not described here, there were clear developments in terms of his actions, knowledge, and the specific professional practice of using technology in his EAP teaching. He was able to customize a particular technology (iPad) to fit the purpose of his lesson, and to
use that technology “not for its own sake, but for the sake of advancing student learning and understanding” (Koehler & Mishra, 2009, p. 66), which suggests an increased sense of TPK. The fact that he chose to use the iPad in a restricted way does not suggest lack of TK, but an ability to balance the affordances of the technology with the needs, and pedagogic strategies of the lesson. It was being used in a natural, unobtrusive way, as in Bax (2003), and McGrath et al (2011), as just another tool of teaching, with the production of language seeming to be the main object of learning.

On the whole then, the lesson seemed more of an example of Blue’s (1998, p. 48) EGAP teaching, then ESAP teaching, and indeed bore many hallmarks of standard Communicative Language teaching. The emphasis was on the skills needed to listen and take notes in lectures, which again could be shaped by his own sense of practice, voiced in much of his dialogue throughout the focus group sessions, where the practice he describes suggests a greater concentration on study skills than on disciplinary work.

6.6 Discussing developments in practice

6.6-i Opportunities afforded by resource

At the outset of the individual interview I asked Matthew if his usage of technologies had changed, continued or developed in any way, rather than directly question the issue of giving primacy to language over other content. His response was that “definitely, I would say that the use of Moodle has changed as have various other things I’ve integrated in terms of technology” (II1, P. 75). He makes particular reference to the iPad, and the practical function it serves in his classes. He claims to be “using that in the context of gaining, of emergent language, which is what I was doing before, but before I was using the computer and using it and using Word” (ibid). The fact that he draws comparisons between Word and the iPad suggests that it is not precise technologies that matter, but the pedagogic strategies behind usage. Effectively, he is doing the same thing, but has now found a faster and more effective vehicle. This is Evernote, which he describes as having “a couple of advantages”, such as ability to analyse students’ language during activities,
either individually or in groups, collate this, and then transfer it to another medium for demonstration or sharing (II1, pp. 75-76). Interestingly, in light of earlier emphasis on social media, he states that “there’s a kind of personal element to using an iPad” (p. 76).

This emphasis on the personal element echoes some of his early dialogue, where at that time he appeared to want to broker the integration of school technologies and social media. Though his choice of tools might have changed, his underlying sense of what is important in the classroom may not. Much of his work still seems to centre on the production of language. Despite this, when pressed on his understanding of what EAP is, he suggests that it is “a stepping stone” between where the students have come from, and “where they are going to, which is pretty much a British university” (II1, p. 77). A clue to his sense of what is important in helping them on their journey comes in some of the actions he describes, in the context of using iPads. He suggests that “we use iPad a lot for videos, so videoing seminars, videoing presentations” and for other pronunciation based activities such as to “practice the phonemic chart”, or “practice recording themselves” (II1, pp. 82-83). Therefore, he seems to have brought the iPads, and some other tools that he goes on to talk about, into his practice so as to build language and skills.

Yet, the BALEAP framework suggests that an EAP teacher should be able to locate the methods, practices, and techniques of CLT in an academic context and to “distinguish between teaching subject content, procedural knowledge (e.g. how to go about doing a task) and language knowledge” (2008, p. 10). Matthew though still seems to see EAP as being about “the basic preparation, the writing and the reading, the four skills preparation, and then kind of obviously things like lecture listening and that kind of thing” (II1, p. 77). What this then seems to suggest in terms of his development is that an increased technological knowledge has served as impetus for developing TPK, but not necessarily TCK, or indeed PCK as it was initially conceptualised by Shulman (1986/1987).
Matthew’s dialogue and actions though seem to suggest that he sees language as content, which challenges Freeman’s (2002) argument that such a belief lends itself to a messy interpretation and enactment of PCK. I did not see too much that was messy in Matthew’s lesson, and nor did he in his assertion of its typicality of his practice – “it pretty much covered all of the main things that I do in terms of the variety of activities, the use of technology and images, and the kind of interactivenss of the lesson” (II1, p. 82).

Later, in a second interview to clarify some outstanding matters from the first, he reiterated these sentiments by stressing “the integral elements” of interaction, whilst introducing a further element of his own development, which was the ability to use “different approaches to learning, with a much more systematic way of improving their English” (II2). This seems to go right to the heart of Matthew’s sense of EAP as a subject, and EAP teaching as a profession. Going back to the common TPACK term of synergy, he seems to have a slightly different sense of the synergy between CLT and the academic context to that of BALEAP (2008). This has been constant throughout the focus group sessions, observed lessons, and individual interviews, and thus suggests a need to take a closer look at his sense of ‘content’ in his lessons.

6.6-II Matthew’s focus on language as content

One of the developments that occurred in terms of Matthew’s actions and knowledge was to use technology as a means of trying to enhance students’ basic preparation in four skills language work, as he asserted in his first individual interview. Throughout this study, his emphasis has been on study skills and language awareness. This emphasis on teaching language in the EAP classroom is quite different to BALEAP’s (2008) expectations of integrating language with discipline-specific work. However, another school of thought argues that when the focus is the language itself, then pedagogical practice is specifically engaged with language as content (Andrews, 2003; Tsui, 2003).

This fits in with the work of Çelik & Simpson (2013), whose recent attention has been focused on situating TPACK in ELT, as a
foundation for its subsequent placement in ESP. Their argument is that “language lies somewhere mainly between content and pedagogy, and that “language is the context” (p. 8); suggesting that it takes the place of the outer ring in Mishra & Koehler’s (2012) model of ‘Context Influence on TPACK Knowledge’ (Figure 3).

Matthew’s emphasis on language is apparent throughout the individual interview from early on, such as in the use of the iPad “in the context of gaining, of emergent language” (p. 75), which serves as a form of influence on other parts of the lesson. Such parts include “collaborative learning”, which he defines as “not just students on their own working in groups and me going around observing” (pp. 79-80). Rather he says that “it should be the students generating the activities themselves as well, if that’s at all possible, so that they feel more responsible for their own learning” (p. 80). However, ultimately, he does see the teacher’s job as being “to get an activity going and to be receptive to language, which you can then adjust, highlight for adjustment” (ibid). In doing this, he says that “what you are doing is crafting language so that it’s more accurate and everything else as much as possible should be about the learners creating the activity, and working together to create that” (ibid). Interestingly, he then goes on to describe this as being “an ideal classroom situation” (ibid).

On first analysis, perhaps Matthew’s “ideal classroom situation” (II1, p. 80) seems at odds with Macallister & Kirk’s (2013) warning against “EAP only as language practice” and “academic content reduced to a carrier vehicle.” However, Shulman (2012) talks about the importance of what works in the classroom, and paying attention to teachers’ conceptions of their own subject matter. In Matthew’s case, he feels that the lessons are working, and students, in the final vignette, were engaged with the materials, which is a crucial element of his overall sense of practice. Repeatedly, in his individual interviews, he stresses the need for engaging students, and creating “the interactivity” (II1 p. 82) that has been a feature of his espoused work since the very start of the focus group sessions. Indeed, when questioned about this specifically in the second interview, he states that “if you don’t try and find an
approach to learning in a fairly different, slightly unique or interactive way” students lose their motivation. At the same time though, he shows awareness that language is not just about fun, or interaction, and that there is a need for classes to be “scaffolded over a longer period”, and to understand the structure of EAP classes, which is more systematic than General English (II2).

Thus, because Matthew appears to have a strong cognitive understanding of student learning, and a perception of what the students need in particular learning situations, he does demonstrate elements of PCK, as reimagined by Shulman (2012). In this understanding of the knowledge base, the focus is on the very etymology of the word ‘discipline’, as coming from the Latin ‘discere’, to learn, and in Matthew’s lessons, primacy is given to the learning of language. That is how he sees the subject, based on the needs of the particular students that he is teaching, and thus he is bringing into play elements of PCK in the classroom.

Through using technology to help him do this, TPK also comes into focus, because of his understanding of how technology can shape ways in which language is recorded, represented, and so on. There may also be elements of TCK coming into play, but the overall existence of TPACK would not fit Kirk’s (2012) definition of the construct being enacted in the EAP classroom. Rather, it would bear more similarity to Çelik & Simpson’s (2013) model of how the TPACK framework can be applied to language learning situations, by having language as an outer ring of context, as well as content.

6.6-iii Technology as a greater part of practice

Shulman (2012) advocates measuring teaching success more by actions than cognition, and Matthew, through what he claims in his dialogue, and what I witnessed in the observations, appears to have found success in integrating technology into his teaching. Aside from the iPads and his consistent work with Moodle, he talks of using podcasts, as a means of students accessing materials such as those found on The Guardian website (II1, p. 81). He justifies this by saying that “it’s incredibly new and authentic; why on Earth would I not source that online, why would I not use that
technology in the classroom?” (ibid). In espousing this, he draws on his ELT knowledge base to shape his actions in the classroom, by talking of grading the material at lower levels, until “they’re ready to start absorbing fully authentic, upgraded material” (ibid). Again, this is not just about language but about context, and “creating an interface” between students and this virtual world, which echoes his FG1a discussion, where he seemed keen on brokering incorporation of social media into school technologies. This is something he believes he has done, but in a different way, as suggested in his statement that “unless the classroom is a bubble, which doesn’t really reflect life then you should be using social networking within the classroom, which is what Moodle is” (II1, p. 81).

The latter end of his previous statement is significant, as it suggests that he no longer sees the boundaries between school and social media as being fixed. Perhaps, changing those boundaries is a form of brokering within the activity system, as in Kimble et al (2010), but I would argue that it is an increased TK, and TPK, that has caused this change in conceptualising the boundaries. The ‘school’ technology has thus ended up “as a way of breaching or broaching that gap between the outside and inside worlds” (II1, p. 81), and Matthew has finally managed to “transgress” (FG2a, p. 37) the challenges once posed by other forms of social media.

**6.7 Overview of developments in Matthew’s practice**

On the whole, Matthew experienced developments in terms of his actions and knowledge, which did reshape the specific professional practice of using technology in EAP teaching. In the second individual interview, he states that he is still on “a learning curve”, which he also spoke of in FG1a (p. 7). However, he feels that now he is better able to “marry” together the two main parts of teaching that he sees as important, “so that one isn’t bigger than the other” (II2). These two things, by his definition, are the need for interaction, and a systematic way of teaching students the language, and structure for other skills such as writing (ibid). Through this definition, a clear sense of his practice emerges, and
it is one where language and skills have primacy over the sort of
disciplinary work in contemporary EAP literature. Though many of
those voices might challenge Matthew’s sense of ‘content’, he feels
that he has developed over the course of the programme, and will
continue on this “learning curve” because “it takes a couple of
years just to get ideas into practice” (II2).

Regarding the impetus for these developments, he suggested it had
been “less the workshops, and more the staffroom based
interaction, which has been really good for sharing ideas” and
“generating ideas through literally just talking to other teachers”
(II1, pp. 76-77), as was evident in his collaboration with Victor on
the possibility of sometimes using iPads in his classes. This again
shows the synergy between knowledge and the broader system of
activity (Schul, 2010), and supports the view that practice is
socially shaped (Motteram, 2013), and changed through a process
of reflection and reimagining as new knowledge is acquired
(Manning & Payne, 1993). Perhaps this was most keenly
demonstrated in the journey that he had made in terms of
balancing the blend of school and social technologies.

Through increasing his TK of Moodle, he was better able to
recognise the strengths and limitations of its usage in the EAP
classroom, in terms of how it related to particular objectives of
creating authenticity, and autonomy. Using the VLE as a base for
giving structure to his classes, he was then able to reconfigure
other technologies, such as podcasts, for the “customized
pedagogic purpose” (Koehler & Mishra, 2009, p. 66) of helping
students to bridge the gap, as he spoke of in both FG1a and II1,
between the classroom, the outside world, and their future studies.
CHAPTER 7: Kelly’s developmental journey

After Christmas 2013, Kelly decided to undertake a new challenge, to run in the annual Brighton marathon in the spring. There, she would find herself alone against the elements, relying entirely upon her own resources to get through the race and push across the finishing line. She was running to raise funds for the charity Mind, and had collected a considerable amount of money through her promotion of the race, and the cause, on social media. Throughout her preparation, she provided updates on her development, sharing the stories of her experience with the friends and colleagues who had supported her. Through this combination of her own resourcefulness, and the usage of the Internet, whether to inform advertise, or collect money through electronic payments, she raised several hundred pounds for the charity.

On the day, I went to watch. Running, as a spectator sport, holds no great appeal for me, but I decided to lend some moral support. It was also interesting to see how technology had been incorporated, in a normalised, unobtrusive manner (Bax, 2003). In the olden days there might have been legions of auxiliaries with clipboards, and stewards governing the starting line. Here, the process was simplified by equipping every runner with an electronic device that clicked into action as soon as they crossed the starting line, and recorded timings. Better still, this acted as a tracking device through which it was possible to keep up with a runner’s progress on the Internet. Therefore, hours later, I would see that Kelly’s friends and colleagues in London had been posting social media updates of her progress, and finishing time.

Here, in the digital age, she was not so alone as she might have been a generation ago; running the very same route but equipped with an iPod’s wealth of songs to keep her entertained, and the knowledge of being connected to those supporting her from the sidelines, or through cyberspace. She still though had to run the 26 miles and did so, before a beer to celebrate, and then a train journey back to London, to teach the following morning.
7.1 Starting out on the journey

7.1-i Kelly’s sense of practice at the outset

Kelly, at the beginning of the research journey, was making a transition from a background in General English teaching to a new, more academic context. In the early stages of FG1a, the main focus of her discussion was on past training experiences, and this then shifted towards the impact of technology on her practice. During these discussions it seemed that her knowledge base was largely shaped by past ELT experience and training, and this served as her reference point for measuring technology’s impact on her practice. This was exemplified at a point when she discussed ways in which students negotiate meaning in the ‘traditional’ sense, compared to how such meaning is negotiated through new technologies.

She begins this discussion by wondering “how we can maintain the interactivity” in environments where the classroom layout is built around the technology of the IWB, “with tables facing the board” (FG1a, p. 9). She goes on to talk about a situation where “in a classroom, if you move all the tables back and you sit in a circle, and you don’t use that technology”, it becomes “personalised” and “you force people to negotiate the meaning themselves” (ibid). This is a significant description because she goes on to point out “that’s the bit I really like about teaching, that just doesn’t have any computers involved” (ibid).

This is important because the bit that she really likes about teaching, at this stage, is the communicative aspect, which, from her FG1a description, is best achieved in a “stripped down, technology free environment” as described in Thornbury (2000). Furthermore, just as in Thornbury’s Dogma for EFL, there is a sense that people, rather than other resources, are at the centre of the learning experience. Thornbury describes this as focusing on “the local and relevant concerns of the people in the room, not on the remote world of coursebook characters, nor the contrived world of grammatical structures” (2000). Kelly too seeks a natural and non-contrived environment, in that even though she “likes to look at computers and see all the exciting things that we can do”,


she is concerned that “there is so much technology that people don’t really interact with each other face to face” but through “Facebook and text messages” (FG1a, p. 9). This, she says, is the reason why she likes “to keep the human element in” (ibid).

Thus, at the outset of the study, Kelly’s sense of practice appears to be shaped by need for communication and natural interaction in teaching, but not necessarily through excluding technologies. Rather, what she seems to be doing is applying pedagogical knowledge to given situations, through understanding the learning needs of students in particular circumstances, and applying “general classroom management skills” (Koehler & Mishra, 2009, p. 63). Furthermore, there also appears to be recognition of an element of technological knowledge, of when technology can “impede achievement of a goal” (ibid, p. 64). This suggests then that, at the outset, Kelly had acquired a basic level of TK and PK, creating a base through which possible synergy could occur over the course of the education programme. Even though she talks about “the human element” and “personalised” learning situations, this seems not to be such a fixed rejection of technology as in Thornbury’s earlier work (2000), but rather a strategic choice made according to situational demands.

7.1-ii Actions and knowledge regarding technology’s usage in EAP practice

During the first focus group session, much of Kelly’s dialogue about technology switched between a sense of its potential, counterbalanced by concerns over some of its possible drawbacks, when the correct strategies are not used in its implementation. This was exemplified when Matthew spoke of its potential as a means of assisting students with the writing process (FG1a, p. 5). Kelly says that she agrees, “definitely with the interactive element, so you are getting students to contribute and to publish things online” (ibid). Here, she seems positive about the use of Moodle, which is the particular technology that Matthew was talking about. Yet, as soon as she has highlighted this interactive potential, she goes on to suggest a possible drawback. Her argument is that
“sometimes with technology there’s a thing that you don’t want it to become a one-way communication such as just looking at OHPs, or whiteboard, or whatever, and just copying it down” (ibid). In such a scenario, perhaps she fears that the human element, she later describes, would be lost. She voices this as being “worried that I’ll just slip into a way where I’ve just got a million kind of Powerpoint projections and it might become very static in the classroom” (FG1a, p. 5). This suggests awareness that technological knowledge alone does not create the interactive atmosphere that is essential to her sense of practice.

Technology, through her early dialogue, thus comes across as a potential barrier to communication, if and when she is in a room equipped with resources that she does not fully know how to use. Since communication and interaction seem central to her practice, this is an area of concern for her in the early stages of the study. Aside from this, there is not much else that she really says about technology in the first focus group session, where she was much quieter, and perhaps more inhibited than in subsequent sessions.

One interesting thought that she voiced, which feeds into the next section, came about in an exchange of ideas with Patricia who suggested that it can be awkward to reveal a lack of technological knowledge to co-workers. Kelly’s response was “Yes, it’s quite scary to admit that you don’t know something about an aspect” (FG1a, p. 4). This, with her newness to EAP, and the language centre, could suggest that she is not yet comfortable within its activity system, particularly where technology is involved, as her focus seems to be on aspects of individual technologies rather than on more holistic ways of using them. That could also be why she talks about creating an environment, possibly more within her own comfort zone, where there is no technology involved, and she can fall back on communicative approaches, and a knowledge base that has probably served her well in the past. However, those such as Manning & Payne (1993) would argue that for development to occur there is a need to step outside this zone, and re-examine practice in the light of newly acquired knowledge.

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4 The actual coding of this important piece of dialogue can be seen in Appendix Three
7.1-iii Kelly’s goals in terms of knowledge

Although she has some uncertainty about the use of technology in her practice, Kelly has clearer ideas about the forms of training that she wants and requires. These ideas appear to have been largely shaped by the past training experiences that she describes in FG1a (pp. 3-4), from her previous work in language schools. She talks about the need for regular training, because without this “you get out of the habit and forget about training and then six months have passed, and you haven’t really looked at another book” (FG1a, p. 3). Here, there is a sense of training happening at a theoretical level, and being informed or supported by books. The need to also be in the habit of practicing what was learned further suggests that she feels newly acquired knowledge will fade, unless associated with some form of recurring practice. This recurrence, in past situations, was absent and inhibited by such factors as “time constraints”, and lack of support from management (ibid).

The main thing that she wants to learn, in terms of technology, in this new ‘training’ opportunity, as stated in FG1a, is “how it can really be interactive and communicative” (FG1a, p. 5). Again, the emphasis is very much on interaction and communication, which is the bit that Kelly likes about teaching (p. 9). There is almost a sense then that as she begins her developmental journey, she wants technological knowledge to reinforce this pedagogic knowledge base, shaped by her past experiences in ELT and CLT. However, going back to her comment about it being “quite scary to admit that you don’t know something about an aspect” (FG1a, p. 4), I also felt that, in the focus group session, she was keeping an emphasis on CLT, because she felt comfortable talking about this.

7.2 Vignette of Kelly’s practice at the outset

During the first focus group session, Kelly seemed most comfortable talking about the communicative aspects of teaching, rather than the academic context. Although she was teaching two classes at this time, and I observed both, it seemed particularly

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5 At this stage Kelly herself opts for the term ‘training’ rather than education.
important to get a sense of how she translated her communicative strategies into the academic context of a postgraduate pathway course. This was a Graduate Diploma course, which is essentially an EAP course for students hoping to progress onto Masters degree programmes, mainly in disciplines such as Humanities and Law. Although Kelly was new to EAP, a Programme Manager had asked her to teach on this course as a consequence of holding a Masters degree specifically related to the Social Sciences. I also felt that with this background knowledge and disciplinary experience, she might feel more comfortable and natural in being observed, having earlier spoken about the “scary” aspect of the public view.

On this particular day, Kelly was teaching in a standard classroom equipped with computer, projector, and IWB, very much in the layout she described in FG1a (p. 9). The focus was on complex noun phrases and looking at texts to see the role that these play in the construction of paragraphs and in aiding the cohesion/flow of paragraphs. Further emphasis was placed on the function of language and the way in which noun phrases can be used to deepen the information within a paragraph and its component parts; namely sentences. The texts used for this exercise came from the other discipline-specific subjects undertaken by students on the overall programme, so it was very different from the CLT lessons of Kelly’s past, or even the type of lessons on her other EUS\textsuperscript{6} course.

The session started off with a ‘word cloud’ displayed through a PPT on the IWB. The purpose of this was to introduce students to the vocabulary they would encounter when reading texts at a later stage of the lesson, and appeared to engage them from the outset. Students seemed focused on the task and the vocabulary, in a classroom atmosphere that was positive and conducive to learning. After the word cloud activity had finished, the next stage of the lesson was a combination of a split dictation and chopped up sentences in which one student had to dictate whilst the others constructed paragraphs out of the sentences. The dictation and matching activities were set up particularly carefully. Instructions were checked, and progress monitored, and there seemed to be a

\textsuperscript{6} This is the course that was taught by Matthew in his observed lessons.
combination of strategies employed through the type of tasks often found in the ELT classroom, adapted to a more academic context. Having completed the split dictation and paragraph construction, students then moved on to searching the paragraphs for examples of noun phrases. This was done in pairs, before answers were checked at a whole-class level, and brought up on the IWB system’s visualizer. Noticeably, there was very good rapport with the students. Kelly tried to practice what she preached by incorporating “a human element” through focusing on student needs, monitoring constantly, and grading her language appropriately. There were no concerns, so far, about the staging of activities, and movement from the guided to the autonomous.

During the course of the lesson, Kelly assumed various roles; facilitator, presenter, helper, guide, provider of resources, and source of knowledge. There was an effective combination of activities through the use of a word cloud activity, a split dictation, chopped up sentences, eliciting, modelling of language, highlighting of target language, guided reading activities, and the use of reflective questions. Students were engaged in a number of learning activities, and were shown the function of a form of language they had come across in their academic texts and were given a sense of how this is and can be used. Technology played an important role in the teaching and learning activities, particularly as a presentation device, conducting a warmer activity, and in modelling answers to the tasks that students completed.

On the whole then, Kelly demonstrated far more technological knowledge, operating in synergy with pedagogic strategies, than she had given insight into during the first focus group session. She seemed far more comfortable in using technological resources than her early dialogue suggested. There was none of the “static” teaching that she feared (FG1a, p. 5), and when she used technology, she incorporated communicative teaching strategies as a means of keeping the students engaged. It was as if, in a matter of weeks, she had found new ways of interacting, without getting the students to form a circle and turn away from the technology (FG1a, p. 9). Perhaps she was starting to find a place for “the
human element” (ibid) in the activity system of her classroom, and getting a better sense of her own place in an EAP activity system.

### 7.3 Deeper into the journey (developments in practice)

#### 7.3-i Moving towards blended learning approaches

Kelly, in the first focus group session, had made very little reference to use of Moodle, despite having gone through an introductory session in its usage. By the time of the second focus group, she had been involved in more workshops including one on more advanced usage of Moodle. This appeared to have given rise to recent developments in her actions and knowledge, which then reshaped her professional practice in terms of how she was using this particular technology in her teaching. The second focus group session began with me asking about what had been happening in the period since the last session and the present workshops, particularly those on Moodle. Kelly’s immediate response was that she was using Moodle more “with regards to structuring and organisation” and getting students more involved (FG2a, p. 35). This can be seen in the extract of coded dialogue at the end of this section, where she details what has happened in terms of changes with Moodle, and how she is now using it, with students. Here, rather than being a barrier to communication, the technology is helping to facilitate interaction, and this has come about through new technological knowledge of the resource, and pedagogical knowledge of how to teach with it.

The reason I stress evidence for both TK and PK is that she knew what Moodle could do, previously, since she had talked about the potential for an interactive element, and getting students to contribute and publish things online (FG1a, p. 5). However, she was not translating that into practice, even though she could see that it was a possible strategy in terms of addressing the tension brought about by technology’s physical barrier to communication. The fact of gaining technological knowledge seems to have synergised with her existing pedagogical knowledge, which might also be called historical knowledge, as in Schul (2010), and this new TPK, in turn, is reshaping the activity of her EAP teaching.
Extract of Kelly’s coded dialogue from FG2a (p. 35)

<table>
<thead>
<tr>
<th>EXTRACT</th>
<th>CODE</th>
<th>THEMES</th>
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<tbody>
<tr>
<td>Yeah I think I’m using Moodle a lot more with regards to structuring and organisation, so for example I’m getting the students to do their homework and post it on Moodle.</td>
<td>TK Action (using Moodle more for structuring &amp; organisation)</td>
<td>Change (new knowledge in action) &amp; (impact of action on learners &amp; learning)</td>
</tr>
<tr>
<td>And then they comment on each other’s work from there, whereas before I was just using it to put up the course details or the reading for each week, for example, so that’s what’s changed for me.</td>
<td>Student action (posting on Moodle; commenting &amp; collaboration)</td>
<td>Change (developing strategies for interaction)</td>
</tr>
<tr>
<td></td>
<td>Reference to past action (previous usage of Moodle)</td>
<td>Change &amp; construction of knowledge (strategic knowledge in using technology – Moodle)</td>
</tr>
<tr>
<td></td>
<td>Change (in using Moodle – more interaction)</td>
<td></td>
</tr>
</tbody>
</table>

However, despite this new strategic knowledge in using Moodle, she goes on to say that she still has a demand for further technological knowledge when she says that “I would like to use some more audio in the lessons” (FG2a, p. 36). This came about as part of a discussion with the other focus group members regarding the use of alternative materials on Moodle as a means of making lessons more engaging. She states that her reason for wanting to use more audio is that this “can really increase their (students’) independence” (ibid). Again, on a deeper level, what she seems to be requesting here is not technological knowledge of audio in teaching, which she would already be expected to have as a consequence of her prior ELT training and experience, but a way of using audio functions of Moodle to guide students towards autonomy, possibly as described in BALEAP (2008, p. 5).
7.3-ii Shifting perspectives on nature of communication

In FG1, it was apparent that Kelly places a great deal of emphasis on natural communication in the English Language classroom, which she saw as sometimes being inhibited by the hardware. Then, her strategy was to turn away from that hardware and focus on “humanware” (Warschauer & Meskill, 2000, p. 315) through sitting in a circle, and having a natural conversation. In the second focus group session, she once again returns to the notion that the technology might be affecting the naturalness of communication. Drawing on ideas from what she calls Thornbury’s “methodology”, she still voices the “reservation” that she gets about technology, which is that “this might be replacing the communicative, interactive thing” (FG2a, p. 39).

However, even though Kelly still holds this perception, she is also trying to find strategies for integrating affordances of technology into her teaching in other ways. One of these is to focus on “writing skills” and helping students in “entering into debate on their own” (FG2a, p. 39). Thus she says that “they’re using it for their homework and they’re communicating on it, which they would be doing anyway on Facebook or wherever” (ibid). Here, once again, new knowledge is having an impact on activity. In trying to make Moodle more communicative, she is also trying to change the activity of students outside of class, and attempting to translate practices of social media into a more academic context.

These new strategies to develop students’ “writing skills” (FG2a, p. 39), and to “debate online” (p. 41), not only show an increased synergy of technological and pedagogical knowledge to form TPK, but also show how this knowledge feeds into teaching competency, as defined by BALEAP’s framework. There appears to have been a change in her focus on writing skills, alongside her sequencing of teaching and learning activities (2008, p. 8). Added to this, she shows increased awareness of skills needed in academic contexts, for both teachers and students as she talks about how “they can check when their assignments are”, which is “obviously a good kind of management tool or planning tool for the teacher and for
them as well” (FG2a, p. 39). Here, she is not only demonstrating actions that are in synch with BALEAP’s core competencies, but also meeting key managerial, and curricular aspects of Koehler & Mishra’s (2009, p. 63) definition of the elements of pedagogical knowledge. By using the technology to try and achieve this, and to shape teaching and learning, this is further enactment of TPK (ibid, pp. 65-66), alongside her earlier reconfiguration of her usage of Moodle, to incorporate characteristics of social media. Further to this, there are echoes of Shulman’s PCK (1986, pp. 8-9) in her emphasis on the need to transform the same sets of learning materials into comprehensible form for different groups of learners, according to their specific needs and particular context. Kelly’s way of doing this is through the grading of language.

7.3-iii Strategies shaped by language needs of students

Towards the end of FG2a, when discussing the use of Moodle, Kelly makes reference to adaptation of tasks in line with student needs. She contextualises this by saying “it’s interesting with Moodle because for one of the classes I’ve got, they’re really into it and debate and forums and so on, while the other class haven’t really taken that up as easily” (FG2a, p. 41). She goes on to suggest that the reason for this is because she thinks one group has got a “different level or a lower level of English, and so there’s these two spectrums of English and one group are not going to be so confident” (ibid). As such, she now needs to draw on her pedagogical knowledge of managing learning situations in order to “change activities, and just try to get them using it, doing basic things” (ibid). Furthermore, although the language in this sense is more to do with context than content, as in Çelik & Simpson (2013), Shulman does talk of content knowledge as including the amount of organisation of knowledge in the mind of the teacher (1986, p. 9). He also talks about changing the nature of content to make it comprehensible to students (ibid, p. 8) and, in his later work, about the primacy of learning outcomes (Shulman, 2012). Thus, in this instance, whilst language is not the content, Kelly draws on content knowledge to adapt materials and engage learners, according to what she has said, and what I observed.
Over the course of the study, as explained in the Methodology chapter, I recorded diary notes and instances of what was happening with Moodle. Kelly, from the period after the first focus group session, had started to use Moodle as a form of self-access for students, and a way of communicating outside of class. Generally this involved making use of the forum where, as she said in FG2a, she could get students involved in online debates and discussion. This was, as she claimed, most apparent with her high-level classes, those students on the Graduate Diploma course.

With these learners, studying Humanities and Law, her work features two levels of engagement. One is the organisation that she speaks of in FG2a, where she uses Moodle as a means of helping students plan for presentations and assignments. The second is in facilitating debates and discussions linked in to the content being studied in their specific subjects on a weekly basis. An example of this comes through ‘Globalisation’ and an associated discussion entitled “Why are children going to school hungry?” Such work is more challenging than that which she does with ‘lower level’ students (FG2a, p. 41) at this stage, where tasks bear a greater resemblance to the getting-to-know-you type activities, such as those in the work of Salmon (2000) who writes of scaffolding students in blended learning environments. Thus, whereas the sociologists’ forum includes such titles as ‘Breaching experiment’, ‘Class, poverty and welfare’ or ‘Reading for research homework’, the work with lower level classes is much more about themselves and their interests, so topics such as ‘Favourite books’ feature alongside ‘Exam information’ and ‘Presentation Schedule.’

Though again the issue of content is a problematic one, because of students interacting through a second language (Freeman, 2002), Kelly appeared to be drawing on aspects of PCK in her work with students, of differing abilities, on Moodle. Paradoxically, even though she is using technology, her actions do not yet quite fit the literature’s definition of TCK (Ward & Kushner-Benson, 2010; Kirk, 2012), because she is using the technology simply as a means of managing and delivering the graded content. A true definition of TCK, according to Koehler & Mishra (2009, p. 65) would involve the content being shaped by the technology, and vice versa.
7.3-iv Early developments in Kelly’s practice

On the whole then, at the midway point of the teacher education programme, there had been significant changes in Kelly’s practice. At the outset she expressed discomfort with the technology, struggling to juxtapose the human elements of teaching with the ubiquitous hardware of the classroom. Gradually though, as her technological knowledge increased, she used her existing ELT knowledge base, and beliefs in what teaching is supposed to be, to adapt the hardware to meet the particular needs of students. Therefore, in terms of the research questions, she has increased her technological knowledge, and aspects of both TCK and TPK, particularly through developments in her actions with Moodle. This has then reshaped her specific professional practice of using technology in EAP teaching, because she has changed the focus of activity to extend beyond the classroom, and is making greater usage of Moodle outside of class time. In doing so, she is still meeting the same outcomes and object, but seems to have repositioned herself, not just physically but philosophically, in how she manages communication between the students. Before, she gave an instance of forming a circle and starting a conversation. Now, though many of the same principles apply, just a few months later, she is setting up these conversations through technology, and letting students do more of the work for themselves, even if she admits that the success of this often depends on language levels.

7.4 Developments towards the end of the workshops

7.4-i Changing usage of instruments in practice

By the time of the third focus group session, Kelly described further changes in her practice, and actions shaped by new knowledge of, and access to, technologies. Having had to contend with “Bank Holidays” (FG3a, p. 47), she drew on the support of the College’s IT department to introduce and use Camtasia Studio as a self-accessible resource for students. She states that this came about because “I needed to push things because the students had missed loads of hours and I didn’t know what to do” (FG3a, p. 47). Faced with this situation, which she may not have had to contend
with before, she seemed unable to find a solution through her existing base of knowledge and experience. Therefore, she sought assistance from someone else in the language centre’s activity system, and this was the Head of the IT department. She states that she spoke to him, and “he said I can download this programme for you, and you can record lectures, and record the audio, and then the students can listen to it online” (FG3a, p. 47). Having then been shown this by the Head of IT, she goes on to suggest that “I think that accident of the Bank Holidays kind of sparked that usage of technology” (ibid). However, viewed through an activity theory lens, it was not just the contextual or sociocultural factor of the holidays which brought about this change in practice, and new knowledge, but also negotiation and “collaboration across boundaries” (Kimble et al, 2010, p. 437), which had shaped a new form of usage, or “innovation” (ibid).

Following on from this initial spark of activity, brokered through the IT department, Kelly then draws on existing PK and PCK to shape her learning materials and subject matter around the affordances of Camtasia Studio. Although the Head of IT had told her that she could “record lectures”, she states that “I didn’t want to do the video. I used the PowerPoint slides and it’s a programme where you can record them” (FG3a, p. 47). She again demonstrates her technological knowledge of this new resource by saying that “you can record the audio and the Powerpoint at the same time, and if you want you can use a webcam at the same time to record but I didn’t want to do that” (ibid).

Again, she is making pedagogical choices, and, as before with Moodle, drawing on elements of PCK and TPK. This time though, because she is also using the technology to shape the content in particular ways, it could also be argued that she is starting to find that synergy between technology and content, which facilitates TCK. At the very least she is aware of the need to work on ways of reshaping the content and the technology to fit the needs of learners. This is supported by her analysis of its effectiveness in that “it was quite successful in the way that some of the students went and watched it and listened to it”, but others had difficulty in
accessing it because of formatting and downloading (FG3a, p. 47). Despite this she wants to hopefully “use it a bit more maybe”, and she goes on to explain that she has started “playing around with it in the staffroom” (FG3a, p. 48), alongside a more experienced colleague named Kenneth, who comes from a teacher education background. She says that they “have literally just been playing about with it”, and Kenneth “wants to use it more to provide feedback...whereas I was using it more for the lecture....but I am thinking that I could use it for feedback as well, especially in written work” (ibid). Once more, this is interesting from the perspective of activity theory because there has been a synergy of new knowledge and action, to shape possible changes in activity.

The Head of IT introduced this as a recording device originally, and Kelly shaped its affordances around her particular needs. She then introduced this to Kenneth, effectively becoming a broker of activity (Wenger, 1998), and now Kenneth is exploring this from a different perspective, in its potential for feedback, which is one of the most critical activities of EAP teaching, going back to the days of red pen, as spoken of by Victor (FG1b, p. 20). This suggestion of a core ELT activity being shaped by the use of a particular technology echoes Motteram’s (2013) discussion on how the word processor has reshaped the writing of essays.

What is interesting in Kelly’s case is the way in which she has adopted different tools for her own purposes, and changed the shape of her teaching and learning activities through doing so, first with Moodle, and now with Camtasia. She used Moodle to reshape communication with students, and the balance of activity, and has begun to see how Camtasia can reshape both the provision of lectures and the provision of feedback to students. Just a few months before, she had come across as being inhibited by the presence of technology, and the fear of having “to admit that you don’t know something about an aspect” (FG1a, p. 4). Yet, here she is now, using one “aspect” of a tool such as Camtasia, whilst not being fluent in other aspects of its usage, and, rather than being inhibited, showing excitement at possibilities of further discovery.
7.4-ii Sparks and snowballs – influences driving change

Although Kelly does suggest that the spark for change in her practice came about “because of the Bank Holidays” (FG3a, p. 47), she later goes on to talk about other significant influences. The first of these is the exploration of resource, which she had been engaged in alongside Kenneth. However, she goes on to make a small but significant point about support for this exploration. She states that Camtasia “is a programme that you have to purchase”, but the Head of IT “is saying that if enough people are interested then he can have a better reason to purchase it” (FG3a, p. 48).

In coding this, the key issues appeared to be support for resource, and impact of staff interest on practice. The onus though seems to be on the teachers to prove their interest, rather than on the organisation to promote the use of the resource, unlike the case of Moodle. Thus, if Camtasia were to become a regular part of practice, it may require the likes of Kelly and Kenneth acting as brokers. Kelly though might not necessarily see herself as a main agent of change. This is suggested in an exchange of dialogue with Matthew and James (FG3a, pp. 50-51) where they discuss the impact of working with someone who is “more of an expert.” James remarks that he sometimes consults Emily about things he is having difficulty with, because he happens to sit across from her in the staff room, and prefers this direct approach to “faffing and fooling around if I’m not getting anywhere” (FG3a, p. 51).

Kelly states that “I am the same really” (FG3a, p. 51), as if placing herself in the role of learner rather than expert user, even though she had displayed some of the characteristics of a broker of activity, through her advocacy of Camtasia. She then goes on to suggest that incidences of her own development often come from a need, such as the Bank Holidays, which she mentions once again. When such a need occurs, she says that she will “go and ask someone what to do about it, and see if anyone has any ideas, or just from overhearing other people, and talking about things usually” (ibid). Here, there is a sense of technological knowledge being co-constructed, and practice being socially shaped in the
staff room. She goes on to add that overhearing people leads to “getting a bit curious” about the subject matter, “and asking them what’s happening, getting pulled into conversations, and seeing the demonstrations, them showing you something, and then it snowballing from there” (ibid).

This reference to snowballing is valuable in addressing research question one, and developments that occur in terms of actions and knowledge, during and after the teacher education programme. Firstly, there appears to be an increased presence of community, collegiality, and collaboration in the staff room. This is then translating itself into the exploration of resource, and a sharing of knowledge, and opportunities. Through this sharing of ideas, Kelly’s understanding of technologies is “snowballing”, which suggests rapid growth from something starting out as quite small. Within this situation of ideas being shared, and bigger developments growing from seed, there are echoes of Wenger & Snyder’s (2000) work on how communities of practice can also form through an initial cultivation. In this case, there was no deliberate cultivation, but the workshops appeared to have sparked forms of collaboration, not just for those who took part in them, but for others in the broader activity of the language centre.

This was most evident in Kelly’s explorations of different technologies with colleagues such as Kenneth, and the IT department, and her efforts to introduce tools such as Camtasia, and another named Teacher’s Pet (FG3a, p. 49) into her own practice, and the practice of others, if they were interested. Her ambitions, and a sense of change in the form of support that she possibly requires in order for this snowballing to continue, are summed up in her closing words of the final focus group session, where she is having a discussion on the future usage of Moodle, and she digresses slightly in saying that “hopefully if we get the Camtasia thing, I can also give more feedback through that” (FG3a, p. 52). This then appears to be a suggestion of need for support in terms of resource, rather than further education, or ‘training’ as she herself had a continued tendency to describe it.
However, as the session closed, there was a sense that for this support to be offered it would require others to become engaged in the venture, whether that was the IT department or the teachers showing enough interest to support funding for the programme. Here then, even though she seems in much greater control of the variables shaping her practice by the end of the teacher education programme, and the management of resources in her classroom, there are still some aspects of resource she has no direct control over in the broader system of activity, and this affects her actions.

**7.4-iii Summary of developments in knowledge**

As the programme came to an end, in order to get a sense of developments in Kelly’s knowledge and actions, it was important to trace the path of her journey from where she had been at the outset, and where she was now as a teacher. In the beginning she was new to EAP, and drawing on a knowledge base shaped by ELT training and experience, where she seemed to have had limited exposure to technologies in her practice, despite CALL having been a feature of ELT for decades. Indeed, as discussed earlier, at one point, it appeared as if she aspired to a “stripped down, technology free environment” as described in Thornbury (2000).

Now, after the workshops, there was a greater synergy between her use of technologies, and the pedagogical strategies she used to facilitate the communication and interaction that seemed central to her sense of practice. Going back to the first focus group session, Kelly’s take-up of technology was initially slow, and characterised by a sense of resistance to the hardware. Now though, she has both knowledge of, and ambitions for, the use of a broader range of technologies in her teaching. As such, she now appears to meet Koehler & Mishra’s (2009) definition of enacting a TPK knowledge base, which could become TPACK according to the content and focus of particular lessons. It would be interesting then to observe her teaching once again, to see her “knowledge in action” (Kirk, 2012), whilst remembering that the purpose is not to analyse her practice for the existence of TPACK, but to see what developments have occurred, and how these have shaped practice.
7.5 Vignette of Kelly’s practice after the programme

Once again I observed Kelly teaching a Graduate Diploma (Pre-Masters) class, as in her first vignette, with the focus of the lesson being the language of cause and effect essays; adapted from the Oxford English for Academic Purposes Upper-Intermediate textbook (de Chazal & McCarthy, 2012). Thus, it was a writing class based around a presentation of the target language leading up to less guided practice activities in which students generated examples of the target language. Once again the lesson was taught in a standard room, equipped with computer and IWB. The class was small (7 students), with a mix of genders and nationalities.

Kelly started the lesson with students being shown examples of the target language on the interactive whiteboard before doing an exercise in which they had to find examples of this language in a worksheet that was designed in Microsoft Word. The focus of the lesson was ‘Analysis & understanding of concluding paragraphs’, as a form of preparation for students’ own forthcoming research projects, not in English, but in their specialist area of study. This feeds into BALEAP’s (2008) emphasis on subject-specific work, and de Chazal’s own focus on specificity in EAP classes (2012). It also again goes back to Shulman’s initial conceptualisation of PCK (1986, pp. 8-9), and the need for teachers to be able to transform and represent subject matter as appropriate, according to context.

When students had completed the first exercise on their own they then compared answers with their partners before Kelly elicited responses at whole group level. While doing this, she wrote up the answers on the interactive whiteboard and used its highlighting features to demonstrate how sentences are constructed and how the different parts interconnect with one another, and then separate sentences come together at paragraph level. By using the technology in this way, it was a more visual experience for students and it allowed the process of elicitation to flow more freely than with use of a traditional whiteboard/teacher talk approach, as in Mayer (2005, p. 2). The basic highlighter functions of the interactive whiteboard also facilitated annotation of examples.
Interestingly, in Kelly’s elicitation stage, she was very careful to involve all students and to address their individual needs, to pause for pair work and reinforcement where necessary, and to concept check that all students were following the gist of what was happening in the lesson. This was significant because of her consistent emphasis on student needs, and interactivity, during the focus group sessions. Another way in which she facilitated this was to actually use material that had a real-life connection to students’ own experiences. One of the texts was about factors that improve exam results, within which there was a section on the impact of small classes on student performance. This material was thus authentic, appropriate, and engaging; acting as a supplement to the central instrument of the Oxford EAP textbook, which provided the base from which to integrate other authentic materials.

By bringing in authentic materials with a disciplinary dimension, and then concentrating on the texts at this stage of the lesson, Kelly was demonstrating further competency in line with the criteria laid out by Shulman (1986), and through the way in which she was teaching it, prioritising PCK over TCK, and TPK, when evaluated through Koehler & Mishra’s (2009) definitions. However, when she returned to the use of technologies, TPK again came into play. This happened in the next activity, which was to look at a range of academic sources and find examples of cause and effect language, as she wrote up the choice of essay topics on the IWB. This work on the IWB then generated a brainstorming session where the technology was used in a particular way to advance student learning and understanding of specific subject matter, as in Koehler & Mishra’s (ibid, p. 66) description of TPK.

This was the point at which I left the lesson, having seen that it was moving towards less guided production of language. Students, at this stage, appeared to have a solid grasp of the target language and how to use that in the context of incorporating sources into a piece of academic writing. Kelly had also adapted her role from direct instruction at the outset to becoming more of a facilitator as the lesson progressed; scaffolding the students towards understanding, as stipulated in BALEAP (2008, p. 7), and as
similarly exhibited in the first lesson which I had observed. As in the first vignette of practice, technology played a normal and unobtrusive role in Kelly’s classroom, where most of the focus was on the type of language work described in BALEAP’s (2008) references to “text processing and text production”, and the language of “academic discourse” in terms of “grammar and syntax at the level of phrase, clause, and sentence” (p. 5).

7.6 Discussing developments in practice

7.6-i Freeze in some areas of Kelly’s practice

At the time of the final focus group session, Kelly had been talking about how her interest in something new tended to snowball (FG3a, p. 51). In her observed lesson, there was not much evidence of an interest in technology having continued to snowball, but her use of authentic texts certainly had. Thus, to start off the individual interview, I asked her for a general overview of developments in her practice, since the last focus group session. Her response was interesting in light of her earlier comments with regard to using Camtasia, and the way in which the focus group session had ended.

She says that with some technologies her interest has continued, and with others it has not. She then points out that “it has reached a bit of a dead end with Camtasia” (II1, p. 65). This though, she stresses, is “not because of anything to do with the software itself”, or that she “was suddenly reticent about using it” (ibid). Rather, she explains that “the best way to put it is that things got in the way” (ibid). This caused her to become “distracted” and then to “not push for that enough” in terms of getting support for the resource from “different managers or the people who hold the purse strings basically” (ibid).

That echoes Engeström’s (1999, p. 19) reference to the impact of socioeconomic factors on an individual’s actions. Here, we can see the institution’s influence in terms of ‘spending’ time and money. The lack of time, and the suggested difficulties in accessing finance, have caused FG3’s ‘spark for change’ to subside into the background. This is important, in light of simultaneous ventures
involving iPads, where there seemed much greater organisational support. Kelly appeared to have reached a point where her usage of varying technologies was going to ‘snowball’ but then was not given further impetus for this, and so went back to reliance on the instruments most readily available to her. This was a combination of IWB, Word, Moodle, and the Graduate Diploma’s core Oxford EAP textbook (de Chazal & McCarter, 2012).

This though should not be taken as a regression. Rather, it shows a good integration of TPACK’s various categories and the ability to use resources where appropriate, as provided, or as readily accessible. Furthermore, the knowledge she gained of other instruments did not go away, as suggested in FG1a, p. 3 where she spoke of getting “out of the habit” and forgetting about “training”. Now, in referring to Camtasia, she says that “I suppose what’s interesting is that as we’re coming to the end of term now it’s resurfacing, the idea of using it again is resurfacing” (II1, p. 65).

This reference to “resurfacing” of usage and knowledge suggests that there have been developments in terms of both research questions. Regarding her actions and knowledge, as in RQ1, she now appears to have embedded TPK in such a way that it is not dependent on recent education, or usage of a particular instrument. This has also shaped her specific professional practice of using technology in EAP teaching (RQ2), in that she seems better able to make strategic, pedagogic choices about how and when to use technology, as a means of shaping the subject matter for students, according to context and situation, as in Shulman (1986, pp. 8-9). However, there may be a sense that most of these developments took place during, rather than after, the teacher education programme, and that this development has now slowed down in the couple of months since the programme ended. With greater support, or impetus, Kelly might well have become a broker of activity, in introducing Camtasia as an accepted means of giving electronic feedback to students. This did not happen, for the reasons, she has previously listed, and I was then left wondering whether her use of more established technologies in the language centre’s system of activity had also reached a dead end.
7.6-ii Consolidation and change in other areas of practice

When I moved on to asking Kelly about how she was using technology in her lessons, she provided several examples alongside a rationale for doing so, which was a very interesting response. Aside from her continuing use of PPT and the IWB “as a visual reference” (II1, p. 70), as evidenced in her second vignette of practice, she talks about how she has been using technology for “playing any kind of listening or video material” (ibid). Added to this, she is still using Moodle outside of lessons, with students “submitting their own work, through submitting assignments, and hopefully participating in the forum on there, which is for discussion” as well as “for storing PowerPoints and work so that the students can access it for self-study and for revision” (ibid).

This use of Moodle suggests continuance rather than change, whereas more obvious changes occurred in other areas of practice. One seems to come in her usage of text processing and text production, as in BALEAP (2008, p. 8), and as evidenced in the second vignette of practice where she was looking at the function of language in a text, as a strategy for students’ production of texts. Through doing this, she has a growing sense of PCK, that is not limited to language as content, as in Çelik & Simpson (2013), but contains disciplinary focus, as envisioned by Shulman (1986), and then by Mishra & Koehler (2006), and Koehler & Mishra (2009), in terms of its synergy with overall TPACK. She shows good understanding of both the substantive and syntactic structures (Shulman, 1986, p. 9) of EAP preparation for postgraduate studies, in both her actions and dialogue. She talks about getting students “to notice the particular structures in their context and then to analyse it and to let students apply that by themselves” (II1, p. 71), whilst also having a focus on “what’s on the syllabus, or depending on what the goal is” (ibid, p. 67), which echoes BALEAP’s (2008, p. 7) focus on syllabus development.

Through enacting such competencies of BALEAP (2008), in line with practice suggestive of PCK, Kelly could also be said to be bringing into play a new synergy, whereby BALEAP competencies
become part of the syntactic structure of EAP, if treated as a subject in its own right. Therefore, again this links the activity system to the TPACK framework because BALEAP’s competencies then become a presence establishing rules for both parts. Kelly, over the course of the programme, has moved from an early emphasis on communication and interaction, as in FG1a, to more of an understanding of how to locate “the methods, practices, and techniques of communicative language teaching” within specific academic contexts, which in turn require a particular set of tasks and processes (BALEAP, 2008, p. 8) in order to make the subject matter comprehensible to students (Shulman, 1986, p. 8).

Regarding those students, another significant point is that from the outset Kelly’s knowledge base was strong in terms of key areas such as “understanding how students learn, general classroom management skills, lesson planning, and student assessment” (Koehler & Mishra, 2009, p. 63). It may then have been this strong base of PK that helped give shape to other developments, and in turn became strengthened in itself, so as to absorb and embed the TK, which may have been a scary aspect of teaching at the start. Come the end of the education programme, there is a real sense of Kelly being more in control of her classroom and her course, and the knowledge components interacting with “dynamic equilibrium” (Mishra & Koehler, 2006, p. 1029), and “flexibility” (Koehler & Mishra, 2009, p. 60) to produce “effective teaching” (ibid, p. 62).

7.6-iii Technology as a greater part of Kelly’s practice

As shown in the previous sections, Kelly has come far in terms of her use of technology, and her perceptions of its usage in practice. From a point of seeing it as scary to admit lack of knowledge about an aspect (FG1a, p. 4), she ends up being selective in aspects of programmes that she uses in her teaching. It was also interesting that there was such a snowballing of interest and usage at the middle stage of the workshops, and then this reached what she calls “a dead end” with particular tools such as Camtasia (II1, p. 65), whilst continuing with Moodle, the IWB, and PPT. Other aspects appear to have moved from something that she was
interested in at the start, to something that became a normalised part of her practice later on, as in cases referred to in Bax (2003) and Motteram (2013). One leading example of this is in the use of audio, which she aspired to in FG2a (p. 36), and has then adapted to a regular part of her practice by the end of the programme, as supported by her dialogue in the individual interview (II1, p. 70).

7.7 Overview of developments in Kelly’s practice

Overall, Kelly’s journey has been one of fast development at the outset, and then consolidation as she sought to develop her practice in line with contemporary ideas of what should happen in the EAP classroom (BALEAP, 2008; de Chazal & McCarthy, 2012), and how best to represent the ideas of the subject to students (Shulman, 1986). Of the three teachers in the study, I would say that her practice is most in line with the BALEAP Competency Framework, since this also places technology as “something in the background” (II2) which needs to be understood and integrated into delivery so as to “reflect academic practices” (2008, p. 8).

Kelly has thus travelled quite a distance in a very short space of time, and this was summed up in her own words in a second individual interview, when I asked her to explain how she feels she developed over the course of this research study. Her answer was that “I’ve got more of an idea of English for Academic Purposes and the different kind of skills that students need.” Added to this, she felt that she had developed through having a more serious and long-term approach to her practice, not just for herself, but also for the students for whom so much is at stake (II2). Thus, from start to finish, the emphasis on meeting the needs of students is central to her work, but this has moved from not only giving students “the knowledge or the language” (II2), but also the support “to go on and do very well at university” and to “be okay on their own by the end of the course” (ibid). Ultimately, then Kelly’s sense of practice is now more focused on the academic context, and a broader sense of “overall educational purposes, values, and aims” (Koehler & Mishra, 2009, p. 63), than on what she goes on to define as “short term learning for learning’s sake” (ibid).
CHAPTER 8: Cross-case comparison of developments in the practice of the three teachers

8.1 Aggregating findings of the individual case studies

When the stories of the individual cases have been reported, Robert Yin (2009, pp. 130-163) suggests that the journey should end with cross-case synthesis as a means of “aggregating findings” (p. 157). This, he argues, shows the reader how the research questions have been addressed, and findings supported by data (ibid). He also recommends reviewing individual cases, and presenting a summary of key features in a diagrammatic format, which has been done for each case, shaped by analysis of the key categories and themes to emerge from the data sources, particularly the dialogue. This is perhaps particularly important in a research story where I have opted to present details of each case in a separate chapter leading up to a synthesised comparison.

The chapter has been structured in such a way so as to restate the research questions, and then present a diagrammatic overview of developments in each of the three cases, before summarising the main developments in the cases as a whole, as a precursor to investigating these developments in greater detail. Within this, there will be a discussion on how these developments relate to practice, and how they link in to the theoretical framework, as well as the lessons they provide for EAP/ELT and teaching as a whole. At the end of the chapter, the conclusion will feed into the final part of the thesis, which is the contributions section.

In order to again stress the importance of knowledge, actions, and professional practice to the study, it is important to restate the research questions, voiced in the following manner at the outset.

Main research questions:

(1) What developments occur in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technologies in the classroom?
(2) How do these developments shape or reshape EAP teachers’ specific professional practice of using technology in EAP teaching?

Sub-questions:

How do teachers articulate their sense of EAP as a subject and EAP teaching as a profession?

Does technology become embedded in teaching to a greater extent after the workshops? (to inform RQ2).

8.2 Overview of the individual cases

8.2-i Developments in Victor’s practice

Victor, from the outset, came across as having a personal sense of professional practice, and critical experience of development, already asking questions of his pedagogy (Mishra & Koehler, 2006, p. 103), as in evaluating the benefits of Professor Michael McCarthy’s visit to his former workplace (FG1b, p. 18). He had identified tensions and contradictions (Engeström, 2001) surrounding the use of technology in teaching, particularly within areas of institutional support for resource, and the in-vivo theme of using technology for technology’s sake. His sense of EAP, as a subject appeared to have been shaped by his past experience and pedagogical knowledge, particularly with regard to the rules and expectations of ELT, within which interactivity played a key role. This was to continue through his developmental journey, but a change would come about in gaining a broader sense of what EAP entailed, in integration of CLIL approaches, or what he labelled as CLIL, even if slightly different to some areas of the literature, as in Krashen (1981), Marsh (1984), and Hutchinson & Waters (1987).

At the outset, Victor’s initial focus on the object of EAP was in getting students to write essays, but by the time of his second focus group session, this had shifted towards a greater emphasis on self-access and blended-learning opportunities. He was now using technology to facilitate communication, through the VLE, but the

7 Categories and themes are listed in italics within paragraphs to preserve flow of the narrative
The greatest change in Victor’s practice would arise in the periods between the second and third focus group sessions, as signs of **TCK** began to emerge, after the synergy of **TK** and **PK** to create **TPK**, and **PCK** in transforming subject matter through use of technology. Within this period, he developed an interest in the use of iPads, and introduced *new instruments* into the language centre’s activity system, as a vehicle for his **CLIL** approach. By doing so, he became a broker of activity, as in Wenger (1998), and Kimble et al (2010), and enacted further examples of **TPK** and **TCK** in his practice.

The main developments in Victor’s case are thus summarised as follows in a diagrammatic representation provided as Figure 13.

**Figure 13 – Summary of main developments in Victor’s knowledge, actions, and practice in the research journey**

<table>
<thead>
<tr>
<th>DEVELOPMENTS IN KNOWLEDGE</th>
<th>DEVELOPMENTS IN ACTION</th>
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<tbody>
<tr>
<td>(1) Increased technological &amp; technical knowledge of core resources (IWB, Moodle, PPT, Microsoft Word)</td>
<td>New and differing uses of PPT, Word, and IWB – (1 &amp; 2)</td>
</tr>
<tr>
<td>(2) Increased synergy in TK and PK to establish TPK</td>
<td>Evolution of Moodle from a course management &amp; communication system, to an integrated tool with iPads (1 &amp; 2)</td>
</tr>
<tr>
<td>(3) Increased awareness of using technology to scaffold students towards autonomy (TPK)</td>
<td>Getting students to use technology for their own ends (3 &amp; 4)</td>
</tr>
<tr>
<td>(4) Developing new ways to motivate students (PK and PCK)</td>
<td>Brokering – introducing iPads into the activity system (4 &amp; 6)</td>
</tr>
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<td></td>
<td>Making CLIL an essential part of practice &amp; increased use of subject-specific textbooks (5)</td>
</tr>
</tbody>
</table>
(5) Increased TCK and PCK – using technology as a vehicle for content and transforming subject matter for teaching through differing tools

(6) Increased knowledge of resource through exploration, and institutional support

(7) New synergy between existing ELT/EAP knowledge base, and new knowledge found in TPACK components

More finesse delivery of skills classes – e.g. through using iPads for presentations, and SimpleMind + for mind-mapping (5 & 7)

New ways of focusing on language work through technology – e.g. recordings with Chinese students in pronunciation classes (5 & 7)

<table>
<thead>
<tr>
<th>MAIN WAYS OF PRACTICE BEING RESHAPED</th>
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<tbody>
<tr>
<td>(a) <strong>CHANGING SENSE OF PRACTICE</strong> – what EAP is all about – move from focus on writing essays to more holistic academic understanding &amp; greater emphasis on content integration</td>
</tr>
<tr>
<td>(b) <strong>EMBEDDING OF TECHNOLOGY IN EAP TEACHING</strong> – Instruments now a normalised part of his practice</td>
</tr>
<tr>
<td>(c) <strong>INTEGRATION &amp; RECONFIGURATION OF RESOURCES</strong> – Introduction of iPads into the activity system and their reconfiguration for “customized pedagogic purposes” (Koehler &amp; Mishra, 2009, p. 66) in the EAP context</td>
</tr>
<tr>
<td>(d) <strong>GREATER IMPACT ON THE ACTIVITY SYSTEM</strong> – Through introduction of iPads &amp; integration of ‘subject’ materials</td>
</tr>
<tr>
<td>(e) <strong>CHANGE IN PERCEPTION OF CONTENT KNOWLEDGE</strong> – Relating EAP class content to subject pathway content</td>
</tr>
<tr>
<td>(f) <strong>SHARING OF PRACTICE</strong> – collaboration with colleagues in sharing of ideas, explorations, and knowledge</td>
</tr>
<tr>
<td>(g) <strong>RESHAPING THE BLEND</strong> – New blend of content &amp; language, new linkage of ‘older’ and newer technologies.</td>
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</tbody>
</table>
Matthew, at the outset, was less confident than Victor in using technology in teaching, as a result of having less technological knowledge, and less sense of what he needed to know, in order to develop the synergy required in technological pedagogical knowledge. In the beginning there were more tensions in his dialogue than strategies to deal with them, but he had a strong sense of opportunity, which he spoke of as excitement about technology’s potential.

He was keen to learn about the integration of methods and techniques, and to define the classroom in the digital age, as well as using the opportunity offered by the workshops for exploration. He did though make several references to things he perceived as barriers in his teaching, which I labelled with the in-vivo code of bear-pits, and when he spoke of getting to grips with technology, there was also a sense of getting to grips with rules.

These rules seemed not just connected to the rules of ELT, and a sense of there being a right way of teaching, and an established way of learning. They also related to the rules of activity, in that because of the provision of resource, teachers were expected to have a base of TK, and TPK, to know what they should do with the provided resources. In the beginning though, Matthew seemed slightly uncertain about how he should utilise this range of new resources, which of course were highly protean (Koehler & Mishra, 2009, p. 61; McGrath et al, 2011), and thus liable to quickly become “yesterday’s news” as he suggested in FG1a (p. 14).

Following the initial workshops, by the time of the second focus group session, changes in action was becoming a theme of Matthew’s work, particularly in the way that he was using the VLE, as a source of interactivity for himself and the students. Through his work on Moodle, he was enacting examples of the synergy between his newly acquired TK and PK, to construct TPK, and develop strategies that helped him overcome the initial bear-pits, as well as changing activity in his own classroom. Now, he was
seeing technology as a means of fostering communication rather than the barrier which he perceived it as being at the outset, and was *reshaping the blend* of class work, and self-access activities.

Come the third focus group session and then the individual interview, after completing the workshops, there were continuing *changes in action*, as well as increased focus on learning through collaboration and exploration, which I incorporated into an overarching theme of *community*. He was placing greater emphasis on *student autonomy* and *scaffolding*, as well as enacting instances of *TCK*, and elements of *PCK* in his work, though focusing more on language and skills, as the main content of his lessons, than on subject matter related to specific disciplines.

Through doing so, and relating this to Vygotksy’s (1978, p. 56) spiral of knowledge, Matthew’s development was characterised by a sense of using his *newly acquired TK and TPK* to reshape and strengthen his existing ELT knowledge base. Though elements of *TCK* and *PCK* were found in his work, he did not always locate his methods and practices in a discipline-specific academic context, as expected by BALEAP (2008). Therefore, even though technology became more embedded in his lessons after the workshops, his sense of practice appeared to be shaped, throughout the study, by his *ELT/CLT knowledge base*, rather than by a changed understanding of the main focus of EAP teaching, as defined in the literature. This though does not necessarily have to be treated as a negative, and indeed challenges particular lines of argument found in BALEAP (2008), and more explicitly in Martin (2014).

The main developments in Matthew’s case are thus summarised as follows in the diagram provided as Figure 14.

**Figure 14 – Summary of main developments in Matthew’s knowledge, actions, and practice in the research journey**
<table>
<thead>
<tr>
<th>DEVELOPMENTS IN KNOWLEDGE</th>
<th>DEVELOPMENTS IN ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Increased technological &amp; technical knowledge of core resources (IWB, Moodle, PPT)</td>
<td>Evolution of Moodle usage in 3 stages – content &amp; support, to Facebook style self-access, and then as a regular source of linkage to classroom activities (1 &amp; 2)</td>
</tr>
<tr>
<td>(2) Increased synergy of TK and PK to facilitate TPK</td>
<td>Early usage of social media affordances of Moodle (1 &amp; 2) and later integration of authentic materials into lessons through podcasts, recordings, and forums on news websites etc (1, 2, &amp; 3)</td>
</tr>
<tr>
<td>(3) Development of strategies to bring a real-life, real-language context to the EAP classroom (PK, TPK, TCK, &amp; elements of PCK)</td>
<td>Using technology rather than the self to make teaching ‘personal’ e.g. claim of personalising lessons with the iPads (4)</td>
</tr>
<tr>
<td>(4) Changed awareness of the role of self in teaching</td>
<td>Collaboration with others influencing actions to a greater extent (4)</td>
</tr>
<tr>
<td>(5) Development of strategies and strategic knowledge for teaching language in a more systematic way, in line with skills (PK, TPK, and PCK)</td>
<td>Using technology for language work and the crafting of emergent language e.g. work with iPads and Evernote (5 &amp; 6)</td>
</tr>
<tr>
<td>(6) New knowledge of using technology to teach and represent language as subject matter (TK, TPK, TCK, PCK)</td>
<td>Getting students to create their own materials e.g. their own recordings and podcasts (6 &amp; 7)</td>
</tr>
<tr>
<td>(7) Increased knowledge of using technology for scaffolding students towards autonomy</td>
<td></td>
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</tbody>
</table>


8.2-iii Developments in Kelly’s practice

Kelly, at the outset, seemed to have more in common with Matthew, than Victor, in terms of knowledge acquired through ELT/CLT experience and training. Starting out, she voiced concerns about the dominance of hardware over humanware, as in Warschauer & Meskill (2000, p. 315). There was a sense of loss in the themes arising from her early dialogue, through loss of interactivity, absence of the human element, and lack of time for

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<table>
<thead>
<tr>
<th>MAIN WAYS OF PRACTICE BEING RESHAPED</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) <strong>CHANGING SENSE OF PRACTICE</strong> – Greater confidence in teaching language as content, and greater emphasis on linkage and variety of activities inside and outside the classroom.</td>
</tr>
<tr>
<td>(b) <strong>RESHAPING THE BLEND</strong> – New blend of classroom and self-access work - onus of creativity and creation of materials (<em>as in 1st vignette</em>) no longer just on the teacher but also on the students – engaged in co-creation of resources. Also new perceptions of blend in school and social technologies.</td>
</tr>
<tr>
<td>(c) <strong>INCREASED INSTANCES OF BUILDING PRACTICE AROUND PERCEPTION OF STUDENT NEEDS</strong> – Gradual movement from espoused theory regarding scaffolding of students towards autonomy to theory-in-action of scaffolding students towards autonomy in terms of skills and language.</td>
</tr>
<tr>
<td>(d) <strong>INCREASED EMPHASIS ON LANGUAGE AS CONTENT</strong> – New emphasis and ways of representing and delivering language as content, incorporating TPK, TCK, and elements of Shulman’s original definition of PCK (1986, p. 9). Drawbacks could exist within this, to be discussed later.</td>
</tr>
<tr>
<td>(e) <strong>EMBEDDING OF TECHNOLOGY IN TEACHING</strong> – Range of instruments, particularly Moodle in association with other technologies, now a normal part of Matthew’s practice.</td>
</tr>
<tr>
<td>(f) <strong>NEW PRACTICE SHAPED BY COMMUNITY</strong> – Sharing of ideas with colleagues, and shared exploration/instigation having a greater influence on practice than formal training.</td>
</tr>
</tbody>
</table>
training, for which there was also a need of institutional support. Kelly, therefore, seemed slightly adrift in the system of activity, as she began her transition to a new EAP teaching environment. However, as she increased her technological knowledge in the early stages of the workshops, changes in action began to occur, as she drew on strategic knowledge to employ strategies for interactivity, by focusing use of instruments on meeting the learning object. This was most evident in the way she reshaped use of Moodle, first of all as a tool for self-access, and communication outside of class, and then as a way of introducing academic context through forums discussing topics related to students’ specific pathways.

Very soon, Moodle became an embedded part of her teaching, as normalised as conversation in the ELT classroom. At the same time, a growing sense of content knowledge came to the fore, more discipline-specific than in the cases of the others. She developed this through exploration, collaboration, and a combination of accident and snowballing of knowledge. This snowballing of knowledge appeared to happen very quickly in the middle to latter stages of her developmental journey, and then slowed down again, for possible resurfacing, when embedding of knowledge occurred.

Through embedding this knowledge, she was demonstrating an increased synergy between categories of knowledge, enacting what Kirk (2012) terms knowledge-in-action through activities that drew on different aspects of a TPACK knowledge base. Towards the end, in observations and her dialogue, there was also change in actions with regards to instruments, through a new focus on text as a teaching tool, as in BALEAP (2008, pp. 3 & 8). Having acquired a better synergy of TK with other elements of knowledge, Kelly seemed better equipped to then make strategic choices about when to use particular technologies, based around an emphasis on the subject matter, as in Shulman (1986, p. 9).

However, unlike Matthew and Victor, there is a sense that by the end of the education programme, Kelly does not see herself as being on a linear continuum of developing technology-related knowledge. Rather, her actions and dialogue are more suggestive
of development occurring in the form of a spiral, as in Manning & Payne (1993), in which she goes back to reflect on the content element of her EAP teaching, so as to find the right balance of this alongside the technology. In doing so, she ends the programme still asking questions of her own pedagogy (Mishra & Koehler, 2006, p. 103), in order to build upon and further activate the “schema of knowledge” (Piaget, 1970) underpinning her practice, as discussed in the specific context of TPACK in Ward & Kushner-Benson (2010). The main developments in Kelly’s case are thus summarised as follows in the diagram of Figure 15.

**Figure 15 – Summary of main developments in Kelly’s knowledge, actions, and practice in the research journey**

<table>
<thead>
<tr>
<th>DEVELOPMENTS IN KNOWLEDGE</th>
<th>DEVELOPMENTS IN ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Increased technological &amp; technical knowledge of core resources (especially Moodle)</td>
<td>Using Moodle as a forum for communication (1, 2, &amp; 7)</td>
</tr>
<tr>
<td>(2) TK &amp; PK interacting to create TPK and increase awareness of using technology in particular ways</td>
<td>Using different aspects of Moodle for different purposes &amp; grading content – course management, forums etc (1, 2, &amp; 3)</td>
</tr>
<tr>
<td>(3) Greater awareness of using and adapting technologies (TK)</td>
<td>Use of Camtasia to record lectures and attempt to broker its usage for variety of tasks – lectures and feedback – (2, 3, &amp; 4)</td>
</tr>
<tr>
<td>(4) Knowledge of new resource (acquired through interaction with other colleagues) and increase in TPK and TCK, which leads to subsequent ‘snowballing’ of knowledge</td>
<td>Sharing of ideas and exploration of resource with other colleagues (4)</td>
</tr>
<tr>
<td></td>
<td>Going back to use of technologies at end of term when time and circumstance allows (4)</td>
</tr>
<tr>
<td>(5) Embedding of TK/TPK for future reference</td>
<td>Integration of discipline-specific materials on Moodle and in class (6)</td>
</tr>
<tr>
<td>(6) Greater awareness of interplay of context (language) and content (disciplines) – PCK</td>
<td>Grading of content according to language needs (6 &amp; 7)</td>
</tr>
<tr>
<td>(7) Knowledge of how to apply CLT principles to EAP and disciplinary situations – enactment of synergy between new, and existing knowledge</td>
<td>Changes to communicative activities, in class and on Moodle, to give them more of a disciplinary focus (7)</td>
</tr>
</tbody>
</table>

**MAIN WAYS OF PRACTICE BEING RESHAPED**

(a) *Changing Sense of Practice* – Greater synergy between the methods and practices of CLT, and the broader academic context of students’ lives as in BALEAP (2008, p. 8).

(b) *Reshaping the Blend* – Using technologies such as Moodle and Camtasia to change the delivery of content, and the connections between class and self-access activities

(c) *Embedding of Technology in EAP Teaching* – Making technologies such as Moodle, an essential but unobtrusive part of teaching, whilst at the same time keeping an emphasis on the human element.

(d) *Deeper Understanding of Content Knowledge* – More in line with Shulman’s (1986) concepts of PCK & CK, and also BALEAP (2008).

(e) *Sharing of Practice* – collaboration with colleagues in sharing of ideas, explorations, and knowledge
8.3 Cross case summary of developments

Before going into detail on some of the main developments, it seems important that an overview is provided at this stage. Thus, the following findings have emerged across cases and will be discussed in more depth throughout the rest of this chapter. It is important to highlight these at this stage to provide a sense of final direction in the research journey, and also to build towards the claims of a significant contribution to knowledge in the closing chapter. It should also be stated that this is a summary of developments in the knowledge, actions, and practice of the three teachers whose stories have been told in chapters five to seven, even though all participants experienced some form of development along the way. That though is a story to be narrated at another time, as the focus now is on Matthew, Kelly, and Victor.

In the case of all three aforementioned teachers, there have been a number of significant developments in actions and knowledge both during and after the teacher education programme on the use of technologies in the classroom. Essentially, these developments have led to technology becoming more embedded in their teaching, both inside and outside of the classroom. There has been a gradual movement from tentative exploration at the outset, particularly in the cases of Matthew and Kelly, to an almost fluent usage of a range of technologies. Significantly too, especially in Kelly’s case, even when not fully fluent in the affordances of new tools, the teachers appear more comfortable with using ‘aspects’ of a technology – as seen in Kelly’s usage of Camtasia for example.

Interestingly though, even if technology has become more embedded in lessons, all three teachers articulated their sense of EAP as a subject in slightly different ways, with the less-experienced teachers, at the outset, placing more of an emphasis upon the practices, methods, and techniques of CLT and ELT. For Kelly, more than Matthew, this emphasis changed over the course of the study, whilst Victor claimed that his sense of practice remained consistent. Further to this, it appears that content knowledge, although historically problematic in ELT contexts, and
individual perceptions of content knowledge, plays a major role in EAP teachers’ understanding of their practice, and the actions they take with regards to the integration of technology into their professional practice. Finally, as regards understandings of EAP, Matthew’s use of communicative approaches in the classroom appeared to strengthen as technology became more embedded in his teaching, to the extent that what he was doing in the classroom challenged some of the notions in the BALEAP (2008) framework. Rather than taking the communicative affordances of resources such as podcasts, and consciously reshaping them to be more ‘academic’, he used them in their natural form, and through these tried to foster the acquisition of generic skills. As such he appeared to be basing his classes around what he saw as the needs of his students, rather than expectations of what EAP is supposed to be.

The fact of each teacher using particular tools according to particular learning situations as espoused by Mishra & Koehler (2006), further suggests that teachers’ understanding of what is required in terms of content may also influence their choice of tools that they use to mediate the object and outcomes of their teaching. This was perhaps most apparent in the work of Victor and his integration of iPads into the system of activity, although Matthew’s use of podcasts, Moodle, and iPads was suggestive of the same, as were Kelly’s choices regarding usage of Camtasia.

Referring back to Mishra & Koehler (2006), it appears that an increase in the components of TPACK has a clear impact on professional practice, and on the broader activity of the workplace. TPACK, as a whole, does not have to be enacted, at any one time, or on a recurring basis in order for its influence to be apparent. Indeed, as the literature suggests, it is a difficult construct to “tease out” in practice (Koehler & Mishra, 2009, p. 66). This study has shown that enactment of, or synergy between any of its constituent parts (TK, PK, CK, TPK, TCK, and PCK) can also serve as the basis for what Mishra & Koehler (2006) term as expert teaching.

Yet as Shulman (2012) has come to argue, one of the most crucial areas of expertise in the classroom is the ability to make subject
matter comprehensible to students, as all three teachers have worked hard to do, in sourcing, adapting, and delivering material for teaching, such as in examples of Matthew and Kelly’s grading of language according to student levels, through interactions on Moodle or other more authentic, interactive forums, and Victor’s use of the iPads as a presentation device in his closing vignette. As he stated then, he could have used Word and the whiteboard as he had done previously, but the iPads provided a finesse version.

Going back to Shulman (2012) the developments and forms of knowledge-in-action, over the course of this study, also suggest that the core values of his original conceptualisation of PCK (1986) have a major role to play in understanding effective teaching, and could serve as a lens through which to re-examine ways in which ‘content’ can be better understood in an EAP context, and modelled on the practices of particular disciplines, such as in instances of Kelly’s work with Humanities students.

Finally, although EAP can be seen as “a pragmatic and eclectic discipline” (Hamp-Lyons, 2011, p. 89), by the end of this study there is also an increased sense of EAP teaching as a profession in its own right, requiring a specific skill set and knowledge base, albeit very closely related to the knowledge base required of English/language teachers as a whole, as in Mann (2005). This knowledge base may not yet be fully defined, but there appears to be a growing search for definitions, not just in the literature, but also in the practice of teachers themselves. In this particular study, it has been the embedding of technology that has caused teachers to ask questions of their pedagogy (Mishra & Koehler, 2006, p. 1063), and the content they are delivering in the classroom. Such questioning and reflection on practice, does indeed seem to create opportunities for professional growth, as suggested throughout the literature on the development of knowledge for teaching.

Having provided this overview of the main findings to come about through the study, it is now important to progress to a more in-depth reflection on the key areas of practice that have been reshaped across the three cases of Kelly, Matthew, and Victor.
8.4 Key areas of practice that have been reshaped

This study has explored developments that occur in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technologies in the classroom, as expressed in research question one. Allied to that, it has gained an insight into how teachers articulate their sense of EAP as a subject and EAP teaching as a profession. It has then looked at how these developments have reshaped teachers’ specific professional practice of using technology in EAP teaching, as voiced in research question two. The reason for asserting that practice has been reshaped comes from findings in sub-question two that technology does indeed become more embedded after the workshops. Essentially, there are five key areas of reshaped practice that I wish to highlight as being most salient to this research study.

i. Changing sense of teachers’ practice

Looking at this study as a whole, there have been clear and significant changes in the practice of all three teachers, and their understanding of what practice entails. Though Victor claims that his approach has remained consistent, and only the resources have changed, observational data and parts of his dialogue suggest that there are differences in his practice by the close of the programme. His integration of his interpretation of CLIL is probably the main difference, alongside the fact that he has now reconfigured particular instruments to fit a customized pedagogic purpose in the EAP classroom, as in Koehler & Mishra (2009). Changes for Kelly and Matthew, on the other hand, are much easier to trace as a result of the way in which their TK was limited at the outset, and once this was developed, TPK became a feature of their practice very quickly, leading on to instances of TCK and PCK in Kelly’s case. The range of instruments used in the classroom, and outside, also suggests a shift in practice, as well as the ability to dip in and out of technology’s usage, as is again best demonstrated by Kelly who talks of the “snowballing” (FG3a, p. 51) of knowledge, and its subsequent embedding, and “resurfacing” (II1, p. 65).
In the above example, Kelly is drawing on TPK rather than TK alone, as is Victor when he makes the assertion, towards the end of the study, that “you can’t just experiment with technology, you need to have the way of teaching to go with it” (II1, p. 86). This captures a sense of what has happened in terms of developments in knowledge and actions, as the three teachers have gone through the education programme. Their practice, to a greater extent, is shaped by a stronger sense of a more personalised, but goal-focused, “way of teaching” with technology, which is not necessarily limited to any one instrument, even in Victor’s case; as other tools are sometimes integrated with his iPads.

ii. **Embedding of technology in teaching**

Through much of the literature on TPACK, CALL, and blended learning, there is a sense that for technology to find an effective synergy with pedagogy, it has to be a normal part of everyday practice (Warschauer, 1996; Bax, 2003; Mishra & Koehler, 2006; McGrath et al, 2011; Motteram, 2013). In this study, the embedding of technology has reshaped the practice of all three teachers, not just in the classroom, but in the work they do with students outside of class as well. Moodle serves as the best example of this, and was becoming embedded in practice from as early as the second focus group session.

The fact of already being an established part of the language centre’s activity system again shows linkage between TPACK and broader activity as in Schul (2010), but it is critical to note that provision of Moodle alone would not have guaranteed its becoming embedded in practice, as suggested in Anderson & Henderson (2004), and Oliver & Trigwell (2005). There had to be parallel provision of education in usage, and when this was provided, in the initial workshops, it served as activation for gradual integration into regular teaching activities.

Furthermore, even if Victor may have been slow to use Moodle at the start, there was a gradual embedding of other technologies around this core technology in Kelly and Matthew’s cases. Victor, on the other hand, chose to embed the use of iPads into his
practice and then, when these had become an established part of his activity, embedded Moodle into the iPads, through a specific mobile app, alongside other applications. Therefore, by the end of this study, all three teachers had found a way of using and integrating a range of technologies in their practice, “not for its own sake, but for the sake of advancing student learning and understanding” (Koehler & Mishra, 2009, p. 66).

### iii. Different understandings of content

Regarding student learning, another key area in any instance of teaching is in the delivery of subject matter, as in what it should entail, and how it should be taught (Shulman, 1986). Several voices in the literature have raised the complexity of defining content in not just English Language classrooms, but in a range of contexts (Freeman, 2002; Mishra & Koehler, 2006; Ball et al, 2008; McGrath et al, 2011; Çelik & Simpson, 2013). Again, this study has shown differing interpretations of content knowledge, and how that is organised in the minds of teachers, which feeds into Shulman’s (1986), and Koehler & Mishra’s (2009) defining of PCK.

Victor sees himself as enacting CLIL, whilst Matthew’s talk and actions suggest a focus on CLT practices in the EAP classroom, that goes against BALEAP’s (2008, p. 8) recommendations upon this. Kelly’s integration of content and language is perhaps most reflective of BALEAP’s expectations regarding discipline-specific work in the EAP classroom, as also voiced in such works as Dudley-Evans & St. John, (2009), Sloan & Porter (2010), Alexander et al (2011), Gilbert (2013), and Kirk (2013). This entails a form of disciplinary analysis that goes beyond syntactic analysis of the subject to more substantive analysis (Shulman, 1986, p. 9).

Such analysis though, in Kelly’s case, is largely possible because of her own familiarity with the disciplinary pathway that her students were engaged in, and by her own admission, their levels of English. Matthew’s *English for University Study* class, as described in his vignettes of practice, did not have the same levels of English and similar types of content integration might therefore not have been possible. Thus, he chose to focus on language as content, as in
Çelik & Simpson (2013). This, in part, was also shaped by his understanding of the object and outcomes of EAP teaching activity, as being to give students the generic language and skills they need in order to undertake future degree studies. Such an approach is markedly different from Victor who sees the object as being the teaching of concepts, and lexicon, from a specific set of subjects, with no apparent emphasis on the more substantive aspects of discourse in these subjects, as is found in Kelly’s work.

On the whole then, regarding the three teachers’ differing understanding of content in EAP, there may have been more of a need to focus on content more explicitly alongside technology in the workshops, in order to fully develop the categories relating to content knowledge in the TPACK framework. Indeed, without this synergy of content, pedagogy, and technology, it is difficult to make claims about the enactment of TPACK as a whole, as suggested in Mishra & Koehler (2006), and Koehler & Mishra (2009). This is why, as demonstrated throughout the individual cases, and in this cross-case comparison, it has been difficult to position the role of CK, PCK and TCK in the teachers’ practice, whereas PK, TK, and TPK were regular features from early on.

iv. Increased sharing of practice in the workplace

As has already been discussed in the individual cases, and this cross-case comparison, one of the most significant developments, to which there was consistent reference on the part of all three teachers, was in the increased sharing of practice. Indeed, Matthew describes this as having more of an impact on his own development than the actual workshops, whilst there is a sense that it is not just Kelly’s knowledge which is “snowballing” (FG3a, p. 50), but also her sharing of knowledge, exchange of ideas, and collaboration with colleagues. Some features of this suggested the development of a community of practice within the workplace (Wenger, 1998; Wenger & Snyder, 2000; Wenger et al, 2002), but it could equally be seen as a specific feature of practice brought about by the acquisition of new knowledge and its impact on dealing with particular tensions in activity. That tension was in getting to grips with the presence and impact of new technologies
in EAP teaching, and the informal sharing of practice was one strategy for dealing with this. Its effectiveness can be seen in the ways in which ideas were transferred between teachers and learning situations, with a reshaping of practice taking place as a consequence, such as in explorations with iPads and Camtasia, and at an earlier stage of the programme, the use of Moodle forums.

v. Reshaping the blend in EAP practice

Though blended learning and CALL have been a feature of ELT for decades, it is only in more recent times that there has been a focus, in the literature, on the integration of IT into EAP course delivery, as in BALEAP (2008, p. 8). In this research study, there has been a gradual movement towards the blending of new technologies with other forms of activity in the classroom. One of the strongest examples, again, comes through developments with Moodle. Kelly, from an early stage, had been active in using the VLE for a combination of activities, as described in Chapter Seven. Matthew’s usage had echoes of Mason’s (1998) trajectory of development, starting out as a repository for content and changing, over time, to a mix of various “event-based activities”, as described by Valiathan (2002, p. 1), including the creation of podcasts. Victor, on the other hand, was slow to integrate Moodle, reluctant even, and instead brokered new activity in the usage of iPads.

However, even though Victor’s work seems to be the most radical in terms of introducing new instruments in practice, it is important to note that all three teachers, by their actions, reshaped not only the blend for students but also for themselves. At the outset of the study, Victor was the only one of these three teachers who had knowledge and experience of integrating technology into his practice, despite limited resources in some workplaces. For Kelly and Matthew, most of their teaching experience was based upon the methods and practices of Communicative Language Teaching. Thus, when they first started out in this new teaching situation, they felt daunted by the presence of hardware, as seen in such exchanges of dialogue as FG1a (pp. 3-15). However, as they increased their technological knowledge, and found an increased
synergy between this and their pedagogical knowledge, they began to use the Moodle system to a greater degree. Furthermore, in doing so, they also reshaped the nature of activities in their classrooms, especially in Kelly’s case, by using the technology as a filter for new forms of communicative practices.

Added to this, in Victor and Kelly’s cases, the technologies they used also helped them to manage the blend of content with pedagogy, through putting lectures on Camtasia (Kelly), and delivering a range of information and activities on the iPads (Victor). Again, this shows the connection between knowledge, activity, and resource, since it was the provision of resource, as in Watson-Todd (2003) that helped them to enact their newly acquired TPK. Matthew, whose focus was on language, also used a combination of Moodle and podcasts to get students working on authentic activities outside of class (II1, p. 80).

There were attempts too to introduce other tools, or new ways of using tools, that might have further reshaped the blend of technologies, and more established practices of EAP and ELT. One such instance was in Kelly’s, and Kenneth’s, aspiration to use Camtasia as a new means of providing feedback to students. Though this never happened, due to time constraints and lack of resource, it was another attempt to change the nature and pacing of course delivery, which are key characteristics of blended learning (Valiathan, 2002).

On the whole then, new ways of thinking about the very nature of the blend appear to have reshaped the three teachers’ specific professional practice of using technology in EAP teaching. This is not just in terms of their increased usage, which is evidenced and has been tracked throughout the study, but also in the way that the new blend has reshaped other tenets of activity, such as changing the division of labour, scaffolding students towards autonomy, making them do more of the work for themselves. Furthermore, changing the blend has also changed the role played by the teacher as subject in mediating the object and outcomes of EAP activity. At the start, in observations and discussions, there was more of a
sense of teachers being at the forefront of activity, even in Victor's case, and less of a conviction in students having the motivation and ability to work more autonomously. However, by the end of the study, all three teachers were describing and enacting situations where students were far more actively engaged in the creation of content, as in Matthew’s classes, and the self-management of activities, as in Victor and Kelly’s classes.

8.5 Developments in the system of activity

In order to capture a holistic sense of development, it is important to examine other changes that occurred in the broader context of practice, during and after the teacher education programme. Throughout the data analysis process, and particularly in the focus group sessions, there was an occurrence and emergence of themes relating to broader systems of activity. This was perhaps most apparent in the references to community, and the impact of tensions on practice, as highlighted in previous chapters, but also from changes in action, the influence of instruments on practice, and the influence of object & outcomes on learning activities. Looking at these themes as a whole, and relating them to Engeström’s (1987/2001) activity theory, there are several key areas in which the practice of the three teachers, in this study, has been shaped or influenced by developments in the broader context.

i. The primary influence of tools on practice

In Engeström’s (1987) original second-generation activity system, tools are taken to mean instruments or artefacts that “mediate the object of activity”, and help to transform that object into an outcome (Murphy & Rodríguez-Manzanares, 2008, p. 443). This study has provided solid examples of EAP teachers using a range of instruments to meet the object of facilitating learning, so as to transform that learning into the specific outcome of their students’ academic progression, and preparation for university study. Several of these instruments, particularly the IWB system, and the Moodle VLE, were an established and expected part of the language centre’s activity and practices to begin with.
Kelly, for example, spoke of the fact that there was an expectation, on the part of teachers, to use technology because “*its being there implies its use*” (II1, pp. 70-71). Though there was no obligation to teach with technology, and lessons could be conducted with print materials, or what all three teachers refer to as a normal or standard whiteboard, there was a sense that usage of technologies has become a “norm” of teaching, as in Shulman (1986, p. 11), who adds that these are shaped by underlying ideological values. Again, this ties into Kelly’s sense of there being a professional expectation to use technology, not just on the part of the language centre or the students (II1, p. 71), but the profession of teaching as a whole. Matthew (FG1a, pp. 7-9) and Victor (FG1b, pp. 24-25) also share this view of technology’s usage being an expected norm of today’s educational context, and an essential part of EAP teaching activity.

Therefore, one of the first ways in which tools have influenced EAP practice is that they have come to shape contemporary rules, norms, and expectations of teaching. Matthew and Victor appear to see such developments as being wholly positive, although Matthew did have inhibitions at the start. Kelly, on the other hand, retains a consistent reservation about the loss of natural interaction, whether spoken (FG1a, p. 9), or through more “*superficial and shallow*” forms of engagement with the written text (II2). Interestingly though, some of this initial criticism appeared to be shaped by rules of CLT rather than EAP. As Kelly’s experience of EAP grew, she then used Moodle to reshape activity, and create new forms of communication in a self-access context (FG2a, p. 39).

This use of tools to reshape activity is a significant feature, and one that occurs in the practice of all three teachers. Over time, each teacher appears to find particular tools that work at a given time, or in a specific situation. Kelly, for example, uses Camtasia in a time of particular need, but then reaches “*a dead end*” (II1, p. 65), whereas she uses various aspects of Moodle throughout. Within this usage of Moodle, she also reshapes the communicative aspect of her teaching, so that it changes from a focus on conversational activities in the classroom, to written discussions outside of class. Here then, aside from her increased knowledge gained through the
workshops, she can do this because of the tools at her disposal. In this way, knowledge and the tools within the activity system, acting in synch, are helping to change her practice, as in Schul (2010).

Matthew also uses Moodle quite extensively, and shows signs of developing his usage, parallel to the acquisition of new knowledge, but through podcasts, and some usage of iPads, also brings new tools into the system of activity. Victor though is the one who brings about the greatest transformation in the activity system, in terms of resources and instruments used to “mediate the object of activity”, and helping to transform that object into an outcome (Murphy & Rodriguez-Manzanares, 2008, p. 443). Indeed, he could be seen to meet the criteria of a broker of activity (Wenger, 1998; Kimble et al, 2010), through his introduction of the iPads, and the way that he uses these to address a set of tensions that he identified, as early as FG1b, particularly a sense of education lagging behind the outside world. These new instruments that he brings into the language centre’s activity system do not just change his practice, but also reconfigure the original purpose for which the tools were intended (Koehler & Mishra, 2009; Motteram, 2013). Added to this, Victor’s use of iPads as a vehicle for what he perceives to be “CLIL” (II1, p. 84), and Matthew’s usage of them as a vehicle for crafting students’ language (II1, p. 80), shows how particular tools can also be configured for different purposes in the same systems of activity, as was again the case with Kelly’s suggestion of different ways of using Camtasia (FG3a, pp. 49-50).

However, in stressing the impact of technologies on practice, it must be noted that the instruments of EAP teaching do not necessarily have to be electronic. Language itself is a mediator of activity (Murphy & Rodriguez-Manzanares, 2008, p. 443), and it is an instrument of particular salience to the EAP/ELT context. All three teachers offer instances of practice when the focus is on the production, usage, and crafting of language on its own. Furthermore, in both Kelly and Victor’s cases, the use of texts and textbooks related to specific disciplines, becomes more of a feature in the later stages of the study. Victor talks about this as being part of his drive towards CLIL, whilst Kelly focuses on the features of
language and styles of writing salient to Humanities disciplines. Interestingly too, Victor talks about using Business textbooks rather than English textbooks (II1, p. 88), whilst Kelly supplements the De Chazal & McCarter (2012) EAP textbook with what she calls “real academic texts” (II1, p. 68). Matthew, on the other hand, moves towards what he describes as “authentic language” that he has mainly acquired through websites, and students’ work with podcasts (II1, pp. 80-81), as a key instrument of his teaching.

ii. The influence of other tenets of activity

Throughout the focus group sessions and the individual interviews, there was a consistent emergence of themes also relating to other areas of activity, as in Engeström (1987). Foremost amongst these were those relating to collaboration, peer support, sharing & exchange of ideas with colleagues, and influence of an instigator. There were also references to changes in the division of labour, and rules & expectations, particularly rules of teaching and learning, and the general rules of activity in the language centre. These, though significant, were not as frequent as references to community, which emerged as an essential theme, from as early as the second focus group session, when collaboration and exchange of ideas became a strategy for dealing with the tensions of teacher isolation, and lack of knowledge regarding new technologies. This, of course, echoes much of the literature on communities in the workplace, such as Hargreaves & Tucker (1991), Wenger (1998), Dunne, Nave, & Lewis (2000), and Darling-Hammond & Richardson (2009), as well as supporting Engeström’s (1987/2001) emphasis on their importance in systems of activity.

Of the three teachers, Victor was the first to recognise the importance of community and sharing of ideas, making reference to this at the point of describing Professor McCarthy’s visit to his old language school (FG1b). The others did not really start to talk about the sharing & exchange of ideas until the second focus group session, after starting to build up their TK and TPK. However, it was in the third focus group session, mainly FG3a, and surrounding developments in the workplace, that references to
community and the sharing of ideas became most strongly linked to developments in practice. One such point in time was when Kelly discussed her explorations with Camtasia (FG3a), firstly through collaboration with the IT department, acting as brokers of this new resource, and then with colleagues in the workplace.

Again, this instance of Camtasia provides a good example of how themes and tenets of activity can overlap, as well as working in sync with Koehler & Mishra’s (2009) components of TPACK. Through collaboration within the broader community of the language centre’s activity system, Kelly and others became familiar with new tools, which then changed the division of labour through placing greater emphasis on self-access study, and addressed tensions regarding lack of time for content delivery. This was also evident in the way that Kelly used Moodle, and Matthew used both Moodle, and podcasts. In doing so, both teachers were better able to “stage the sequence of learning activities from guided to facilitated to autonomous” (BALEAP, 2008, p. 7), and meet one of the most critical outcomes of EAP teaching.

At the same time, understanding those outcomes, or having a particular perspective on what the outcomes were, also shaped activity, or offers a lens into how this activity could be reshaped for the future. As suggested earlier, there are potential issues with Victor’s sense and definition of CLIL, and Matthew’s greater emphasis on CLT than the academic context. With Matthew in particular, this could be a result of mixing up rules of EAP teaching and rules of ELT. During his first individual interview, for example, he talks about both as if they are one and the same thing, through his emphasis on interactivity, and authenticity as the primary drivers of his classroom activity. Kelly, on the other hand, enacts more of the competencies of the BALEAP Framework (2008), even though she does not explicitly mention this, and again makes consistent reference to rules of ELT.

Ultimately then, rules feed into object and outcome in the same way as tools, and the other essential tenets of Engeström’s (1987) version of an activity system. Yet, rules featured as part of another
theme that emerged in the later stages of the study and this was one that I labelled *same rules, different tools* to get a sense of Victor’s work, in particular, with the iPads. Having built up his TPK, and, from his perspective, TCK, he was using these new instruments, pedagogically, in the same way as he had always taught, but doing so in a more “finesse version” (II1, p. 90).

Thus, for Victor, and possibly Kelly, the *rules of pedagogy* and the primacy of the outcomes of EAP teaching remain the same even if the *tools* become more developed, and embedded in practice to a greater extent. Developing such a sense of practice, over time, appears to keep the focus on the object of EAP teaching, rather than on the tools themselves, which of course was such a feature of Kelly and Matthew’s early dialogue, when there was a greater sense of *tension* and *contradiction* in the use of technologies. By the end of the study, technology was a more normal and less obtrusive part of their practice, as they seemed to concentrate more on what Shulman (1986, pp. 8-9) describes as the transformation of subject matter into the content delivered in the classroom. The fact of this happening then lends further support to the synthesis of Activity Theory alongside TPACK as a conceptual lens, and necessitates a closing discussion on the overall construction of professional knowledge, which is essentially what TPACK is concerned with.

### 8.6 Overall construction of professional knowledge

Although this study has been less about searching for instances of TPACK, and more about using the model as an evaluation framework to analyse developments in action, knowledge, and practice, it is important to consider developments from a holistic perspective. Doing this helps avoid the risk of looking at “isolated pieces of the puzzle” (Mishra & Koehler, 2006, p. 1019), and establishes a “classification scheme” (Koehler et al, 2011, p. 17) for examining the broader picture under scrutiny. This broader picture is the EAP practice described in such works as Fenwick & Edwards (2010), and Kirk (2012). Therefore to conclude this section, it seems important to get a sense of the point reached by Kelly, Matthew, and Victor in their TPACK developmental continuum.
Koehler & Mishra (2009, p. 66), in describing the basis for effective teaching, state that the “professional knowledge construct” of TPACK must feature “a dynamic equilibrium” (ibid, p. 67) amongst all of its component parts, and they must all be brought into play before such an instance of TPACK is enacted. However, it is also important to note that TPACK is a complex construct that is “difficult to tease out in practice” (ibid), and care should be taken in attaching the label to instances of action that may, for example, be simply enactment of TK or TPK (Kirk, 2012).

In writing about the specific context of EAP teaching, Kirk provides a definition that serves as a nuanced way of looking for evidence of TPACK, in describing it as “knowledge that develops to enhance EAP practice through technology” (2012). In the case of the three teachers in this study, there has been such an enhancement of practice, although there is more of a sense of moving towards TPACK, in all three cases, than a consistent enactment of it, as depicted in some of the literature (Hofer & Swan, 2007; Harris et al, 2009; Kirk, 2012; Spires et al, 2012). As stated in earlier sections, there have been enactments of its various components, by the teachers at different stages, in the form of TK, PK, CK, TPK, TCK, and PCK. At times too, there has been a synergy of these constituent parts, such as Victor’s teaching of pronunciation to small groups of Chinese students where he is using the iPad, and bringing TPK into play alongside what he would see as TCK.

Matthew, too, in his use of Moodle and later podcasts was providing plentiful evidence of TPK, and increased TK, although some authors such as Çelik & Simpson (2013) might argue that his teaching of language through technology was an enactment of TPACK in an ELT context, of which EAP is a part. Again, there were various enactments of TPK in Kelly’s practice, and her sense of PCK seemed truest to Shulman’s original definition (1986, p. 9). However, once again, there was more of an enactment of TPACK’s constituent parts, at different times, than one single point in her dialogue, or observations, when I could pinpoint a precise instance.
Certainly then, it has been difficult to “tease out” (Koehler & Mishra, 2009, p. 66) instances of TPACK in the practice of the three teachers, at any one particular time. Yet, going back to Mishra & Koehler’s (2006) original formulation, and Koehler & Mishra’s (2009, p. 62) restatement of this, all three teachers appear to have developed pedagogical skills and strategies, which are dynamic and adaptable enough to meet their students’ needs, against a backdrop of technological change. By doing so, they have enhanced their practice (Kirk, 2012), and are better able to meet the outcomes and object of the activity systems of their classrooms, and the language centre as a whole, by understanding the bigger picture of technology’s integration (Spires et al, 2012, p. 13).

Therefore, even if TPACK is not always explicit in their work, it has played a key role, alongside other forms of knowledge, in the development of Kelly, Matthew, and Victor. By the end of this programme, and specific period in their developmental continuum, they had become better able to embed technology in their practice, choosing to make it visible, invisible, or indivisible according to the pedagogic purpose of the lesson, and the content being taught. Furthermore, through acquiring a better synergy of the knowledge bases within TPACK, they simultaneously appear to have found a greater synergy with their other, or pre-existing knowledge bases, as seen in all three cases, and most notably in Kelly’s case. This then is a timely moment to consider the influence of what might be described as the three teachers’ pre-existent ELT knowledge base.

**8.7 Influence of the pre-existent ELT knowledge base**

Within this study, all three teachers had a prior background in less academic areas of ELT, with only Victor having had very much professional experience of an EAP context. Both Kelly and Matthew were making what Martin (2014) deems to be a transition from General English to a more academic context. Regardless of this, there were significant developments in the practice of all three teachers, considering that this study took place over a short period of time. Comparing this to other more formal programmes of English Language teacher education, the DELTA, for example,
takes approximately a year to complete on a part-time basis. Therefore, much has been achieved here in a short space of time and that speed of development seems to have been shaped by the emphasis on technology in both the workshops and the workplace, and the fact that there was a desire on the part of teachers to get to grips with the new technologies at their disposal, not just because of what was happening educationally, but also in the outside world.

Of course, aspects of this rapid development may have been possible in the cases of Kelly, Matthew, and Victor because of their ELT experience and teacher education helping them to meet the fundamental criteria of Koehler & Mishra’s (2009) definition of pedagogical knowledge. This entails an understanding of “overall educational purposes, values, and aims” and “understanding how students learn, general classroom management skills, lesson planning, and student assessment” (ibid, p. 63).

All three teachers had a strong base of pedagogical knowledge to begin with, as evidenced by actions in observations, and espoused practice in the focus group sessions. Furthermore, much of the early literature on the use of technology in ELT, such as that of Warschauer (1996), and Salmon (2000), emphasises how traditional phases of CALL have mirrored developments in English Language teaching, through movement from behavioural approaches to those that are more communicative, and interactive (Warschauer & Healy, 1998; Motteram, 2013).

These communicative and interactive elements of the ELT knowledge base are apparent in parts of the early dialogue. Kelly spoke of the importance of the human element, and the centrality of students to the teaching and learning experience, defining natural forms of communication as being the part that she “really” likes about teaching (FG1 & II2). Though Matthew also placed considerable emphasis on natural communication, he seemed more open to the potential and opportunities for expansion of interaction and communication, which he deemed an essential part not only of teaching, but also of “how people learn” (FG1a, p. 12). Victor, on the other hand, had already acquired some practice in
the use of technology, such as in the area of using a corpus in the English Language classroom (FG1b, p. 19), and gave other examples of integrating technology into ELT situations, such as the use of video in IELTS teaching (ibid, p. 22).

Therefore, on entering the programme, he had already made or been exposed to the connection between technological knowledge and his existing base of ELT pedagogical knowledge, which could account for his differing emphasis on what he wanted to learn. Victor seemed not so concerned with “how to use programmes themselves”, but more “the integration of it” (FG1b, p. 25).

To some extent, Matthew echoed this at the outset when he spoke of how “it’ll be really exciting to learn about new ways of integrating techniques and methods into the classroom” (FG1a, p. 5), but the way he phrases those ideas reveal a major difference to Victor’s perception. He sees the methods and techniques, at this early stage, as coming about through increased technological knowledge, rather than an ability to apply existing pedagogical knowledge to these new tools.

Thus, at the outset, in Matthew and Kelly’s cases, there was more of a tension and less of a synergy in their knowledge bases. Kelly’s reference to Scott Thornbury in FG2a (p. 39) also suggests that this tension did not fully disappear even as new TK intersected with existing PK to establish a strengthened base of TPK, which was becoming “knowledge-in-action” (Kirk, 2012) through the usage of such tools as the Moodle forum. This is because, as with Matthew’s previous extract of dialogue, she was still seeing technology as a “methodology” that “might be replacing the communicative, interactive thing” (FG2a, p. 39), which is a part of Thornbury’s (2000) Dogme teaching approach, but not the sole focus of it.

Therefore, even though there is a reference to Thornbury, Kelly’s focus on CLT probably comes more from her existing base of ELT knowledge and experience, than the thoughts on one theorist. Thornbury himself, it should perhaps be added, was also something of an unexpected visitor in the context of discussion.
It was not really until the third focus group session that there is a sense in Matthew and Kelly’s practice of a shift in perceptions of the knowledge base from which methods and techniques are drawn. This comes about through actions that they describe in the use of Moodle, and Camtasia, where now Matthew for example is talking about getting students interested in extended material outside of class “through the technology” (FG3a, p. 50), whilst Kelly discusses using technologies for a range of standard activities, such as writing, feedback, and so on (FG3a, pp. 47-49).

Technology then eventually becomes less of a methodology for Kelly and Matthew, and more a vehicle through which to use what BALEAP (2008) describe as the standard “methods, practices, and techniques of communicative language teaching” (p. 3). BALEAP’s definition of ‘Teaching Practices’ does though explicitly demand that CLT knowledge is located within an academic context, and related to “teaching the language and skills required by academic tasks and processes” (ibid, p. 10). This then means that whilst CLT practices strengthen knowledge of pedagogy, there can be issues surrounding their application in the area of content knowledge, as discussed in Freeman (2002), Andrews (2003), and Tsui (2003), and addressed by Çelik & Simpson (2013) in their attempt to define language as contextual, rather than content, knowledge.

8.8 Positioning of content knowledge in EAP and ELT

Within this study, there are clear differences in the ways in which the three teachers interpret and use ‘content’ materials in their classes, even after finding a better sense of synergy between technological and pedagogical knowledge. Victor is the one who speaks most about “content”, particularly during his individual interview in which he discusses his perception of Content and Language Integrated Learning (CLIL). Although some of the actions he refers to seem more in line with the type of content-based instruction described by Brinton et al (1989), and Dudley-Edwards & St. John (1998), in the EAP and ESP contexts, than the form of CLIL conceptualised by Marsh (1994), Victor sees subject-specific lexicon and concepts as being his “content” (II1, p. 84).
Matthew, on the other hand, appears to see language work, and study skills as being the main content of his classes. A sense of this is captured in his actions, and his individual interview, when he talks about the “ideal classroom situation” being one where the teacher is crafting language around the activities that students themselves are creating (II1, p. 80). This suggests more of an EGAP than ESAP focus, as in Blue’s (1998) categorisations, where the emphasis is on generic skills rather than subject-specific tasks. Though Matthew’s practice seems to be heavily shaped by the “methods, practices and techniques of communicative language teaching” (BALEAP, 2008, p. 8), his emphasis on scaffolding and student autonomy suggests some attempt “to locate these within an academic context” and relate them to academic purposes (ibid).

However, recent literature suggests that such skills and language provision should be embedded within the specific context of particular academic disciplines (Dudley-Evans & St. John, 2009; Alexander, Sloan, & Porter, 2011; Macallister & Kirk, 2013; Gilbert, 2013), as was more evident in Victor and Kelly’s work. Matthew’s emphasis on language suggests a struggle to define content, as discussed in Çelik & Simpson (2013, p. 8). His more generic sense of content comes across when he talks about being able to deliver more authentic lessons, in which the authenticity is coming from a linkage to real-life situations, whilst when Victor describes a “finesse version” of past teaching, through the iPads, there is a greater sense of providing a smoother delivery of subject matter.

There is also the risk, as seems to come through in Matthew’s perception of content, and the purpose of using technology in the classroom, that fluency in usage of instruments starts to take primacy over more “academic conversations” as described in Laurillard (2002), and Motteram (2004). This could lead to a situation, such as Matthew’s, where teachers themselves may see TPK as being the end goal of development, rather than an impetus for further questioning and reshaping of overall TPACK in practice.

Of the three teachers, Kelly’s sense of PCK for EAP seemed strongest, when evaluated through the lens of Shulman’s original
definition of content knowledge (1986, p. 9), and contemporary understandings of the role played by specific disciplinary context in the teaching of EAP (BALEAP, 2008, p. 2). This argument is supported by the nature of her discussions on Moodle, the adaptation of material according to disciplinary needs, the use of authentic texts as supplementary materials for the De Chazal & McCarter (2012) EAP textbook, and a focus on specific ways of writing for Humanities subjects, as observed in her final vignette. Victor’s emphasis was much more on the type of language and words that appear in Economics and Business texts, rather than on the ways in which ideas are actually formulated and expressed in these disciplines, which again echoes CBI more than CLIL.

Kelly, on the other hand, was more interested in formulating or simulating the types of discussion found in actual disciplines, or areas of the Humanities. Through these actions, she seemed “to demonstrate a systematic understanding of the main theoretical areas” of particular disciplines, and “critical awareness of current issues and problems” (BALEAP, 2008, p. 2). This, of course, is probably helped by the fact that she holds a Masters degree in a Humanities subject, and thus possesses what Shulman describes as a deep knowledge that goes beyond “facts or concepts of a domain” to “understanding the structures of the subject matter” in both substantive and syntactic terms (1986, p. 9). Such knowledge then provides foundations for a form of PCK that “goes beyond knowledge of subject matter per se” (ibid), and possibly what Victor was doing in terms of introducing students to the topics and lexicon of a discipline. This is what he sees as CLIL, and largely because that happened to be the institutional definition of it, at the time, and he was using terminology acquired through the broader activity of the language centre, and the university.

Interestingly though, Kelly makes no claims of CLIL, or its alternative CBI. Rather, she talks in terms of how her favoured practice is an integration of “the communicative aspect” (II1, p. 68), and usage of the “real academic texts” used by students (ibid). This sense of real texts is different to Matthew’s who almost seems to view text as a form of context, again as in Çelik & Simpson.
for generating language, which then serves as the basis for work on skills. By taking this approach, he is echoing part of Gillett & Wray’s (2006) definition of EAP as a combination of language and study skills work, but missing out on the subject specificity that they also recommend in line with BALEAP (2008).

Kelly describes an enactment of subject-specific EAP focus as being students “working together or negotiating meaning” through understanding the grammatical features of texts from their Social Science courses (II1, p. 68). The features she talks about are “lexical chunks and noun phrases”, which is quite different to the work carried out by Matthew, in emphasising analysis of “emergent language” (II1, p. 75). Added to this Matthew’s talk of students creating content suggests a very different focus to Kelly’s ideas on “developing rhetorical stance” and “knowledge of genre” (II1, p. 67). This is even quite different to Victor, whose work on content does not seem to reach the same level of syntactic analysis, with syntax taken here to mean the underlying rules of the discipline, rather than the language. Kelly though shows how the syntactic rules of a discipline can be explored through analysis of language when she speaks of working with students on “reporting verbs to introduce the theories they use” according to the discipline and the essay genre (II1, p. 67).

This then suggests that on this particular course, Kelly’s deep knowledge of content allows for an equally strong synergy of the different knowledge domains within PCK, at the very least. Though much of her specific disciplinary knowledge was probably there at the outset, her dialogue and early actions suggested that she had not managed to synergise this with the EAP teaching context. Kelly then serves as perhaps the best example of how new understandings of content in the EAP classroom can be shaped by the acquisition of new knowledge in teaching with technologies. However, it is important to note that in all three cases the technology is helping teachers to deliver a particular form or interpretation of content that they feel is most conducive to teaching and learning in particular contexts, as advocated in Koehler & Mishra (2009), and the later work of Shulman (2012).
8.9 Conclusion of the cross-case comparison

To conclude then, over the course of this research journey, each teacher has demonstrated an increased understanding of the impact of technology on the practices and purposes of the EAP classroom, albeit with differing senses of disciplinary relationships. This is why it is difficult to argue for the holistic existence or consistent manifestation of TPACK, but that is not what the study has been about. Besides, the very idea of there being an end goal of TPACK, in itself, would challenge the reality of teachers being on a developmental continuum (Richards, 1998, p. 48) or spiral, as in Murphy & Rodriguez-Manzâres (2008). Mishra & Koehler themselves (2006, 2009) are not seeking the formulation of TPACK as an end in itself, but to synergise a knowledge base for “expert teaching” (Koehler & Mishra, 2009, p. 66).

All three teachers, in this study, have developed greater expertise through technologies serving as a vehicle for content and pedagogy. As such they have moved forward on their professional continuum, whilst at the same time drawing heavily on what was already known. On the whole, the essence of this study has been about how developments in knowledge and actions both shape and reshape practice in teaching. This is significant because traditionally it has been difficult to capture definitions and instances of how knowledge translates into actions.

Despite this historical difficulty, I have managed to find a framework for looking at such developments in the practice of the three teachers, presented here as cases. In doing so, it is hoped that their stories and this entire research journey can serve as an example to others not just in EAP but in teaching as a whole.
CHAPTER 9: CONCLUSIONS AND CONTRIBUTIONS

9.1 Overview of findings from the research study

The focus of this study has been to explore developments that occurred in terms of EAP teachers’ actions and knowledge during and after a teacher education programme on the use of technologies in the classroom, and how these developments shape or reshape the specific professional practice of using technologies in their teaching. The developments have been significant, and my main contribution to knowledge has been an increased understanding of ways to explore the knowledge base of teaching, and to develop a synergy between different elements of that base.

Through doing this, I have helped build on the work of Lee Shulman (1986/2012), who himself lays claim to developing foundations established by those such as Bloom (1956), and Schwab (1972). I have also followed on the work of Ball et al (2008) in exploring generic elements of teacher knowledge, and the extensive explorations of technology’s place in the knowledge base of “expert teaching” as in Koehler & Mishra (2009, p. 66).

The study has also been a unique piece of work in the sense of being set in an EAP context, and of using EAP as a ‘subject’ when discussions around teacher knowledge usually take place within what some might call traditional, more specific disciplines. This then has connotations not just for EAP’s relationship with those disciplines, but also in shedding further light on my own research question (SQ1) about EAP as a subject and as a profession.

Though the setting and context of the study has been concerned with the teaching of EAP, the findings actually lend themselves to a much broader exploration of teaching with technologies. It would actually have been possible in hindsight to take out references to EAP in the research questions, and to make this a study of teaching and teacher knowledge, across disciplines, rather than EAP specific. Paradoxically then, by removing EAP from the equation, there is support for the notion that the subject has come of age in its own right, rather than being subservient to other disciplines.
9.2 Contributions to capturing knowledge in action

Shulman (1987) advocated the creation of a periodic table of teacher knowledge, of which he claimed only to have identified the rudimentary elements (Ball et al, 2008, p. 397). Some in the literature, such as Ball et al (ibid), have argued that such a table is impossible because of disciplinary differences. Mishra & Koehler (2006) then formulated TPACK as one possible means of transcending disciplinary differences. However, on its own, the model does not appear to be a finished version as such, largely due to its loosely defined outer ring of context (TPACK, 2012).

It seems contradictory to sociocultural perspectives that there can be a generic ring of context, because each setting is different, as Mishra & Koehler themselves accept. This is why, in my study, I opted to integrate an EAP teaching activity system that again, like a lot of work in this area, probably needs further, future refinement. However, in the spirit of Shulman (1986, 1987, 2012), and Mishra & Koehler’s various works, there is scope for the sharing of knowledge that will lead to such refinement. Indeed the central importance of technology to Mishra & Koehler’s work feeds into the spirit of what Bonk (2010) describes as an open-source era.

There is then considerable openness on the part of TPACK and PCK theorists to see their models refined in such a way that they facilitate the development of expert teaching, which again is not an end in itself, taking into account Richards’ (1998) continuum. As such, this study can serve to further inform TPACK, PCK, and the elements needed in the knowledge base of teaching. It can also serve to provide a framework through which to capture a sense of what Kirk (2012) has described as “knowledge in action”.

Historically, capturing an accurate sense of teacher knowledge has been problematic for a number of reasons such as those described in the works of Argyris & Schön (1974), Donaghue (2003), Mishra & Koehler (2006), and Ball et al (2008). However, through a combination of the conceptual framework and the research methods used in this study, I have been able to capture a sense of how teacher knowledge is enacted in practice, which has been
greatly assisted by the role of technologies. Through focusing on the integration of technologies with more traditional pedagogy, I have been able to focus on an area of teaching that is very much centred upon activity, which is again in line with the conceptual framework. The act of teachers using technology, by its very nature, serves as something concrete through which to observe actions and instances of practice, and then compare these to what had been espoused in the focus groups and individual interviews.

This then is a significant development, and a significant contribution to knowledge, because of that historical struggle to capture instances of knowledge being enacted in practice. Within this study, there has been a consistent sense of being able, and perhaps needing to, constantly compare espoused actions and knowledge, with practical enactment in the teaching context. I believe this has been done quite successfully, assisted to a large extent by having such a deep knowledge of the research setting, and can serve as an exemplar for others conducting future studies.

Though I would not claim to have identified all elements of teacher knowledge, I have established a strong framework through which this can be studied, and shared a research study, and journey, that has been unique. I would even argue that the particularity of the research setting is such that it perhaps meets the definition of the Greek word ‘kairos’, which Sheard (1993) describes as being about much more than simply the right moment or opportune time. Rather, it is a particular set of circumstances coming together to create an end result that may well not have been replicated in the event of any one element being withdrawn. This particular setting was unique in the sense of bringing together a group of teachers to a new language centre at a time when the rapid emergence of learning technologies was creating a distinctive tension. As such, perhaps the context as much as the technology helped to shape the developments and findings in the study, lending further support to the use of its particular, tailored theoretical framework. Above all though, the interplay of variables (methods, context, conceptual lens) has facilitated a significant contribution to capturing a sense of the knowledge base required for teaching in the digital age.
9.3 Professional contribution to teaching as a whole

As stated in the overview of this chapter, my contribution in terms of understanding and capturing teacher knowledge is not limited to the context of EAP, but rather serves to illustrate how studies conducted in the field of EAP can help inform other disciplines. Thus, rather than feeding off the content of other disciplines, as in BALEAP (2008), an EAP context can serve as a filter for knowledge to inform other disciplines. Thus a first major professional contribution is to perhaps redefine and resituate the subject of English for Academic Purposes. Rather than being a “poor relation” of more specific subjects in higher education (Hamp-Lyons, 2011, p. 91), an EAP context has actually proven itself to be a fertile source of knowledge for other subjects, and the overarching educational domain in which it operates.

A second contribution to teaching as a whole, rather than purely an EAP/ELT context alone, has been to highlight how a better understanding of technology’s usage in teaching can influence a broader rethinking and reshaping of practice in other areas. Paradoxically, in a sense, an increased awareness of technology’s usage in the classroom actually leads to its greater invisibility, and more natural rather than forced integration. In the case of the three teachers discussed in this study, as technology became embedded in their practice, there was a simultaneous questioning of their own pedagogy, and other areas of their practice. This supports views held not just in the TPACK literature but also in work relating to Activity Theory, particularly that which goes back to its Vygotskian origins, as outlined in Manning & Payne (1993).

In order for development to occur, there seemed to be a need for teachers to go back and re-examine old practices in light of new knowledge, such as in the act of reshaping communicative activities around new knowledge of Moodle’s affordances. Thus, it was not only teachers’ knowledge and practice that was being reshaped, but also the role of tools themselves within the broader system of activity. Some such as iPads and podcasts were later reconfigured for new and “customized pedagogic purposes”, as in Koehler & Mishra (2009, p. 66). Much of this too took place
through new forms of self-direction, as in Mann (2005), such as the brokering of new activity, and introduction of new tools to mediate the same object and outcomes of the teaching situation. Again, this relates to an “open-minded seeking of technology use, not for its own sake, but for the sake of advancing student learning and understanding” (Koehler & Mishra, 2009, p. 66), in which technology is a normalised, natural part of practice (Bax, 2003).

Since this is very much a part of what is needed in today’s teaching context, not just in EAP but in the increasingly digitalised terrain of higher education (Beard & Dale, 2008; Munro, 2010; Hamp-Lyons, 2011), this study can thus serve as an example of what happens when teachers are directed towards a questioning of their own pedagogy, and guided in usage and integration of new technologies into their teaching. Thus, even though those such as Ball et al (2008) might argue that different disciplines require differing representations of content, the shift towards questioning of personal pedagogies benefits teachers across subject areas.

Of course the use of technologies in Mathematics is going to be different to usage in an ELT context, but the quest for synergy in elements of knowledge is going to be the same. As in Shulman’s more contemporary line of thought (Garritz, 2013), the emphasis is not so much on micro aspects of content but on macro. Thus the instances of TPACK in EAP, as described by Kirk (2012), involve the same underlying principles of representing content as those found in the most contemporary examples of TPACK. These include the work of a group of Australian teachers who are running a Science project known as ‘Possum Magic’ in which children monitor the lives of possums, in Queensland, on real-time classroom computers, instead of learning about them in books (Armstrong, 2014; Seppanen, 2014). Use of technology for innovative practices of course is nothing new, as in Gourley’s (2004) South American project with blind children, but it is the representation of content that makes something an enactment of TPACK, regardless of the micro features of disciplinary content.

9.4 Professional contribution to EAP and ELT

A further contribution that this study has made is to the subjects of English Language Teaching and English for Academic Purposes. Regardless of whether or not one accepts that there is a subject distinction between them, the study has helped address one of the key issues discussed by those such as Kirk (2012), and Çelik & Simpson (2013), who seek to define and locate the content aspect of TPACK more precisely within EAP and ELT respectively. In this study, the same questions linger, at times, with regard to the precise role that content plays, but its contribution in this area can be to suggest future ways of addressing this recurring issue.

Through delivering this teacher education programme, and analysing surrounding developments, there is evidence to support the view that in two out of the three cases (Victor & Kelly), there was a shift in thinking as regards the role played by ‘content’. However, the fact that Matthew’s focus remained firmly upon using technology to enhance language teaching, rather than translating the practices of CLT into a more academic context, suggests that there is a need not just for a focus on technology’s integration with pedagogy, but also its integration with content.

This could mean that there is also a continuing need to define ‘content’ in the EAP context because, as seen in Kelly and Victor’s interpretations, it seems to shift depending on the practices of particular disciplines. On the other hand it could also mean that these constantly shifting interpretations of content are distracting from what Shulman (2012) sees as the most important practice of the classroom, which is to represent, or transform the subject matter for teaching, as Matthew was doing quite successfully in his final vignette of practice, without any focus on disciplines.

The question then arises as to whether or not this made his teaching any less of an enactment of expert EAP practice, to which my response would be that it does not. As Victor voiced in II1 (p. 86), the focus should be on “a way of teaching” rather than on tools, and I would extend this to pedagogy taking primacy over content, as much as it takes primacy over technology. Thus, even
though the ‘content’ debate is still an important one within EAP, it must not be allowed to inhibit the flow of effective teaching, as technology was doing in Kelly’s case at the outset of this study, before it became a normalised part of practice. Thus through providing examples of what has happened in the three teachers’ classrooms, a further contribution of this study can be to shift attention away from EAP’s contemporary discussion on teachers ‘knowing’ discipline-specific content, and replacing that with a stronger sense of representing that discipline-specific content in such a way as to make it comprehensible to students. In doing this, they are actually drawing on elements of knowledge and action within Shulman’s original conceptualisation of PCK (1986, p. 9), and Mishar & Koehler’s (2006) refinement of this into TPACK.

9.5 Contributions to teacher development

i. Contributions at a local level

Since this research was originally shaped by needs arising in the workplace, it is important that there was a contribution to that workplace, and to the lives of the teachers who participated in it. Without betraying the values of this study, with its emphasis on allowing the voices of the teachers to come to the fore, I believe that there has been a significant contribution to their practice. Clearly, as can be tracked out over time, there have been major developments in the way that they use technologies in the classroom, and also their understanding of EAP as a subject, and EAP teaching as a profession. Their actions as a result of the workshops, whether directly or as a possible by-product of collaboration and exploration, as in Victor’s iPad project, have also had a significant impact on shaping and reshaping the broader activity system of the language centre in which they all still work. Added to this, I would hope that those teachers whose stories did not feature in the final analysis and report have also developed along the way, because even though these participants may be “background cases” (Seawright & Gerring, 2008, p. 294) in terms of their role of this thesis, but the developments that occurred in their practice over the course of the study is of equal importance.
ii. Contributions in the wider context

Although the teachers in this study were individuals working in a particular context, there are lessons for teacher educators not just in the fields of EAP and ELT, as argued before, but in the context of teacher education as a whole. Going back to my own experience of teacher training in Huddersfield, as outlined in the contextualisation chapter, I could present an experiential, practical, and theoretical argument as to how a study such as this could be transferable across contexts. The lessons gained from this study go far beyond the boundaries of English Language teaching, and can be applied across any number of courses and situations. The need for synergy of technology, pedagogy, and content is as relevant for primary school educators as for EAP teachers, or for postgraduate trainees undertaking a certificate in Further Education. Some aspects of context and many aspects of activity are going to be different in each situation, but the underlying principles, going back to Shulman (1986) seem to be consistent.

Therefore, the first lesson for teacher educators is that drawing on TPACK as a source of informing teacher education programmes appears to open up a filter for teachers to question other areas of their practice and pedagogy, and develop these as a consequence. The second is that creating a sense of community in the workplace, whether organic or “cultivated”, as in Wenger & Snyder (2000), and Wenger et al (2002), can lead to increased forms of collaboration, exploration, and more self-directed practices. The third lesson is that technology has opened up tremendous potential for linking together knowledge and actions, in such a way that it is now more possible to observe knowledge in action. Again, going back to the situation of doing a PGCE in Huddersfield, so much of the observed practice was incredibly subjective, and often demotivational rather than developmental. Technology again serves as a means of putting knowledge into practice, and of providing foundations and examples of ways in which teachers can develop. Furthermore an emphasis on knowledge in action allows teachers to have that development evaluated in a practical manner that can be either qualitative, as I have done, or quantitative.
9.6 Conceptual and methodological contributions

The main conceptual and methodological contributions of this study relate to its usage of particular theoretical frameworks as a conceptual lens for developments that occurred, and its contribution to the growing body of support for the strengths of insider research. TPACK and Activity Theory served as the basis for establishing a framework of analysis, which allowed me to get a stronger sense of how developments in knowledge and actions were taking shape around a particular set of variables. Without this theoretical synergy of knowledge and action, afforded by the integration of the two frameworks, the study may not have captured a sense of the “big picture of technologies integration” as described by Spires et al (2012, p. 13). There may have been too great a focus on the everyday practice of classroom activity alone, and individual, rather than group, activities of teachers.

By placing TPACK in a broader context and structure, rather than diluting the importance of the framework, its components and features were strengthened. The two parts of the framework complemented rather than contradicted or constrained one another, as could have happened with a different integration of theoretical constructs. Furthermore, TPACK is becoming an increasingly common theoretical lens through which to observe the practice of English teaching, and teaching in general in the digital age, and the greater the amount of studies conducted in line with the framework, the greater the test of its effectiveness.

Very much like Shulman’s original PCK model (1986), by his own later admission, the TPACK model has perhaps not found its finished format. However, once again, its condition as an effective work in progress can only be tested by studies such as this one, and it has served as a useful framework of analysis in this case study, albeit with a consistent need to also draw on Shulman’s original framework of teacher knowledge. Bringing this in line with Activity Theory, whilst not unique, has allowed me to develop and capture a sense of something that is unique, namely a framework through which it has been possible to evaluate knowledge-in-action.
Finally then, a significant methodological contribution I have made is to provide an additional form of support for those who argue for the benefits of research conducted in one’s own workplace. The fact that this study has been significant, and has shaped developments in the practice of the research participants, and the workplace as a whole, suggests that if care is taken and ethical procedures followed throughout, insider-research does have benefits not just for the local context, under investigation, but for broader systems of activity related to the focus of the research.

9.7 Limitations of this research study

Coming to a close, it is important to show awareness of the study’s limitations, in keeping to the spirit of reflexivity found in qualitative research (Stake, 1995; Merriam, 1998; Ellis & Bochner, 2000; Russell & Kelly, 2002; Watt, 2007). Within this study, there have been areas that could be interpreted as weaknesses or limitations, despite efforts to address these at all stages. Through my chapters on methodology and insider research, I have sought to address some of the limitations, but acknowledge that there are others that have recurred or have come to light during the study.

i. The element of subjectivity

At the outset of the focus group sessions, Matthew spoke of how he wanted to avoid the potential bear-pits of technology. Relating this term to the qualitative research context, one of the greatest pitfalls is the danger of subjectivity on the part of the researcher. I have tried to eliminate this as much as possible through collaboration and corroboration with participants, where appropriate, and to keep an audit trail of information, which has been recorded as authentically, and immediately as possible (Poland, 1995).

Despite this, I acknowledge that it is impossible to eliminate subjectivity completely because qualitative research by its very nature is mainly interpretive, and presents understandings that others may well perceive to be subjective (Creswell, 2009). This leaves it open to criticisms of not being scientific, and such criticisms have to be accepted whilst at the same time pointing out
that the great strength of qualitative research is in its ability to recognise that there are multiple realities to every given situation (Robson, 2002), and its emergent nature further supports the need for the presence of personal, rather than predetermined, decisions along the way (Cohen et al, 2013). For example, when choosing the form that the eventual case study would take, the decision is best described as personal rather than what might be labelled as ‘scientific’ in the more positivist research tradition. However, that does not mean it was any less considered, or done out of convenience. At all stages of the process, my overarching goal was to stay true to the ethos, goals, and ethics of qualitative research. In doing so, I had to confront but not get trapped in the “bear pit”.

ii. The double edged sword of insider research

Although I believe that I have presented a convincing argument for the benefits of insider research in Chapter Four, I am aware that there are still those who would argue that such an instance of manager research would be difficult to re-enact or replicate, because by own admission it was heavily dependent on personality. Going further than this and back to the notion of kairos, the whole study was dependent on a set of variables that would be difficult to replicate in another situation, with another group of people. Again, I accept that but there seems no need for any precise replication. The goal was to provide lessons and findings, which readers, and teacher educators, can then use to inform their own context.

As such, though it was absolutely crucial to clarify that this was insider research in a context where I was a manager, I agree with Edwards (2002) that the fact of this should not be allowed to detract from the more important issue of addressing the research questions. However, there are limitations to how transferable the practice of manager inside research is to other contexts, and I make no claim to suggesting that such a segment of insider research would work for everyone. It did though happen to work for me in this particular context, whether down to kairos or not.
iii. The question of transferability

Following on from the latter point, some would also argue that there are limitations in how much of the findings are transferable across contexts, since the literature very strongly puts forward the argument that each teaching situation is unique in itself. Again I would accept this, and leave interpretations of transferability up to readers themselves, as advocated by Patton (1990) wherein the study should be judged in terms of “pragmatic validation” (p. 485). I have presented what I believe to be a convincing case in the sections on my various contributions but it is up to the reader, or other teacher educators, to accept the value of those arguments.

iv. Confinement to an EAP/ELT audience

One further limitation comes from the benefit of hindsight and the potential criticism that I should have concentrated less on understanding EAP as a subject and more on understanding teaching as a profession. Through doing so, I would have avoided some of the discussion on the nature of content knowledge within EAP, which echoes the increasingly outdated discussions on what I have labelled micro, rather than macro, interpretations of content. Sometimes the discussion around EAP could be seen as a distraction from other issues more salient to the profession and delivery of education as a whole. This could then limit the potential audience for a story such as this, and confine it to the parameters of an EAP/ELT context, when actually there is a need within EAP to be as representative a source of educational knowledge as any of the other disciplines within higher education. The danger of concentrating so exclusively on EAP, in so many parts of the research story, is that it may only be of interest, in its present form, to an EAP audience, which would reduce its potential impact.

v. Uncritical usage of competency framework

Though moving away from an EAP focus would negate this limitation, I also accept that my adoption of BALEAP’s (2008) Competency Framework as a benchmark has been quite uncritical in comparison to analyses of TPACK and PCK for example. I am
aware of this limitation, though do not see it as such a major drawback because the BALEAP document served as a benchmark rather than a conceptual lens. However, in future research, it is important to cast a critical eye over all aspects of the literature, and to see this limitation as a source of learning for the future.

9.8 Closing thoughts and future directions

Drawing on Robert Yin’s (2009, p. 29) likening of the research journey to that of Christopher Columbus setting out to find the new world, this study has entered uncharted waters in a number of crucial areas. There have been few studies that have used a theoretical framework of this description and none within the field of EAP as far as I am aware, wherein there is perhaps a lack of doctoral studies in the first instance. My study has made contributions to knowledge, methodological understandings, and professional development, not just for EAP but teaching as a whole. As such it has served as one of those exemplar cases demanded by Shulman (1986), in citing Kuhn (1987), to provide valuable sources of information on the knowledge base of teaching.

This then raises the crucial point of where to progress from here. My hope is that I will continue to build on my growing portfolio of publications, and to extend this beyond the context of EAP, and into the broader educational milieu. It may also be possible to adapt this thesis for publication, concentrating less on the subject of EAP, and more on the lessons that the study provides for education as a whole. In doing this, there may be a need to fine tune the conceptual framework that I have used, and to perhaps give a less uncritical description of the background to EAP.

Yet this is something to be considered for the future. A short-term aim has to be the search for a professional position in which I can maintain a consistent focus on research. Perhaps that will come in my current workplace, or having acquired the PhD I may need to find a more settled home for my research. Regardless of that, I am glad to have made this research journey, and hope one day to share this piece of history with a much wider audience.
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## APPENDIX ONE

Summary of BALEAP Competency Statement (2008, p. 3)

### Summary of competency statements

<table>
<thead>
<tr>
<th>Academic practice</th>
<th>an EAP teacher will –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic contexts</td>
<td>have a reasonable knowledge of the organizational, educational and communicative policies, practices, values and conventions of universities.</td>
</tr>
<tr>
<td>Disciplinary differences</td>
<td>be able to recognize and explore disciplinary differences and how they influence the way knowledge is expanded and communicated.</td>
</tr>
<tr>
<td>Academic discourse</td>
<td>have a high level of systemic language knowledge including knowledge of discourse analysis.</td>
</tr>
<tr>
<td>Personal learning, development and autonomy</td>
<td>recognize the importance of applying to his or her own practice the standards expected of students and other academic staff.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EAP students</th>
<th>an EAP teacher will understand –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student needs</td>
<td>the requirements of the target context that students wish to enter as well as the needs of students in relation to their prior learning experiences and how these might influence their current educational expectations.</td>
</tr>
<tr>
<td>Student critical thinking</td>
<td>the role of critical thinking in academic contexts and will employ tasks, processes and interactions that require students to demonstrate critical thinking skills.</td>
</tr>
<tr>
<td>Student autonomy</td>
<td>the importance of student autonomy in academic contexts and will employ tasks, processes and interactions that require students to work effectively in groups or independently as appropriate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Curriculum development</th>
<th>an EAP teacher will understand –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syllabus and programme development</td>
<td>the main types of language syllabus and will be able to transform a syllabus into a programme that addresses students’ needs in the academic context within which the EAP course is located.</td>
</tr>
<tr>
<td>Text processing and text production</td>
<td>approaches to text classification and discourse analysis and will be able to organize courses, units and tasks around whole texts or text segments in ways that develop students’ processing and production of spoken and written texts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programme implementation</th>
<th>an EAP teacher will be –</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching practices</td>
<td>familiar with the methods, practices and techniques of communicative language teaching and be able to locate these within an academic context and relate them to teaching the language and skills required by academic tasks and processes.</td>
</tr>
<tr>
<td>Assessment practices</td>
<td>able to assess academic language and skills tasks using formative and summative assessment.</td>
</tr>
</tbody>
</table>
## APPENDIX TWO

### Original ISTE Classroom Observation Tool (ICOT)


1. **Setting:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Observation Start Time/End Time</th>
<th># Students</th>
</tr>
</thead>
</table>

2. **Room Description and Student Characteristics**

3. **Student Groupings (check all observed during the period)**

<table>
<thead>
<tr>
<th>Individual student work</th>
<th>Small groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student pairs</td>
<td>Whole class</td>
</tr>
<tr>
<td>Other (please comment)</td>
<td></td>
</tr>
</tbody>
</table>

4. **Teacher roles (check all observed during the period)**

<table>
<thead>
<tr>
<th>Lecturing</th>
<th>Interactive direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion</td>
<td>Facilitating/coaching</td>
</tr>
<tr>
<td>Modeling</td>
<td>Other (please comment)</td>
</tr>
</tbody>
</table>

5. **Learning activities (check all observed during the period)**

<table>
<thead>
<tr>
<th>Creating presentations</th>
<th>Test taking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>Information analysis</td>
</tr>
<tr>
<td>Writing</td>
<td>Simulations</td>
</tr>
<tr>
<td>Drill and practice</td>
<td>Hands-on skill training</td>
</tr>
<tr>
<td>Other (please comment)</td>
<td></td>
</tr>
</tbody>
</table>

6. **How essential was technology to the teaching and learning activities?**

<table>
<thead>
<tr>
<th>Not needed; other approaches would be better.</th>
<th>Somewhat useful; other approaches would be as effective.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Useful; other approaches would not be as effective.</td>
<td>Essential; the lesson could not be done without it.</td>
</tr>
<tr>
<td>Other (please comment)</td>
<td></td>
</tr>
</tbody>
</table>
7. Technologies used by teacher (check all observed during the period):

<table>
<thead>
<tr>
<th>Technology</th>
<th>Calculator</th>
<th>CD-ROM</th>
<th>Database</th>
<th>Data Projector Desktop</th>
<th>Computer Digital Camera</th>
<th>Document Camera</th>
<th>Drill/Practice</th>
<th>E-mail</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Interactive Whiteboard</th>
<th>Laptop Computer Library Database</th>
<th>Mobile Learning Device</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Tablet Computer</th>
<th>Video Camera</th>
<th>Videoconferencing</th>
</tr>
</thead>
</table>

Other (please comment):

8. Technologies used by students (check all observed during the period):

<table>
<thead>
<tr>
<th>Technology</th>
<th>Calculator</th>
<th>CD-ROM</th>
<th>Database</th>
<th>Data Projector Desktop</th>
<th>Computer Digital Camera</th>
<th>Document Camera</th>
<th>Drill/Practice</th>
<th>E-mail</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Interactive Whiteboard</th>
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</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>Tablet Computer</th>
<th>Video Camera</th>
<th>Videoconferencing</th>
</tr>
</thead>
</table>

Other (please comment):

9. Oregon Technology Standards (choose all standards that apply):

ET.1 Creativity and Innovation: Students demonstrate creative thinking and problem solving skills to develop innovative products and processes using (digital) technology.
ET.2 Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, across the global community, to support individual learning and contribute to the learning of
During each 3-minute period, was technology in use by students and/or teachers, and was the time spent with technology used for teaching and learning (as opposed to recreation or routine tasks, such as boot-up and log on)?

| Technology is: | 00-03 | 03-06 | 06-09 | 09-12 | 12-15 | 15-18 | 18-21 | 21-24 | 24-27 | 27-30 | 30-33 | 33-36 | 36-39 | 39-42 | 42-45 | 45-48 | 48-51 | 51-54 |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Used by students |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Used for learning |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Used by teacher |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Used for learning |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

11. Estimated Time Technology Used (if 3-minute chart is not used)

Total minutes technology used by students: Minutes students used for learning:
Total minutes technology used by teacher: Minutes teachers used for learning:

12. Any other comments?
APPENDIX THREE – Samples from the data analysis

<table>
<thead>
<tr>
<th>DATA EXTRACT</th>
<th>CODE</th>
<th>CATEGORY</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, it’s quite scary to admit that you don’t know something about an aspect. (Kelly, FG1a, p. 4)</td>
<td>Admitting concern with aspect of teaching – aspect of knowledge</td>
<td>Early sense of tension in TK – trying to understand ‘aspects’ of technologies</td>
<td>CHALLENGE (facing up to lacking aspects of knowledge)</td>
</tr>
<tr>
<td>(Using Moodle) seems like a good way of getting them to use the technology for their own ends but it’s just a case of encouraging them to do that, which is the challenging aspect of the situation. (Victor, FG2a, p. 37).</td>
<td>Need for student usage of technologies for own purposes Challenging aspect of teaching situation</td>
<td>Sense of EAP &amp; object of learning – getting students to do more by themselves</td>
<td>CHALLENGE (encouraging student usage of technology)</td>
</tr>
<tr>
<td>I used the PowerPoint slides and it’s a programme(^9) where you can record them. You can record the audio and the PowerPoint at the same time and if you want you can use a webcam at the same time to record but I didn’t want to do that. (Kelly, FG3A, p. 47).</td>
<td>New TK in action Combining old &amp; new instruments Making choices about usage</td>
<td>TK + PK becoming TPK (making choices about aspects of technology to use)</td>
<td>CHANGE IN PRACTICE (increased TPK shaping practice with instruments)</td>
</tr>
</tbody>
</table>

---

\(^9\) In this instance, Kelly is talking about the usage of Camtasia
Yes, yes, all the time, that’s how I want students to be using technology mostly in my class. Certainly with regards to an i-pad it’s on the desk and they can get to it whenever they want to help them with something else that they’re doing. So I think it’s counter-productive to make sure that the use of all technology in class is like the teacher says, ‘you do this, you do this, you do this.’ I think it has been better when we’ve been doing something that students have spontaneously started to research something. (Victor, II1, p. 85)

**Response to my question ‘So am I right in assuming that often the use of the i-pads is spontaneous?’**

<table>
<thead>
<tr>
<th>Getting students to use technology as means of support</th>
<th>Using PK in line with TK – creating autonomy in the classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not using technology in teacher centred way</td>
<td>Change in division of labour – students taking more control over learning</td>
</tr>
<tr>
<td>Students using technology for spon. research</td>
<td>Change – technology now used in a more spontaneous way (poss. strategy for earlier tension of motivating sts to use tech)</td>
</tr>
</tbody>
</table>

**CHANGE IN PRACTICE**

(New use of instruments to meet object of student autonomy)

**CHANGE IN PRACTICE**

(informed by TPK) – (knowing how to use technologies to guide students towards autonomy)
### APPENDIX FOUR- Personal code of ethical practice

<table>
<thead>
<tr>
<th>THEORETICAL CRITERIA</th>
<th>INSTANCES OF ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain approval for research from more than one REC</td>
<td>University of Manchester plus workplace REC approval sought</td>
</tr>
</tbody>
</table>
| Working within professional codes of practice & following these guidelines in actual practice | Follow REC guidelines  
Follow BERA, ESRC guidelines  
Follow ethical guidelines in the BALEAP Competency Framework for Teachers of English for Academic Purposes  
Remain **reflexive** at all times  
Professional design & communication of all research materials & in settings |
| Reporting steps that have been taken to act ethically                                 | Ethics section in thesis  
Discussions with supervisors & seeking advice on actions  
Reporting steps to workplace ethics committee and to peer reviewers                         |
| Establishing a solid foundation of learning about ethical procedures.                  | Wide reading of the literature *(as suggested in Richardson & McMullen, (2007, p.1129))*  
Discussions with supervisors  
Discussions with peers, participants, and colleagues about their own research experiences  
Drawing upon ideas from University of Manchester’s professional research training component. |
APPENDIX FIVE – steps taken to ensure ethical design of consent forms according to Creswell’s (2009) guidelines

<table>
<thead>
<tr>
<th>Creswell’s recommendation</th>
<th>Means of inclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of the researcher</td>
<td>Clearly stated on the consent form which included my signature</td>
</tr>
<tr>
<td>Identification of the sponsoring institution</td>
<td>Clearly stated, and also displayed in the heading</td>
</tr>
<tr>
<td>Identification of how the participants were selected</td>
<td>Voluntary participation stressed, and connection to workshops emphasised. Also inclusion of a section titled ‘Why have I been chosen?’</td>
</tr>
<tr>
<td>Identification of the purpose of the research</td>
<td>Clearly stated at several junctures of the form, particularly in the section titled ‘Aims of the Research’</td>
</tr>
<tr>
<td>Identification of the benefits for participating</td>
<td>Highlighted through an emphasis on the practical aspects of development in the workshops</td>
</tr>
<tr>
<td>Identification of the level and type of participant involvement</td>
<td>Explained throughout and boxes had to be ticked by participants to demonstrate understanding and acceptance</td>
</tr>
<tr>
<td>Notation of risks to the participant</td>
<td>Risks minimised by research design but withdrawal process clearly illustrated</td>
</tr>
<tr>
<td>Guarantee of confidentiality to the participant</td>
<td>Highlighted in a section titled ‘What if I have a problem?’</td>
</tr>
<tr>
<td>Assurance that the participant can withdraw at any time</td>
<td>Clearly stated that participants were free to withdraw, without reason, at any stage</td>
</tr>
<tr>
<td>Provision of names of persons to contact if questions arise</td>
<td>Provided</td>
</tr>
</tbody>
</table>
APPENDIX SIX

Consent form used at outset of the research study\textsuperscript{10}

Information Sheet for Participants

Aims of the Research:
The aim of this research is to deepen understanding of EAP teachers’ interpretations and applications of teaching with technologies, and the changes that occur over the course of a teacher training programme. It will look at the decisions made by a select group of teachers with regard to their application of blended learning while developing academic literacy for students in an English Language Teaching (ELT) setting over the course of a training programme focusing on the integration of new technologies into traditional teaching methods. The proposed research will take place before, during, and after an in-house training programme on the usage of skill-driven blended learning approaches (Valiathan, 2002) in the EAP classroom. The purpose is to generate a practical framework for professional development in the field of teaching and designing EAP courses in the 21\textsuperscript{st} century. The reason for doing so is the identification of a need to bridge the existing gap between course content offered currently and increasing demand for provision of academic foundation courses to international students.

Invitation:

You are being invited to consider taking part in the research study regarding EAP teachers’ applications of blended learning before, during, and after a series of teacher training workshops.

This project is being undertaken by Paul Breen as part of PhD research for the University of Manchester.

Before you decide whether or not you wish to take part, it is important for you to understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with friends and relatives if you wish. Ask me if there is anything that is unclear or if you would like more information.

\textsuperscript{10} PLEASE NOTE – The title of the proposal at the outset is different to the finished version but in order to preserve the authenticity of the study I have left this form in its original format
Why have I been chosen?
You have been chosen because you are a teacher of English Language and English for Academic Purposes. Furthermore I need participants who are interested in continuous professional development and need to be at a stage in their career where they are ready for such development. You need also to be able to commit time to this research project. Six to eight participants will be recruited, and divided into two focus groups who will be interviewed before, during, and after the teacher development programme. All participants are teachers of EAP who work for ___________________________________.

Do I have to take part?
You are free to decide whether you wish to take part or not. If you do decide to take part you will be asked to sign two consent forms, one is for you to keep and the other is for our records. You are free to withdraw from this study at any time and without giving reasons.

What will happen if I take part?
I propose to generate data using three methods; questionnaires, focus groups, and semi structured interviews. Thus the first stage will be to send out consent forms and then forms requesting demographic data from potential participants. If you then decide to take part in the research project you will be able to attend training workshops on the usage of skills-driven blended learning approaches in the EAP classroom. You may choose to attend these workshops without any part in the focus group stage and that is acceptable. I will start out with one large focus group and then split this into two smaller groups. When I interview the focus groups I will concentrate on your experiences, feelings, beliefs, and understandings, drawing on ideas and techniques from a responsive interviewing model. The focus groups will be interviewed before, during, and after the teacher development programme. When something explored in focus groups requires further elaboration, I will request a customized interview and scope will be left open for further interviews with you on an individual basis if systematic analysis reveals further topics for exploration.

If I take part, what do I have to do?
Essentially you will take part in a short series of teacher training workshops in which we collaborate and discuss our application of blended learning approaches in the EAP classroom. On a practical level you have to engage in
a form of professional development and on a more discursive level you have to be prepared to openly discuss experiences, feelings, beliefs, and understandings.

**What are the benefits (if any) of taking part?**
The main benefit of taking part is that this is an excellent opportunity to engage in continuous professional development with colleagues. Thus it is an excellent opportunity for career development in both theoretical and practical terms. You have an excellent opportunity to participate in a series of teacher training workshops that will help you to develop greater fluency in the usage of new technologies in the classroom and to collaborate with colleagues in the course of this personal development. It will also allow you to lend your voice to the discussion on blended learning approaches in the EAP classroom and to contribute to a final thesis and hopefully framework which will have longer term benefits for the organisation and for the profession of English Language teaching in the field of EAP and as a whole.

**What if there is a problem?**
If you have a concern about any aspect of this study, you should speak to the researcher who will do their best to answer your questions. You should contact Paul Breen at p.breen@uea.ac.uk

**How will information about me be used and who will have access to information about me?**
The information will be recorded and coded. The analysis of the data gathered from that information will take place in both my workplace and in my home/study environment. I will be analysing the data under the guidance of my supervisors and using peer review as a means of enhancing trustworthiness. The information will be treated as confidential and your real name will not be used unless you specifically request that it is used. I will have control and act as custodian for the data generated by the study. Only myself and my supervisors will have access to the data generated by the study. At this stage it is not known how long the data will be stored for, but you can be assured that it will be stored and used only in an ethical manner.

**Who is funding and organising the research?**
Paul Breen, the researcher conducting the study, is funding and organising the research.
CONSENT FORM

Proposed title of project:  <A case study of EAP teachers’ applications of blended learning before, during, and after a series of teacher training workshops on the use of technologies in the classroom. >

Name of Principal Investigator: <Paul Breen >

Please tick box

1  I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.  □

2  I understand that my participation is voluntary and that I am free to withdraw at any time. □

3  I agree to take part in this study. □

4  I understand that data collected about me during this study will be anonymised before it is submitted for publication. □

5  I agree to the interview/focus group being audio taped/video recorded □

6  I agree to allow the data collected to be used for future research projects □

7  I agree to be contacted about possible participation in future research projects. □

Name of participant ___________________________  Date ___________________________  Signature ___________________________

Researcher ___________________________  Date ___________________________  Signature ___________________________
CONSENT FORM
(for use of quotes)

Proposed title of project: < A case study of EAP teachers’ applications of blended learning before, during, and after a series of teacher training workshops on the use of technologies in the classroom. >

Name of Principal Investigator: <Paul Breen >

Please tick box

1 I am happy for any quotes to be used
2 I don’t want any quotes to be used
3 I want to see any proposed quotes before making a decision

Name of participant ___________________ Date ___________________ Signature ___________________

Researcher ___________________ Date ___________________ Signature ___________________
APPENDIX SEVEN

Snapshot of information about the focus group sessions

Proposed outline of introductory focus group session

Number of participants: __________

Pseudonyms of participants:
________________________________________________________________________
________________________________________________________________________

Issues to be addressed:

Attitudes to the usage of educational technology in the EAP classroom/HE setting prior to a series of teacher training workshops.

Mode of recording: Password-secured Digital Dictaphone + notes.

Facilitator: Paul Breen.

The reason for using the approach of open ended, semi-structured questions is to obtain a full range of responses and to create scope for participants to speak their minds.

Introductory questions:

How are you?

Are you all volunteers in today’s session and are you all comfortable with the environment that has been chosen in which to conduct these sessions?

(Anyone who wishes to leave if the situation occurs will be given permission to leave)

I will then explain that I am doing this research in the capacity of a PhD student in the University of Manchester and that although I am also Programme Manager in the setting of this research, it is being carried out in the context of PhD studies.

Linking questions:

What prior experience have you had of teacher training?
Having had this experience what are your views on teacher training?
What do you hope to gain from these teacher-education workshops?
APPENDIX EIGHT

**Information on using mobile devices in the classroom**

These are practical ideas which you might find adds to your students’ experience of the classroom and your teaching.

<table>
<thead>
<tr>
<th>Pedagogical area</th>
<th>Ideas</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Speaking and pronunciation</strong></td>
<td>Recording micro-presentation skills in pairs and then reviewing</td>
<td>Eg presenting a data slide</td>
</tr>
<tr>
<td></td>
<td>Recording individual sounds and comparing with each other</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recording personal history, stories for fluency and then reviewing (can be done in pairs)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recording discussion (micro seminar tasks) and then listening to review</td>
<td></td>
</tr>
<tr>
<td><strong>Lecture based skills</strong></td>
<td>Using Evernote* to take notes on lectures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scribing power point slides while lecture is being delivered</td>
<td>Best done on tablets, assumes .ppt has been given to students in advance. Slides have to be in .pdf format to do this</td>
</tr>
<tr>
<td></td>
<td>Recording lectures for revision/review purposes</td>
<td>Can be done in conjunction with .ppt scribing</td>
</tr>
<tr>
<td><strong>Writing and study skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------</td>
<td></td>
</tr>
<tr>
<td>Portable electronic dictionaries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborative research using the electronic library to find resources (for long essays and research projects)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-editing short texts</td>
<td>Can be done together in class or separately as a wiki/Moodle forum – can be followed up as homework</td>
<td></td>
</tr>
<tr>
<td>Maintain a class blog</td>
<td>useful for feedback/personal tutoring purposes and as a formative writing project – weekly or fortnightly.</td>
<td></td>
</tr>
<tr>
<td>Peer feedback on texts in construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research key topics to feedback to group</td>
<td>Can be freely on the web or from a set of collected resources delivered via Dropbox* or VLE.</td>
<td></td>
</tr>
<tr>
<td>Record team-based brainstorms for reflection and drawing up after initial brainstorm (reflect on non-reflective activity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Find article of interest on internet to paraphrase/summarise</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sorting through chosen texts and web sites to decide on credibility (can be sourced from and followed up on a VLE)</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Listening skills</strong></td>
<td>Access lectures/listening materials from VLE, Ted, RSA etc</td>
<td>Personal access allows for replay and differentiation within the class. Also allows for Jigsaw listening.</td>
</tr>
<tr>
<td></td>
<td>Note-taking to co-construct gist and main ideas of a lecture</td>
<td></td>
</tr>
<tr>
<td><strong>Reading skills</strong></td>
<td>Sorting short texts for research/relevance purposes</td>
<td></td>
</tr>
<tr>
<td><strong>Grammar and vocabulary</strong></td>
<td>Personal dictionaries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Doing web-based personalised/differentiated grammar practice based on diagnosis and/or feedback from written work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Using Evernote* to make a note of new vocabulary</td>
<td></td>
</tr>
<tr>
<td><strong>Sharing</strong> (between students and teachers as well as between courses)</td>
<td>Dropbox*</td>
<td></td>
</tr>
<tr>
<td><strong>Flipped classrooms techniques</strong></td>
<td>Classroom response software* can be used to check understanding and/or completion of the input materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This application allows for subject and EAP classes to share materials with each other.</td>
<td></td>
</tr>
</tbody>
</table>
## Pre-class input materials can be delivered via VLEs

<table>
<thead>
<tr>
<th><strong>Tutorials</strong></th>
<th>Record tutorials for later reference</th>
</tr>
</thead>
</table>

**Lab and field work, site visits**
Recording data and images, timing events/experiments. Using recorded images to create topic-based word searches

### Notes on software

*Evernote is a small piece of cloud-based software which can be used across all platforms and automatically updates (synchs) itself. Thus, notes taken in phone in class will carry across the student’s home computer and be available later in the course and beyond.*

*Dropbox is similar to Evernote in that it is a cloud based storage facility again available across all platforms. Classes can share the dropbox to deliver materials and to upload their own materials.*

*Classroom response software includes:
  - Socrative
  - Nearpod
  - eclicker*