PARTICIPATORY ACTION RESEARCH: CHALLENGING THE DOMINANT PRACTICE ARCHITECTURES OF PHYSICAL EDUCATION

By

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PARTICIPATORY ACTION RESEARCH: CHALLENGING THE DOMINANT PRACTICE ARCHITECTURES OF PHYSICAL EDUCATION

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ABSTRACT

Research shows that the dominant pedagogical practices of physical education are irrelevant to young people in the 21st century, and that physical education currently exists in a time of innovation without change. Subsequently, physical education as a curriculum subject is at risk of becoming extinct unless the 'talked' about pedagogical innovations that provide authentic, relevant and transferable learning experiences can become sustainable 'actioned' futures. Therefore, the purpose of this thesis was to explore how a pedagogical innovation, the Cooperative Learning model, could be used over an enduring period of time.

Participatory action research (PAR) was used as the methodology to scaffold the inquiry and to support eight secondary school physical education teachers' learning and use of Cooperative Learning during an academic year. This thesis considers how PAR enabled teachers to break the dominant practice architectures of physical education and how PAR supported teachers' use of an emergent pedagogical approach within and beyond the honeymoon period of implementation. In other words, how PAR facilitated teachers' ability to work beyond the dominant pedagogical practices of physical education and the practices endorsed by the school as an institution. Furthermore, how PAR sustained teachers' engagement with, and use of, the Cooperative Learning model. Indeed, Cooperative Learning was firstly immersed within the milieu of the practice architectures. Yet through the use of PAR the teachers were motivated to move beyond the honeymoon period and began to use the model *within*, *with and* then against the mess of the practice architectures. Subsequently, Cooperative Learning was emerging as the dominant pedagogical approach. However, this only occurred for some teachers' where social connectivity and an emerging

community of practice were significant variables in sustaining and adapting the use of Cooperative Learning.

The contribution to knowledge is therefore the methodological processes of how to move beyond dominant pedagogical practices and facilitate innovation with change. In order for a pedagogical innovation to become a sustainable 'actioned' future its use is context dependent and PAR facilitates its sustainability. Furthermore, teacher learning should be advanced and teachers should be encouraged to create communicative spaces with colleagues and researcher facilitators.

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DECLARATION

I declare that this thesis is my own unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of Bedfordshire.

It has not been submitted before for any degree or examination in any other University.

Name of candidate: Victoria Anne Goodyear

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Date: 8th May 2013

LIST OF PUBLICATIONS

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Goodyear, V.A., Casey, A. and Kirk, D. (2013) 'Physical education teaches use of practitioner research in the day-to-day realities of teaching: effective, enjoyable and relevant professional learning', *Asia Pacific Journal for Health, Sport and Physical Education*, 4 (1), pp.19-33.

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Conference Papers

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Dyson, B., Casey, A. and Goodyear, V.A. (2012) Cooperative Learning meets Teaching Games for Understanding, paper presented at the *International Teaching Games for Understanding Conference*, 14-16th July, Loughborough University, Loughborough, UK.

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Forthcoming Conference Papers

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Goodyear, V.A., Casey, A. and Kirk, D. (2013) The dominant, residual and emergent process of students' and teachers' long term engagement with a pedagogical model, for oral presentation at the *British Education Research Association's National Conference*, 3-5th September, University of Sussex, Sussex, UK.

Poster Presentations

Casey, A., Goodyear, V.A and Dyson, B. (2013) 'Using model provenance to authenticate student learning outcomes from a unit of Cooperative Learning', poster presented at the *American Educational Research Association Conference*, 26th April -1st May, San Francisco, America.

Goodyear, V.A., Casey, A. and Kirk, D. (2012) The Best Laid Schemes. Gang Aft Agley: Professional Development for the Cooperative Learning Model, poster presented at the *International Convention on Science, Education and Medicine in Sport*, 19-24 July, Glasgow, UK.

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CHAPTER 1: INTRODUCTION

This thesis explores the yearlong use of Cooperative Learning in two secondary school physical education departments and the contests that were waged for its very existence against the dominant pedagogical practice of physical education and the practices endorsed by the school as an institution. It has considered how participatory action research (PAR) enabled teachers to break the dominant practice architectures of physical education and how PAR supported teachers enduring use of an emergent pedagogical approach (i.e. Cooperative Learning).

The purpose of engaging in this research developed from two overarching concerns around the pedagogy of physical education. The first concern centres on arguments that what is done in the name of physical education reflects the pedagogical practices of the early and mid-20th century (Kirk, 2010; Quennerstedt, 2013). Subsequently, it is considered that physical education as a curriculum subject is at risk of becoming extinct due to its failure to provide relevant and transferrable learning experiences for all young people (Lawson, 2013; Kirk, 2010; Pope, 2011; Williams *et al,* 2012). The second overarching concern is that, whilst physical education has sought to address the first concern (and a number of innovative pedagogical practices have been introduced), physical education exists in a time of innovation without change where teachers rarely move beyond the honeymoon period of implementation in their use of innovations (Goodyear & Casey, In Press; Macdonald, 2004a, 2003; O'Sullivan, 2013; Pope, 2012). By exploring Cooperative Learning as a pedagogical model radically different from the pedagogical practices of the early and mid-20th century, and by unpacking the complexity of this emerging learning environment over the course of an academic year, my aim was to address these two overarching concerns and contribute to an understanding of how to move physical education from the *endangered species list*.

CHAPTER 1: INTRODUCTION

My decision to consider Cooperative Learning as one of many emergent pedagogical approaches was not an idea that merely *sprung up* or was *happened upon* as a result of Cooperative Learning's reported effectiveness (Dyson & Casey, 2012a). Instead, my motivation for exploring teachers' use of Cooperative Learning as a means to address the overarching concerns began as a result of practice-informed theory (Macdonald, 2002). Prior to beginning my doctoral study I was a physical education teacher and my Masters' research explored my own use of Cooperative Learning as a practitioner-researcher in one of the secondary schools in this study. I understood how to teach through the model and I had seen the positive student learning outcomes that it can accrue through my own eyes as a teacher. Yet despite my positive experiences, I did not move beyond the honeymoon period of implementation, although this was mainly a result of leaving teaching to begin my doctoral study. That said I still had a desire to understand what happens when the model is used longer-term, and building upon my use of practitioner research, what methods could support teacher learning over an enduring period of time. By this means, as I moved from being a physical education teacher to a full-time researcher, my aim was to develop the theories around practice that existed for pedagogical models as a whole, and specifically for Cooperative Learning. I wanted explore practice over a sustained period that was built on the existing theories of pedagogical models' short term use and then, as a consequence of these practices, inform our understanding of implementation beyond the honeymoon period based upon my observations and the participants' experiences.

The broad purpose of this thesis was therefore to consider whether the 'talked about' ideas of innovations could become sustainable 'actioned' futures (Casey, 2013, p.79). Cooperative Learning was used as one way to explore this overarching statement. Through four research questions I set out to answer whether Cooperative Learning could comprehensively and cohesively promote learning in the physical, cognitive, social and affective domains[1], how the model

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[1] Kirk (2012) positioned these four learning domains as the legitimate learning outcomes of physical education that can serve to encourage relevant and transferrable learning experiences.

could be sustained in secondary school physical education and if its enduring use is feasible. The questions therefore centre on students' learning, teachers' use of the model and their learning, the Cooperative Learning structures[2] and the school contextual factors that enable or constrain its use.

1. Can Cooperative Learning achieve the student outcomes of physical, cognitive, affective and social learning in a secondary school physical education curriculum and progress over time?
2. How do teachers learn to use Cooperative Learning in secondary school physical education, within and beyond their initial experience?
3. What structures of Cooperative Learning best facilitate student learning and teaching in physical education?
4. Which school contextual factors facilitate or constrain the use of the Cooperative Learning model in secondary school physical education?

These questions served as the focus for my inquiry, analysis, discussions and conclusions. Participatory action research (PAR) was used as the methodology to scaffold my inquiry and to support teachers' learning and use of Cooperative Learning. Indeed, in Chapters 4-6 the research questions are used as a framework to show the change over time from the honeymoon period (Chapter 4) through to the end of the yearlong study (Chapter 6). My aim in this thesis is to conclude by providing advice for those advocating the enduring use of pedagogical models and innovation with change. I provide recommendations that suggest the use of a model is context dependent and that teacher learning should be progressed beyond that initially developed during the honeymoon period.

Structure of the thesis

Following this introductory chapter, over the course of six chapters this thesis explores the theoretical underpinning for the project, the methodology and methods, the findings, and the conclusions I have made.

Chapter 2- *Review of literature* – I begin my discussions by critiquing what is done in the name of physical education and I examine why there is a need to move

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[2] Pre-defined methods for teaching through the Cooperative Learning model (c.f. Dyson & Grineski, 2001)

beyond the early and mid-20th century pedagogical approaches that are endorsed by the school as an institution and a neo-liberal policy climate. Drawing on Kemmis and Grootenboer (2008), these endorsements are considered to be practice architectures that reflect how the classroom is *pre-constructed* and *pre-configured* for teaching and learning. I consider pedagogical models as one possible future for physical education and then explore Cooperative Learning as one of these models. I discuss social constructivism as the theoretical underpinning of Cooperative Learning, the development of the model in education, and the burgeoning research base in physical education.

Chapter 3- *Methodology* – positions my use of participatory action research (PAR) (Kemmis & McTaggart, 2008) as a means to facilitate teacher learning and use of the Cooperative Learning over the course of an academic year. In addition, I discuss the interpretative methods used to explore my research questions and the use of Cooperative Learning from eight teachers' perspectives (from two different schools) over the course of an academic year.

Chapter 4- *Working within the milieu of the practice architectures* – argues that a three month period of initiation, which was conceptualised as the honeymoon period, served to motivate and prepare teachers to use Cooperative Learning. However, when Cooperative Learning was used in the first instance, the model was constrained by teachers' and students' pre-defined expectations for being a *good teacher* and a *good student* which was derived from the past pedagogical approaches of physical education and the practice architectures in their respective institutions.

Chapter 5- *Working within and with the mess of the practice architectures* – continues to show how the use of Cooperative Learning was constrained by pre-defined expectations and the decisions made for practice by others outside of the classroom. The teachers' workload and the physical education curriculum hindered the feasibility of the model. Using Cook's (2009) discussions around the messiness of changing practice, these constraints were conceptualised as mess and

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I show how the teachers worked *within* and *with* the mess to explore the practicality of implementation and to progress students' learning.

Chapter 6- *Emerging into a phase of continuation and emerging rejection* – Drawing on Fullan's (2007) processes of educational change, this chapter argues that towards the end of the yearlong study the eight teachers were either emerging into the phase of continuation or they were emerging into rejection. The teachers who were emerging into continuation were also emerging into a CoP, and together these teachers worked beyond the practice architectures, used the model in an advanced manner and developed pedagogical fluency (Casey, 2010). Students' learning continued to advance and I tentatively show that the learning experiences accrued from Cooperative Learning began to transfer to students' engagement with physical activity beyond lessons. However, the teachers who were emerging into rejection began to discontinue their use of the model after three units of activity taught. Previous experience with similar pedagogical models, time spent using the model, social connectivity with me (in my role as a facilitator), and social connectivity with each other in an emerging CoP, are considered as variables in emerging continuation vs emerging rejection.

Chapter 7- *Conclusion* – I answer three questions: what happened? so what? and what now?, as a means to bring together the findings explored in Chapters 4-6 and to show how I have addressed my research questions. I consider the significance of my findings, providing implications for those advocating the enduring use of pedagogical models and I look forwards to how I will continue to engage with the emerging pedagogical practices of physical education as a result of the experiences and findings explored during my doctoral study.

CHAPTER 2: REVIEW OF LITERATURE

This chapter draws on current pedagogical research in physical education to argue the need for the practices of physical education, and what is done in its name, to be changed. My purpose is to present a legitimate and congruent argument for the enduring use of pedagogical models, and more specifically the Cooperative Learning model. However, I argue that physical education in the 21st century exists in a time of innovation without change.

I begin my discussions with a critique of the nature and relevance of practice to students in the 21st century. I consider how physical education's position in education, as a valued cultural practice for the promotion of the physically active life, is ideological. Furthermore, I will consider that, whilst as a research community we have sought to address these concerns and developed new innovative pedagogical practices, these are constrained by policy and the school as an institution. Consequently, I will argue that any innovation that enters the classroom runs the risk of being hindered by pre-defined expectations around physical education, with regards to teaching and learning.

In the second section, I explore the idea that pedagogical models may be a possible future for physical education. I will argue that pedagogical models present a legitimate answer to the concerns about an irrelevant pedagogy, before showing as a consequence of their use physical education could begin to have an impact on young people's engagement with the physically active life (Siedentop, 1996). However, whilst these models present a legitimate future, teachers' rarely move beyond the honeymoon period of implementation and therefore we have a limited understanding of students' learning and teachers' use of a model beyond one unit of activity taught. We are only beginning to unpack the complexity of these learning environments, and if pedagogical models are a possible future for

the practices of physical education, then we need to understand much more about their enduring use. The discussions in this section, therefore, raise important questions, with few examples, as to how the 'talked about' practices of pedagogical models can become the sustainable 'actioned' practices.

The final section discusses one of these models, Cooperative Learning. Drawing on socio-constructivist theories of learning, I show how Cooperative Learning is capable of creating authentic and meaningful learning environments which explores the socio-cultural significance of human movement. Yet whilst Cooperative Learning is one legitimate future for physical education, if this is to become a sustainable 'actioned' practice then we need an understanding of this model's enduring use. I propose a need for further research on students' learning, teachers' use of a model, the Cooperative Learning structures and how the school contextual factors constrain or facilitate teachers' use of a model beyond the honeymoon period of implementation.

What is done in the Name of Physical Education

> Imagine a doctor goes to sleep for 100 years and then wakes up. He decides to go to work and practice medicine. Imagine his surprise at the latest technology, methods and medicines, or indeed the reaction of other doctors or patients. Imagine instead a teacher who does the same and goes back to the classroom after 100 years. He goes to the front of the classroom and takes up his chalk, writes a few key points and then goes on to question pupils, to which individuals put up their hands to respond. Would anyone notice that 100 years have elapsed since he last taught?

> (Jolliffe, 2007, p.1)

Similar to Jolliffe (2007), who portrayed Robert Slavin's discussions on the Rip Van Winckle effect[3], many curriculum theorists would agree that what is done in the name of physical education has remained relatively stable for a number of decades (Evans, 2013; Kirk, 2010, 2012; Tinning, 2012, 2010). Nothing could be

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[3] The story of Rip Van Winckle who went to sleep for 20 years and awoke to find that society had changed.

more telling than Quennerstedt's (2013) analysis of 285 You Tube clips from 27 different countries. In these video clips physical education was seen to be dominated by skills, sporting performance, team games, fitness testing and a multi-activity driven curricula (Quennerstedt, 2013). These physical education lessons, as captured by anyone who participated in or watched a lesson and took the time to post it to You Tube, show that what is done in the name of physical education is no significant departure from the practices of the mid-20th century (Evans, 2013; Kirk, 2012, 2010; Tinning, 2012, 2010). This *doing* shows a pedagogy that is driven by a hegemonic masculine militaristic amateur sport culture, with an overarching focus on drills, traditional games, fitness, the mastery of skills and a teacher-centred approach (Kirk, 2010, 1999; Tinning, 2010). Thereby, it could be assumed that that if you watched a physical education lesson today and compared it to the lessons that took place in the 60s, 70s or 80s, the routines, activities and contexts would be very much the same (Kirk, 2010; Tannehill & Lund, 2005; Tinning, 2012, 2010).

However, unlike the Rip Van Winckle effect highlighted by Slavin where nothing had changed in the classroom for 100 years, Kirk (2010, 2006, 1990) has argued that physical education has experienced one significant paradigm/pedagogical shift in the last 100 or more years: its change in content focus from gymnastics to sport. Kirk's (2010, 2006, 1990) historical and sociological analyses of physical education shows that after the end of the Second World War there were three versions of gymnastics (Swedish, Olympic and Educational) that had dominated the pedagogical landscape of physical education.

Swedish (or Ling) gymnastics had been the hallmark of physical education between the late 1890s and 1930s (Kirk, 2010, 2006, 1990). Swedish gymnastics involved flexions and extensions of major body joints using apparatus such as vaults. Movements were performed in a militaristic fashion focussing on discipline and the command of the movements that were practised in large groups and in confined spaces. The second form of gymnastics was German or Olympic gymnastics. Towards the mid-20th century German or Olympic gymnastics vied with Swedish gymnastics for space in the British physical education syllabus. This

form of gymnastics included rings, parallel bars and pommel horses and also focussed on exercising major body joints. The third form of gymnastics, educational gymnastics, was Laban's conceptualisation of movement and dance that was introduced in the 1930s. Laban emphasised free and spontaneous movement that incorporated dance and built upon the ideas of child-centred approaches to teaching and learning.

However, whilst there were three forms of gymnastics, Tinning (2012) argued that they were merely mutations of the original form of Swedish gymnastics. In his analysis of the past pedagogies of physical education, Kirk (2010) suggested that these three forms of gymnastics could be collective termed physical education-as-gymnastics. Physical education-as-gymnastics represents a collective pedagogy of physical education between the late 19th century and the mid-20th century that emphasised specialised techniques of the body that were often practiced in controlled environments (Kirk, 2010).

Taking these discussions around the pedagogy, it can be argued that there has only been one paradigm/ pedagogical shift in physical education (Kirk, 2010; Tinning, 2012). In other words, physical education has moved from gymnastics to essentially 'sport' (Kirk, 2010; Tinning, 2012). Kirk (2010, 2006, 1990) suggested that this shift was predominantly related to the increase in amateur sports and the influx of men following World War two into the field of physical education. Through the association of sport and masculinity, football, cricket and rugby became a major driving force in physical education, and as a result of male teachers' militaristic backgrounds and their engagement with competitive sport, encompassed within sport was fitness (Kirk, 2010, 2006). Yet whilst the content changed from gymnastics to essentially 'sport', the teacher-centred approach and techniques have remained an inherent feature of physical education teachers' pedagogical practice in the 21st century (Evans, 2013; Kirk, 2012, 2010; Quennerstedt, 2013; Tinning, 2012, 2010). The current pedagogy could be conceptualised as physical education-as-sport-techniques (Kirk, 2010).

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Although there has not been a significant shift as seen from gymnastics to sport (Kirk, 2010; Tinning, 2012) innovations have been developed and created since the mid-20th century. In the last decade alone 'much has been written about newer and innovative pedagogical approaches that can better assist children and youth experience quality physical education' (O'Sullivan, 2013, p.1). These innovations may include pedagogical models (which will be discussed later in this chapter), participatory action research methodologies and critical pedagogies (O'Sullivan, 2013). Whilst it is considered that there is still a place for a teacher-centred approach and 'sport' in physical education, these innovations seek to move beyond 'sport' and a teacher-led approach narrowly defining physical education and create student-centred learning experiences that are relevant to young people in the 21st century (Kirk, 2010; Metzler, 2011; Tinning, 2010). Yet despite a number of innovative pedagogical practices readily available to practitioners, these innovations have not been used in their entirety and have been seen to work within 'sport', techniques and a teacher-centred approach (Penney, 2013). It could be said that 'watered down' versions exist (Curtner-Smith *et al*, 2008). In other words, rather than the whole pedagogical approach being implemented, only selective features of these innovations are used (Curtner-Smith *et al*, 2008).

By using Williams' (1977) discussions around cultural processes and cultural elements, as a conceptual framework, it is possible to position the pedagogical practices in the 21st century. Williams (1977) argued that the dominant culture features elements of the past (residual) and the future (emergent). The dominant is the overarching cultural practice that embodies the dominant societal norms and values. The residual is 'something different from the 'archaic'', it was formed in the past but is an effective element of the present (Williams, 1977, p.122). The emergent is something radically different to the dominant, 'new meanings and values, new practices, new relationships and kinds of relationship [that] are continually being created' (Williams, 1977, p.123). Therefore, and building upon Kirk's (2010) historical analysis, it could be said that what is done in the name of physical education represents the overarching dominant pedagogical practices of sports performance, fitness and games (dominant), a teacher-led approach and

techniques (residual), and innovations, such as student-centred approaches or pedagogical models (emergent) that are not used in their entirety. However, whilst techniques were formed in the past and are a residual practice, through the conceptualisation of physical education-as-sport-techniques as the overarching pedagogy of the current era, techniques (which might also be positioned as skills or skill-based drills) are encompassed within the dominant pedagogical practice (Kirk, 2010). Therefore, I define techniques (skills) as being part of the dominant.

In light of these discussions around how the pedagogy of physical education is predominantly based upon pedagogical practices that existed and were developed in the 1900s and the mid-20th century, questions can be raised around the relevance of physical education to young people in the 21st century (Kirk, 2010). Although Hamilton (1990, p.65), in his work on schooling and the economic order, suggests that education 'plays a substantial role in producing and reproducing every new generation of adults', it seems reasonable to suggest that physical education is preparing young people for a society that no longer exists. For example, with the growth and diversity in employment, 'teaching as telling is no longer appropriate' (Lieberman & Pointer-Mace, 2008, p.226). Society needs young people who are 'prepared in problem solving, adaptability, critical thinking and digital literacies' (Lieberman & Pointer-Mace, 2008, p.226) which develop when people are given the opportunity to think divergently in social and cooperative contexts (Johnson & Johnson, 2009; Sennett, 2012). Furthermore, in consideration of physical activity, the transmission of practice from amateur sport i.e. drills and skills and the sole focus on physical competence is no longer relevant to how young people engage with physical activity (Kirk, 2012, 2010). Both girls and boys, and women and men, in the 21st century explore human movement as a social practice where they participate in a diverse range of physical activities with friends and families (Azzarito & Sterling, 2010; Wright *et al,* 2003). Participation is no longer just about playing or performing, engagement with physical activity involves being a leader, coach or volunteer (Gard *et al,* 2013; Kirk, 1999).

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My discussions to this point are just a few of the examples that have led many authors to critique the authenticity and transferability of the learning experiences created for young people (Brown, 2013; Gard *et al,* 2013; Kirk, 2010; Kirk & Macdonald, 1998; Penney, 2013). Indeed, Lawson (2013, p.123) who drew on the work of Brown (2013), Gard *et al.* (2013), and Penney (2013) suggested that our programmes 'are out-of-step with societal priorities, global realities and both child and family needs in our fast changing times'. Whilst the dominant pedagogical practice could be considered to represent the dominant societal norms and values (Williams, 1977), there seems to be a disparity between the contemporary needs for young people and practice. This brings me to two overarching concerns of our subject. First, whether physical education will survive as a curriculum subject, and second, that despite innovative pedagogies and curriculum developments, the mid-20th century pedagogy has survived.

Considering the survival of our subject first, physical education has held a legitimized place in education for its promotion of the physically active life (Bailey *et al*. 2009; Green, 2009; Kirk, 2012, 2010, McNamee, 2005; Tinning, 2012). Yet we have limited evidence to show that physical education can have an impact on the physically active life (Siedentop, 1996) and many authors would agree the pedagogy of the mid-20th century cannot meet this aspiration (Kirk, 2012, 2010; Rovegno, 2008; Tinning, 2012). Although the UK government believes physical education is in good health (OfSTED, 2012), when physical education is held accountable for the outcome of producing healthy active citizens, the position physical education holds as a valued curriculum subject may soon be questioned and, as a result, the subject could even become extinct (Bailey *et al*. 2009; Evans, 2013; Kirk, 2010; Tinning, 2012).

In recent years we have already begun to see that extinction is upon us. For example, Penney (2013), Pope (2011), and Rovegno (2008) have shown that physical education is marginalized for space and time against subjects such as Maths and English. Furthermore, whilst Hoffman (1987) predicted that by 2020 physical education teachers could be replaced if the pedagogical practices from the 80s continued, Williams *et al.* (2012) have argued that this possible future for

physical education has become a reality. Most evidently in Australia, in the 21st
century it has been reported that physical education is a subject up for sale where
'individuals and organizations other than teachers and schools position themselves
to deliver PE either within or beyond school curricula' (Macdonald, 2011, p.41).
Teaching is outsourced to external providers and governing bodies who deliver
sports programmes in schools (Macdonald, 2011; Macdonald *et al*, 2008;
Williams *et al,* 2012). This marginality and outsourcing in Australia shows that
while extinction may not yet have occurred, physical education could certainly be
considered to be on the *endangered species* list. All of this certainly raises
questions about what might be done in the name of physical education if the
subject is able to survive as a valued cultural practice (Kirk, 2010; Macdonald,
2011; Macdonald *et al,* 2008; Williams *et al,* 2012).

In consideration of the second overarching concern, i.e. despite the emergence of
new pedagogical approaches the dominant pedagogical practices which originated
in the mid-20th century have survived, it can be said that physical education exists
in a time of innovation without change (Evans, 1985; Goodyear & Casey, In
Press). Although pedagogical 'change has become the catch-cry of the 21st
century' (Pope, 2012, p.119) these innovations and new approaches are 'talked
about' rather than 'actioned' (Casey, 2013a, p.79). 'Curriculum change can be
likened to when a stone or tree branch hits the iron roof of a chookhouse' - after a
brief flurry of activity the chookhouse return to their normal routines (Macdonald
(2004a, p.70). Indeed, Evans (2013, p.2) suggests that whilst curriculum
developments and progressive pedagogies convey physical education as a
'profession in progress, having agency and momentum', he likened physical
education to the radical concept of porn, for the distortions in reality it portrays. In
this way, there are few examples of the enduring impact of an innovation and how
an innovation disrupts the dominant and residual pedagogical practices (Casey,
2012a; Kirk, 2012; Penney, 2013).

Taking the two concerns together, if physical education as a valued curriculum
subject is to survive, Pope (2011, p.274) argued that 'time and status will only be
possible if physical education can present a congruent argument for its role and

importance within the curriculum and wider school life'. "Doing things differently' and 'doing different things in the name of physical education' is then, the essential means' through which to extend in a sustained sense 'thinking about the pedagogical purposes that physical education serves and can legitimately pursue' (Penney, 2013, p.6-7). Yet as Penney and Chandler (2000, p.85) suggested, as a profession we should not only address what the futures should be but 'ensure that policy and curriculum developments then reflect the visions [are] established, and [that, as a profession, we] facilitate their realization.' As physical education has existed in a time of innovation without change (since the later part of the mid-20th century), and practice is not aligned with the contemporary needs of young people, we not only need to consider what the alternative future might be, but consider the methods that facilitate their realisation in practice in the hope that they could become the dominant pedagogical approach (Casey, 2012a).

Building upon my discussions around innovations earlier in this chapter, pedagogical models have been positioned as one possible future for physical education (Haerens *et al,* 2011; Kirk, 2013, 2012). Furthermore, their use has been supported through inter- and intra-professional collaboration, and teachers' use of action research (Casey, 2013b; Dyson & Rubin, 2003; Dyson & Strachan, 2000, 2004; O'Donovan *et al,* 2013, 2012, 2010). However, whilst pedagogical models have been positioned as a legitimate future, and we have an understanding of how to facilitate their use, we know little about their long term use in schools and how they impact on learning over enduring periods of time (Penney, 2013; Rovegno, 2008). One notable exception is the work of O'Donovan *et al.* (2013, 2012, 2010). Whilst I will explore these authors discussions around a primary school's use of a pedagogical model over the course of a ten year period later in this chapter, the longer term use of a pedagogical model was attributed to the synergy with the school ethos, local support from the head teacher(s), and the functioning of a community of practice (CoP) (Wenger, 1998).

Drawing on the work of Evans (2013) and Tinning (2012) it can be suggested that the choice made by physical education teachers to reject the enduring use of these pedagogical models is influenced by policy, media and the school as an

institution. Indeed, Penney (2013) suggests that pedagogic action (i.e. social action) and policy need to be considered together if we are to understand the decisions made and reflected as practice, and how innovations fail to survive the tough test of reality. Thereby, before I discuss the possible future of pedagogical models and the methods which facilitate their realisation, it is important to understand why what is done in the name of physical education has resisted the enduring use of pedagogical models, and indeed any pedagogical innovation. I do this by exploring the work of Kemmis and Grootenboer (2008) around meta-practices and practice architectures to show how a neo-liberal policy climate and the school as an institution have engendered a traditional pedagogical approach.

Meta-practices and practice architectures

The dominant, residual and emergent pedagogical practices are endorsed by the organisations and institutions in which teachers operate (Tinning, 2012). Therefore, a teacher's dispositions and actions are not solely based on their individual thought (Evans, 2013; Kemmis & Grootenboer, 2008; Penney, 2013; Tinning, 2012). Instead the institution combines with the socio-cultural context to affect a teacher's practice. This type of influence was defined by Kemmis and Grootenboer (2008) as meta-practices. Meta-practices are practices that 'guide' the actions, thoughts and decisions of individuals through their dominance over teachers' dispositions to teaching. For example, the meta-practice of educational policy, which I will now show, shapes the practice of teaching and learning in the school context (Kemmis & Grootenboer, 2008).

The meta-practices of government policy, have endorsed the dominant and residual pedagogical practices of physical education since the 20th century. Indeed, at the beginning of the 20th century the *Syllabus of Physical Exercise* for British schools emphasised Swedish gymnastics (Kirk, 1990). Educational gymnastics was also encouraged by the Ministry of Education in the 1950s through the publication of the *Moving and Growing and Planning the Programme* curriculum guides (Kirk, 1990). In the 21st century, and relevant to my discussions around the current pedagogical practices of physical education, Evans (2013), and

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Evans and Penney (2008) argue, that the meta-practices of government policy have endorsed a focus on sports performance and prioritised physical competence. Statements in the UK national curriculum reflect competition, excellence and measurements of performance and 'manifest standards in easily recognisable 'traditional sports'' (Evans, 2013 p.7). Indeed, the content proposed to be taught in the national curriculum, and the attainment targets which serve as a measure for grading students' abilities, have sought to focus teachers' attention on physical competence and the use of multiple sports in curricular (Evans, 2013; Evans & Penney, 2008; QCA, 2009). Furthermore, [in their review of 'outstanding physical education for all'] the Office for Standards in Education (OfSTED, 2012), whom inspects schools on their provision of education in the UK, suggested that to raise standards, teachers should focus on students' fitness, physical performance and competition. This is one example of how the UK government is encouraging the practices of the mid-20th century. Yet it could be said that in many Western societies the standards, objectives or expectations inherent within policies for physical education endorse physical competence and fitness as being a central component of teachers' practice (Macdonald, 2011; National Association for Sport & Physical Education [NASPE], 2004; Ontario Ministry of Education, 2010; Queensland Studies Authority, 2010).

The arguments made in policy, which are then expected to be practiced in physical education, reflects a neo-liberal climate (Macdonald, 2011). For example, with an increasing focus on health as a global and economic priority, attention has been paid by policy makers as to how to produce healthy and active citizens (Evans, 2013; Gard & Wright, 2001; Macdonald, 2011; Tinning, 2012). However, as a result of quantifying health through population testing, which then serves to quantify what counts as a 'good measure' of a good-looking healthy citizen, fitness and fitness testing is one example that has served as a strong foundation for physical education programmes to meet global and national policy agendas (Cale & Harris, 2009a; Evans, 2013; Gard & Wright, 2001; Kirk, 1999; Macdonald, 2011). The militaristic practices of fitness are re-enforced and as Macdonald (2011, p.39) claims this 'reflects the broader neo-liberal policy climate'.

Yet whilst policy endorses sports, fitness, and physical performance, the UK national curriculum also appears to encourage the development of emerging pedagogical approaches. For example it encourages teachers to move beyond the teacher-led approach by emphasising the importance of the use of reproductive teaching styles and student-centred approaches (Curtner-Smith *et al,* 2001; Curtner-Smith & Hasty, 1997; OfSTED, 2012). For example, in 2009 the UK government introduced the Personal Learning and Thinking Skills (PLTS) which encourage students working in teams to discuss, analyse and problem solve (Qualifications and Curriculum Authority [QCA], 2009). Furthermore, OfSTED (2004) suggested that teachers and schools should focus on promoting spiritual, moral and cultural development. The UK has not been alone in its drive to change the dominant approaches to teaching physical education. For example, the Ontario curriculum encourages the focus on physical literacy[4] and the education of the 'whole person' (Ontario Ministry of Education, 2010), NASPE (2004) in the US purports to encourages a focus on personal and social behaviour and the Queensland syllabus focuses on learning activities which allow young people to learn *in*, *through* and *about* human movement (Queensland Studies Authority, 2010). Drawing upon these examples, it seems reasonable to suggest that the meta-practices of physical education policy have guided teachers' thoughts, actions and decisions (Kemmis & Grootenboer, 2008). Subsequently, policy has encouraged the use of early 20th century, the mid-20th century, and emergent student-centred pedagogical innovations from the last few decades (Evans, 2013; Macdonald, 2011; Penney, 2013). As a result of the lack of change in practice in physical education since the 60s, it could be argued that the student-centred approaches and social, moral and cultural learning can be immersed into already formed dominant pedagogical practices of sport, fitness and physical performance (Penney, 2013).

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[4] Physical literacy is a philosophical concept which focuses on the physical, cognitive, social and affective dimensions of learning (c.f. Whitehead, 2010).

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Whilst I have discussed and given examples of how the meta-practices have endorsed a climate of sports, fitness and physical performance, the school as an institution also contributes to the construction and sustainability of the pedagogical practices from the 20th century (Lawson, 2009; Tinning, 2012, 2010). Indeed, meta-practices fall under the umbrella term of practice architectures (Kemmis & Grootenboer, 2008). A practice architecture could be understood as how 'schools and classrooms are *designed*' for teaching and learning and how the classroom is pre-configured for teaching and learning by 'organisations, institutions and settings' (Kemmis & Grootenboer, 2008, p.57-58). Practice architectures are '*constructed*' by the people inside and outside classrooms (Kemmis & Grootenboer, 2008, p.58). In other words, practices architectures are defined as how the practices constructed by those outside of the classroom influence the practice within a classroom (Kemmis & Grootenboer, 2008). For example, a teacher may *construct* the practice of a particular unit of work, yet this is framed by the conditions for practice within the school or by the curricula documents for the subject (Kemmis & Grootenboer, 2008).

Drawing on Tinning's (2012) memetic analysis of physical education, we can better understand how practice architectures (Kemmis & Grootenboer, 2008) have facilitated the sustainability of the early and mid-20th century pedagogical practices. Similar to Evans (2013) and Macdonald (2011), Tinning (2012, p.120) claimed that what is done in the name of physical education was based on the 'ideas that fit best with the institutional agenda'. Physical education-as-gymnastics 'fitted' with the ways of thinking about the body and the creation of complaint and productive workers in the 1900s and early 20th century (Kirk, 2010; Tinning, 2012). The dominance of sport, skills, games and a teacher-led approach have continued to survive as they *fit* with the time constraints of lessons, whole school timetables and curricula (Tinning, 2012). Teachers adopt the command style approach to get through the diverse range of content, for instance, within a six lesson block of one hour lessons (Kirk, 2010; Tinning, 2012; Tousignant & Siedentop, 1983). Furthermore, with lessons traditionally consisting of 40-60 minutes, a strong emphasis is placed on discipline, control and drills to enable

teachers to keep to the rules and routines of whole school timetables and meet the physical performance based outcomes within the national curriculum (Evans, 2013; Fernandez-Balboa, 1998; Kirk, 2010; Van der Mars, 2006). Tinning's (2012) discussions on the institution show how the classroom is *constructed* and *designed* to endorse a traditional curriculum and how the decisions made outside of a teacher's control shapes what is done on a daily basis in physical education.

Taking the discussions on the meta-practices and practice architectures together, it could be suggested that what is done in the name of physical education, and how the pedagogical practices from the 1900s and mid-20th century has survived, is based upon political agendas and the school as an institution. Drawing on Kemmis and Smith (2008b, p.269), teachers are 'no more than a 'cog in a machine'' responding to the decisions made by others outside of their classrooms and schools. Therefore, it is not surprising that a pedagogical practice of skills, drills, a teacher-led approach and the multi-activity curricula is the overarching way to teach physical education (Tinning, 2010, p.42), despite the emergence of innovative student-centred pedagogical practices.

In this section I have argued that physical education is dominated by the pedagogical practices from the mid-20th century embodying sports, skills, drills, physical competence, a multi-activity driven curricula and a teacher-led approach. However, this 'doing' appears to be irrelevant to the contemporary needs of young people. The workforce is no longer driven by compliancy, but instead people who are adaptable and have the ability to problem solve. In addition, human movement is a social practice in the 21st century, where militaristic and isolated skill practices seem to be inconsistent with young people's engagement with physical activity. In this way, I have argued that the position physical education holds as a valued and cultural subject for its promotion of the physically active life, is ideological if all we do is continue with more of the same. As a subject we need to move from the 'talked' about emergent pedagogical practices and begin to 'action' them to ensure the continued legitimacy of physical education.

In the following section I begin my discussions on the legitimate learning outcomes of physical education that might allow the subject to promote the physically active life. Subsequently, I show how pedagogical models can facilitate the realisation of these learning outcomes. Yet returning to an overriding concern of the subject, that physical education since the 60s has existed in a time of innovation without change (Evans, 1985; Goodyear & Casey, In Press), I suggest that whilst pedagogical models provide a legitimate alternative to the traditional pedagogical practices and can enhance the relevance and transferability of learning experiences for young people, we need to facilitate their long term use. I draw on the stages of the causes and process of initiation, implementation and continuation (Fullan, 2007) to explore when and why pedagogical models have been sustained periods of time and, in a similar vein, why the act of discontinuance has happened. Drawing on the rare cases of the sustained use of pedagogical models, I position intra- and inter-professional collaboration, and specifically the use of CoP, as social learning frameworks which facilitate the realization of pedagogical models into practice over enduring periods of time.

A Possible Future: The Enduring use of Pedagogical Models

If physical education is to sustain its valued cultural and moral position within education, Kirk (2013, p.6) argued that we should focus on how best to promote the 'educationally beneficial outcomes for students, across a range of domains'. Drawing on Bailey *et al's*. (2009) discussions on educationally beneficial learning outcomes in physical education, Kirk (2013, 2012, 2010) argued that we should comprehensively and cohesively address learning in the physical, cognitive, social and affective domains (Haerens *et al*, 2011; Kirk, 2013, 2012, 2010; Metzler, 2011). Indeed, for physical education to be capable of promoting the physically active life, Kirk (2012) positioned these four learning domains as the legitimate learning outcomes. However, learning in these domains can only occur 'given the right social, contextual and pedagogical circumstances' (Bailey *et al,* 2009, p.16). The socio-cultural perspective of human movement, considers the four learning domains within the social and contextual environment (O'Sullivan, 2013). The socio-cultural view holds that the development of human movement does not

occur in isolation from psychological, social and cognitive processes, or the context which learning occurs (Quennerstedt, 2008; Öhman & Quennerstedt, 2008; Nyberg & Larsson, 2012; Rovegno, 2006; Rovegno & Dolly, 2006; Tinning, 2010, 1997a). Movement in this way is a socio-cultural act that involves exploration of what human movement means, and its significance within a specific context (Nyberg & Larsson, 2012; Quennerstedt, 2008; Rovegno, 2006; Tinning, 2010). From the socio-cultural perspective, knowing how to perform, the feelings of performing, the social nature of engaging in physical activity and the creation of an authentic, meaningful and relevant learning environment are just as significant, and if not more important, as being a competent mover (Dyson *et al,* 2004; Gard, 2011; Nyberg & Larsson, 2012; Quennerstedt, 2008; Tinning, 2010, 1997a). The socio-cultural perspective suggests that the learning domains happen together and learning is context dependent.

One way in which the pedagogical circumstances, the legitimate learning outcomes of physical education, and a socio-cultural perspective to learning can be considered is through models (O'Sullivan, 2013), and more specifically pedagogical models (Kirk, 2013, 2012). There is an increasingly level of advocacy for the use of pedagogical models, and at the forefront of this argument is Kirk (2012). He claims that for physical education to achieve cultural legitimacy in the medium (~10 years) and long term future (~20 years) physical education should adopt a models-based approach. In other words, curricula should be organized around pedagogical models, rather than sport or the multi-activity approach (Kirk, 2013). There are two main reasons for Kirk's (2013, 2012) argument. Firstly, through well-defined set of procedures, and the use of critical elements, pedagogical models seek to align teaching, content, context with the legitimized learning outcomes for physical education (Kirk, 2013, 2012). Secondly, since a critical mass of school-based empirical research suggests that pedagogical models can achieve the legitimate learning outcomes of physical education, explore the socio-cultural significance of human movement and create an authentic, relevant and meaningful learning environment (Casey & Dyson, 2012; Harvey & Jarrett, 2013; Hastie *et al,* 2011; Kirk, 2012; Metzler, 2011).

Thereby, pedagogical models have been argued to construe an effective physical education programme that can provide educationally worthwhile learning experiences that lead young people to value the physically active life (Haerens *et al*, 2011; Kirk, 2012).

Yet pedagogical models are not a new idea. The argument for using a model and shifting the focus from the traditional pedagogy can be attributed to the work of Bunker and Thorpe (1982) and Siedentop (1987) in the 1980s. Furthermore, the term pedagogical models emerged from the work on curriculum models by Jewett *et al.* (1995) and instructional models by Metzler (2011, 2005, 2000). Curriculum, instructional and pedagogical models all explore the four concepts of pedagogy and the four learning domains as a means to legitimately address the physically active life (Haerens *et al*, 2011; Metzler, 2011; O'Donovan, 2011; O'Sullivan, 2013). However, in curriculum models the primary focus is the change in content of a physical education programme and the aim towards specific and well defined student learning outcomes (Jewett *et al*, 1995). Furthermore, instructional models, as the term indicates, place the instruction at the centre of the models-based framework and work towards changing the way the teacher modifies their behaviour and organisation of a programme (Metzler, 2011, 2005, 2000). Pedagogical models is a term that has developed from curriculum and instructional models amidst concerns that by using the term 'curriculum model' or 'instructional model' the concept of curricular change is limited to either content or the teacher (Haerens *et al,* 2011). Whilst curriculum, instruction and pedagogical models all have similar intent (Haerens *et al,* 2011; Metzler, 2011; O'Donovan, 2011; O'Sullivan, 2013), the term 'pedagogical' includes all three aspects of learning, curriculum (content) and instruction (teaching strategies) (Haerens *et al,* 2011; Kirk, 2012). Pedagogical models acknowledges teaching, learning, content and context without omitting one as more as important that the other and this term has developed from the early work in the 1980s and that of Jewett *et al.* (1995) and Metzler (2011, 2005, 2000).

A number of different models have been developed since the early 1980s. The most well-known are considered to be Sport Education and Teaching Games for

Understanding (Kirk, 2012; O'Sullivan, 2013) yet others such as Cooperative Learning (Dyson & Casey, 2012a), Adventure-Based Learning (Sutherland & Stuhr, 2012), and Teaching Personal and Social Responsibility (Hellison, 2003) have received increasing advocacy as being worthwhile pedagogical practices. One would only have to open the contents page of a journal to see that there is an increasing level of encouragement for teachers to use these models as a basis for their practice (Casey, 2012a). However, pedagogical models have had a lack of profound and lasting success (Dyson *et al,* 2004; Kirk, 2012, 2010; Penney, 2013; Pope, 2011). Similar to Macdonald's (2004a, 2003) discussions on comparing curriculum change to the stone hitting the chookhouse, pedagogical models have often floundered or lost momentum (O'Donovan *et al,* 2012, 2010). Despite pedagogical models being promoted as a means to teach physical education for nearly a quarter of a century, they are conceived of as an emergent pedagogical approach and 'still struggle to achieve legitimacy or certainly attain any sense of dominance in physical education' (Penney, 2013, p.15). In the next section I draw upon the critical mass of research on pedagogical models, and I use Fullan's (2007) framework of the causes and process of initiation, implementation and continuation to consider when and why models have either been rejected or their use has been sustained.

The causes and processes of initiation, implementation and continuation

The decision to use a pedagogical model over a sustained period of time does not happen as a result of *selling* teachers good ideas (Kirk, 2011). Drawing on Fullan's (2007) discussions on educational change, it seems reasonable to suggest that teachers go through a process of initiation and implementation which results in either continuation or rejection. Continuation (or confirmation, incorporation, routinization, institutionalization) is the decision a practitioner or a collective group of individuals make to use an innovation beyond the initial experiences, where the innovation becomes a sustainable part of their practice (Fullan, 2007). In doing so they recognise the benefits of using the innovation, they begin to integrate the innovation into their on-going routines and they promote the innovation to others within their communities (Fullan, 2007) and immerse an

innovation into the school and their practice. In contrast, rejection is the act of discontinuance (or non-continuation) which can occur following the decision to use the innovation and a phase of implementation (Fullan, 2007). Discontinuance can happen as a result of dissatisfaction with the innovation's outcomes, the realisation that an innovation is inappropriate for one's practice, a lack of local support from within the school context or the practice architectures that continue to govern one's dispositions and practice (Fullan, 2007; Hargreaves, 1994; Kemmis & Grootenboer, 2008).

Whilst the time frame of initiation, implementation and then either continuation or rejection varies, these phases are dependent on the teacher and socio-cultural context (Fullan, 2007; Hargreaves, 1994). For example, the act of discontinuance often happens to those who innovate alone and consequently, practitioners return to their traditional routines (Fullan, 2007; Hargreaves, 1994). Yet those who work together and are supported by outsiders and have a high level of social connectivity are more likely sustain their use of the innovation (Fullan, 2007; Hargreaves, 1994). Furthermore, the phases of initiation, implementation and continuation are not a linear process 'but rather one in which events at one phase can feed back to alter decisions made at previous stages' (Fullan, 2007, p.67). I will now use initiation, implementation and continuation to explore teachers' use of pedagogical models. As I will show, we have evidence of initiation, implementation and rejection, but a limited understanding and few examples of continuation.

Initiation

Fullan (2007) argued that the first process in educational change is initiation. This is a period of time is when teachers or a collective group of individuals are introduced to an innovation and they begin to make a decision as to whether their use or engagement with a new pedagogical approach is beneficial for their practice, their professionalism, their students or their school (Fullan, 2007; Hargreaves, 1994). In this way, McCaughtry *et al.* (2004, p.137) argued that 'teachers have to buy into a new curriculum and see that something else is worth

engaging with', before they are willing to proceed into the next phase of implementation (Fullan, 2007). For any pedagogical change to become possible in teachers' practice the period of initiation and the innovation needs to challenge teachers' pre-existing beliefs about practice, which may have been formed as a result of the meta-practices and practice architectures (Casey, 2012b; Kemmis & Grootenboer, 2008; Patton & Griffin, 2008; Patton *et al,* 2005).

The notion of initiation with regard to pedagogical models has often been suggested to happen during a professional development programme when teachers are introduced to a model and they engage in workshops or activities which develop their understanding of what a model does and how it works (Ko *et al,* 2006; Pascual *et al,* 2011). Yet in other cases, as I found myself as a physical education teacher, initiation into pedagogical models can also happen during a period of academic study (Cohen & Zach, 2012; Goodyear *et al*, 2013a, 2012a; Casey, 2013b; Zach & Cohen, 2012). Yet regardless of how teachers' learn about a pedagogical model, many authors agree that the willingness to continue into the phase of implementation, and therefore McCaughtry *et al's* (2004) notion of *buy in,* happens as a result of a pedagogical model aligning with teachers' philosophies, the school ethos and occurs as a result of evidence of effectiveness from their own and other teachers' use of it (Casey, 2013b, 2012a; O'Donovan, 2011; O'Donovan, *et al*, 2012, 2010). It seems reasonable to suggest that to facilitate teachers moving into the phase of implementation, professional development in either the form of workshops or academic study, should focus on developing teachers understanding of a model, how models have synergy with their philosophies and discussing or providing evidence to suggest that a model works (Casey, 2012a; Ko *et al*, 2006; Sinelnikov, 2009).

Implementation

Implementation follows initiation and is the 'process of putting into practice an idea, program, or set of activities and structures new to the people attempting or expected to change' (Fullan, 2007, p.84). The critical mass of research discussing pedagogical models exists within this phase of implementation, which highlights

as a professional community that physical education does not have a problem with *selling* ideas to teachers (Kirk, 2011). However, whilst in this section I explore the phase of implementation it is worth noting that the duration of implementation reported is relatively short. In consideration of the two most widely researched models, Teaching Games for Understanding and Sport Education (Kirk, 2013; Pope, 2011), retrospectively research design lengths were commonly between 7-12 (Harvey & Jewett, 2013) and 8-26 lessons (Hastie *et al*, 2011). With hindsight, in the UK where most school curricular offers two hours of physical education per week (OfSTED, 2012), implementation has been explored in one unit of activity, across one school term.

Whilst the period of time explored is relatively short, the research within one unit of activity, across one school term suggests that pedagogical models facilitate students' learning in the physical, social, cognitive and affective domains (Casey & Dyson, 2012; Harvey & Jewett, 2013; Hastie *et al,* 2011). Yet, although learning happens, changing practice is problematic for both teachers and students (Casey, 2012b; 2010; Cohen & Zach, 2012; Zach & Cohen, 2012). For example, Ko *et al.* (2006) argued that during implementation teachers found it difficult to change from their teacher-led approach and their students found it difficult to cope with the new level of ownership and responsibility that they were afforded. This provides one example to show that the use of pedagogical models can cause teachers to feel out of their comfort zones and that a model works against teachers' and students' predefined expectations for teaching and learning (Casey, 2012a, 2012b). These pre-determined responses are referred to as extra-individual conditions and are based on the 'cultural-discursive conditions and possibilities that existed before' and beyond teachers and their students (Kemmis & Grootenboer, 2008, p.50). In other words, extra-individual conditions is the term used to identify how the cultural traditions of education shape teachers' and students' dispositions and actions in response to particular situations (Kemmis & Grootenboer, 2008), which are confronted during the phase of implementation (Casey, 2012b; Fullan, 2007; Hargreaves, 1994).

Although the phase of implementation is problematic and confronts the extra-individual conditions (Casey, 2012b), over the course of a unit students' and teachers' adjust to a learning environment where learning occurs in the four domains and teachers become more comfortable with their changing practice (Dyson, 2002; Sinelnikov, 2009). However, in a review of teachers' use of pedagogical models, Casey (2012a) held that teachers rarely move beyond the initial point of implementation and either return to their 'traditional approach' (McNeill *et al*, 2008) or modify the model to suit their own purposes (McCaughtry *et al,* 2004). Kirk (2011) summarised this as, teachers rarely move beyond the honeymoon period of implementation, i.e. they use the model once when it is exciting, new and conceived as being innovative, but then not again. Therefore the act of discontinuance often occurs after the first unit taught. It could be suggested that meta-practices, practice architectures and extra-individual conditions constrain teachers' use of a model and whilst they could work beyond them they choose not to (Kemmis & Grootenboer, 2008). As a result of exploring just one unit of activity during the phase of implementation, as Rovegno (2008, p.92) suggests, 'we are only beginning to unpack the complexity of these learning environments', and we know little about the longitudinal use of pedagogical models and what happens when models become the dominant pedagogical approach.

Continuation

Continuation follows the initial assessment of the innovation (initiation) and 'is an extension of the implementation phase' (Fullan, 2007, p.66). Continuation signifies when change gets built into the school system and when the use of an innovation becomes an on-going part of teachers' routines (Fullan, 2007). Whilst the time frames of moving from implementation to continuation vary between groups of teachers, and between schools, Fullan (2007) argued that the continuation of an innovation usually occurs after 2-3 years of implementation. Yet, with the relatively short research designs there is a limited understanding of the processes that lead to continuation and students' learning over enduring

periods of time. Drawing upon a few case studies I will now discuss how continuation has occurred.

In the case of O'Donovan *et al.* (2013, 2012, 2010), who have explored primary school teachers' use of a model over ten years, the enduring use of Sport Education has been attributed to an emerging community of practice (c.f. Wenger, 1998). Teachers who worked together to plan the curriculum, support each other's practice and head teachers who valued the contributions that Sport Education could make to the ethos of the school and its ability to meet governmental expectations, not only supported teachers' use of the model but gave the model credibility in the teachers' classrooms. This example from O'Donovan *et al*. (2013, 2012, 2010) shows the power that a teacher's socio-cultural context can have on teachers' use of a model over an enduring period of time. At this juncture it is therefore important to explore the social learning framework of CoPs in order to understand how a CoP supported the sustained use of Sport Education, and how CoPs could contribute to the sustained use of other emergent innovations.

CoP is based on the seminal work by Lave and Wenger (1991) on situated learning theory. A CoP could be defined as a group of people who 'deepen their knowledge and expertise in [an] area by interacting with one another on an on-going basis' (Wenger, *et al*, 2002, p.4). The assumption is that 'learning is an integral and inseparable aspect of social practice' (Lave & Wenger, 1991, p.31) and people learn and develop their practice through being participants within a community (O'Sullivan, 2007; Wenger, 1998). Whilst there are many different types of communities (for example, knowledge-building communities, professional learning communities or networked learning communities), a CoP has distinct features that distinguish CoP from these other types of communities (Barab & Duffy, 2012; Hoadley, 2012). In Wenger's (1998) arguments for CoPs, and building upon the initial conception of a CoP by Lave and Wenger (1991), the dimensions of a CoP can be understood as, mutual engagement, joint enterprise and shared repertoire. A CoP exists because each participant occupies a unique identity where their contributions are important for other members (mutual engagement). Members facilitate the development of each other's practice, and

the practice of the community, in order to achieve a common and negotiated goal (joint enterprise). Finally, over time the community develops routines, actions, or ways of doing things that become a sustainable part of their practice (shared repertoire).

A CoP creates a communicative *space* for meaningful, worthwhile and frequent discussions between teachers, which in turn facilitates the development of their own and each other's pedagogy (Calderón, 1999; Deglau and O'Sullivan, 2006; Parker *et al*, 2010; O'Sullivan, 2007). Quite often in a CoP, teachers work together to inquire into their respective practices and to develop their understanding of how to use a new pedagogical approach (Atencio, *et al*, 2012; Calderón, 1999; McLaughlin & Zarrow, 2001). Indeed, building upon my discussions around, O'Donovan *et al*. (2013) the three dimensions of mutual engagement, a shared repertoire and a joint enterprise (Wenger, 1998), facilitated teachers' enduring use of the pedagogical model, Sport Education. The teachers had a shared goal to use Sport Education in the curriculum, the teachers supported each other's use of the model through curriculum planning and developing community members understanding of the model, and the teachers formed routines that facilitated Sport Education being an enduring feature of physical education for 10 years. However, despite CoPs reported effectiveness, CoPs take time to emerge and are not something which can be simply created. Communities must have some form of history for them to emerge from, and members must share a form of history with one another (Barab & Duffy, 2012; Hoadley, 2012). Yet it has been suggested that CoPs can be fostered and supported through technology and with the support of an outsider to the community (Barab & Duffy, 2012; Fleer, 2003; Hoadley, 2012).

Returning to my discussions around the processes that lead to continuation, whilst technology and outsiders to a group of teachers can foster a CoP (Barab & Duffy, 2012; Fleer, 2003; Hoadley, 2012), the sustained support from academic researchers have developed teachers' understanding and use of pedagogical models over enduring periods of time. For example, Sinelnikov (2009) highlighted that the frequent discussions between teachers and a researcher

supported teachers in the pedagogical decisions they were making and their understanding of Sport Education over the course of an academic year. In the same vein, Dyson and Rubin (2003) have shown that the sustained support from an academic researcher aided the teacher in their use and understanding of the Cooperative Learning model over a four year period. A communicative space and a supported cultural context, in keeping with Fullan (2007) and Hargreaves (1994) aid the longitudinal use of pedagogical models.

However, although intra- and inter-professional collaboration has shown to be an effective social context that facilitates the use of a model over an enduring period of time, these supportive climates do not always exist and take time to emerge (O'Donovan *et al*, 2013; Wenger, 1998). At this juncture it is also important to note that professional development courses on pedagogical models are absent from teachers' professional learning, unless teachers and schools form university-school partnerships. Drawing on Casey (2010) who used action research to support his use of multiple pedagogical models over a seven year period, it can be suggested that action research is one methodology that supports the process of initiation, implementation and continuation (Fullan, 2007; Hargreaves, 1994). Similar to the discussions around participatory action research (Ax *et al,* 2008b) and how the process of community inquiry can challenge the practice architectures, through Casey's (2012b) use of action research he learnt how to work within and then later against the practices architectures and extra-individual conditions (Kemmis & Grootenboer, 2008). He also developed an understanding of how to use models, how to develop his students understanding of how to learn within these models, which then led him into a phase of continuation (Casey, 2010). During this phase of continuation he described his use of a model as pedagogical fluency (Casey, 2010). The notion of pedagogical fluency was described as a time when the students became the heart of the model and when the teacher began to think within the model responding to the students emerging learning experiences (Casey, 2013b, 2010). Casey's (2012a, 2010) research shows how adopting the role of a teacher-researcher allowed him to meld theory and practice together to support his sustained use of pedagogical models. This "self-

help' approach allowed him to engage in theoretically-informed practice, or praxis' which it can be suggested is an important feature of teachers' learning to use pedagogical models both within and beyond the honeymoon period (Casey, 2012a, p.11)

In this section I have argued that pedagogical models offer a plausible alternative to the dominant pedagogical practices through their alignment with teaching, learning, content and context, and through pedagogical models' ability to achieve the legitimate learning outcomes of physical education. However, whilst teachers' buy into a model (and we have a critical mass of evidence that shows that models work during implementation), we have a limited understanding of the use of a model beyond one unit of activity. Drawing on a few case studies it becomes evident that CoPs, frequent and sustained support from academic researchers, and an inquiry stance can aid teachers moving through initiation, implementation and into a phase of continuation where teachers work beyond the practice architectures (Ax *et al,* 2008b; Fullan, 2007; Hargreaves, 1994; Kemmis & Grootenboer, 2008). Yet these examples are few and far between and we know little about teachers' practice, students' learning, how models are used, and how beyond implementation the socio-cultural contexts constrains or enables the model's use. If pedagogical models are the future practice of physical education it does not seem inconceivable to suggest that we need to look beyond the questions as to whether pedagogical models work and begin to look longer term (Casey, 2012a; Kirk & Casey, 2012). This would mean acknowledging the meta-practices and practice architectures have constrained teachers' and students' dispositions and actions (Casey, 2012a; Kemmis & Grootenboer, 2008) and findings ways for a model to emerge in the hope that it could then become the dominant pedagogical practice. When this happens we might then be able to unpack the complexity of these learning environments and understand what learning might occur over sustained periods of time (Rovegno, 2008).

In the remainder of this thesis I focus my attention on one pedagogical model, Cooperative Learning. However, at this juncture, and before I move onto discuss this model, it is important to acknowledge my reason for using Cooperative

Learning and not for example, Sport Education or Teaching Games for Understanding. Before I began my doctoral study I was a secondary school physical education teacher. During this time, and as part of my Masters degree, I used the Cooperative Learning model as a practitioner researcher to explore my teaching of two classes (Goodyear *et al*, 2013a; 2012a). Drawing on Kemmis and Smith (2008a, 2008b) who described praxis as a morally-committed action based on Aristole's dispositions of epistēmē (to seek truth though contemplation), technē (to act in a true and reasoned way to gain an outcomes) and phronēsis (to act wisely), as a teacher I had developed this notion of praxis. I had understood that Cooperative Learning could achieve the legitimate learning outcomes of physical education (epistēmē), I knew how to use the fundamental elements (which will be discussed in the next section) of the model to develop students' learning (technē), and as a teacher I had begun to develop an understanding of the contextual and situational requirements for the model to be used (phronēsis) (Kemmis & Smith, 2008b). Whilst I had learnt of other pedagogical models, I had experience from within the school context and had formed a practice-informed theory about Cooperative Learning (Macdonald, 2002). Such a situated form of knowledge Casey (2012a) argued could support cooperating teachers in their use of a model. By using Cooperative Learning I had a greater level of practice-informed knowledge in comparison to other models, and I had a 'head start' in my journey to developing theory-informed practice (Macdonald, 2002) about the enduring use of a pedagogical model, which is the heart of this thesis.

The Cooperative Learning model

In this section I consider Cooperative Learning as a pedagogical model. I begin by exploring the theory and development of Cooperative Learning as a model seen to emerge from the practices in education. Following these discussions I position Cooperative Learning as a pedagogical model by discussing the 'burgeoning research base' on its use in physical education (Casey, 2013b, p.151). In keeping with my discussions on pedagogical models, whilst Cooperative Learning can achieve the legitimate learning outcomes of physical education, physical education teachers rarely move beyond the honeymoon period of implementation

(Kirk, 2011). These discussions lead me into my conclusions of this chapter where I suggest and propose four questions that need answering if we are to consider Cooperative Learning as one of the pedagogical models to support the survival of physical education.

Theory and development of the Cooperative Learning Model

Whilst models such as Sport Education and Teaching Games for Understanding were constructed and developed in the 1980s by researchers in the field of physical education and sport pedagogy, Cooperative Learning only began to develop in physical education during the early part of the 21st Century and emerged from its use in other curriculum subjects such as English, Maths, and Science (Dyson & Casey, 2012b; Johnson & Johnson, 2009). In the 1970s the model was created amidst concerns that students rarely had the opportunity to develop or even use their interpersonal skills in the traditional competitive and individual learning environments (Johnson & Johnson, 1983; Kagan & Kagan, 2009; Slavin, 1996, 1995). Through combining social and academic learning, Cooperative Learning was seen as a method of promoting students' interpersonal skills and their ability to interact and achieve in an ever changing economic and social society (Kagan & Kagan, 2009). Since the 1970s more than 1200 research articles have shown that in comparison to traditional pedagogical practices, Cooperative Learning enhances students' achievement, self-esteem, interpersonal skills, and cognitive learning (Johnson & Johnson, 2009; Johnson *et al,* 2000). Although Cooperative Learning is an emergent pedagogical model in physical education, it has history of use, application and theory from a number of curriculum subjects (Johnson & Johnson, 2009; Kagan & Kagan, 2009; Slavin, 1996).

Johnson and Johnson, Slavin, Kagan, and Cohen have been instrumental in Cooperative Learning's development. However, these protagonists have differing perspectives as to what maximises learning and achievement within the model. Whilst they agree that social constructivist theories are the overarching theoretical framework that explains how students' learn, they drew on behavioural,

motivational and socio-cognitive theories to developed four separate approaches to Cooperative Learning. In the following section I discuss social constructivism, the over-arching theoretical framework for Cooperative Learning. Following this, I introduce the differing approaches to the model developed by Johnson and Johnson, Slavin, Kagan, and Cohen.

Social Constructivism

In contrast to behaviourism where students learn by responding to a stimulus, such as an instruction from a teacher, through the social constructivist lens it is suggested that students' acquire knowledge through social interaction with their peers and through being a social, active and creative learner (Macdonald, 2004b; Perkins, 1999; Rovegno & Dolly, 2006; Ward & Lee, 2005). Social constructivism arose from the work of cognitive development psychologists Jean Piaget and Lev Vygotsky and was then suggested to emerge into education through the work of educational philosopher John Dewey (Azzarito & Ennis, 2003; Rovegno & Dolly, 2006). Whilst peer learning has often been criticized, since the knowledge given or required to be learnt is taken away from the expert teacher, the work of Piaget, Vygotsky and Dewey justify and explain how students' learn from social interaction (Johnson & Johnson, 2009; Macdonald, 2004b; Ward & Lee, 2005).

In order for one to learn through social interaction, Piaget (1985) considered cognitive conflict to be vitally important. Cognitive conflict happens when one is confronted with differing perspectives which positions an individual in a state of cognitive disequilibrium (Johnson & Johnson, 2009; Lafont, 2012; Piaget, 1985; Ward & Lee, 2005). Such a state of conflict between competing perspectives requires the individual to re-think their understandings, build upon their previous knowledge and the new knowledge developed from social interaction serves to create new forms of understanding and reach equilibrium (Piaget, 1985). Thereby, Piaget argued that the development of knowledge is a result of competing ideas and the subsequent management of these ideas to generate new understandings (Johnson & Johnson, 2009; Piaget, 1985; Ward & Lee, 2005).

Vygotsky's (1978) view of learning is similar. He argued that knowledge is created as a result of generating different understandings from the people we interact with. Vygotsky (1978) considered learning to be a process which happens when an individual confronts and moves through the zone of proximal development. The zone of proximal development is defined as 'the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978, p.86). Within group work, students learn under guidance and support from more knowledgeable peers who guides them through the zone of proximal development (Miller, 2003; Rovegno & Dolly, 2006; Vygotsky, 1978). Through the perspectives of Piaget and Vygotsky, activities where people interact with each other whilst working towards achieving something, such as cooperative tasks, facilitates cognitive-development as result of managing different perspectives and building upon their previous knowledge (Miller, 2003).

Dewey was 'perhaps the first modern educator to recognize education as a social enterprise' (Azzarito & Ennis, 2003, p.179). Whilst his work was grounded in the philosophy of education rather than social constructivism (Quay and Peters, 2008), building upon the views of Piaget and Vygotsky, it is clear that Dewey (1938) also agreed that learning happens as a result of social interaction and the connections a learner can make with their pre-existing knowledge. In his discussions around experiential learning, Dewey (1938) considered the conditions and the settings that would facilitate social interaction and the ability for young people to learn from real world experiences (Azzarito & Ennis, 2003; Quay and Peters, 2008). It could be said that Dewey was more concerned with the role of the teacher, the curriculum and the school in the creation of an authentic and transferrable learning experiences, instead of how students learn through social interaction as discussed by Piaget and Vygotsky. For example, in order for young people to learn as a result of social interaction and make connections with their pre-existing knowledge, Dewey (1938, 1900) argued that the teacher should teach as a cultivation of experience (Darling-Hammond, 2007). The child is at the

centre of learning where their pre-existing knowledge forms the organising centre for new knowledge to be built upon (Dewey, 1938). This could be summarised as the learner 'becomes the sun around which the appliances of education revolve; he is the centre about which they are organised' (Dewey, 1900, p.51). Reflection (as an inherent feature of experiential learning) was one way to connect learning and place the child at the centre of practice (Dewey, 1938, 1933, 1929; Quay and Peters, 2008; Sutherland, 2012). Dewey (1933, 1929) considered that reflection allowed learners to understand how their knowledge had developed and how the new lessons learned connected to their lives (Dewey, 1933, 1929). Central to human learning, Dewey (1939) claimed, was the creation of an authentic social learning environment that encompasses reflection to allow young people to build upon existing knowledge and transfer new understandings (Dewey, 1938). The educational process closely resembles the path of a butterfly where the teacher creates learning experiences for students to build upon their pre-existing knowledge (Darling-Hammond, 2007; Jackson, 1968).

> The teacher is someone who can anticipate productive starting points for the chasing of the butterflies by arranging experiences and nurturing environments that, in the course of skilfully managed interactions, may enable students to benefit from the ideas they are encountering and develop the ability to continue to learn from their experience
> (Darling-Hammond, 2007, p.25)

Drawing on the theoretical positions of Piaget, Vygotsky and Dewey, learning is considered to be a process, rather than having a distinct end point (Johnson & Johnson, 2009). Through the social constructivist lens, learning is based upon the assumption that students' construction of knowledge occurs in a social context (Rovegno & Dolly, 2006), 'with the individual making personal meaning from socially shared perceptions' (Macdonald, 2004b, p.16). Students are active, social and creative learners who connect their past, current and future learning experiences to construct new meanings and understandings (Brooks & Brooks, 1993; Ennis, 1994; Lafont, 2012; Perkins, 1999). Thereby, drawing on the views of Piaget, Vygotsky and Dewey, these arguments suggest that group work should

be structured so that young people have time to reflect but can also learn from more competent peers or the teacher.

In the following section I explore how group work is structured in Cooperative Learning through this social constructivist lens. However, in order to structure group work and for young people to achieve as a result of peer interaction, Johnson and Johnson, Slavin, Kagan, and Cohen drew upon cognitive-development, behavioural-social and motivation theories to support the social constructivist perspective (Johnson & Johnson, 2009; Slavin, 1996). Whist it is beyond the scope of this thesis to discuss the multiple theories that inform Cooperative Learning, in the following section I show how these theories support the social constructivist framework and have informed Johnson and Johnson's conceptual approach, Slavin's curricular approach, Kagan's structural approach, and Cohen's complex instruction approach.

The Cooperative Learning Approaches

Building upon Deutsch's (1949) social interdependence theory, Johnson and Johnson (2009) developed the conceptual approach. Deutsch (1949) explored goal accomplishment and motivation and suggested that the way in which interdependence among goals is structured determines how individuals interact and the interaction pattern determines achievement (Johnson & Johnson, 2009). In a cooperative social situation the goals for the individuals within a group are interrelated and correlated with the attainment of that goal by other members of the group, '*you sink or swim together*' (Deutsch, 2006, p.24). Furthermore, people have a membership motive to help each other attain through promotively interdependent goals (Deutsch, 1949). Social interdependence theory therefore predicts interpersonal attraction, an effort to achieve and higher attainment because the social situation promotes the success of others where each member is dependent on one another's goal accomplishment (Johnson & Johnson, 2009).

Social interdependence theory led Johnson and Johnson (1983) to exemplify the importance of positive interdependence and group goals as a fundamental

component of Cooperative Learning (Johnson & Johnson, 2009, 1989, 1983).
However, the conceptual approach developed by Johnson and Johnson (1989,
2009) also draws on cognitive-development and the behavioural-social
perspectives. Social interdependence theory predicts goal interdependence, the
cognitive-development perspective predicts intellectual resource and the
behavioural-social perspective predicts reward and task dependence (Johnson &
Johnson, 2009). Based on these three theoretical positions, Johnson and Johnson
(2009, 1994, 1991, 1989) argued that five elements serve as the centre of the
conceptual approach.

> *Positive Interdependence:* students perceive that they need each other in
> order to complete the task.
> *Face-to-Face Promotive Interaction*: Students promote each other's
> learning by helping, sharing and encouraging efforts to learn.
> *Individual Accountability*: Each students' performance is frequently
> assessed and the results given to the group and the individual.
> *Interpersonal and Small Group Skills*: groups cannot function effectively
> if students do not have and use the needed social skills.
> *Group Processing*: groups need specific time to discuss how well they are
> achieving their goals, and maintaining effective working relationships
> among members.
>
> (Johnson & Johnson, 1991, p.4)

These five elements form a set of instructional procedures which are uniquely
tailored by the teacher to their instructional needs, circumstances, subject areas
and students (Johnson & Johnson, 1983). By using these, teachers' re-structure
their classroom into a cooperative one (Johnson & Johnson, 1999; Johnson *et al,*
2000). Yet in support of these five elements the teacher should ensure that there
are shared group goals and the division of labour, for example through team roles
(Johnson & Johnson, 1994; Kagan & Kagan, 2009). Encompassing the elements,
group goals and the division of labour, has come to be known as the approach of
learning together (Johnson & Johnson, 1994; Kagan & Kagan, 2009).

During the latter part of the 20th century Johnson and Johnson and Slavin were in
continuous disputes as to what Cooperative Learning should be and included to
maximise achievement (Johnson & Johnson, 1989). Slavin (1995, 1996) claimed
that there was little evidence to suggest that 'pure' cooperative learning methods

which depend solely on interaction (as he considered Johnson and Johnson were advocating) could produce higher achievement (Slavin, 1996). Slavin's (1995, 1996) background in cognitive and motivational psychology influenced him to propose that Cooperative Learning can be an effective means of increasing student achievement, but only if the essential elements of specific group goal, team rewards and individual accountability are integrated into the Cooperative Learning classroom. Slavin (1990) argued that these provide students with the incentive to help each other. Rewarding groups based on group performance (or the sum of individual performances), he argued creates an interpersonal reward structure which group members will give or withhold social reinforces (e.g. praise, encouragement) in response to group mates' task-related efforts (Slavin 1983).

Building on the importance of goals, rewards and individual accountability, in contrast to Johnson and Johnson who suggested that through the implementation of the elements a classroom can be restructured into a cooperative one, Slavin's (1996) curricula approach emphasised the importance of subject specific approaches to format a lessons (Kagan, 1989; Slavin, 1995). For example, structures known as Student Teams Achievement Division (STAD), Team Games Tournament (TGT) and Jigsaw (drawn from the work of Aronson *et al.* (1978)) are largely based upon a form of competition and team scores (Slavin, 1995). In these structures, Slavin (1995) claimed that students will be more motivated to help each other to learn.

Similar to Slavin, Kagan's structural approach emphasised the use of specific and well defined techniques as a method for teaching through Cooperative Learning (Kagan & Kagan, 2009). The structures he proposes, for example Think-Pair-Share or Pairs Check, are step-by-step sequences designed to support social interaction and achievement (Kagan & Kagan, 2009). Kagan offers over 200 hundred different structures that can be used in lessons, on the basis that rather than using one structure in a lesson like Slavin, Cooperative Learning lessons are composed of a number of different structures (Kagan & Kagan, 2009). The multiplicity of structures draws upon Howards Gardner's multiple intelligences

theory (Kagan, 1994; Kagan & Kagan, 2009). Using this theory as a framework, Kagan argues that no single teaching method will be effective for every student and that instruction needs to be matched to students' intelligences (Kagan & Kagan, 2009, 1994). By using a wide array of structures, learning can be effectively differentiated so that teaching and learning takes place in the zone of proximal development and accommodates all students' intelligences (Kagan & Kagan, 2009). These structures also ensure students are positively interdependent, individual accountability where there is equal participation and simultaneous interaction (Kagan & Kagan, 2009).

In contrast to the approaches of Johnson and Johnson, Slavin, and Kagan, Cohen's complex instruction is the least structured in adherence to formalized prescription of structures or elements (Dyson & Strachan, 2000). Complex instruction focuses on cooperative tasks and the delegation of authority rather than the more psychological concepts of common goals and rewards (Cohen, 1994; Cohen *et al,* 1999). Cohen's (1994) background in sociology and her work on multiple intelligences caused her to oppose the zone of proximal development (Vygotsky, 1978) as a means for student learning in small groups. In complex instruction, Cooperative Learning does not consist of stronger students assisting weaker students, but instead, Cohen (1994) claimed that there should be an exchange in ideas and skills where each person in a group's contribution is required and equality is established. The teacher must create a group task that requires resources that no single student possesses, so that no single student can accomplish the task without at least some input from others in their group (Cohen, 1994; Cohen *et al,* 1999). Tasks should be structured to use students' multiple abilities by assigning students to perform in different roles, for example a team manager (Cohen, 1994). Furthermore, Cohen (1994) emphasizes individual accountability alongside group accountability. For achievement to occur, she argued that everyone in the group must have an assignment to prevent free-riders (Slavin, 1996) and the group must be accountable for their collective activity (Cohen, 1994). Contrary to Slavin (1996) group rewards aren't always required

but peer evaluations in the form of group processing are necessary for achievement to occur (Cohen, 1994; Cohen *et al*, 1999).

By discussing the four different approaches, is it is evident that Cooperative Learning has been developed along divergent lines and informed by not only social constructivist theories, but cognitive-development, behavioural-social and motivational theories. The approaches by Slavin and Kagan and the structures such as STAD and Pairs-Check, provide teachers with direct instructions on how they should implement the model and format their lessons to promote cooperation and student achievement (Johnson *et al,* 2000; Kagan, 1989; Kagan & Kagan, 2009; Slavin, 1985). In contrast, the conceptual approach and complex instruction provide teachers with a framework guided by a number of elements or principles that the teacher should use to facilitate students' cooperation when working together in small groups (Cohen, 1994; Johnson & Johnson, 2009, 1994; Johnson *et al,* 2000). In a meta-analysis of the four approaches, Johnson *et al.* (2000) claimed that the direct approaches by Slavin and Kagan were easier for teachers to learn and use. However, they also suggested that these structures were easy for teachers to discontinue using since they were specific to particular circumstances and were not easily adaptable to the changing conditions in a classroom (Johnson *et al,* 2000). In contrast, the approaches proposed by Johnson and Johnson and Cohen are considered to be difficult to learn initially, but are highly adaptable to the changing conditions where they are sustainable in a teacher's practice. Whilst I acknowledge that Johnson *et al's* (2000) view may be biased towards their own conceptual approach, when Johnson *et al*. (2000) compared the approaches and considered student achievement, they suggested that despite Kagan, Slavin, and Cohen advocating the need for rewards, multiple structures and the promotion of equality in learning teams, it was Johnson and Johnson's (2009) conceptual approach of learning together, with its emphasises on social interdependence, that brought about the greatest effect on students' achievement (Johnson *et al*, 2000). In light of this analysis it is possible to say that whilst all four approaches offer coherent ways to teach through Cooperative Learning, Johnson and Johnson's

conceptual approach is highly adaptable to changing circumstances and brings about the greatest effect on students' achievement.

In this section I have shown that Cooperative Learning is a model constructed and developed in curriculum subjects other than physical education. Therefore, due to its longevity, Cooperative Learning emerged into physical education with a history of use, a well-established theory for students' learning and a wealth of research which suggests it has a greater impact on students' learning in comparison to traditional pedagogical practices. In the following section I introduce what Cooperative Learning is considered to be in physical education. I define Cooperative Learning as a pedagogical model and consider the current research which has informed the model's use, but also informs why there is a need for further research on the enduring use of the model in physical education.

Cooperative Learning as a Pedagogical Model in physical education

Drawing on research from eight international countries, and the subsequent conclusions made from pedagogical research in the last decade, Casey and Dyson (2012, p.173) concluded that Cooperative Learning considers human movement to be 'something which is undertaken within a cooperative relationship with others'. In contrast to the traditional pedagogical practices, Cooperative Learning acknowledges that 'teaching as telling is no longer appropriate' (Lieberman & Pointer-Mace, 2008, p.226) and that movement and learning about movement do not occur in isolation from the cognitive, social or affective domains (Casey & Dyson, 2012; Dyson, 2001; Lafont *et al,* 2007). Young people learn about movement in physical activity contexts and understand how their experiences are relevant, meaningful and transferable, by working together to learn without direct instruction from the teacher (Bähr & Wilbowo, 2012; Casey & Dyson, 2012). Students are encouraged to interact with each other and learn from the experiences that they create (Dyson, 2005; Dyson & Casey, 2012b; Lafont, 2012).

Casey and Dyson (2012) recently argued that Cooperative Learning is a pedagogical model capable of meeting the legitimate learning outcomes of

physical education and exploring the interrelation between teaching, learning, content and context. Reinforcing Dyson and Grienski (2001) and Dyson and Rubin (2003) original arguments, Casey and Dyson (2012) consider learning in the physical, social, cognitive and affective domains, and the interrelation of the four concepts of pedagogy, are a result of teachers' use of five fundamental elements. These five fundamental elements are the same as those considered within Johnson and Johnson's (2009) conceptual approach: positive interdependence, individual accountability, group processing, promotive face-to-face interaction and small group and interpersonal skills. Therefore in physical education, Casey and Dyson (2012, p.173) defined Cooperative Learning as:

> A pedagogical model that, through its five elements, explores the social-cultural significance of human movement through the use of individual and group learning outcomes to enhance student development, interaction and task mastery within the physical, cognitive and affective domains.

Whilst in education Cooperative Learning developed along four separate lines, Cooperative Learning in physical education encompasses one approach. The five fundamental elements are considered to be a pentagonal scaffold that guides teachers' actions maintaining the model's authenticity and fidelity (Casey & Dyson, 2012; Casey *et al*, 2013). However, drawing on the protagonists of Cooperative Learning in education, heterogeneous teams, group goals, the teacher facilitating learning and Cooperative Learning structures support the fulfilment of these elements and students' learning (Casey *et al,* 2013; Dyson & Grineski, 2001; Dyson *et al,* 2010). For example, Dyson and Grineski (2001) and Metzler (2011) highlighted the importance of using structures they drew from Johnson and Johnson, Slavin, and Kagan, to support the fulfilment of the elements. The structures Dyson and Grienski (2001) and Metzler (2011) advocated and created by the protagonists were STAD, TGT, Pairs-Check-Perform, Jigsaw and learning teams (Dyson & Grineski, 2001; Metzler, 2011).

Cooperative Learning in physical education is a model that considers learning in the physical, cognitive, social and affective domains to happen through peer-interaction. At the centre of students' learning within the model is the creation of

an authentic learning environment through the implementation of five fundamental elements. In the following sections I show how Cooperative Learning is an important inclusion to physical education teachers' practice. I begin my discussions by exploring students learning, followed by discussions on teaching through the model, the constraints to using the model, and I then talk about the enduring use of the model in physical education. However, similar to my discussions on pedagogical models, we have a limited understanding on the enduring use of Cooperative Learning in physical education. Most research is based upon one unit of activity where lessons often exist between 12-14 lessons. At worst, unit length was three lessons consisting of six hours (André *et al,* 2011), at best, thirty lessons which accrued nineteen hours (Dyson *et al,* 2010). Yet drawing on Casey (2013b, 2010), and Dyson (Dyson & Rubin, 2003; Dyson & Strachan, 2004, 2000), I provide two examples of how the model has been used in a sequential unit with the same students and over a two year period. Thereby, at this point in my discussions it is clear that the majority of pedagogical research, and similar to my previous discussions on pedagogical models, has explored the Cooperative Learning model during the phase of implementation (Fullan, 2007).

Students' learning in physical education

Drawing on Perkins (1999) three tennets of constructivism, Fernández-Río and Méndez-Giménez (2012) and Dyson *et al.* (2004) argued that Cooperative Learning facilitated active learning, social learning and creativity. Students are active learners through the provision of tasks, which stimulate decision making, critical thinking, and problem solving (Dyson & Casey, 2012b; Dyson *et al,* 2010; Fernández-Río & Méndez-Giménez, 2012). Students are social learners who construct their knowledge through their face-to-face interactions (Dyson & Casey, 2012b; Fernández-Río & Méndez-Giménez, 2012). Finally, students are creative learners when they are encouraged to create their own understandings of the subject matter, guided to discover things for themselves, and asked to create activities or games (Dyson *et al,* 2004; Dyson & Rubin, 2003; Fernández-Río & Méndez-Giménez, 2012; Hastie & Casey, 2010). Students explore the socio-

cultural significance of human movement by being social, active and creative learners.

The primary focus of the majority of school-based empirical research on the Cooperative Learning model in physical education has explored students' learning (Cohen & Zach, 2012). In a variety of different cultural contexts, and in both secondary and primary school physical education, Cooperative Learning has been reported to have an impact on students' physical competence, cognitive understanding, social skills and their affective development (Dyson & Casey, 2012a). These learning outcomes are reported to be interrelated, where academic and social learning are on par with one-another (Casey *et al,* 2009). For example, Lafont (2012) suggested that as students' progress their communication skills their understanding of the motor skills also improved. Furthermore, as a consequence of improved communication with each other improvements in motor performance and the tactical choices students and teams were making were also seen. Moreover, students have reported that their throwing and catching skills were enhanced due to heightened levels of confidence, enjoyment and self-esteem, developed as a result of receiving feedback and encouragement from members of their team (Dyson, 2001).

The five elements, discussed by Johnson and Johnson (1991), have been positioned as a central pentagonal scaffold which facilitates and deepen the four learning outcomes that I have discussed (Casey *et al*, 2013; Dowler, 2012; Dyson & Strachan, 2000; Lafont, 2012; Strachan & McCaulley, 1997). In consideration of positive interdependence, the development of students' cognitive understanding and their physical performance has been attributed to receiving feedback and encouragement from the coach within teams (Barratt, 2005; Dowler, 2012; Dyson, 2002, 2001; Dyson *et al,* 2010; Goodyear *et al,* 2012a). Individual accountability has motivated students to develop each other's physical, cognitive, social and affective learning (Dyson *et al,* 2010; Dyson & Strachan, 2004, 2000). Through the use of both promotive face-to-face interaction and small group interpersonal skills students have developed their confidence and competence in working as a group or a cooperative pair (Dowler, 2012; Goudas & Magotsiou, 2007; Polvi &

Telama, 2000; Lafont, 2012; Lafont *et al,* 2007; Velázquez-Callado, 2012). Finally, group processing is considered to be the fulcrum to the achievement of the four learning outcomes (Casey & Dyson, 2012). Drawing on Dewey's (1900) importance of connecting past, current and future learning experiences, group processing encourages students to consider their own and their team's learning trajectories (Sutherland, 2012). Teams and individuals connect their learning, and the experiences that they created, to other lessons and their wider participation in school life and society (Casey & Dyson, 2012; Sutherland, 2012).

Although the five fundamental elements facilitate learning, through the Cooperative Learning structures, and the format of lessons which encourage Slavin's (1996) notion of group rewards and team success, students' learning within the model is strengthened (Hastie & Casey, 2010; Dyson & Grienski, 2001; O'Donovan & Harvey, 2012; Metzler, 2011). Indeed, through the structure of learning teams (based on Johnson and Johnson's conceptual approach where students perform in roles such as a coach or a recorder to help each other learn (Dyson & Grineski, 2001)) and a competition at the end of the unit, which required each team members scores, students were motivated to help each other learn and perform the skills over the course of the unit (Casey *et al,* 2013, 2009). However, whilst there is a wealth of structures developed by the protagonists, for example Jigsaw and learning teams (Dyson & Grineski, 2001; Metzler, 2011), there is a limited understanding of what structures best facilitate students' learning, or indeed teaching through the Cooperative Learning model in physical education. In part, this could be attributed to the lack of longitdinal research, but as Barrett (2005) and Ward and Lee (2005) suggest, further research is required on the structures if we are to understand Cooperative Learning as a pedagogical practice in physical education.

Importantly, whilst I have shown that Cooperative Learning can develop students' learning in multiple domains through the elements and structures, Cooperative Learning does not bring instant results nor does it develop students learning in each of the domains immediately (Dowler, 2012; Dyson *et al,* 2010; Goodyear *et al,* 2012a). It takes time for students to learn how to learn in a new

way (Casey & Dyson, 2009; Casey *et al,* 2009). Students need to develop their interpersonal skills, understand how to learn through the model and how to help each other to learn, before they are able to effectively work together as a group (Casey & Dyson, 2009; Casey *et al,* 2009; Dowler, 2012; Dyson *et al,* 2010; Lafont, 2012; Velázquez-Callado, 2012). For example, Dyson *et al.* (2010) argued that it was only towards the end of a fifteen week unit, when students were familiar with the increased ownership and responsibility for their learning, were they were able to effectively progress each other's skills, tactics and gameplay (Dyson & Strachan, 2000; Dyson *et al,* 2010). In light of these discussions, important questions are raised about the longevity of the frequent 12-14 lesson units, and if and when students have learnt to learn through the model, what the learning outcomes could be. This is something that I will consider in further detail when I later explore the enduring use of Cooperative Learning drawing on research by Casey and Dyson.

Teaching through Cooperative Learning in Physical Education

The teachers' fundamental role in Cooperative Learning is to facilitate students' learning (Bähr & Wilbowo, 2012). In order to do this, resources and tasks should allow students to explore the socio-cultural significance of human movement through the five fundamental elements without direct instruction from the teacher (Casey & Dyson, 2012; Dowler, 2012; Velázquez-Callado, 2012). The teacher should also spend time developing students' interpersonal skills and the language they need to be able to work together (Casey, 2010; Cohen, 1994; Gillies, 2006; Gillies & Boyle, 2005). Through such positively interdependent tasks and the development in students' interpersonal skills the teacher should be able to become the 'guide in the side' (Hertz-Lazarowitz, 1992, p.77) where they function as 'the expert for the respective movement task, but also as a socially competent counsellor who ultimately offers 'self-help assistance'' (Bähr & Wibowo, 2012, p.30). Essentially, Bähr and Wibowo (2012) define the teacher as someone who empowers students to take responsibility for their learning and find their own solutions to problems.

However, learning to teach through Cooperative Learning is a labour intensive task where a lot of behind the scenes work is required on the part of the teacher to be able to plan for lessons and learn how to act as a facilitator (Casey *et al,* 2009; Dowler, 2012; Dyson, 2001; Velázquez-Callado, 2012). Indeed, adopting this role of the facilitator is not easy, and teachers have reported feeling like beginners again, frustrated and out of their comfort zones, with low self-efficacy in comparison to their use of traditional methods of instruction (Casey & Dyson, 2009; Casey, 2012a; Casey *et al,* 2009; Cohen & Zach, 2012; Dyson, 2002; Zach & Cohen, 2012).

Whilst the role of the facilitator is radically different from the hierarchical position the teacher holds in the traditional pedagogy, as a unit progresses the teacher becomes more comfortable in their new role (Casey & Dyson, 2009; Casey *et al,* 2009). A method that has facilitated teachers' learning and use of Cooperative Learning has been through their engagement with the principles of action research: planning, acting, observing and reflecting (Casey, 2010, Cohen & Zach, 2012; Dyson, 2002; Velázquez-Callado, 2012; Zach & Cohen, 2012). For example, Cohen and Zach (2012) argued that through pre-service teachers' engagement with a cycle of planning, teaching and reflecting, the pre-service teachers developed an understanding of how to use the model and their self-efficacy was enhanced. Similar to Cohen and Zach (2012), Casey (2012c) suggested that through action research he learnt to learn from his students where he became a co-participant in the learning process. Subsequently, he developed an understanding of how to plan for the fundamental elements and facilitate students' learning (Casey, 2012c). These examples suggest that teachers need to spend time learning how to use Cooperative Learning. Yet through the use of action research, teachers learning, the use of the model and teachers' self-efficacy is strengthened Casey, 2012c; Cohen & Zach, 2012; Velázquez-Callado, 2012; Zach & Cohen, 2012). However, whilst time and action research are variables which can support teachers' use of Cooperative Learning, in the following section I discuss a number of contextual constraints which can hinder the use of the model and further cause teacher frustration in the process of implementation.

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Constraints

Schools are not a blank canvas in which curriculums, models or new approaches can be easily *written* (Casey, 2012b, 2010). Returning to my discussions at the beginning of this chapter on meta-practices and practices architectures, teachers are required to teach physical education so as to meet a number of school and governmental expectations, whilst abiding to the school's and their physical education department's philosophies or traditions of what construe's good and effective teaching (Aldous & Brown, 2010; Cale & Harris, 2009b; Casey, 2010; 2012b; Curtner-Smith *et al,* 2008; Kirk, 2010; Lawson, 2009). In addition, teachers are required to fulfil a number of extraneous responsibilities other than the teaching of physical education (Casey, 2010; Petersen *et al,* 1994). For example, these extraneous responsibilities may include their pastoral role, sporting fixtures and extra-curricular clubs (Casey, 2010; Day *et al,* 2007). Taking these discussions together, it does not seem surprising that the meta-practices and practice architectures have been argued to be the main constraining school contextual factor that hinders the use of the Cooperative Learning model in physical education (Casey, 2012b; Ovens *et al,* 2012).

Considering these constraints further, curricula design through the multi-activity approach has meant that teachers' have often had to conform to short units of 6-10 lessons using the model to teach the planned activity related content on their curricular (Dyson, 2001; Dyson & Strachan, 2000; Goodyear *et al*, 2013b, 2012a). Coupled with extraneous events such as school trips, school sport competitions or the weather (which can limit the facilities available for lessons), the number of lessons within a unit of Cooperative Learning can be further reduced (Casey, 2012b; Casey *et al,* 2009; Ovens *et al,* 2012). Subsequently, teachers have reported that the disruptions to their units caused by school contextual factors have caused a lack of stability and consistency in their students' learning (Ovens *et al,* 2012). Furthermore, teachers' extraneous responsibilities has greatly impeded upon the time teachers have to invest in learning how to use Cooperative Learning (Casey, 2010; Ovens *et al,* 2012). As a result of these practice

architectures (Kemmis & Grootenboer, 2008), teachers have become frustrated as they haven't been able to use the model as they intended (Ovens *et al*, 2012).

Whilst the multi-activity approach and events within the school day prevent lessons actually taking place and the time teachers have to invest in planning for lessons, the time within a physical education lesson has also hindered teachers' use of the fundamental element group processing (Casey & Dyson, 2012). Casey *et al*. (2009, p.418) reported that implementing group processing, 'simply was not possible in such a time-poor environment'. Similar to Casey *et al.* (2009), Ovens *et al.* (2012) observed that group processing was always rushed at the end of lessons and not appropriately used by physical education teachers or engaged with effectively by students. Although group processing is seen as the fulcrum to all other elements, it has been sacrificed in favour of others due to the time constraints within a physical education lesson affecting the authenticity of implementation (Casey *et al,* 2009; Ovens *et al,* 2012).

As a result of these meta-practices and practice architectures one might question how Cooperative Learning is feasible, and even possible, within physical education. Using the model within the complexities of school life (Ball, 1987) represents a number of constraints that teachers must use the model within or find a way to work around, for example, the multi-activity approach. However, we have few examples of how teachers have used the model within the milieu of the practice architectures and moved forwards into a phase of continuation where the practice architectures no longer constrain their use of Cooperative Learning. Similar to the majority of research on pedagogical models, the Cooperative Learning model has been explored in one-off isolated studies (Kirk & Casey, 2012). Exceptions to this rule are Casey (2013b; 2010), and Dyson and colleagues (Dyson, 2001; Dyson & Rubin, 2003) Dyson & Strachan, 2004, 2000). In the following section I discuss their reports on how the model has been used beyond the honeymoon period and show how it has extended students learning and the teachers' worked against the practice architectures. The points raised will provide insight into what might happen if the model is used beyond one unit of activity taught.

The enduring use of Cooperative Learning

Through Dyson's collaborative work with physical education teachers, he has explored students' learning in differing grade levels after they have had previous experience of learning through Cooperative Learning (Dyson, 2001; Dyson & Strachan, 2004, 2000). Central to his discussions has been that when students understand how to learn through the model, and they have developed their interpersonal skills, the teacher can pay more attention to developing students' physical competence through peer interaction and teachers can encourage students to solve their own problems (Dyson, 2001; Dyson & Rubin, 2003; Dyson & Strachan, 2004, 2000). In comparison to students' first experiences of the model, the instructions given by the teachers are less prescriptive, and through affording students more responsibility for their learning, students can then apply their knowledge and progress their physical performance at a greater rate (Dyson & Strachan, 2004, 2000). The teacher who had used the model over three and a half years emphasised the importance of teaching as a progressive experience (Dyson & Strachan, 2000). She claimed that social learning needs to be developed first and given priority and then in a second unit students can work together to progress each other's physical performance and cognitive understanding (Dyson & Strachan, 2000).

Learning how to learn through the model was also a key consideration of Casey's (2013b) research on a sequential unit of Cooperative Learning with the same class of students. In the second unit he taught, as a result of his students' understanding how to learn, he used a cognitive understanding approach. Rather than asking his students to work together to perform physical skills as seen in unit one (Casey *et al,* 2009), in unit two he encouraged students' to problem solve and consider for example, how can I jump further? Similar to Dewey's (1900) discussions on connecting past, current and future learning experiences, the students were afforded the opportunity to transfer their learning, and draw upon their understanding of different activities such as rugby or football, to develop each other's physical performance. Furthermore, as a teacher, he noted that 'the role of facilitator that I adopted in year 2 was in marked contrast to the didactic teacher I

was in the early stages of year 1' (Casey, 2013b, p.158). In the second unit taught, he was able to move beyond having the desire to adopt a do-as-I-do approach and it was 'the very act of trusting' which allowed him to afford his students' time to inquire and create their own learning experiences (Casey, 2013b, p.159).

Importantly, and returning to some of discussions early on this chapter, the teachers in Dyson and Casey's research, who moved beyond the first unit of activity taught, were able to work beyond the practice architectures that had previously constrained their practice and their expectations for students' learning and teaching. In Dyson's research the teachers using the model had sustained long-term university-school collaboration (Dyson & Rubin, 2003; Dyson & Strachan, 2004, 2000). This intra-professional support aided teachers overcoming the anxieties with using Cooperative Learning and move into a phase of continuation (Dyson & Rubin, 2003; Dyson & Strachan, 2004, 2000). For Casey (2012b) it was his use of action research which allowed him to acknowledge and then work beyond the practice architectures that had constrained his use of the model.

Drawing on both Dyson and Casey it becomes clear that in the first unit of activity taught students need time to learn how to learn through the model. In the first unit, where the majority of our research is placed on Cooperative Learning, students are developing their interpersonal skills. Yet as I have shown, when students participate in a second unit they can then begin to progress each other's physical performance at a greater rate, their cognitive understanding is enhanced and the teacher also feels comfortable with their changing practice. Furthermore, the importance of intra-professional collaboration and teachers' use of action research has also facilitated teachers enduring use of the Cooperative Learning model. Whilst there are rare examples of continuation, it seems reasonable to suggest that Cooperative Learning is a pedagogical model that can advance students' learning in the physical, cognitive, affective and social domains beyond the honeymoon period, and the methods which make Cooperative Learning feasible in the school context are intra-professional collaboration and inquiry.

In this section I have shown that Cooperative Learning is based upon social constructivist theories of learning. The model in physical education has been informed by its existence in education since the 1970s and the work of Johnson and Johnson, Slavin, Kagan, and Cohen. However, in physical education there is only a 'burgeoning research based' and whilst there is evidence to suggest that Cooperative Learning is a pedagogical model, and an important inclusion into teachers' practice, we have a paucity of research which explores its use beyond one unit of activity taught. In light of these discussions, and in similarity to the four components of a pedagogical model, i.e. teaching, learning, content and context, I propose that further research on the Cooperative Learning model is required with regard to learning, teaching, the Cooperative Learning structures, and the school contextual factors that either enable or constrain its use. By exploring these four areas we can begin to understand whether or not Cooperative Learning is capable of meeting the legitimate learning outcomes of physical education, how and why the model can be sustained, and if its enduring use is feasible within physical education. Therefore, this thesis is focussed upon four research questions:

1. Can Cooperative Learning achieve the student outcomes of physical, cognitive, affective and social learning in a secondary school physical education curriculum and progress over time?
2. How do teachers learn to use Cooperative Learning in secondary school physical education, within and beyond their initial experience?
3. What structures of Cooperative Learning best facilitate student learning and teaching in physical education?
4. Which school contextual factors facilitate or constrain the use of the Cooperative Learning model in secondary school physical education?

Chapter Conclusion

This chapter has shown how physical education since the 1960s has exists in a time of innovation without change where there has not been another significant paradigm shift as seen with gymnastics to 'sport' (Evans, 1985; Goodyear & Casey, In Press; Kirk, 2010; Tinning, 2012). Indeed, pedagogy is based upon the mid-20th century pedagogical practices which has been engendered and encouraged by policy and the school as an institution. Any innovation that has

entered a teacher's classroom has been constrained by the meta-practices and practice architectures which, as a result emergent practices, have been immersed into the dominant and residual pedagogical practices of sports, skills, games, a multi-activity driven curricula and a teacher-led approach.

Pedagogical models provide one legitimate future for physical education. Pedagogical models seek to align teaching, learning, content, and context, and a critical mass of research shows that they can meet the legitimate learning outcomes of physical, cognitive, social and affective learning. However, there are few examples of their enduring use and teachers rarely move beyond the honeymoon period of implementation. Yet, as I have shown CoPs, sustained and frequent support from academic researchers and action research can support their enduring use. Indeed, these methodologies facilitate teachers moving beyond the practice architectures and into continuation where teachers develop the notion of pedagogical fluency, a time when the student becomes the heart of the model and the teacher can respond to students emerging learning experiences.

The pedagogical model which I will explore in this thesis, Cooperative Learning, can enhance and develop students' learning in the physical, cognitive, social and affective domains. Drawing on social constructivist theories of learning, and the model's use in education, through the five fundamental elements students can explore the socio-cultural significance of human movement. However, changing practice is not easy and it takes time for students' learning how to learn in a new way. Furthermore, teachers' use of Cooperative Learning is constrained by the practice architectures and we have few examples of the impact of Cooperative Learning over sustained periods of time. In order to understand Cooperative Learning as a pedagogical model, further research is required on students' learning, teachers' use of a model, the Cooperative Learning structures and how the school contextual factors constrain or facilitate teachers' use of a model.

Drawing upon my discussions in this chapter which suggest CoPs, sustained and frequent support from academic researchers, and action research facilitate the enduring use of pedagogical models and Cooperative Learning, in the next chapter

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I begin to consider these methodologies as a means to support the enduring use of Cooperative Learning. Furthermore, I consider the methods which will support my investigation of eight teachers' use of a model and over 200 students' learning.

CHAPTER 3: METHODOLOGY

In Chapter 2, in discussing the current pedagogical research in physical education and more specifically the use of pedagogical models and the Cooperative Learning model, it became clear that physical education exists in a time of innovation without change. Indeed, pedagogical models are a 'talked about' future, rather than an 'actioned' present of pedagogical practice in physical education, and teachers have rarely moved beyond the honeymoon period when implementing them. As Pope (2012, p.126) suggests, the challenge is to 'engage others to learn, as individuals or as collectives, to act and to adapt [yet] importantly, adapting to change may not be enough: actually changing in a pro-active manner so change is directed' and sustained. Building upon these points, this chapter has two purposes. The first is to justify the methodology of participatory action research (PAR) which I proposed would support eight teachers' learning and use of Cooperative Learning during sequential and interrelated units over an academic year. My second purpose is to discuss the methods that allowed me to address and seek answers to my research questions.

I firstly discuss teacher learning and praxis. I begin by critiquing the current form of professional development which uses one-off workshops as a means for changing practice. I argue that these have limited effect on changing practice and facilitating teachers' use of pedagogical models. Consequently, I consider that changing practice is a matter of enabling praxis. Praxis allows teachers to develop a practice-informed theory about their use of an innovation. Yet in order to enable praxis, teacher learning needs to be considered as a social act and a continuous process.

Following my discussions on teacher learning and praxis I consider the methodology action research. I argue that action research enables praxis through

teacher learning being as a social and practical process. I explore the work of the founding fathers of action research, Kurt Lewin, John Collier, Lawrence Stenhouse and John Elliott to suggest that action research is a social science methodology that is based upon community action, and action and research.

After foregrounding my discussions on action research through the founding fathers, I explore the practitioner-orientated methodology of PAR. PAR emerged from the work of the founding fathers in response to concerns that action research had become a technique rather than a social action. PAR is a form of teacher learning that enables praxis through individual and participatory inquiry. PAR pays explicit attention to creating a communicative space as a means to facilitate changing practice. Through my discussions I show how this methodology could support a teacher's use of the Cooperative Learning model during interrelated and sequential units.

The methods section discusses the research design, the participants, the pedagogical intervention and the multiple sources of data that were used to explore my research questions. Furthermore, I discuss how I analysed my data, through inductive analysis and constant comparison, and how I ensured my data was trustworthy.

Teacher Learning and Praxis

The mainstay of teacher learning as a means for changing practice, in both education and physical education, conforms to the notion of professional development (Armour, 2011, 2010; Casey, 2013a; Groundwater-Smith & Mockler, 2009; Mockler, 2005). Professional development can be understood as a process whereby 'teachers passively absorb information or ideas given by experts' (Groundwater-Smith & Mockler, 2009, p.56). Teachers attend a generic one-day course or workshop where they are given a bundle or a package of information, with the assumption held that at the end of the workshop the teachers will be *developed* and *well-prepared* to change their practice (Armour, 2011, 2010; Casey, 2013a; Groundwater-Smith & Mockler, 2009; Mockler, 2005). In this way,

professional development 'rests on the existence of technical knowledge' where teachers are given a technical model (i.e. the key features of an innovation) or a generic script to follow as a means for changing practice (Kemmis & Smith, 2008b; Lieberman & Pointer-Mace, 2009, 2008; Mockler, 2005, p.734).

However, whilst professional development as a form of teacher learning is common practice, and most likely since courses or workshops are short, quick and can target multiple teachers (Groundwater-Smith & Mockler, 2009), there is limited evidence to suggest that this short, one-size-fits all approach can have any impact on changing practice and enhancing students' learning (Darling-Hammond & Richardson, 2009; Lieberman & Pointer-Mace, 2010, 2008). Indeed, building upon my discussions in Chapter 2, innovation with change does not happen as a result of *selling* teachers good ideas (Kirk, 2011) or developing their understanding of an innovation (Fullan, 2007; Hargreaves, 1994), or more specifically, developing teachers' understanding of the features of elements of a pedagogical model (Casey, 2012a; Kirk & Casey, 2012; Hastie *et al,* 2011). For example, Ko *et al*. (2006) explored how teachers used and understood the pedagogical model Sport Education following a one-day workshop. The findings showed that whilst the teachers developed an understanding of the key features of the model, since the teachers were not provided with the support mechanisms that enabled them to overcome the contextual barriers during implementation, they were not able to use the model in its entirety and transfer their understandings from the workshop to their practice. It seems reasonable to suggest that workshops and standalone courses are incapable of supporting teachers' use of pedagogical models and, in the case of this thesis, the Cooperative Learning model.

In their discussions on teacher learning and educational change, Fullan (2007) and Hargreaves (1994) claim that at the heart of changing practice is the subjective meaning of change, the practicality of implementation and how an innovation is implementable in the teachers' school, and the curriculum and the classroom. In this way, teachers need to be afforded the opportunity to see how the innovation is relevant to their practice, compatible with their beliefs, and they need time to

develop an understanding of how to use it within the practice architectures (i.e. how the classroom is pre-constructed and designed for teaching and learning (Kemmis & Grootenboer, 2008)) and with their students (Adlong, 2008; Ball, 1987; Casey, 2012b; Fullan, 2007; Hargreaves, 1994). By this means, rather than change resting on providing teachers with just technical information (i.e. the key features of innovation) from a one-day course, change is something which is born over time through teachers' use of an innovation (Fullan, 2007; Hargreaves, 1994; Mockler, 2011).

In order to scaffold teacher learning and to facilitate teachers' use of an innovation, changing practice is considered to be a matter of enabling praxis (Ax *et al*, 2008b; Kemmis & Smith, 2008c; Smith *et al*, 2010). Praxis is used to refer to theory-informed practice or practice-informed theory (Macdonald, 2002). In teachers' use of an innovation, or for example a pedagogical model, praxis could be understood as the transfer of technical knowledge (i.e. the key features or elements of the innovation) into action (theory-informed practice) and the development of an understanding of how to use the technical knowledge in action (practice-informed theory) (Macdonald, 2002). Indeed, praxis draws on the Aristotelian tradition of practical philosophy (Somekh & Zeichner, 2009). Using the Aristotelian philosophy, Kemmis and Smith (2008a, 2008b) suggest that praxis is based on the development in Aristole's three dispositions: epistēmē (to seek truth through contemplation), technē (to act in a true and reasoned way to gain outcomes) and phronēsis (to act wisely). Thereby, praxis is about generating a situational understanding where a practitioner learns how to use a technical model (or their technical knowledge of an innovation) from the experiences gained in the classroom and the development in these three dispositions (Kemmis & Smith, 2008b; Somekh & Zeichner, 2009).

In particular, Kemmis and Smith (2008b) argued that the development of the disposition phronēsis allows practitioners to use actions which support their use of the technical model (i.e. the technical knowledge or key features of an innovation). Furthermore, through the development of phronēsis practitioners learn how to respond to the unanswered questions that emerge from within the

professional context (Kemmis & Smith, 2008b). For example, teachers learn how to address the practicality of implementation and they begin to understand how to change the practice architectures that can threaten and derail their use of an innovation (Ax *et al*, 2008b; Kemmis & Smith, 2008b). The development in phronēsis, Kemmis (2010, 2009) claims is dependent on the transformation in one's sayings, doings and relatings. Transforming practice and developing phronēsis means changing what is thought and said (sayings), transforming how one acts (doings) and transforming the conditions of practice, the way one relate to others and the circumstances around the practitioner (relatings) (Kemmis, 2010, 2009).

To enable praxis and the development in Aristole's dispositions, many authors agree that it is fundamental to open up communicative spaces where practitioners can begin to develop their own practice and their colleagues practice (Adlong, 2008; Ax *et al,* 2008b; Edward-Groves, 2008; Ponte, 2002). Indeed, through the discussions with students, colleagues, facilitators, these participants in the teacher learning process all enable praxis (Adlong, 2008; Ax *et al,* 2008b; Edwards-Groves, 2008; Ponte, 2002). In addition to the creation of communicative spaces, Adlong (2008) argued that to enable praxis the teacher should also have the opportunity to inquire into their practice in order to understand how to change their practice and the contextual environment in which their practice is situated. To facilitate teacher learning that enables praxis of overriding importance is the commitment to personal development, development in connection with other's and essentially the commitment of the teacher to position themselves as a learner of their own practice and professional context (Adlong, 2008; Ax *et al,* 2008b; Kemmis & Smith 2008b). Rather than teacher learning having a distinct beginning and end point (as assumed by the standalone workshops), educational change is understood as being a social act and a continuous process (Armour, 2011, 2010; Edwards-Groves, 2008; Lieberman & Pointer-Mace, 2008). Teachers' learn and develop their use of an innovation *on the job*, developing their own theory about how to use the technical information by opening up communicative spaces and

through their engagement with inquiry (Adlong, 2008; Ax *et al*, 2008b; Edward-Groves, 2008; Ponte, 2002).

In this section I have suggested that whilst one-day workshops are the mainstay of teachers' professional development, these have been reported to have a limited effect on changing teachers' practice and supporting teachers use of an innovation or pedagogical models. I have argued that, instead of innovation with change being something which can be taught through developing teachers' technical knowledge, changing practice is a matter of enabling praxis. Through praxis teachers develop a practice-informed theory about an innovation from its use within the professional context. Praxis is underpinned by Aristole's dispositions of epistēmē, technē and phronēsis where teachers develop a situational understanding of how to use an innovation from the experiences gained within the classroom. Yet praxis is not something which can be taught, to enable paxis and the development in Aristole's dispositions, teacher learning is considered to be a social act where a teacher learns how to use an innovation through opening up communicative spaces and through their commitment to their own personal development by engaging in inquiry.

In the following section I explore how praxis can be enabled through the methodology action research. Action research embodies both social interaction and inquiry as a means for changing practice. I begin my discussions by providing an overview of action research. Following this I discuss how this methodology has emerged from the founding fathers of action research; Lewin and Collier in the 1940s who used action research as a means to improve intergroup relations and prevent exploitation of minority groups in the USA, and Stenhouse and Elliott's work in the 1970s and 1980s on curriculum development projects to overcome the concerns with the Tripartite system to education in the UK (Tinning, 1997b). I will argue that these founding fathers emphasised the importance of community action and inquiry as a means for changing practice and overcoming problems in the contexts in which the participants worked. Indeed, the founding fathers argued that change was conceivable and happened because the participants worked together to solve problems and because praxis was

enabled. However, whilst the founding fathers work has had a significant impact on the methodological processes for educational change, and the development of action research in education, the community action and communicative space that the founding fathers emphasised, had been *neglected*. Following my discussions on the founding fathers, I explore the methodology of PAR which has emerged amidst these concerns about the *neglect* of the communicative space. PAR pays explicit attention to the communicative space, as the founding fathers had intended in their original conceptions of action research, as a means for changing practice and enabling praxis.

Action Research: A social and practical process of change

> Action research is a participatory process concerned with developing practical knowing in the pursuit of worthwhile human purposes. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions or issues or pressing concern to people, and more generally the flourishing of individual persons and their communities
>
> (Reason & Bradbury 2008, p.2)

Drawing on Reason and Bradbury (2008), action research could be seen as a form of teacher learning that is practical, social and moves beyond the sole use of technical knowledge as a means to change practice. The knowledge of what to do, how to use something, and how to change is developed as a result of a teacher engaging with a cyclical and interchangeable process of action and research, in communication with colleagues, students and a facilitator (Kemmis & McTaggart, 2008; Reason & Bradbury, 2008; Somekh & Zeichner, 2009). Indeed action research was extolled by Ax *et al.* (2008a) as an individual and participatory process through three components: analysis (of the practitioner's reflections and observations), dialogue (with a researcher and/or colleagues) and negotiation (dialogue with students). Through these practical and social actions, a teacher develops a practice-informed theory about an innovation (Elliott, 1983/2007). Furthermore, and drawing on the disposition of phronēsis, the teacher learns how to act in a true and reasoned way for the benefit of their own practice, their students' learning and the community for which a practitioner is part of (Kemmis

& McTaggart, 2008; Kemmis & Smith, 2008b; Reason & Bradbury, 2008). However, action research was not constructed as a methodological process which sought to bring about change in education. The origins of action research lie in social science research and in the following section I explore the work of the founding fathers, Lewin and Collier, to exemplify why a community based approach to action research is necessary for change.

Lewin and Collier

Lewin, a social psychologist, and Collier who worked in government agencies, both believed in a democratic approach to reform by using research strategies from the social sciences to overcome social problems (Alderman, 1993; Noffke, 1997; Ponte, 2002). Action research was constructed by these authors as a process which sought to bring about change by working with those directly involved in the social context (Alderman, 1993; Elliott, 1991; Noffke, 1997; Ponte, 2002; Reason & Bradbury, 2008; Somekh & Ziechner, 2009). Indeed, both Lewin and Collier argue that change is mediated and constructed by those within the social context, who identify problems and, through action and research, work together to improve the social contexts in which they work and live.

Considering Lewin first, he was a psychologist at the University of Iowa in the 1930s and 1940s (Alderman, 1993). He began to formulate an understanding that group discussions on problems and group decisions on how to proceed was a 'common sense' approach to change when he was invited to work as a consultant to enhance the productivity of factory workers in Virginia (Alderman, 1993). In this context, Lewin divided the factory workers into two groups, one group received training didactically and the second group were encouraged to discuss and decide for themselves on the division of tasks (Alderman, 1993). When the productivity of the two different groups was explored, the findings showed that the second group learnt tasks faster, and their productivity and morale was far greater than the first group (Alderman, 1993). Following this initial field experiment, that led Lewin to consider democratic rather than an autocratic

approach to change, he continued to focus on group decisions and actions as a means of changing practice (Alderman, 1993).

Lewin's work expanded and he was particularly concerned with improving both self-esteem and productivity of minority workers, who were often marginalised in America in the 1930s and 1940s (Alderman, 1993; Lewin, 1946). His focus on minority groups and their self-esteem, it can be said, was influenced by his own personal experiences as a Jew who escaped Nazi occupied Europe in the 1930s (Alderman, 1993). Indeed, Lewin (1946, p.40) considered that stereotypes or ideologies were 'anchored in cultural standards' and influenced by economic and political ideologies, that subsequently, tied expectations to groups of people. In order to change stereotypes and expectations, Lewin (1946, p.40) argued that 'change depend[s] largely on happenings in groups as groups' (Lewin, 1946, p.40). Indeed, Lewin (1946, 1947) emphasised that change was a democratic movement and that in order for change, any process needed to exercise all of the inhabitants' beliefs, values, actions and their evaluations of the social context.

> How is economic and social discrimination to be attacked if we think not in terms of generalities but in terms of the inhabitants of that particular main street and those side and end streets which make up that small or large town in which the individual group worker is supposed to do his job?
> (Lewin, 1946, p.34)

In his paper *Action Research and Minority Problems,* Lewin (1946) continued to focus on group decisions and actions. Yet in this paper he introduced a more formalised approach to group decisions and actions, known as action research. Action research, he argued, was a participatory process involving a 'spiral of steps each of which is composed of a cycle of planning, action and fact finding about the result of an action' (Lewin, 1946, p.38). A step was seen as one cycle and those engaged with action research would continue to repeat the cycle using the knowledge they had generated to work together to resolve problems and improve their actions. When reporting on the use of this action research cycle, Lewin (1946) argued that the change in practice sometimes opposed the traditions or stereotypes formulated by political agendas and economic distribution (Lewin,

1946). However, change was conceivable and happened if the problem for the impetus for action was constructed by those within the social context (Lewin, 1947, 1946). By working together change was seen to fit with the views of those from within the setting (Lewin, 1947, 1946). Moreover, through this participatory process, a greater level of group productivity was seen and the more members that worked together, Lewin (1946) claimed, could 'multiply the power of the participants to bring about change' (Lewin, 1946, p.41). Action research that resulted in change, was understood by Lewin (1946, p.35) as a participatory process that involved 'research on the conditions and effects of various forms of social action, and research leading to social action'.

At the same time that Lewin began to formulate his understandings of action research, the development of action research for Collier arose as a result of his attempts to ensure a maximum degree of local democracy with American Indian communities (Noffke, 1997). Similar to Lewin's work with minority groups, Collier was intensely involved in ensuring equal rights for Indian communities and ensuring tribes could establish their own economic and social growth, which was exploited in the United States throughout the late 19th and early 20th century (Nielsen, 2006). Between 1933 and 1945 Collier worked as a Commissioner of Indian Affairs and began to formulate an understanding that social science methods was indispensible to the democratic process of change (Collier, 1946/2005, 1945/2005; Neilsen, 2006). Collier (1945/2005) explicitly reported that in order to influence a change those involved in the social context should be primary participants in the research. He argued that democracy and change was achieved by knowledge developed in the social context by the *lay citizen,* and subsequently, this knowledge being directly fed into action (Collier, 1946/2005, 1945/2005).

> Imperfect action is better for men and societies than perfection in waiting, for the errors wrought by action are cured by new action. And when the people acted upon are made themselves true partners in the actions, and discoveries of correction of error, then through and through, and in spite of blunders and even by virtue of them, the vital energies are increased, confidence increases, power increases, experience builds upon wisdom, and the most potent of all principles and ideals, deep democracy, slowly wins the field

> (Collier, 1946/2005, p.96)

In 1945 Collier left the Indian Affairs and became the president of the Institute of Ethnic affairs, a non-profit, non-governmental organization whose goal was to help ethnic minority groups avoid exploitation (Nielsen, 2006). During this time Collier worked on and reported on projects where he and his colleagues worked with American Indian communities to mould research projects, implement them, observe the results and to continue to experiment until satisfactory outcomes were reached (Collier, 1946/2005; Neilsen, 2006). In Collier's (1946/2005, 1945/2005) two articles reporting on his work with American Indian communities, action research was characterised by the knowledge being generated by those within the social context, the participants being directly involved in the research process, and action was determined by the needs of the participants (Collier, 1946/2005, 1945/2005). However, in contrast to Lewin, Collier did not advocate the need for a spiral of steps. Instead, Collier stressed the importance of developing group dynamics, and with the support of technical experts, those native in the field can change their social and economic conditions through action and research (Neilsen, 2006).

Despite Lewin and Collier arriving at similar conclusions, i.e. that action and research needed to be conducted in communities in order for change to occur, Lewin has arguably had the most impact on the development of educational action research (Neilsen, 2006; Noffke, 1997). Indeed, Collier's intent was not to present a social science methodology, but instead to explore the exploitation of American Indian communities where action research was presented as a technique which he had used to rejuvenate and protect communities (Nielsen, 2006). In contrast, Lewin presented action research as a legitimate dimension of scientific

study and explored action research as a theory of change, a process of 're-education' and provided a step-by-step protocol for action research (Noffke, 1997, p.5).

In this section I have shown that both Lewin and Collier believed in a democratic approach to social change. Both authors agree that in order for there to be a change, change needs to be constructed and mediated by the inhabitants of the contexts. From the work of Lewin and Collier, action research is a social science methodology which facilitates a participatory and collaborative approach to change. Through the identification of problems through group discussion, group action and an evaluation of the outcomes, the inhabitants can engage in a continuous process of changing and improving the conditions in which they operate. Indeed, change was conceivable, the practices of the inhabitants were more productive, and the participants' morale was enhanced because change was constructed by those within the social context and change was relevant to the conditions in which the participants live and work. In this way, action research is a community action involving action and research. In the following section I discuss the development of educational action research through the work of Stenhouse and Elliott, who built upon these ideas of action research with minority groups (Tinning, 1997b).

Stenhouse and Elliott

In the 1970s action research emerged as a legitimate form of educational research through the school-based curriculum development projects in the UK led by Stenhouse and Elliott (Elliott, 1997, 1983/2007; Kemmis, 1982; Noffke, 1997, 2009; Ponte, 2002; Somekh & Zeichner, 2009; Tinning, 1997b). These curriculum theorists drew upon the views of Lewin to contend that the teacher needed to be at the centre of curriculum and pedagogical reform (Stenhouse, 1975; Elliott, 1991; Tinning, 1997b). Moreover, they worked towards a democratic view of teacher learning whereby collaboration between teachers, senior leadership teams and researchers was valued (Stenhouse, 1975; Elliott, 1991; Kemmis, 1982). Their curriculum development projects focussed teaching

on reflection, experimentation and dialogue as the basis for the subsequent theorizing of actions and changing practice (Elliott, 1997, 1991). Indeed, action research was foregrounded as one way to bring together theory and action, i.e. praxis, as a basis for educational reform and professional learning (Elliott, 1983/2007).

The process began with the innovatory humanities curriculum in the 1960s, which has been suggested to be pivotal in the development of action research in education (Elliott, 1997, 1983/2007). The purpose of the innovatory curriculum was to change the conditions under which students learn in an attempt to provide a solution to the tripartite system of schooling that re-emphasized social hierarchy and the unequal distribution of cultural capital (Elliot, 1997, 1983/2007). Broadly speaking, grammar schools stressed educational excellence and the mastery of knowledge, whereas secondary modern schools focussed on vocational subjects, such as Humanities, Geography and Religious Education (Elliott, 1997, 1983/2007). It was argued that students in secondary modern schools were marginalised and disadvantaged when leaving school, and subjects such as Humanities were deemed as irrelevant to, and by, secondary modern students who would leave school at the age of 15 and pursue a career in the workforce (Elliott, 1997, 1983/2007). The innovatory curriculum focussed on moving from an instruction-based classroom (which was the dominant pedagogical practice) to a discussion-based classroom, and providing students with learning experiences that were relevant to everyday society in an attempt to ensure equal distribution of cultural capital, prepare learners for society and to engage students in subjects such as Humanities (Elliott, 1997, 1983/2007).

However, whilst most teachers valued the innovatory curriculum, the teachers were challenged with implementing this in their classrooms. Some teachers were reported to abandon the curriculum all together, whereas others, although they moved beyond the primary focus being on factual knowledge, reverted back to their pedagogical approach of controlling classroom discussions (Elliott, 1983/2007). On the counter of these findings, blame for the failure of the adoption and successful implementation of the curriculum was not cast on the teachers.

Elliott (1983/2007) acknowledged that the problem was the theorists, who had failed to develop teachers' understanding of how the theory of the curriculum could be translated into practice. Consequently, in order for the adoption of the curriculum and for it to be applied to the classroom as the theorists had intended, Elliott (1983/2007) exemplified the need for praxiology.

> By shaping ideas into a practical form it not only assists the realization of ideas in practice, but also allows them to be tested and modified in the light of practice. A praxiology supports the art of translating ideas into action without restricting the practitioner's judgement about how this can best be done.
>
> (Elliott 1983/2007 p.18)

Following the innovatory curriculum Stenhouse embraced praxiology via The Humanities Curriculum Project (Elliott, 1983/2007). Stenhouse (1975) argued that teachers needed to understand their own practice and that educational theory was defined as a systematic structuring of their understanding of their own work (Stenhouse, 1975). He claimed that 'the uniqueness of each classroom setting implies that any proposal – even at school level – needs to be tested and verified and adapted by each teacher in his own classroom' (Stenhouse, 1975, p.143). Consequently, Stenhouse's approach to the humanities project differed from the initial attempts to reform reported in the innovatory curriculum. The humanities curriculum presented to teachers was a set of hypothetical classroom procedures to be tested through experimentation and reflection (Elliott, 1997, 1983/2007; Stenhouse, 1975). Through this conception of the curriculum he derived the term teachers-as-researchers (Elliott, 1997, 1983/2007; Stenhouse, 1975). Being both a teacher and a researcher, Stenhouse argued that the teacher could link theory to practice and develop a practice-informed theory about their use of the curriculum (Elliott, 1997, 1983/2007; Stenhouse, 1975). Indeed, action research was characterised by Stenhouse as a process which involved teachers putting educational ideas, such as curriculum materials or guides, to the test in the context of their own classrooms through experimentation and the deliberate act of reflection (Elliott, 1997, 1983/2007; Stenhouse, 1975; Tinning, 1997b).

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The Ford Teaching Project was the subsequent curriculum development project, led by Elliott in the 1980s, which sought to address the problems and challenges teachers were facing when enacting innovations and adopting inquiry/discovery approaches (Alderman, 1993; Elliott, 1976-77/2007). The motive for this project was that, although curriculums and innovations had been devised to overcome some of the inherent problems within the tripartite system of education, no major changes to teachers' pedagogic practices had been achieved (Alderman, 1993). Elliott (1976-1977/2007) had identified that teachers were not able to move beyond teacher-led approaches and recognise their habitual and unconscious behavioural patterns. Similar to the Humanities Curriculum Project led by Stenhouse, action research was seen as a vehicle to generate teachers understanding of how they could use an inquiry/discovery stance within their own teaching, develop their own understanding of their behaviour when using the inquiry stance, and subsequently, generate their own theory of the curriculum (Alderman, 1993; Elliott, 1976-77/2007).

In the Ford Teaching Project, Elliott built upon Lewin's original theory of action research by re-emphasising the importance of collaboration and utilising a model of reflection, dialogue and experimentation (Alderman, 1993; Elliott 1991, 1976-77/2007). His approach to action research has been described as collaborative action research or multi-level action research since a) senior teachers carried out action research on their roles as managers facilitating the process, b) teachers carried out action research in their classrooms facilitated by university staff, and c) teachers shared their understandings about their practice with each other (Alderman, 1993; Elliott, 2009, 1991, 1976-77/2007; Somekh & Zeichner, 2009). The role of the teacher was to participate in a process of collaborative problem solving through which the relevance, usefulness and findings could be challenged and then new knowledge acquired (Elliott, 2009, 1991, 1976-77/2007). Elliott (1976-77/2007) suggested that by drawing on the views of teachers, students and research facilitators a teacher could triangulate their findings and better understand their practice. Indeed, he argued that each participant occupied a unique epistemological position with divergent access to information that could

inform the teacher about that practice and students' learning (Elliott, 1976-77/2007).

Through the Ford Teaching Project, triangulation of findings and collaboration emerged as a central element of the methodology to action research (Elliott, 1997, 1976-77/2007). Elliot suggested that by drawing upon a number of viewpoints a practical theory of inquiry/discovery teaching developed (Elliott, 2009, 1976-77/2007). Indeed, comprehensive data was obtained from the teaching context that benefitted the practitioner, but was also transferable to the wider context, supporting researchers understanding of the process of educational reform and the curriculum.

> Both paradigms could utilize data…the action research accounts of practitioners could be used by evaluators to explain their activities to stakeholders, while their own case studies could be used by practitioners to deepen their understanding of the contextual factors which shape and influence their practices.
>
> (Elliott, 1997, p.24)

Through my discussions on the curriculum projects, and in agreement with the previous work of Lewin and Collier, Stenhouse and Elliott argued for a democratic process to change where the teacher needed to be at the centre of curriculum reform. Through the early innovatory curriculum the need for praxis was understood, and it was shown that by providing teachers with merely technical information about the curriculum the teachers were not able to change their practice. However, through both the humanities curriculum led by Stenhouse in the 1970s, and the Ford Teaching project led by Elliott in the 1980s, the importance of developing praxis and a situational understanding of the curricula was exemplified. Stenhouse argued that teachers need to be able to test out their ideas, and by acting in the role of a teacher-researcher, teachers could develop a practice-informed theory about the curriculum. Similar to Stenhouse, Elliott argued that teachers should research their own practice and triangulate their findings from students, colleagues and facilitators, who act as informants to a teacher's changing practice. Action research was understood by Stenhouse and Elliott as a process which could enable praxis through teachers' researching their

own practice and through collaboration with those from within the professional context.

In this section I have discussed the theoretical underpinning of action research from the work of Lewin and Collier in the 1940s, and Stenhouse and Elliott in the 1970s and 1980s. Through their work to prevent minority groups being exploited, Lewin and Collier separately argued that a community based approach that encompassed both action and research was fundamental to ensuring lasting change. In my discussions on Stenhouse and Elliott, through the role of the teacher-as-researcher and the use of triangulation to understand multiple participants' perceptions of practice, these curriculum theorists argued that praxis is enabled and teachers' enduring use of a curriculum is encouraged. As a result of these pioneers work, action research should be considered as a practitioner orientated methodology which seeks to bring about change through both group research and the teacher acting in the role of a researcher. In the following section I explore PAR as a methodological process which pays specific attention to the communicative space, group research and teachers' contextual environment as a means to influence change.

Participatory Action Research

In a critique of the development of educational action research, Kemmis and McTaggart (2008) argued that whilst Lewin and Collier encouraged action research to take place in a communicative space, and Stenhouse and Elliott had built upon these ideas, there was limited dialogue between practitioners when they engaged with action research. Indeed, Kemmis and McTaggart (2008) argued that action research had emerged into education as a technique rather than a social action, as it was intended. It was assumed that interaction between practitioners would occur as a consequence of their engagement with action research (Kemmis, 2006; McTaggart, 1994). Yet without support mechanisms, i.e. when and how this interaction might happen, it seemed that dialogue had been *neglected* and action research had become an individual rather than a participatory process (Kemmis, 2006; McTaggart, 1994).

Whilst the origins of PAR are difficult to define (Kapoor & Jordan, 2009) it could be suggested that Carr and Kemmis (1986), in their critical stance of educational action research, encouraged and re-emphasised the participatory and collaborative nature of action research (Kemmis & McTaggart, 2008). Indeed, in their book *Becoming Critical* Carr and Kemmis (1986) repeatedly noted the importance of the participatory and collaborative nature of action research. They suggested that whilst action research can only be conducted on a teacher's own practice, practitioners jointly construct understandings from the social context in which they are situated and collectively changed the social context in which they operate to improve their own practice (Carr & Kemmis, 1986). In the 1990s similar discussions emerged on the participatory and collaborative nature of action research and PAR emerged through the work of Kemmis and McTaggart (Bryden-Miller & Mcguire, 2009; Kemmis & McTaggart, 2008; McTaggart, 1994). PAR became a paradigm which emphasised the social nature of action research and encouraged dialogue and cooperation between practitioners, researchers and students, who could act as co-participants, rather than informants seen by Elliott (Bryden-Miller & Mcguire, 2009; Kemmis & McTaggart, 2008; McTaggart, 1994).

The main premise of PAR follows that '*if practices are constituted in social interaction with people, changing practice is a social process*' (Kemmis & McTaggart, 2008, p.277, [original emphasis]). PAR acknowledges that the practices of an individual are situated within their professional context and the communities of which they are part (Kapoor & Jordan, 2009; Kemmis & Grootenboer, 2008; Kemmis & McTaggart, 2008). In other words, whilst action research can be conducted as an individual process, the development in one's knowledge, understanding and any change in actions are shaped by the social context and their social relations with others (Kemmis & McTaggart, 2008; Reason & Bradbury, 2008). Thereby, Kemmis and McTaggart (2008) suggest that to inquire into one's practice the social conditions and inter-personal relations play an important role in changing practice. The practitioner should seek to understand their social context, yet also engage with the social practices of others,

in order to develop new understandings and change the conditions in which their practice is situated (Kemmis & McTaggart, 2008; Kemmis & Smith, 2008b).

Taking these discussions further, Adlong (2008, p.235) argued that PAR encourages a 'praxis-orientated educator seeking to open communicative spaces with others to address irrationality'. PAR could therefore be understood as a collective group of teacher-researchers who critically examine their own individual practice, where their emergent findings support or change their own practice and the practices or culture within their community (McTaggart, 1994). Learning and the development of one's actions is a reciprocal process whereby the practices of the community shape the practices of an individual, and in turn the individual can influence the practices his/her community (Kemmis & McTaggart, 2008). Indeed, PAR is a practice-changing-practice, and through individual and collective inquiry one transforms their sayings, doings and relating (Kemmis, 2009; Taggart & Curró, 2009), developing the disposition of phronēsis, and therefore praxis (Kemmis & Smith, 2008b). For example, Ax *et al.* (2008b) suggests that through PAR individuals develop their own practice but together they are capable of changing the practice architectures (Kemmis & Grootenboer, 2008) in order to improve the educational context.

In order to facilitate both individual and collective inquiry, PAR draws upon Lewin's self-reflective spiral of steps: planning, acting and observing, reflecting and fact finding, and re-planning (Kemmis & McTaggart, 2008). As practitioners' engage with, and move through, each of these steps it is the communicative space with others from within the professional context that allows practitioners to transform their practice and understand how their actions are situated (Kemmis & McTaggart, 2008). Similar to the thinking of Elliott (1976-77/2007) around triangulation, in the communicative space there a number of co-participants who can interact and share their experience and begin to triangulate their findings (Kemmis & McTaggart, 2008). By using Ax *et al's* (2008a) discussions on action research as a framework, within PAR the development in practice is dependent on the teachers' gathering insight from a) analysis of their own practice, b) dialogue with colleagues and a facilitator, and c) negotiations about their practice with their

students (Kemmis & McTaggart, 2008; McTaggart & Curró, 2009). Practitioners move through the steps in a continuous process of dialogue, re-constructing and constructing their own practice, and the practices of the community in which they are situated.

However, it is important to acknowledge that the process is not a neat plan, as the cycle suggests, 'the stages overlap, and initial plans quickly become obsolete in the light of learning from experience (Kemmis & McTaggart, 2008, p.277). Indeed, in any process of change and in the use of action research, transforming practice is a *messy* process which does not always result in neat resolutions or follow a sequential path of actions (Cook, 2009; Kemmis, 1982). Teachers may change their general plan or their understandings of their practice in any phase of the action research cycle going backwards and forwards between different steps (Casey, 2012d), or as Cook (2009) suggests going forwards and backwards between a messy area and a messy turn. A messy area is when practitioners have begun to change their practice but not fully accepted for example, the emergent pedagogical practice (Cook, 2009). A messy turn occurs when new understandings are revealed and articulated (Cook, 2009). Thereby, the PAR cycle is a fluid process open to change dependent on the emergent experiences that occur from within the professional context, and supported and encouraged by colleagues and an outside facilitator (Cook, 2009; Kemmis & McTaggart, 2008).

This section has identified that whilst the pioneers of action research, i.e. Lewin, Collier, Stenhouse and Elliott, argued that action research was a community based approach involving both action and research, action research had emerged into education as a technique rather than a social action. PAR emerged in response to these concerns, and pays explicit attention to the communicative space and community action. Indeed, PAR involves both individual and collective inquiry where teachers' inquire into their practice, gather new insights and, through the communicative space of colleagues, facilitators and students, feed their emergent findings into their own practice and the practices of the community. The change in a practitioner's practice is reciprocal since an individual's emergent findings support the practices of the community. Yet the practices of the community also

influence the individual's practice. When practitioners engage in such a process they can begin to change not only their own practices but also the practices of the community and the contexts in which their practice is situated. Building on my discussions in Chapter 2, when teachers work together to change and create communicative spaces there is an increased likelihood that praxis will be enabled and change will be sustained. In light of these conclusions on PAR, this was the chosen methodology to facilitate teachers' use of the Cooperative Learning in sequential and interrelated units, and to scaffold an exploration of my research questions (p.53).

Methodology Conclusion

In this methodological section of the chapter my purpose was to present a justification for my use of PAR as being capable of supporting teachers' learning and use of the Cooperative Learning model during sequential and interrelated units. I began by critiquing the traditional form of teacher learning, i.e. one off workshops, and suggested that these have a limited effect on changing teachers' practice, supporting teachers' use of innovations, and more specifically pedagogical models. Subsequently, I considered that changing practice to be a matter of enabling praxis. By this means, the teacher develops a practice-informed theory about their use of an innovation through the development in Aristole's three dispositions of epistēmē, technē and phronēsis. To enable praxis, I argued that teacher learning is a social act, and a continuous process.

In order to scaffold a practical and social form of teacher learning I considered action research as methodology. Action research is a form of teacher learning that enables praxis through individual and participatory inquiry. Through my discussions on the founding fathers of action research, Lewin, Collier, Stenhouse and Elliott, I have argued that a community-based approach was fundamental to encompassing both action and research that can influence lasting change. However, whilst action research was considered a practitioner-orientated methodology by these pioneers, the communicative space and a community-based approach to action research has become *neglected* since their work in the 1940s,

1970s and 1980s. Indeed, action research emerged into education as a technique rather than as a social action.

Building upon the work of the founding fathers, PAR was shown to be a methodology that enabled praxis through the explicit attention paid to the communicative space in action and research. Through PAR an individual inquiries into their own practice, but also supports the practices of the community. Furthermore, whilst community action supports a teacher's practice, together the community can change the conditions in which each teacher's practice is situated and allow each of them to start to work beyond the practice architectures. In contrast to the traditional form of professional development, PAR places importance on the creation of communicative space where change happens as a result of inquiry and group action. As a result, this was chosen as the methodology which would support teachers' use of the Cooperative Learning model in interrelated and sequential units during an academic year. In the following sections I explore the details of my research design and discuss the methods which turned my methodology into a research project.

Research Design

Schwandt (2003, p.296) claimed that in order to understand a social action, such as teaching, the inquirer needs to comprehend 'the meanings that constitute that action.' Moreover, we need to gain first-hand knowledge of the contexts, events, and the participants involved (Schwandt, 2003; Sparkes, 1992). This study adopted an interpretative approach, assuming an internal-idealist ontology, a subjectivist epistemology, and participative methodology (Schwandt, 2003; Sparkes, 1992). In other words, my research design was framed by the understanding that the realities of truth that are portrayed in this thesis are personal and mind-dependent. As I will show in this methods section, through the communicative space of PAR used to scaffold teacher learning and my inquiry, knowledge was socially constructed between the teachers and I, and with secondary school students. This study therefore draws on multiple personal

perspectives, yet it is limited to the contexts in which these occurred, and my 'existence' in the two schools.

Building upon my ontological and epistemological stance, I acknowledge that my data gathering processes, my existence in the two school contexts and my interactions with teachers and students will have influenced these participants' actions and dispositions. Furthermore, my interpretations of events, my actions and my ways of thinking about 'reality' were drawn from the theoretical framework of Cooperative Learning, my practice-informed knowledge, and the socially constructed nature of reality through PAR. However, assumptions made about reality and truth are unavoidable when facilitating teacher learning over an enduring period of time through PAR, and when my research was informed by theory. The truth is therefore value laden and despite my use of multiple data gathering methods (that are explored later in this chapter) these were not a set of pre-established neutral procedures (as seen in positivism) (Sparkes, 1992). I do not consider the research design to provide certifiable guarantees of truth and I appreciate that if a different researcher was to conduct this fieldwork the outcomes may turn out differently (Ball, 1990), and even the data gathering tools and processes may have differed. However, through PAR, and drawing on Elliott's (1997, 1976-77/2007) discussions around triangulation, truth was positioned as the shared visions and common understandings between the participants, and the interpretations that 'we' collectively ascribed to events. Indeed, triangulation of the multiple perspectives informed my analysis throughout the yearlong study within PAR, and was used to inform teachers' learning and use of the Cooperative Learning model. Therefore, whilst this participatory methodology confronts ontological and epistemological issues, the research design has sought to represent 'truth' and 'reality' by exploring the shared visions and interpretations of multiple participants within the communicative space. Yet I wish not to mask my existence and my influence on the actions or the meanings ascribed to actions, and as I will show, I operated as a central figure in the social construction of knowledge and practice.

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Settings

The study took place in two comprehensive secondary schools (age 11-19) in the UK, Buckingham and Birchwood[5]. Both schools were co-educational, non-selective and situated in rural towns. At the time of this study 959 students at Buckingham and 1313 students at Birchwood were on roll. At both sites a large majority of students were from white, middle class backgrounds, and as reflected in the lower than average percentage of students eligible for free school meals (Buckingham: 7.6%, Birchwood: 7.6%), the schools were situated within economically advantageous contexts. The percentage of students with English as an additional language (Buckingham: 2.4 %, Birchwood: 4.4%) and the proportion of students with special educational needs (Buckingham: 4.9%, Birchwood: 4.3%) were reported to below the national average.

Buckingham held specialist sports college status[6] and Birchwood was an academy and held specialist technology status with an additional sport specialism[7]. Whilst Birchwood was an academy it still used OfSTED criteria as a basis for practice in the school.

Physical education was a compulsory subject at both schools, and students had a minimum of two hours allocated on their timetables per week. Programmes for compulsory physical education were structured through the multi-activity approach (Cothran, 2001) and units of activity were between six-ten lessons. The programmes were designed by senior members within their respective

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[5] Approval to use the school names was granted by the head teachers and physical education teachers in both schools.

[6] Sports college status is awarded by the government to maintained schools. Schools that apply for specialist status receive additional funding and are expected to enhance their provision and raise the standards of physical education and school sport (c.f. DfES , 2003; Flintoff, 2003; Quick et al 2010).

[7] Academies are independent schools directly funded by the government. Academies have a greater level of freedom in their decisions on teaching and learning (c.f. Department for Education). Schools are granted funding from the government to raise standards in specialist status. However, this funding was removed in April 2011.

departments at the beginning of the academic year. At Buckingham, the head of department allocated facilities and selected one of the four the range and content areas from the national curriculum (outwitting opponents, maximum performance, accurate replication and safe and effective exercise) to each unit which the teachers could choose an activity from (QCA, 2007). At Birchwood, teachers were assigned a facility and an activity for their classes and were expected to teach this defined content.

At Buckingham, in key stage three (age 11-14) classes were taught in sets representative of students' grades in reference to the national curriculum for physical education attainment targets (QCA, 2007). The sets, a top ability single sex boys' class, top ability single sex girls' class and a low ability co-educational class, were selected by the physical education department when the students were in year seven (age 11-12). These classes were rarely modified and the average class size was thirty students. In key stage four (age 14-16) the classes were modified at the beginning of year ten (age 14-15) due to the inclusion of leadership awards into the programme. Students were given an option as to which of three classes they would like to be in. These include an all girls' mixed ability class, an all boys' mixed ability class and co-educational Sports Leaders Level 1[8] class. In the leadership class students' participate in tasks and activities which develop their leadership skills in accordance with the assessment criteria for the Level 1 award.

At Birchwood, in year seven (age 11-12) classes were compromised of two tutor groups and taught in single sex. These year seven classes had three hours of physical education per week. In years eight to eleven (age 12-16) students had two hours of compulsory physical education on their timetables and were taught in single sex set classes. The classes were selected in reference to the teachers' assessments of their ability in year seven using the national curriculum for physical education attainment targets (QCA, 2007). Inter-form school sport

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[1] Information on this award can be found at
http://www.sportsleaders.org/awardsqualifications/qualifications/level-1-award-in-sports-leadership/

competitions were run in physical education lessons in the last two weeks of each term. In these lessons students competed against other tutor groups in a prescribed activity. The physical education department did not run any leadership awards.

Participants

Teachers

Eight teachers participated in the study. The teachers' decision to use Cooperative Learning was voluntary and they were given the option to withdraw from the study at any time. All six members of the physical education department at Buckingham opted to be involved and at Birchwood two members of a ten person physical education department decided to engage with the use of Cooperative Learning. Whilst other members in the department at Birchwood demonstrated an interest in using the model, the other teachers suggested that extraneous demands, such as pastoral responsibilities, limited the time they had available to engage in learning how to use a new pedagogical approach. The eight teachers varied in their experience as physical education teachers, their extraneous responsibilities in their departments and school, and their previous experience with pedagogical models (Table 1). All teachers' names are pseudonyms.

Table 1. The teachers and the number of years they had been a teacher, their extraneous roles within their department and school, and the teachers' previous experience with pedagogical models

Name	School	No. of years teaching	Extraneous roles in the departments and school	Previous experience with pedagogical models
Joey	Buckingham	8	Head of Department for physical education	Taught through SE*
Jane	Buckingham	9	Assistant head of department for physical education	Taught and led a programme of SE*
Chris	Buckingham	6	None	Taught through SE* and TGfU*
Christina	Buckingham	3	School Sports Co-ordinator	None stated
Phil	Buckingham	15	Head of Year 11	Taught through SE
Kelly	Buckingham	<1 year	None	Taught through SE and CL* during undergraduate degree
Tom	Birchwood	11	Head of Department for physical education	Taught through SE*
Nikki	Birchwood	4	Head of examination physical education age 16-19	Learnt about TGfU* during PGCE[1]

Sport Education (SE), Teaching Games for Understanding (TGfU), Cooperative Learning (CL)
[1] *Post Graduate Certificate in Education (PGCE) and one year degree course for Qualified Teacher Status.*

The Boundary Spanner

The term boundary spanner is derived from the work on organisational structures by Thompson (1962) and later Aldrich and Herker (1977). These authors argued

that a boundary spanner distributes information, filters information and facilitates the use of information in different organizations (Aldrich and Herker, 1977; Thompson, 1962). Consequently, the boundary spanner is a representative of an organisation and acts to meet their organizations goals by distributing the service or product through interacting with other agents in society (Aldrich and Herker, 1977; Thompson, 1962). The boundary spanner is not a participant within the inter-professional community but is instead someone who supports teachers working together and the process of inquiry.

In the process of developing teachers' knowledge and use of Cooperative Learning, and supporting teachers' use of PAR, my role was defined as a boundary spanner. I had previous experience of teaching physical education through Cooperative Learning and using practitioner inquiry as a physical education teacher (c.f. Goodyear *et al,* 2013a, 2012a). I therefore had a level of practice-informed theory to support the cooperating teachers (Casey, 2012a). Furthermore, in the year prior to the commencement of this study I had taught through the Cooperative Learning model in pre-service teacher education programmes, continuing to develop a practice-informed theory, and had begun to study the theory of Cooperative Learning, generating a theoretical understanding of the model. In consideration of Aristole's dispositions of praxis I developed to some degree epistēmē, technē, and phronēsis (Kemmis & Smith, 2008a, 2008b) through my previous experience of teaching through Cooperative Learning and my academic study.

I visited Buckingham school bi-weekly due to the number of members of the department using the model and the need to gather data from all six teachers. I visited Birchwood bi-monthly due to the fact that only two teachers were using the model[9]. I supported teachers' practice by initiating them into the model over a three month period, organising professional learning meetings, interviewing

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[9] The variance of interaction with the teachers between the two schools is a limitation of the research design, and whilst this could not be prevented, the potential effect this had on changing practice will be considered in Chapter 6 and Chapter 7.

students and discussing the teachers' practice with them both formally (during interviews) and informally (either face-to-face or on online-platforms). I played an inherent role in the communicative space of PAR. Whilst these methods of support will be discussed in detail in the data gathering section, my role was multi-facet. Similar to Avgitidou (2009) discussions around an outsider's role, I adopted a role of a supporter, facilitator and a critical friend. My role changed throughout the yearlong study and my support was dependent on teachers' emerging learning experiences.

At this juncture it is important to highlight that I had been a colleague, a friend, a peer and a collaborative researcher with a number of the teachers before the study began. I had worked with five of the teachers at Buckingham (Jane, Joey, Chris, Christina and Phil) and had maintained a friendship and professional relationship with these teachers since leaving the school. Moreover, four of the teachers at Buckingham (Jane, Joey, Chris and Christina) were participants in the pilot study for this thesis on practitioner inquiry (c.f. Goodyear *et al,* 2013a). I had also worked with, and been mentored by Jane in another local school during my Post Graduate Certificate in Education (PGCE) and Nikki at Birchwood was also a peer on my Post Graduate in Certificate of Education[10] (PGCE) course and my Masters degree. However, I had no prior relations with Tom or Kelly before the study began.

In light of my prior relations with the teachers, before the study began it was important for me and the teachers to understand our roles in the collaborative process. Drawing on a number of recommendations for establishing successful and ethical partnerships (Broadhead, 2009; Campbell & Groundwater-Smith, 2007; Day, 1991; Groundwater-Smith & Mockler, 2005; Williams, 2002), and to try to develop an asymmetrical relationship of knowledge and power (Kemmis & McTaggart, 2008), I went through a number of processes before the pedagogical intervention began. After obtaining ethical approval from the University, I firstly

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[10] Post Graduate Certificate in Education (PGCE) is a one year course that leads to gaining Qualified Teaching Status.

gained ethical consent from the teachers and informed them that they could withdraw from the study without it affecting their professional standing or their relations with me. Secondly, I defined my role with the teachers as a collaborator of knowledge generation. Whilst I would facilitate their practice through being a supporter, facilitator and critical friend (Day, 1991; Elliott, 1997, 1976-77/2007), my role was also to gather data to explore my research questions. During the initial meetings with the teachers, and re-emphasised in the first formal interview, I explained that the knowledge I gathered from their practice would be shared in this way and that they would have the opportunity to discuss with me the findings and read the reports and papers that I produced. However, whilst these processes took place, as a means to establish an ethical relationship between the researched and the researcher, I acknowledged that I would never be an entirely equal co-participant due to power differentials and my position as an outsider to the professional context (Broadhead, 2009; Campbell & Groundwater-Smith, 2007; Day, 1991; Groundwater-Smith & Mockler, 2005; Kemmis & McTaggart, 2008; Williams, 2002). These processes served to support the intra-professional collaboration, yet not prevent the ethical dilemmas that may occur over the course of the academic year.

Pedagogical Intervention

In this section I discuss how the eight teachers' used the Cooperative Learning model during the academic year. I begin by discussing the non-negotiables which served as the fulcrum for teachers' understanding of how to use the model, and a means which I felt would ensure the authenticity of implementation. Following this I discuss teachers three month initiation into the model and then subsequently how the model was implemented.

The non-negotiables

Casey and Dyson (2012) argued that the five fundamental elements of individual accountability, positive interdependence, group processing, small group and interpersonal skills, and promotive face-to-face interaction serve as the non-

negotiables of Cooperative Learning, and should be implemented for a lesson to be considered as Cooperative Learning. Metzler (2011, 2005, 2000) has also argued that teachers' should use 14 benchmarks which, in their analysis of the ecology of the Cooperative Learning classroom, Dyson *et al.* (2010) used as a means to monitor the authenticity of implementation and to guide teachers' actions. However, through my exploration of the literature on Cooperative Learning in both education and physical education, and as a result of my practice-informed theory about the model, I considered both the elements and benchmarks to be an inappropriate means to support teachers' learning and use of Cooperative Learning.

In consideration of the elements first, these did not provide teachers with enough depth of information for teachers to re-structure their classrooms into a Cooperative one. Indeed, Johnson and Johnson (1994), Slavin (1996), Kagan (1989) and Cohen (1994) i.e. the protagonists of Cooperative Learning, and the literature on Cooperative Learning in physical education (Dyson & Casey, 2012b), suggests that in a Cooperative Learning classroom students need to work in heterogeneous teams, have group goals, a defined approach (or structure) should be used and finally the teacher should act as a facilitator. Since these additional features facilitate learning, support teachers' re-structuring their classroom into a cooperative one, and encourage the use of the fundamental elements (Casey *et al,* 2013; Dyson & Casey, 2012b), I considered that these additional features needed to be planned for and implemented. Furthermore, Cooperative Learning differs from the traditional teacher-led approach and if attention wasn't paid to, for example the teacher-as-facilitator, then this may not be implemented and students' may not be encouraged to create their own learning experiences and work together without immediate instruction from the teacher.

In consideration of the benchmarks, whilst Metzler (2011, 2005, 2000) included some of the additional features, such as a heterogeneous teams, only individual accountability had been included from the five fundamental elements used as a measure of implementation in education and physical education. It seems that, to some extent, Metzler may have ignored the school-based empirical research on

Cooperative Learning in the *creation* of his benchmarks. However, this was not my only critique. Metzler (2011, 2005, 2000) included 14 different (7 teacher, 7 student) benchmarks in his model summary. Yet it seemed an unduly complex undertaking for teachers to firstly learn the 14 benchmarks and then re-structure the classroom into a cooperative one; especially as the benchmarks seem comparable for both the teachers and students. Consequently, I felt that a number of the benchmarks could be combined into one category and there was not a need for developing two separate benchmarks under the same behavioural umbrella. The final critique of the benchmarks was with regard to the term itself. Benchmark denotes something to aim for or to aspire to achieve, not something which needs to be implemented to re-structure the classroom into a cooperative one.

In light of my critique of the elements and benchmarks I considered that a number of aspects of the model could be devised to better guide teachers' actions and facilitate the authentic use of the Cooperative Learning model. These subsequent eight categories build on my discussions around the additional features of Cooperative Learning by the protagonists and the literature in physical education. These eight features were defined as the non-negeotiables and served as the fulcrum of teachers' technical knowledge (technē) (Kemmis & Smith, 2008b; Mockler, 2011). The word non-negotiables was selected as the term itself denotes that these features would need to be planned for and implemented in lessons. Table 2 identifies the non-negotiables and provides a brief description. It is important to acknowledge that the fundamental element of small group and interpersonal skills was excluded. At the time of developing these non-negotiables I felt that through the teachers planning for a social/emotional goal and through promotive face-to-face interaction that the development in students' interpersonal skills would be planned for. The decision to exclude this element was therefore based on trying to reduce the confusion for teachers as seen in Metzler's (2011, 2005, 2000) 14 benchmarks. It is also important to note that these non-negotiables are not presented here, or were for the teachers, hierarchical.

Table 2. The Non-negotiables

Non-negotiable	Description
Mixed ability groups	Students work in mixed ability, gender and social relations pairs or small groups (4-5 members) for the duration of a unit
Group Goal	Students work in pairs or small groups to achieve group goals in the physical, cognitive and social/emotional domains
Teacher Facilitator	Students learn from each other rather than the teacher
Positive Interdependence	Students are dependent on each member of their group participating and completing tasks to be able to achieve the group goal
Individual Accountability	Students are assessed on their contribution to group work and/or their performance
Promotive Face-to-Face Interaction	Students have positive interactions with members of their group, they encourage one another and demonstrate good interpersonal skills.
Group Processing	At the end of the lesson the group reflects on what they have learnt and how they can improve their ability to work as a group
Cooperative Learning Structure	The teacher selects a defined structure from Cooperative Learning Model

Initiation

Before the teachers began teaching through the Cooperative Learning model in formalised units the teachers spent three months learning about the non-negotiables, various Cooperative Learning structures and how to use PAR.

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Drawing on Fullan (2007) this was conceptualised as teachers' initiation into the model. The three months of initiation had two key features: workshops and experimentation.

The workshops took place in teachers' respective schools and the aim of the workshops was to develop teachers' understanding of the non-negotiables and the structures. These workshops were led by me with the support on two occasions from Ashley Casey (doctoral supervisor). It was planned that teachers would participate in six hours of workshops but on the teachers' requests at Buckingham three workshops were completed lasting in total seven hours and at Birchwood four hours of workshops took place lasting in total eleven hours. Both Tom and Nikki from Birchwood participated in the total eleven hours, and all teachers from Buckingham except Chris, who missed a two hour session due to extra-curricular responsibilities, participated in the seven hours of workshops. I ensured the workshops were relevant to the teachers' personal developmental needs in order to sustain their interest and support their pedagogical understanding of Cooperative Learning (Goodyear *et al,* 2012b). The workshops began with a discussion and then the content and activities within the workshop were constructed in response to teachers' questions about the model, and their understandings of the non-negotiables. One workshop was dedicated to planning units and lessons the remainder were practical activities. The workshops were video recorded and discussions were transcribed.

Experimentation with the model involved the teachers completing a number of tasks which were designed to support their understanding of the non-negotiables and structures from within their own practice. For example, task one involved using two of the non-negotiables in the lesson and then the following lesson modifying how they had used the non-negotiables to support students' learning. To facilitate the teachers' experimentation, understanding of the model and develop their understanding of how to engage with PAR, the teachers also reflected on their experimentation with the model using the modified version of the Post Lesson Teacher Analysis Tool (PLTA (Dyson, 1994)) (Appendix 1) and interviewed their students using pre-planned questions I had provided. In addition,

the teachers responded to questions I posted on an online discussion board, *The Physical Education Practitioner Research Network* (PEPRN), to open up a pedagogic dialogue around the use of Cooperative Learning. PEPRN is nested within a larger research project which aims to engage practitioners in discussions around issues and projects in physical education and sport pedagogy. PEPRN in this thesis was used as a form of engaging teachers in dialogue around their changing practice during both initiation and implementation.

Implementation: teachers' use of Cooperative Learning

Following the three month period of initiation the teachers were asked to select a minimum of one class to use Cooperative Learning as a focus for their pedagogical practice for at least four units of activity. Table 3 (p.92) represents the classes chosen and shows that a range of classes from year 7 (age 11-12) to year ten (age 14-15) were selected. Table 3 also identifies students who were documented by the schools as having special educational needs, English as an additional language or behavioural, emotional or social learning difficulties. Whilst at Buckingham classes are normally taught in sets of approximately thirty students. Jane and Christina (Buckingham) decided to share two classes since Jane (Buckingham) did not teach one class on her timetable twice in a week. Yet in the fourth and fifth units Jane and Christina (Buckingham) taught separate units of activity to these two classes. Moreover, Kelly (Buckingham) chose two classes on her timetable since during the experimentation with Cooperative Learning she felt both classes would react positively to learning through the model. All students' names in this thesis are pseudonyms.

Each lesson was one hour long, except for Tom (Birchwood) where every other lesson he taught was two hours in length. The teachers used the model with their pre-defined programmes and selected a Cooperative Learning structure to use within each unit (Table 4 p.93-94). Some units ran consecutively and others had, for example, four lesson breaks in-between. This was at the discretion of the teachers. Whilst the teachers were only required to teach four units of activity all teachers, except Nikki (Birchwood), taught five units. Nikki (Birchwood)

removed herself from the study after beginning her second unit due to her extraneous demands and other commitments which hindered the time she had to engage with the study. It is also important to acknowledge that a number of the lessons within the units were cancelled due to poor weather limiting the facilities available, teacher absence for external professional learning or illness, in-house school sport competitions, school trips, teacher employment within the department and a cross-curricular week.

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Table 3. The classes chosen by teachers to use Cooperative Learning as a focus for their practice and the number of students within these classes statemented with learning difficulties

Teacher	Class	Class size	Characteristics of students with statements for learning difficulties identified from whole school data
Joey	Year 7 Boys Mixed ability	12	Two students were identified as having mild learning difficulties and one student had Asperger's. The class was all of the boys from one tutor group.
Jane & Christina	Year 7 Girls Mixed ability	16	One student was identified as having mild learning difficulties and two students had literacy levels below their expected grade level. The teachers' described the majority of this class as being low ability. The class was all of the girls from one tutor group.
Jane & Christina	Year 8 Girls High ability	32	One student with behavioural emotional and social learning difficulties
Chris	Year 9 Boys High ability	26	One student was identified as having Asperger's. Two students had behavioural, emotional and social learning difficulties
Phil	Year 10 Boys Mixed ability	16	One student was identified as having behavioural, emotional and difficulties.
Kelly	Year 7 Girls High ability	27	One student was identified as having English as an additional language
Kelly	Year 9 Girls High ability	33	Four students identified as having behavioural, emotional and social learning difficulties
Tom	Year 7 Boys Mixed ability	30	One student had severe autism* and was supported in lessons by a teaching assistant 1 student with social, emotional and behavioural learning difficulties
Nikki	Year 8 Girls High ability	28	No statement students identified

*Severe autism was identified by the school assessment procedures in accordance with the local authority guidelines. The student was on action plus provision where the school received additional funding to provide extra provision for the student. For example, in lessons he was supported by a teaching assistant.

Table 4. The content and Cooperative Learning structures used to teach each unit of activity through Cooperative Learning

Teacher	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Total Number of Lessons Taught
Joey Buckingham	Swimming 6 lessons Pairs Check Perform	Games Making 6 lessons Learning Teams	Cricket 6 lessons Pairs Check Perform & Learning Teams	Paralympic Football2 lessons Learning Teams	Athletics 4 lessons STAD	24 lessons
Jane Buckingham	Health 3 lessons (yr7) 3 lessons (yr8) Learning Teams	Badminton 2 lessons (yr 7) 2 lessons (yr8) Think-Share-Perform	Trampolining 3 lessons (yr 7) 3 lessons (yr8) Think-Share-Perform	Athletics (yr 7 only) 6 lessons Learning Teams	Rounders (yr 8 only) 6 lessons Complex Instruction/ Learning Teams	28 lessons
Christina Buckingham	Health 3 lessons (yr7) 3 lessons (yr8) Learning Teams	Badminton 2 lessons (yr 8) 1 lesson (yr 7) Think-Share-Perform	Trampolining 3 lessons (yr 7) 3 lessons (yr8) Think-Share-Perform	Rounders (yr 7 only) 10 lessons STAD	Athletics (yr 8 only) 8 lessons STAD	33 lessons
Chris Buckingham	Basketball 6 lessons Learning Teams	Football 3 lessons Learning Teams	Badminton 5 lessons Jigsaw	Cricket 6 lessons Jigsaw & Learning Teams	Athletics 6 lessons STAD	26 Lessons

Teacher	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Total Number of Lessons Taught
Phil Buckingham	Trampolining 4 lessons Think-Share-Perform	Badminton 2 lessons Think-Share-Perform	Football 6 lessons Think-Share-Perform	Athletics 2 lessons Think-Share-Perform	Cricket 6 lessons Pairs Check Perform & Learning Teams	20 lessons
Kelly Buckingham	Football 6 lessons (yr7) 6 lessons (yr9) Learning Teams	Basketball 4 lessons (yr 7) 4 lessons (yr 9) Learning Teams	Health 6 lessons (yr 7) 6 lessons (yr9) Jigsaw	Frisbee 6 lessons (yr 7) 6 lessons (yr 9) Jigsaw	Athletics 2 lessons (yr9) Learning Teams	46 lessons
Tom Birchwood	Football 10 lessons Learning Teams	Gymnastics/ Health 3 lesson Think-Share-Perform/ Learning Teams	Volleyball 2 lessons Learning Teams	Athletics 6 lessons Learning Teams	Cricket 2 lessons Learning Teams	23 lessons (33 hours due to every other lesson 2 hours in length)
Nikki Birchwood	Netball 6 lessons Jigsaw	Lacrosse 2 lessons Jigsaw				8 lessons

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Participatory Action Research (PAR)

PAR is based on Lewin's (1946, p.38) argument that action research 'is composed of a circle of planning, action and fact-finding' (Kemmis & McTaggart, 2008). Taking this into account, I drew upon Casey's (2010) discussions and application of a cycles within cycles approach. The cycles within cycles approach draws upon Lewin's spiral of steps but suggests that practitioners can engage with cycles of action research simultaneously. Casey (2010) came to the understanding of cycles within cycles in his use of pedagogical models. He felt that whilst he had an overall cycle which ran the course of a number of academic years, and focussed on changing his practice through pedagogical models, each unit he taught through a model could be conceptualised as a mini cycle contributing to the outer cycle. Since this project is similar to Casey (2010), in that teachers are teaching through Cooperative Learning in multiple units with an overall objective to develop their use of Cooperative Learning in an academic year, the cycles within cycles approach was adopted.

Figure 1 demonstrates how the teachers' engaged with PAR to support their use of the model. Following Lewin's (1946) conceptualisation of action research and Casey's (2010) cycles within cycles approach, Figure 1 shows that the teachers' engaged with an overarching cycle of planning, acting and fact finding over the course of the academic year, before they would move into their second cycle which was conceptualised as being beyond this study and the next academic year. Their overall plan was to develop their use of Cooperative Learning as situated within their practice and schools (Plan) and through their use of the model (Act) and the subsequent findings that were gathered (Fact Finding) they would form a practice-informed theory about the model. Yet within this overarching cycle, and in the process of developing their use of the model, they engaged with mini cycles. These mini cycles are defined as each unit of activity taught through Cooperative Learning where the teachers developed a plan, they acted and engaged with fact finding to feed their emergent findings into both the next lesson and the next unit taught. These mini cycles served to contribute to the overarching cycle informing acting and fact-finding.

Figure 1 also shows that inherent to this process were the three features of action research extolled by Ax *et al.* (2008a): analysis, dialogue and negotiation which encouraged the communicative space for PAR and served to support each of the phases of planning, acting and fact finding. Firstly, the teachers analysed their practice and students' learning from their observations and reflections. Secondly, the teachers engaged with dialogue with me both formally (before and after their lessons) and informally (through discussions in the staffroom, on social media and the online discussion board PEPRN). The teachers were also encouraged to engage with dialogue through PEPRN and through face-to-face discussions with their colleagues in the department. Finally, the teachers' negotiated their practice with their students during focus group interviews following each unit taught. Thereby, through analysis, dialogue and negotiation the teachers inquired into their practice on an individual and collective basis. Their practice was situated within the professional context and their own emergent findings were situated within the practices of their classrooms. The methods of analysis, dialogue, and negotiation were used as forms of data gathering and will be discussed in their entirety in the following sections.
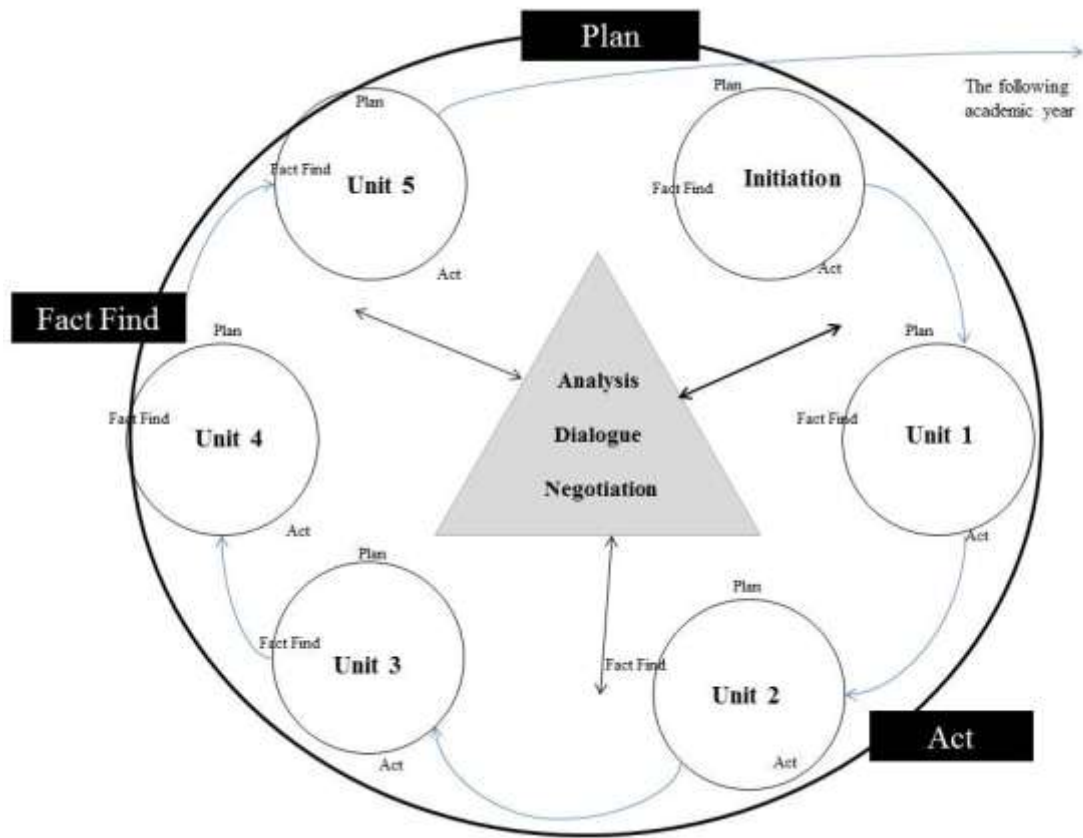
Figure 1. Teachers' use of the cycles within cycles approach to participatory action research

Data Gathering

Table 5 (p.99) shows the multiple sources of data were used to inform my research questions that provided diversity within the data. These included my field journal, teacher reflections, interviews, observations and informal and online discussions between the teachers and I. Multiple methods allowed me to achieve a broader and in-depth understanding of my research questions (Flick, 2002; Fontana & Frey, 2008). The data sources were coherent with the methods that supported teachers' engagement with PAR and were therefore consistent with the epistemological position of the methodology, further enhancing the rigour and quality of this research (Carter & Little, 2007). It is important to note that all data sources were piloted during either a) a practitioner inquiry project (Goodyear *et al,* 2013b), or b) as part of a collaborative project on a validation tool for the Cooperative Learning model (Casey *et al,* 2013). Both of these projects formed

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the pilot study for this study. The former involved exploring how four of the teachers at Buckingham used practitioner inquiry to develop their pedagogical practice. I piloted video recording lessons, teacher and student interviews, informal discussions, the PLTA and the use of the field journal. The later pilot study involved the use of the validation tool for the Cooperative Learning. I systematically observed and coded fourteen video recorded lessons taught using the Cooperative Learning model.

The data was gathered from within each of the mini cycles of the PAR process. This enabled me to explore the change in teachers' practice and students' learning over time and within each unit taught. Table 6 (p.100) shows the framework for the data gathered within each mini cycle. However, to explore the overarching change in teachers' practice and students' learning, data was gathered through formal interviews with the teachers following the three months of initiation and at the end of the academic year, and through my sustained use of the field journal. Whilst interviewing students at the beginning and end of the study would have supported the understanding of change over the course of the academic year, most teachers had only selected the class to use for the study at the very end of the school term and just before the units began the first week back in the next term. Time was not available to interview the students before they began learning through Cooperative Learning, yet at the end of the year focus groups of students were interviewed to support the findings exploring the overall change in teachers' use of the model and students' learning. The analysis and transcriptions of the data that I will discuss in the next section were completed as soon as possible after the lessons or discussions occurred, to a) facilitate my understanding of teachers' practice and to enhance the support I was able to provide in my role as a boundary spanner, b) to deepen teachers' understanding of their practice by, for example, reading their students interview transcripts that I was able to provide to them, and c) to support me in the management of data gathering and analysis from the large volume of sources that I used.

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Table 5 The data gathering sources

Data Source (Code used in chapters 4, 5, 6)	Description of Data Source
1. Field journal (FJ)	Notes about informal discussions with teachers and key incidences that took place during my time in the school.
2. Post Lesson Teacher Analysis (PLTA) (Dyson, 1994)	Teachers responded to seven questions (see appendix 1) and either wrote their answers on paper or recorded them onto a voice recorder.
3. Pre and Post lesson interviews (PL Interview)	I interviewed the teachers before and after every lesson observed.
4. Post Unit Interviews (PU Interviews)	I interviewed the teachers on the completion of each unit and as part of an additional pre-service teacher interviews[*].
5. Year End interviews (YE Interviews).	An exit interview was undertaken with the teachers and students at the end of the academic year
6. Cooperative Learning Validation Tool (CLVT) (Casey et al In Review)	The first and last lessons of each unit were video recorded. These recordings were then analysed using the CLVT. This was supported by field notes
7. Professional Learning Meetings	Two professional learning meetings were video recorded and transcribed.
8. Focus Group Interviews (FG Interviews)	The teachers and I interviewed the pupils at each of these time periods (i.e. post unit, and end of year).
9. Social Media, Web-Based Discussions & Podcast	Data were collected from Facebook, Twitter and PEPRN. A podcast was created by the teachers as part of my annual monitoring for PhD
10. Lesson observations (LO)	Data were also used from lesson observations conducted by senior leaders.
11. Informal discussions (ID)	Informal discussions that took place in the staffroom or physical education office were video recorded and transcribed
12. Discussions during lessons (DD)	As part of supporting teachers' practice some discussions took place between the teachers and I during lessons. These discussions were transcribed from the video recorded lessons.

*Pre-service teacher interviews were part of an additional project taking place at the school

Table 6. Data gathering within each mini cycle of the participatory action research process i.e. each unit taught.

	Pre Unit	Beginning of the unit	All lesson within unit	End of the unit	Post Unit
Field Journal					
Post Lesson Teacher Analysis					
Online Discussions					
Informal Discussions					
Validation Tool					
Pre-Lesson Interview					
Post-Lesson Interview					
Post-Unit Teacher Interview					
Post-Unit Focus Group Interview(s)					

Field Journal

I kept a field journal throughout the academic year to note key incidences and my reactions to things I had seen or heard. This was an important source of data since field notes provide a reflexive account of the research process and an examination of the researcher's interpretations of events and subjective reactions to their observations from within the field (Griffin, 1985). Indeed, the field journal enabled me to record anything which stood out, which was related to an experience or conversation, and which held significance to me at a particular point in time (Griffin, 1985; Tjora, 2006; Wolfinger, 2002). The field journal provided an alternative voice in the data gathering and an interpretation from someone working within the field but external from the school contexts (Galton & Delamont, 1985).

The field journal was written as soon as possible following my visits to schools to facilitate my recall of detail, my reflections, and my understanding of events (Goodyear *et al,* 2013a; Hopkins, 2002). The date of my reflections were noted which enabled me to keep an on-going record of the changes in practice (Galton & Delamont, 1985). In order to keep a firm grasp on the research questions, the research questions were used as a guide for me to reflect.

Cooperative Learning Validation Tool

The intention of using the Cooperative Learning Validation Tool (CLVT) was to confirm the authenticity of implementation and document my observations and interpretations of teaching and students' learning. The CLVT consists of 17 categories, including all of the non-negotiables, the fundamental elements, a selected number of benchmarks (Metzler, 2011) and records students' learning in the physical, cognitive and social/emotional domains (Appendix 2 (Casey et al 2013; Dyson *et al,* 2012a, 2012b)). The tool serves as a checklist, so that if one of the categories was observed during a lesson it could be coded as observed (Casey *et al,* 2013). The tool was also supported with field notes. Therefore, if a category was coded as observed field notes were also made on how and when this was achieved for a first, second or third time. As part of a collaborative project with Casey and Dyson (doctoral supervisors) I had used this tool to analyse video recorded lessons taught through Cooperative Learning. Therefore, I was familiar with the systematic observation process and had ascertained that I could use this tool with reliability and validity. Intra- and inter-observer reliability was above the recommended 85% (Casey *et al,* 2013; Dyson *et al,* 2012a, 2012b; Van der mars 1989).

In order to analyse the lessons, data was gathered from video-recorded lessons. A lesson at the beginning of the unit (either lesson one or two) and a lesson towards the end of the unit (for example, lesson five or six) was video recorded. Two cameras were used to video record the lessons. One camera focussed on the teacher behaviour and used a wireless microphone to record all discussions between the teachers and students, and statements made by the teacher. The

second camera focussed on a student learning team and was placed in close proximity to that team. I randomly selected one team to follow in the first lessons of each teacher's first unit. In the subsequent units, if the learning teams changed the camera remained with at least one student from the original learning team I had filmed in the very first lessons of the study. To support my description of events the dialogue between the teacher and students and the dialogue between students were transcribed. These two cameras enabled me to explore the teachers' behaviour in lessons and the students' behaviour and learning, which was then analysed using the CLVT.

Interviews

Interviews allow for the participants in the field to discuss their interpretations of events explaining their ideas and identifying events that they regard as crucial (Cohen *et al,* 2000; Denscombe, 2007). The interviews were an important time for me to gain an understanding of how teachers' and students' understood and were responding Cooperative Learning. Yet interviews were also a central component of the PAR cycle through the teachers' dialogue with me and their negotiation with their students. All interviews were recorded on a voice recorder and I transcribed these as soon as possible after the interviews had taken place to further my own understanding of the research findings, and for the transcriptions of student interviews to facilitate the teachers understanding of their practice.

Teacher Interviews

The end of initiation, end of unit and year end interviews with the teachers took place in a semi-structured format. Semi-structured interviews were chosen since I was able to prepare questions which were related to my research questions and explore student learning, teacher learning, the Cooperative Learning structures and the school contextual factors from the teachers' perspectives (Burton *et al,* 2008; Fontana & Frey, 2008; Tjora, 2007). Secondly, semi-structured interviews allowed for asking further questions for clarification or the use of additional questions in response to a key incident that the teachers had described (Burton *et*

al, 2008). Thereby, the questions were open and pre-planned. The questions were the same for each teacher to ensure a level of consistency. However, since interviews and observations are interactive and are shaped by the context and the situations in which they take place (Fontana & Frey, 2008; Tjora, 2007) additional questions were often included. These varied amongst the teachers and were dependent on my observations of their practice, informal discussions with the teachers and in response to my findings from the student focus group interviews. This enabled me to generate an understanding of each teacher's pedagogical context and specific events that had taken place.

In contrast, the pre- and post –lesson interviews took place in an unstructured and informal format. The 'questions emerged from the immediate context' and were asked in a conversational tone rather than a formal and structured approach (Cohen *et al,* 2000). My intent was to guide teachers through a reflection of their practice through questions which were comparable to the questions posed in group processing: what happened? So what? and what now? (Sutherland, 2012). For example, my first question in the post-lesson interview would be "so how do you think it went?" and then through the discussion I would pose questions in response to their answers. In this way, the interviews were matched to the individual and the context and the approach allowed me to understand the teachers' intentions and interpretations of events without imposing any prior categorization which may limit what was said or expressed (Cohen *et al,* 2000; Fontana & Frey, 2008).

Student Interviews

Student interviews were completed in focus groups using a semi-structured format by both the teachers and me. The focus groups remained the same throughout the study and two groups were randomly selected by the teachers in unit one. Group interviews allowed the questions to be directed at the group, rather than at individuals, in the hope that a group discussion would stimulate the recall of events between students and enhance students' willingness to engage in a discussion about their learning and their teacher's practice (Flick, 2002; Fontana

and Frey, 2008; Hopkins, 2002). The purpose of both teachers and me interviewing students was firstly to support the teachers in the negotiation process of PAR (Fig 1). On most occasions I would interview one group of students and then the class teacher would interview a different group of students. Yet when time wasn't available, due to the busyness of schools and teachers extraneous responsibilities (Casey, 2010), I would interview both focus groups and email the transcription to the teachers. The second purpose of engaging the teachers in the interviewing process was to overcome some situational concerns and to try to get an honest interpretation of events from the students. Indeed, during my Masters research, as a practitioner researcher, I found that the students were not willing to give an honest interpretation of my practice in face-to-face interviews (Goodyear *et al*, 2013b). Yet on the same hand in my role as a boundary spanner I was a stranger to some of the students and they may not be willing to discuss their practice with me until I had built a rapport with them (Fontana & Frey, 2008). Through both of us interviewing students I sought to overcome these constraints.

We used the same questions in an attempt to explore how the students' understandings were changing over the course of the different units. However, similar to the teacher interviews, additional questions were sometimes asked in response to my observations of teachers' practice and the discussions I had with the teachers about their practice. Furthermore, the teachers' asked additional questions, and sometimes asked me to ask their students additional questions in order to understand their changing practice and their students' responses to Cooperative Learning.

Reflections and informal discussions

The teachers used the modified version of the PLTA (Dyson, 1994 (Appendix 1))) to reflect on their lessons. The purpose of the PLTA was to facilitate the teachers' understanding of their practice and support their planning for the next lesson (Casey, 2010; Goodyear *et al,* 2013b). Teachers either wrote or recorded their reflections on a voice recorder following each lesson taught. Informal face-to-face discussions between the teachers and I further encouraged reflection. These

discussions occurred when I visited the school staff room or PE office and were often imitated by the teachers. The discussions were recorded on a voice recorder or noted in my field journal.

Technology, on the online discussion board PEPRN, was used to stimulate reflection. Discussions on this virtual platform mainly took place during the period of initiation and the first unit the teachers' taught. However, social media was also a form of data gathering that emerged. Indeed, with social media acting as a global phenomenon with over a billion people using Facebook and/or Twitter daily, and teachers checking these social media platforms at the beginning and end of the school day, social media has been reported as one way to open communicative spaces between teachers and boundary spanners, as a means to support teachers' changing their practice (Casey, 2012d; Crews and Stitt-Gohdes, 2012; Lieberman & Pointer-Mace, 2010; Sennett, 2012). Whilst it was not my intention to gather data or support teachers' practice through social media, the discussions between the teachers and on Facebook and Twitter that simply *happened* served as an important method for me to support their practice. These discussions occurred between six of the teachers. Their preferred time for contact varied but the conversations often occurred when I had not seen the teachers for a period of time or in response to my tweets or status updates (on both Facebook and Twitter). Data was therefore gathered from both the social media sites and the web based forum, this included 234 Facebook Page status updates and photos, 441 tweets made about the study by me, 49 private message Facebook conversations, 76 Conversations through Twitter and eight comments on PEPRN.

Lesson Observations

An emergent form of data gathering was teacher lesson observations. This data source was gathered from Buckingham when members of the senior leadership team, and Joey (the head of department), observed Chris's and Kelly's lesson taught through Cooperative Learning in the fifth unit, and Jane's examination physical education lesson she had chosen to teach through the Cooperative Learning model for an observation (but which was not one of the classes she had

selected to use the model with within the study). The teachers' lessons were
analysed by the senior leadership team and Joey using OfSTED lesson
observation criteria[11] which included categories of a) high expectations and
effective support b) a range of teaching styles differentiation c) subject knowledge
d) effective use of time, e) use of resources and technology, f) student progress, g)
personal learning and thinking skills and h) spiritual, moral and cultural
development. The teachers were then graded on a scale of outstanding, good,
satisfactory and unsatisfactory as to how well they met the criteria. The
documents written by the senior leadership team and Joey were then used as an
additional source of data.

Data Analysis and Trustworthiness

It is understood that a researcher's ability to follow a disciplined approach reflects
the appropriate meanings of the data and the social action which is being explored
(Atkinson & Delamont, 2005; Walker *et al,* 2008). Indeed, Thorne (2000, p.68)
highlighted that if a framework is not discussed then it is left to be assumed that
the researcher 'left the raw data out overnight and awoke to find that the data
analysis fairies had organised the data into a coherent new structure that explained
everything!' Therefore, I understood that using a defined approach, and describing
the logical steps and processes of arranging the data would support the credibility
of this research (Atkinson & Delamont, 2005; Morse, 1994). The approach I used
to guide my analysis and 'transform the raw data into a new and coherent
depiction' (Thorne, 2000, p.68) was inductive analysis and constant comparison
(Lincoln & Guba 1985). This framework allowed me to draw themes from the
data and then compare them across the students, classes and teachers, and explore

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[11] In the UK, the Government and schools assess the quality of teaching and learning through an
OfSTED criterion (Cale and Harris, 2009b). During observations teachers are graded against
OfSTED's criteria: outstanding, good, satisfactory or unsatisfactory, which serves as an external
measure of the observer's interpretation of good practice and contributes to the schools overall
grade of outstanding, good, satisfactory and unsatisfactory (Cale and Harris, 2009b). At
Buckingham teachers are observed once per term using this criterion as part of the in-house
inspection and maintenance of teachers' practice.

how the students, teachers and my own interpretations of events supported or contradicted one-another (Lincoln & Guba 1985; Thorne, 2000).

I began the process by organising the previously transcribed and written data from interviews, teacher reflections, discussions, my field journal, the CLVT, and the online discussions from PEPRN, Twitter and Facebook. The next step I was to group all of the data into specific time frames: the period of initiation, unit one, two, three, four and five. This allowed me to respond to my research questions by exploring change over time. Within these time frames I also grouped the data specific to lessons, teachers and classes. For example, all interviews, the CLVT field notes, my field journal, reflections and informal discussions per class were grouped per unit. The data gathered from Phil's (Buckingham) class were collated separately to Nikki's (Birchwood) for each unit. This enabled me to triangulate the data, specific to each class to explore events and perceptions of practice i.e. how did the findings from the CLVT field notes and my field journal support or contradict the teachers' reflections or what was said during the interviews. By this means I sought to address the concerns of researcher bias and explore the data sources as they were situated within each teacher's context and from multiple perspectives (Walker *et al,* 2008).

I approached this re-organised data through an inductive lens. In Morse's (1994) terms I began comprehending the data by reading the texts and writing analytical memo's about the data. The analytical memos allowed me to reflect, document my understandings of the on-going data analysis and maintain a level of reflexivity in the analytical process (Phillips & Carr, 2007). Following this I began to uncover key events and developed descriptive codes, for example, resources, teacher facilitator, time to plan, the Cooperative Learning structures. Subsequently, and following the coding of data, I learnt that these events changed over the course of the five units. I also learnt that there were three comparable blocks of time for whilst I had separated the five different units and initiation, it emerged that the events that were taking place across some of the units could be combined. For example, the events and changes within practice were similar

between the period of initiation and unit one, and likewise between the start of unit two and the end of unit three.

The next phase of the data analysis involved synthesising the data, and comparing the data across the teachers and classes (Lincoln & Guba, 1985; Morse, 1994; Walker *et al,* 2008). By this means I identified a phenomenon, I had begun to develop themes and I now examined whether it *fitted* with this idea of combining the time frames, and if it was relevant to each class (Ryan & Bernard, 2003). I created a table and summarised the themes from each teacher and class under headings: phase 1 (initiation and unit 1), phase 2 (unit 2 and 3) and phase 3 (unit 4 and 5). This allowed me to compare, explore main collective themes and understand cases that falsified the main themes (Ryan & Bernard, 2003). For example, in phase one the key themes across the teachers were, a) expectations for teaching and learning, b) analysis, dialogue and negotiation, and c) high ability students leading. These themes were comparable across the teachers and schools. However, there were two cases that falsified the main themes. First, the events that took place at Buckingham differed to Birchwood in phase three and I therefore considered that these experiences would be compared and contrasted against each other. Second, Joey's (Buckingham) students' learning and his teaching through the model was comparable to all other teachers' in his school during phase three (units four and five) even though he had only taught two units. Similar to this Tom (Birchwood) was also only on his second unit in phase three. However, every other lesson taught was a two hour lesson and Tom had taught a similar number of lessons through Cooperative Learning in comparison to the teachers at Buckingham. Therefore, Joey and Tom falsified the main idea of the three phases, yet the time spent using the model and their experiences meant that their third unit was explored in phase three alongside the other teachers who taught in their fourth and fifth units in phase three.

Once the themes had been developed I then began theorising by exploring how and why these events were occurring (Morse, 1994). In order to do this I revisited the original data sources. In this phase of the analysis I also drew upon CLVT. From the CLVT, where the categories from the tool had been coded as either

observed or not observed, I grouped the data from all of the classes in each school separately so as to explore the change in practice under these three phases. For example, all teachers' lessons were pooled together at Buckingham and the same at Birchwood. I then calculated the percentage of lessons for each unit when the categories had been observed. Subsequently, with the percentage of lessons coded as observed calculated, I was able to explore whether the themes were a result of the fulfilment of the categories. Following this, and using all data sources, I examined why the events identified within the themes were occurring. For example, I learnt that the theme of high ability students leading could be explained by students in the learning teams low literacy levels.

After the identification of themes within each phase and an understanding of how and why the events were occurring, I began recontextualising using theory to explore the evolving knowledge to deepen and position my understanding of the data (Morse, 1994). Indeed, in acknowledgement that the analysis does not end once themes are understood, recontextualising continued as I wrote the chapters (Morse, 1994; Thorne, 2000). As a result of these processes, three chapter themes emerged within the three phases where I used theory to position my arguments:

> **Chapter 4:** Working within the milieu of practice architectures (initiation and unit 1)
> **Chapter 5:** Moving forwards with the mess within the mess towards a messy turn (unit 2 and unit 3)
> **Chapter 6:** Emerging adoption and emerging rejection (unit 4, 5, and beyond)

Lincoln and Guba (1985) argued that it is incumbent that a researcher establishes trustworthiness by ensuring the findings have credibility, dependability, confirmability and transferability. Credibility was determined by spending an academic year in the schools and triangulating the findings (Amis & Silk, 2008; Lincoln & Guba, 1985). Dependability is evident through my accounts of the decisions I made to use the methods and the processes of how these occurred over time (Amis & Silk, 2008). Conformability is seen through the use of my field journal, the analytical memos I kept, and how I tried to remain reflexive in order to avoid researcher bias in the process of grouping and triangulating the data.

Finally, transferability is accounted for through the discussions in my results chapters, which show detailed accounts of the events, data and how the theory has been used to position the findings relevant to the teachers' professional contexts. The three results chapters include what Lincoln and Guba (1985) termed a thick description of the events, which should allow the relevance of the findings to be transferrable to different contexts and situations.

Chapter Conclusion

In this chapter my purpose was to first justify the methodology of PAR, and second, to discuss the methods that allowed me to address and seek answers to my research questions. In consideration of the methodology, I have argued that changing practice should be considered a matter of enabling praxis. In order to enable praxis it was considered that teacher learning should be social act supported by inquiry. Therefore, by exploring the work of Lewin, Collier, Stenhouse and Elliott, action research is a practitioner-orientated methodology that enables praxis through social interaction and inquiry. The methodology which emerged from these pioneers' works in the 1940s, 1970s and 1980s, that pays explicit attention to the communicative space and inquiry, is PAR. PAR is a form of individual and collective inquiry that facilitates teachers' changing their practice, and the professional context in which their practice is situated. Thereby, PAR was chosen as the methodology to support teachers' learning and use of Cooperative Learning.

Through my discussion on the methods I have shown that this study explored eight teachers' use of the model and 220 students' learning. Teacher learning began with a three month period of initiation and was followed by an exploration of Cooperative Learning over a minimum of four units of activity. Multiple sources of data have informed the research questions and inductive analysis and constant comparison was used to generate three chapter themes. In the following three chapters I explore the findings in these three themes: Chapter 4: Working with the milieu of practice architectures, Chapter 5: Moving forwards with the

mess within the mess towards a messy turn, and Chapter 6: Emerging adoption and emerging rejection

CHAPTER 4: WORKING WITHIN THE MILLIEU OF PRACTICE ARCHITECTURES

By using Williams' (1977) discussions around cultural processes and cultural elements, and applying this to the pedagogical practices of physical education, over the course of the next three chapters I will discuss the process of pedagogical change through the lens of the dominant, emergent and residual pedagogical practices. The purpose of this chapter is to discuss how Cooperative Learning was immersed into these dominant and residual practices and how Cooperative Learning worked within the milieu of practice architectures (Kemmis & Grootenboer, 2009). The dominant pedagogical practice is positioned as an amalgamation of games, sports, skills and fitness that includes features of student-centred approaches (endorsed by policy) and watered down versions[12] (Curtner-Smith *et al*, 2008) of pedagogical models[13]. The residual pedagogical practice is the teacher-centred approach, and the emergent pedagogical practice is Cooperative Learning, which was something 'new' to most of the teachers and all of the students. Drawing on how practice architectures are defined, in this Chapter I explore how the classroom was *pre-designed* and *pre-constructed* for teaching and learning by those outside of the classroom (Kemmis & Grootenboer, 2008). Subsequently, how students and teachers had cultural expectations for how they should act. Teachers' and students' dispositions and actions reflected the dominant and residual pedagogical practices and contrasted against the emergent pedagogical practice, Cooperative Learning.

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[12] Watered-down: selective features of a pedagogical model are implemented (Curtner-Smith et al, 2008)

[13] All teachers had a form of previous experience with pedagogical models (c.f. Table 1.p.82)

I firstly discuss how the three month period of initiation facilitated teachers' *buy in*. I show how the workshops, experimentation with the model, reflection and professional discussions motivated and prepared teachers for their use of the model in the first unit of activity taught. However, whilst the teachers re-structured their classrooms into Cooperative Learning environments, units and lessons worked with features of the dominant and residual pedagogical practices. Secondly, I consider Kemmis and Grootenboer (2008) discussions around extra-individual conditions. The extra-individual conditions are defined as the predetermined responses to particular situations, which are shaped by the cultural traditions of education (Kemmis & Grootenboer, 2008). I use extra-individual conditions to argue that the students had formed cultural expectations. I do this by exploring the discursive positioning of girls and boys, and vertical ability hierarchies. Consequently, I argue that students' learning was a result of the teacher managing the learning environment and peer tutoring (Lafont, 2012), rather than Cooperative Learning. Finally I discuss how the teachers' experienced cognitive dissonance (psychological discomfort as a result of two opposing cognitions - Cooper, 2007) as a result of the practice architectures constraining their dispositions and actions. Yet through their teachers' use of participatory action research (PAR), the teachers began to transform their practice and were motivated to use the model in a second successive unit.

Three Months of Initiation: 'Buy in'

The three month period of initiation, that involved workshops, professional discussions with each other and me, and experimentation with the model, influenced teachers' *buy in* i.e. the willingness to move into a period of implementation (Fullan, 2007; McCaughtry *et al*, 2004). In this section I explore the four sources that led to *buy in*. I discuss how the teachers' expressed a *desire to change*, they saw Cooperative Learning was *something worth exploring*, they had gathered *evidence of effectiveness* and finally, how the teachers had the *'permission' and resources* they required to be able to change their practice. Following this I discuss the impact of the period of initiation on teachers' plans for their units, and their ability to implement the non-negotiables. I argue that

whilst the period of initiation prepared and motivated teachers to use the model, when the model was used it was immersed within the dominant and residual pedagogical practices.

The desire to change, something worth exploring

Whilst the dominant pedagogical practice of sports performance and games was foregrounded as 'THE way to teach' (Tinning, 2010, p.42), a motive for engaging with Cooperative Learning was to escape the boredom of 'doing the same things over and over again' (Joey, Buckingham, PD Interview). In consideration of the number years the teachers had been practicing as a physical education teacher (Table, 1. p.82), it is likely that the teachers involved had developed a sense of efficacy with their practice, and for half of the teachers who were more experienced (8-15 years Jane, Tom, Phil & Joey) a degree of professional saturation (Day *et al*, 2007). Indeed, there was an observed excitement at the prospect of using Cooperative Learning that was partly a result of it being an opportunity to 'try something new' (Tom, Birchwood, PD Interview). However, whilst most of the teachers had a desire to learn and do something different it is unlikely that the Newly Qualified Teacher (NQT) Kelly (Buckingham), who had been teacher for less than two months, had reached a level of professional saturation or even efficacy within the school or department (Day *et al,* 2007). During our interview she positioned herself as someone who wanted to be innovative within the department and 'keep up to date' (Kelly, Buckingham, PD Interview). Whilst her motive was to use the model because it was 'something new to focus on' (PD Interview), her engagement was likely to be influenced by the changing practice architectures of her department. In fact, it could be argued that through their collective drive to use Cooperative Learning, Kelly's desire to be accepted as a legitimate participant within her local professional learning community could be met (Day *et al,* 2007; Kemmis, 2009; Lave & Wenger, 1991; Wenger, 1998).

However, Cooperative Learning was also something worth exploring as the non-negotiables and the learning outcomes of the model offered a degree of synergy

with the 'talked about' (Casey, 2013, p.79) ideas of 'student-centred', '21st century learning skills' and 'autonomy', evident in OfSTED's (2012, 2004) criteria and the whole school strategies for teaching and learning. For example, in the very first meeting, when I proposed the study to the head of department and the assistant head of department at Buckingham (Joey and Jane), I noted how Cooperative Learning's alignment with OfSTED criteria and the non-statutory aspect on the national curriculum, Personal Learning and Thinking Skills[14] (PLTS (QCA, 2009)), served as a motivation for Joey and Jane to consider using Cooperative Learning within their department.:

> Immediately Joey said this links with what we already do and the PLTS. However, he said the problem is we don't necessarily do it in a structured way and link it directly to cooperation, also that we will do it in one lesson but then not all the time or do it for parts of the lesson. He was really up for being involved as the government initiatives, through OfSTED, are wanting more student centred learning and the use of PLTS, which directly link with this… He mentioned that it fitted within the school targets of PLTS and student centred learning, which was the focus of the latest Ofsted visit (FJ 22.11.11).

The focus on school targets was not unique to the teachers at Buckingham. Tom (Birchwood) saw the use of Cooperative Learning as a means through which to respond to his school's focus on professional development. For example, Tom said, 'with the whole school focus this year being on planning and delivery, I thought, well it ties in with that' (YE Interview). Furthermore, Building Learning Power is a strategy which the teachers at Birchwood were required to embed into their lessons. In short, Building Learning Power focuses on the mental, emotional, social and strategic skills for learning (c.f. Claxton, 2002) and is similar to the focus of learning in Cooperative Learning (Dyson & Casey, 2012b; Kagan & Kagan, 2009). Indeed, Nikki (Birchwood) said that 'Building Learning Power is our whole school initiative and Cooperative Learning should facilitate it' (PD Interview). Cooperative Learning was seen as a method for the teachers to

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[14]The Personal Learning and Thinking Skills (PLTS) are a non-statutory part of the National Curriculum: Independent inquirers, team workers, creative thinkers, self-managers, reflective learners, effective participants. (c.f. QCA, 2009)

respond to and develop their practice in line with the 'talked about' (Casey, 2013, p.79) practice architectures, and was therefore worth something all of the teachers felt was worth exploring.

Cooperative Learning was also afforded currency as something worth exploring since it was compatible with teachers' beliefs about good practice. The teachers believed that the social dimension to learning was important, yet they considered it to be absent in their current practice. Indeed, Tom (Birchwood) claimed his lessons were 'far too skills based' and that he was 'preparing them [his students] for sport' but 'wasn't preparing them to play sport' (PD Interview). Moreover, on the basis of her findings from her Masters research Nikki (Birchwood) suggested that 'the students' perceive social learning as one of the most important factors in PE lessons, yet we, as teachers don't focus on doing it' (PD Interview). In this way, Cooperative Learning was a method of focussing on the social learning aspect of physical education and an opportunity to 'make it more formalised' (Tom, PD Interview). However, the model was rejected as a pedagogical approach in examination physical education. There was a sense of worry about the 'impact upon the production of their assessment tasks' (PEPRN Joey, Buckingham) and the teachers' accountability to the school for their students' results. Cooperative Learning was positioned as a worthy approach for teaching and learning within their key stage 3 provision i.e. when teachers are not held accountable for students' national examination grades. In these contexts, it was seen as an important addition to the key stage three programmes as it allowed the teachers to focus on the social domain, which it could be suggested had been previously *neglected*.

It seems reasonable to suggest that a number of the teachers agreed to use Cooperative Learning simply because of their prior relations with me. That is not to say that the model didn't fit with their hopes around practice in physical education, it did, but the final incentive to become engaged may have been 'me' in my new role as a boundary spanner. When studying for my Post Graduate

Certificate in Education[15] (PGCE) Nikki (Birchwood) was a peer on my course and Jane (Buckingham) was a teacher working in one of my placement schools. After my PGCE I maintained a friendship with both of these teachers. In addition, I had previously worked at Buckingham and had sustained a friendship with the teachers through my attendance to social events and a practitioner inquiry project (Goodyear *et al*, 2013a), that eventually became the pilot study. This 'closeness' between the teachers and I, was a potential way that *buy in* was strengthened. Indeed, the *buy in* and 'me' was related to supporting my PhD. For example, Jane (Buckingham) stated that a reason she wanted to be engaged with the study was 'to help out a friend in a PhD' (PD Interview). In addition, the teachers understood that I valued the worth of the model and that leaving my job as a physical education teacher to study for my PhD was a tough decision.

> '[The teachers] know that I left a job that I loved…I think they get that I believe in this model and if it doesn't work out it would have all of been for nothing' (FJ 11.12.11).

Although I acknowledge that my friendship with some of the teacher represents a different type of *buy in* and confronts epistemological issues, in many ways knowing me as a colleague and a friend goes someway to suggest that a trusted relationship between the researched and the researcher was developed from the very onset of this study. Accordingly, I 'naturally' overcame some of the ethical dilemmas of intra-professional collaboration through my familiarity with the teachers' sites and practice (Avgitidou, 2009; Broadhead, 2009; Day, 1991). Indeed, it could be suggested that, since I had no prior relationship with Tom (Birchwood) or Kelly (Buckingham) before the study began, the 'trust' the other teachers had in me and their willingness to explore the model in their practice could have encouraged these two teachers' *buy in*. Yet as I will show in Chapter 6, *friendship only gets you so far* and friendship did not have enough influence to support Nikki (Birchwood) working beyond the practice architectures.

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[15] A one year teacher training course following an undergraduate degree that leads to gaining Qualified Teacher Status in the UK.

At this juncture it is important to recognize one power differential in the intra-professional collaboration that caused a different type of relationship between the researched and the researcher. This occurred with Joey (Buckingham), who had previously been my head of department. As a former member of his department my practice had been confined within the practice architectures he had designed. In addition, through his monitoring of my practice as part of the school's teacher performance observations, the judgements he made on my pedagogy had previously served as a good measure of practice. Through the introduction of Cooperative Learning to his department I was now actively working against some of the practice architectures that I had previously worked within and accepted. Furthermore, he had previously been the one leading the professional learning and now, I was leading his department through a year-long form of professional learning. Yet whilst my views now contrasted his perceptions of good practice, and he no longer held a position of power and authority over me, he welcomed me back into the department for a second time following the practitioner inquiry pilot study (Goodyear *et al,* 2013a). At this phase of the study it seemed he was supportive of the intra-professional collaboration. He saw Cooperative Learning as something which could 'enhance pupil learning within the department' (PD Interview). Yet, as I will discuss in Chapter 6 the power differential between Joey and I served to challenge me in my role as a boundary spanner. When supporting his use of the model, particularly when challenging him about the way he was using the non-negotiables, I found it difficult to give him advice about how he could modify his use of Cooperative Learning.

This sub-section has shown that *buy in* was developed as the teachers had a desire to change their practice. In addition, Cooperative Learning was seen as something worth exploring in their practice and departments through the model's synergy with the practice architectures of OfSTED and the whole school strategies of PLTS and Building Learning Power. Furthermore, the teachers had an aspiration to pay more attention to the social domain, and coupled with their prior relations with me, *buy in* was strengthened. In the following sections I discuss how *buy in* occurred as a result of the teachers' gaining evidence to substantiate that the

model *worked*. In addition, through their participation in the workshops and tasks which encouraged the teachers to experiment with the model, the teachers perceived that they had developed the *resources* required to facilitate their changing practice.

Evidence of Effectiveness and Resources

Casey (2012a, p.10) held that teachers need to see 'hard evidence' that a pedagogical model 'works' before they are willing to break the tradition of doing something that they perceive already serves good practice. The evidence that the teachers used to ascertain that Cooperative Learning 'worked' came from my own experiences of using the model, their use of practitioner inquiry, and as a result of their experimentation with the model.

Considering the evidence that came from me first, the teachers I had previously worked with were my critical friends when I had used Cooperative Learning at Buckingham to teach physical education (Goodyear *et al,* 2013b, 2012a). They had observed, through their own eyes, 'the improved participation and behaviour of the girls' (FJ 11.12.11) I taught. In addition, four of the teachers at Buckingham, who were the participants in the pilot study, had previously used practitioner inquiry as a method of developing their practice (Goodyear *et al,* 2013b). These two forms of evidence motivated and encouraged the teachers at Buckingham to consider using Cooperative Learning and to continue with a method of practitioner inquiry.

> The other one [the collaborative practitioner inquiry study] was quite interesting and you learnt a lot from yourself doing it and this is kind of a new model and that seeing you doing it before you left to go to uni, it is a new thing for us to input as well and it will aid our training as well and make us better teachers. (Christina, Buckingham, PD Interview).

However, whilst some of the teachers at Buckingham had evidence that both Cooperative Learning and practitioner inquiry *worked*, all teachers from both schools gained evidence of effectiveness as a result of their experimentation with the model during this period of initiation. Indeed, the tasks encouraged the

teachers to use the non-negotiables in their lessons and reflect. Subsequently, the prejudice teachers held towards the traditional pedagogy was challenged. For example, Chris (Buckingham) suggested that he had learnt that, 'you can give students a bit more responsibility, and sometimes you are afraid to let go, but you can' (PD Interview). Furthermore, Nikki (Birchwood) said 'I can see that it will work… students taking more ownership for their learning will make it more pleasurable for them and me' (PD Interview).

The period of initiation not only provided the teachers with a form of evidence of effectiveness, but it also served to develop the resources the teachers perceived they required to teach through Cooperative Learning. Through their experimentation with the model, the Cooperative Learning manual, and the workshops the teachers suggested that they had a deepened understanding of how to use Cooperative Learning in their lessons. Indeed, the teachers suggested that 'the sessions were good' (Christina, Buckingham, PD Interview), the experimentation 'allowed them to learn by making mistakes (Nikki, Birchwood, PD Interview), and 'the manual was really helpful' (Tom, Birchwood, PD Interview). Furthermore, from the discussions during the PD interviews it seemed the teachers enjoyed the 'opportunity to teach each other' (Joey, Buckingham), they liked 'being involved in it from a student's point of view' (Chris, Buckingham), and they appreciated the activity specific examples during the workshops: 'the example in Athletics was good, you can see it working in the sports' (Jane, Buckingham). When I asked the teachers what more support they would need, most teachers responded with comments similar to, 'nothing more at the moment' (Christina, Buckingham) where they suggested they were 'happy with the level of support' at this stage (Joey, Buckingham). Indeed, reflecting on the period of initiation and her experiences, Nikki (Birchwood) claimed that the apprehension of trying something new had been reduced; 'we have had experiences of it, trying out little bits and we have had conversations…I'm feeling quite confident and looking forward to using it' (PD Interview). Accordingly, the teachers were keen to get started teaching their units and felt that they had the resources, in terms of their understanding of the model and their ability to plan for

it. For example, Joey (Buckingham) said 'I'm happy with the non-negotiables, happy with the unit planning I think it's just getting stuck into now' (PD Interview). Yet whilst the teachers felt they had adequate support and they had the resources to use the model, they did highlight that they would want my 'support throughout [the academic year] when teaching it' (Christina, Buckingham, PD Interview).

In Chapter 3 (Table 1 p.82) I showed that all of the teachers had some form of experience with pedagogical models. At this juncture it is also important to consider that the teachers' readiness to use the model may have been a result of their previous experiences with other pedagogical models. Indeed, Rovegno and Bandheur (1997) argued that teachers' prior knowledge and a comparable philosophy for student learning acts as a fundamental filter for teachers' ability to sequence learning and use a constructivist pedagogical approach. Similar to Rovegno and Bandheur (1997), Jane's (Buckingham) use of Sport Education acted as a filter for her ability to understand how to plan for students' roles, how to prepare students for performing in roles and how to develop student learning team folders (Video Recorded Workshop 2). Furthermore, in my interview with Kelly (Buckingham), when I asked her 'have there been any facilitating factors helping you to understand Cooperative Learning?' (PD Interview), she said that her prior experience with Cooperative Learning and Sport Education had developed her understanding of the underpinning of a models-based approach to physical education.

> At uni I knew about learning teams and I knew about jigsaw, I knew the theory behind it and we had done learning teams, so every kid having ownership not just you're a captain, you're this your that, so knowing how to break it down and making it more relevant…I did a lot of Sport Ed on placement (PD Interview).

Through my discussions on the evidence of effectiveness and resources as a means to explore *buy in,* I have considered that as a result of teachers' prior experience with pedagogical models, and their experimentation with Cooperative Learning, the teachers' readiness to use the model in their practice was strengthened. In Chapter 6 I show that previous experience with pedagogical

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models also contributed to how the teachers used the model beyond the honeymoon period of implementation. However, at this phase in the study, and towards the end of the period of initiation, there was a sense of apprehension during the planning of units and lessons. In my conversations with Jane (Buckingham), despite her experience of using Sport Education and her experimentation with the model, 'the main concern was how she was going to get across the defined content to the students through Cooperative Learning, when she wasn't telling them' (FJ 26.11.11). By this means, although the teachers had prior experience with pedagogical models, the residual teacher-led pedagogical practice was seen to hinder their ability to plan for a student-centred approach. Perhaps, in terms of the resources to be able to teach through Cooperative Learning, the teachers needed more support in their planning of units during this period of initiation. In the next section, I discuss the teachers' plans for the first unit taught and how the teachers' implemented the non-negotiables. I show that whilst the teachers had evidence of effectiveness and an observed readiness to use Cooperative Learning, the residual teacher-led approaches, and the dominance of skilled performance, constrained teachers' use of the model. The 'talked about' practices differed from the 'actioned' (Casey, 2013a, p.79). However, whilst the residual and dominant practices remained, the teachers' were able to implement the non-negotiables. Similar to Penney's (2013) discussions on pedagogical models, Cooperative Learning was immersed within the pedagogical practices of sports, skills, drills and a teacher-led approach.

Plans for the first unit and the implementation of the non-negotiables

In the teachers' plans for the first unit, it seemed that they had not moved far beyond their teacher-centred skill-based approach, physical education-as-sport-techniques (Kirk, 2010). I observed that there were limited opportunities for students to create or develop their own learning experiences. In fact, the students were simply required to follow the step-by-step instructions given to them on a resource and many of the teachers had transformed their teacher-led approach to paper, placing everything they would normally say onto a resource. At the end of the study Tom (Birchwood) acknowledged this and said 'I think initially I thought

there it is I have planned it over to you, you can read' (YE Interview). It could be suggested that the concerns highlighted within the period of initiation, of how could they get the information across to students when they weren't telling them, were overcome by providing students with detailed and prescriptive resources. Yet it was not only the lack of freedom the students were given in the decision making process that resembled a teacher-led skill-based approach, it was the way the lesson was structured. In particular, and as the field notes on Chris's (Buckingham) lesson show, within the Cooperative Learning structure of learning teams (Dyson & Grineski, 2001) the sequencing of learning followed the format of the traditional pedagogy i.e. warm up, skill practice and then game (Tinning, 2010).

> 1) warm-up
> 2) shoot 15 baskets with their strongest hand
> 2) shoot 15 baskets with their weakest hand
> 3) 2v2 or 3v2 game whereby you can only shoot by doing a lay-up
> 4) full court game against the opposite team where you can only score
> using a lay-up (Chris, Buckingham, CLVT, U1 L1).

However, whilst Cooperative Learning differs from the traditional pedagogy, responsibility for retaining the traditional sequential path of lessons within the structure of learning teams cannot be wholly cast on the teachers' lack of ability or desire to move beyond their dominant approach. Yet responsibility can be cast on the Cooperative Learning structure of learning teams itself. Indeed, learning teams is based upon Johnson and Johnson's conceptual approach (Dyson & Grineski, 2001) and rather than restructuring lessons in a 'lock-step-way', as seen in Slavin's curricular or Kagan's structural approach, the conceptual approach is a general procedure (Johnson *et al*, 2000, p.5). By this means, there is no format for a lesson that teachers follow. Instead, teachers use the fundamental elements (or in this study the non-negotiables) to create a Cooperative Learning classroom (Johnson et al 2000). In learning teams, the guidance is to simply place students in roles to work together to learn, i.e. a coach, an equipment manager, a recorder, an encourager and a discussion manager (Dyson & Grineski, 2001). Through learning teams the teachers could plan for Cooperative Learning by implementing

the non-negotiables and placing emphasis on student roles, but, at the same time, retain the focus on warm up, skill and then game.

Considering the contradiction between the ability to conform to the residual and dominant pedagogical practices, and at the same time implement the non-negotiables, the findings reported in Table 7 (p.125) confirms that the teachers were able to plan for and implement the non-negotiables whilst retaining some of the features of the dominant and residual practices. However, at this juncture, and before I discuss the implementation of the non-negotiables in more detail, it is important to note that the findings from the Cooperative Learning Validation Tool (CLVT) that are reported in Table 7 will be used as a point of reference in all three results chapters (Chapter 5 and Chapter 6). Table 7 will be used to explore how the model was implemented, how the teachers used the non-negotiables and students' learning. Table 7 identifies the percentage of lessons that the 18 categories from the CLVT were fulfilled over the course of the three phases of the study. Phase one is unit one (this chapter), phase two is unit two and three (Chapter 5), and phase three is the fourth and fifth units that were taught (Chapter 6).

Table 7. Teacher fulfilment of the categories from the Cooperative Learning Validation Tool in phase 1, phase 2 and phase 3.

Category		% Lessons category coded as observed					
		Buckingham School			Birchwood High		
		Phases of Change			Phases of Change		
		1	**2**	**3**	**1**	**2**	**3**
1a	Social/Emotional Goals*	62	58	61	100	33	100
1b	Physical/skill Goals*	77	74	78	67	33	100
1c	Cognitive Goals*	31	84	70	67	33	100
2	Equitable heterogeneous groups*	100	89	100	100	100	100
3	Student centred instruction	100	74	87	67	100	100
4	Teacher facilitator*	100	100	91	67	100	0
5	Cooperative Learning structure*	100	79	100	100	100	100
6	Students have shared ownership	100	95	100	67	100	100
7	Face-to-face promotive interaction*	100	100	100	100	100	100
8	Positive Interdependence*	100	95	96	33	100	100
9	Small group and interpersonal skills	100	95	100	67	100	100
10	Individual Accountability*	85	84	78	0	67	0
11a	Physical assessment	92	58	65	33	33	0
11b	Cognitive assessment	31	47	52	67	33	0
11c	Social or emotional assessment	92	11	13	33	0	0
12a	Physical improvement	69	47	74	33	33	100
12b	Cognitive improvement	77	74	78	67	67	0
12c	Social or emotional improvement	54	63	43	33	67	0
13	Self, group or peer assessment	69	79	61	33	33	50
14	Students encouraging one another	77	32	39	33	33	50
15	Problem Solving	38	47	57	33	33	0
16a	Group Processing –what happened?*	100	68	70	67	33	100
16b	Group Processing – so what?*	54	58	57	67	33	0
16c	Group Processing – now what?*	15	5	30	0	0	0
17	Academic Focus Time: *High*	54	37	70	33	67	100
	Medium	38	53	26	33	33	0
	Low	8	11	4	33	0	0
18	Interest/engagement: *High*	62	42	78	33	100	100
	Medium	31	53	22	33	0	0
	Low	8	5	0	33	0	0

Note: the Phases of change denote the three phases discussed in each of the results chapters. Phase 1= unit 1, phase 2= units 2 & 3, phase 3 = units 4 & 5
*The identified non-negotiables

Returning to my discussions on the implementation of the non-negotiables, it seems reasonable to suggest that the period of initiation, coupled with teachers' use of PAR (that will be discussed later in this chapter), had some success in facilitating teachers' ability to restructure their classrooms into cooperative ones. Table 7 (p.125) shows that the non-negotiables of equitable heterogeneous groups, a Cooperative Learning structure and promotive face-to-face interaction were consistently observed in both schools. Furthermore, at Buckingham the teachers consistently acted in the role of the facilitator, and implemented positive interdependence, group processing, individual accountability and group goals. At Birchwood, although the teachers did not consistently implement individual accountability and positive interdependence, in more than half of their lessons the remaining six non-negotiables were observed. Whilst the difference between the two schools implementation of the non-negotiables will be discussed later in this chapter, these findings suggest that, though teachers were challenged with moving beyond the structural features of a warm-up, skill and then game, the teachers were able to restructure their classroom into a cooperative one through the non-negotiables. In agreement with Penney's (2013) discussions on the use of pedagogical models, Cooperative Learning was immersed within the pedagogical practices of sports, skills, drills and a teacher-led approach.

Learning teams was chosen by six of the eight teachers for the first unit (Table 4. p.93-94) and the ability to retain some of the features of the dominant and residual practices was potentially a reason for the decision to use learning teams. Indeed, when learning to use a model for the first time, teachers often feel out of their comfort zone or like beginners again (Casey, 2012a; Dyson, 2002). Therefore, by retaining the traditional sequential path of lessons, the teachers in this study were able to prevent some of the feelings of discomfort coming to the forefront. Perhaps, the notion of staying within the comfort zone was exemplified when Jane (Buckingham), in choosing her Cooperative Learning structure, said she would 'probably go for learning teams since I know more of it, but I like jigsaw [a Slavin structure] more' (PD Interview). It could be said that the teachers wanted to use a Cooperative Learning structure which was similar to a pedagogical model they

had used before. Whilst the teachers had evidence of effectiveness, they developed the resources that they perceived would aid them in their use of Cooperative Learning, and the teachers did reach some level of consistency in their use of the non-negotiables, in the first unit the model was used with the residual and dominant pedagogical practices. Through learning teams the teachers were able to plan for the non-negotiables, yet stay within their comfort zones following a traditional format of lessons with the focus on skills and games.

In this section I have discussed how the three month period of initiation and teachers' prior relations with me strengthened the notion of *buy in*. Similar to O'Donovan *et al,* (2012) the decision to use Cooperative Learning was based on the teachers' understanding that their engagement would positively impact their professional lives, their role as practitioners within the school and the model could enhance their students' learning. Indeed, Cooperative Learning was seen as compatible with the practice architectures and consequently, the fear of conflicting the expectations for teaching and learning were not a concern. Instead, Cooperative Learning was afforded currency through its synergy with OfSTED and school strategies. Furthermore, the period of initiation facilitated teachers' ability to re-structure their classrooms into cooperative ones, as seen through the implementation of the non-negotiables. Nevertheless, although the period of initiation had strengthened teachers' pedagogical understanding, challenged the teachers' beliefs about good practice and supported the implementation of the non-negotiables, in the teachers' units and lessons the dominant and residual pedagogical practices constrained teachers' use of the model. The students were given limited opportunities to create their own learning experiences and most lessons followed the format of warm up, skill, then game. Whilst Cooperative Learning was valued, the 'talked about' practices were not 'actioned' (Casey, 2013, p.79) in their entirety at this stage, and in the first unit. Yet it seems reasonable to suggest that the conceptual Cooperative Learning structure of learning teams (Dyson & Grineski, 2001; Johnson *et al,* 2000), did not challenge the dominant and residual pedagogical practices, but instead facilitated their use of these practices within Cooperative Learning.

In the next section I discuss the extra-individual conditions and students' responses to Cooperative Learning in the first unit. Specifically, I explore how the teachers' practice was confined by their students' cultural expectations for learning (Casey, 2012b). Following this, I show that the teachers' also had pre-defined expectations for practice, and as a result of the dominant practices and the practice architectures pervading into their use of Cooperative Learning, the teachers' experienced cognitive dissonance (Cooper, 2007).

The Extra-Individual Conditions

Kemmis and Grootenboer (2008) argued that the cultural traditions of education shape individuals' dispositions and actions in response to particular situations. These pre-determined responses are termed extra-individual conditions (Kemmis & Grootenboer, 2008). In his use of Cooperative Learning, Casey (2012b) held that through the unexamined rules, routines and patterns of his behaviour, his students had formed cultural expectations for how they should be taught. Consequently, the students saw it was the teacher's job to tell them what to do in lessons and found it *strange* that they were now asked to learn from each other. Similar to Casey (2012b), in this section I draw on Kemmis and Grootenboer's (2008) discussions on the extra-individual conditions to show how students had formed cultural expectations for learning. I do this by exploring features of the teachers' practice from the dominant and residual pedagogical practices, and suggest that the discursive positioning of girls and boys, and the vertical ability hierarchies effected students' responses to Cooperative Learning and their learning within the model.

The discursive positioning of girls and boys

In her exploration of the discursive positioning of girls and boys in physical education, Wright (1996) argued that girls are traditionally positioned by their teachers as resistant and boys are positioned as compliant. As a result of these pre-defined expectations of their students, teachers' actions further encourage these developing or already formed subjectivities (Hay & Macdonald, 2010; Wright,

1996). Female teachers often use a direct teaching style in an attempt to drag girls through physical education lessons (Wright, 1996). They reprimand girls' disengagement and spend considerable time trying to negotiate and motivate girls to engage (Brunton, 2003; O'Donovan & Kirk, 2007; Rich, 2004, 2003; Wright, 1996). In contrast, due to boys' compliance, male physical education teachers tend to approach physical education with a more relaxed attitude (Brunton, 2003; Hay & Macdonald, 2010; Wright, 1996). Indeed, Wright (1996) argued that male teachers' felt that they rarely had to teach the boys and they could allow the boys to simply get on with playing games. Consequently, and as a result of these implicit actions, girls viewed their female teachers as the one's which nagged them and told them what to do (Brunton, 2003; Wright, 1996). Accordingly, the boys viewed the male physical education teachers as someone they could have *a laugh* with and saw physical education as a break from other subjects through the time they were afforded to play games (Brunton, 2003; Wright, 1996). In this section, I discuss how the students' responses to the increased level of responsibility and ownership in their first units of Cooperative Learning mirrored these notions of either being *nagged* or playing games.

Despite learning tasks and roles (for example, a coach or an equipment manager) which encouraged positive interdependence (Dyson & Grineski, 2001), the girls were dependent on the teacher for the management and organisation of their learning. Kelly (Buckingham) claimed that in both of the classes she taught[16] the girls were 'basically asking me questions that they could easily overcome themselves' (PU1 Interview). Indeed, I observed and noted that in her year nine girls class the 'students are asking Kelly a lot of questions regarding how to organize themselves and what they should be doing' (CLVT, Yr 9 U1 L1). Similar to Kelly, I observed that the girls in Jane's (Buckingham) year eight class[17] would often seek 're-enforcement as to whether what they are doing is right or wrong' (CLVT, Yr8 U1 L2). In Jane's year seven class I noted that the girls asked her '"are we doing it right?" and said "we don't know if we have been

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[16] Kelly taught a year 7 and a year 9 all girls class
[17] Jane taught a year 7 and a year 8 all girls class which she shared with Christina

doing it right" even when the group had already set it [the fitness test] up' (CLVT, Yr 7 U1 L2). In addition to seeking re-enforcement, the girls looked to the teachers to reprimand behaviour or resolve conflict within their teams. For example, Deirdre's team were not listening to her when she was trying to give instructions for the learning task. Yet rather than trying to negotiate with her peers or discuss the task, she gave up, came straight to the teacher and said, 'she went off and spoke to someone else and then she didn't do it…we need some counselling' (Kelly, Buckingham, CLVT, Yr9 U1 L1).

Reflecting on their girls' behaviour in their lessons and over the course of the first unit both Jane and Kelly suggested that the girls' dependency 'was probably because they are used to having the teacher's input and not used to having the freedom to go off and do what they wanted' (Kelly, Buckingham, PU1 Interview). Indeed, through the teachers' prior use of the traditional pedagogy, it could be assumed that they would have told girls what to do and reprimanded their behaviour if they were not complying with the rules or routines of the lesson (Brunton, 2003; Kirk, 2010; Wright, 1996). The girls were so used to the teachers' rules and routines that, rather than taking ownership and responsibility for their learning, they sought the teachers attention on the firm expectation that the teacher would tell them what to do and reprimand disengagement. Consequently, each female teacher spent a large percentage of her time during the first unit encouraging the girls to ask their team first, before they asked the teacher: 'with most of the groups she [Jane, Buckingham] had to encourage them to ask their group before asking her' (CLVT, Yr 7 U1 L2). Therefore, by drawing on four of the five classes of girls in this study I have shown how the girls were dependent on their teachers for what to do in lessons.

However, whilst the majority of the girls were described as being 'needy' (Kelly, Buckingham, PU1 Interview), the boys were rarely dependent on the teacher. Instead, the increased level of responsibility and ownership for their learning was seen as an opportunity to simply, play games, or 'play' in other learning tasks rather than learn the content provided. For example, similar to the students in Casey and Dyson's (2009) study, in Chris's (Buckingham) basketball lesson I

noted that, 'they [the students] were engaged with playing their own games but not using the task sheets' (CLVT U1 L1). Subsequently, Chris started monitoring the students to ensure that they were performing the tasks and not just playing games. I observed that, 'he walks around each group questioning them…Chris needed to focus groups onto the task card and the focus of [the] mini games' (CLVT U1 L1). Despite his monitoring, the majority of the learning teams in Chris's class continued to ignore the task sheets. At the end of the unit the boys suggested, 'well our team, as soon as we got out, we just started games, we didn't get time to practice' (Jack, FG Interviews U1).

Similar to Chris's (Buckingham) class, Tom's (Birchwood) year seven boys class were also more interested in playing their own games, rather than using the task sheets provided to learn the lesson content. During this first unit I noted that my observations and 'discussions with Chris are nearly word for word similar to those with Tom' (FJ U1). For example, in Tom's football lesson I observed that, 'many [groups] began doing different tasks such as shooting at the goals or playing their own games, not using the folders or their resources' (CLVT, U1, L1). Indeed, 'Tom needed to focus the groups onto the tasks that they were supposed to be doing' (CLVT, U1, L1). At the end of the unit the boys in Tom's (Birchwood) class also said that they had a desire to 'play', rather than learn the content from the folders. However, the boys in Tom's class did become more focussed on the learning tasks as the lessons progressed in the first unit. For example, they suggested that,

> Josh: In the first couple of weeks we were all getting distracted and especially football people would like kick the balls about
> Charlie: yeah everyone just goes off sometimes, and plays
> Josh: we have kind of now collaborated more as a team…our group has kinda got a bit more to grips with it now
> Charlie: yeah we use the folder more (FG Interview U1).

Even when the content of the lesson was not driven by games such as football or basketball, we can see from Phil's (Buckingham) year 10 boys class that on some occasions, the boys 'did not always contribute during the practical tasks….when students were meant to be giving feedback to each other, the students were not

using the sheet and were more interested in talking or watching' (CLVT, U1, L2). Therefore, in both schools the boys had a desire to play games, or they disengaged with the tasks, rather than helping each other to learn the content provided from the resources. Yet although, Tom (Birchwood) and Phil's (Buckingham) classes of boys focus on the lesson content improved and they began learning from each other over the course of the unit, it is important to note here that Chris's (Buckingham) students' desire to play games continued into second and third units. However, it is beyond the scope of this chapter to discuss these findings now and they will be explored in the next chapter. Importantly, for this chapter, as it appears relevant to the extra-individual conditions that, at the end of the year Chris acknowledged how his practice of 'rolling out the ball' (Rovegno, 1993) in basketball and football had shaped how his students responded initially to Cooperative Learning.

> They are most used to everyone going out, getting two teams sorted and going into games. So it lost a bit of structure of Cooperative Learning, whether if that is because it has been built in kids over years, years and years of football of, just right two teams one football off you go, so it is almost a bit of a culture shock to that (YE Interview).

In this sub-section I have shown, through example, that the girls' dependency on the teachers and the boys' readiness to play games can be understood by exploring the extra-individual conditions. The teachers' position of authority and the practice of 'roll out the ball' (Rovegno, 1993) were features of the teachers' practice that the students had learnt. Subsequently, the students had formed cultural expectations for how they should be taught and how they should act in lessons. The girls expected the teacher to tell them what to do, and reprimand behaviour. In contrast the boys felt having ownership for their learning was an opportunity to play games. Whilst Cooperative Learning is radically different to the traditional pedagogy (Dyson & Casey, 2012a), the students had yet to understand how to learn within this new approach. They responded in ways that reflected the teachers' previous use of the dominant and residual pedagogical practices i.e. games and a teacher-led approach. In the following section, I continue to show how the extra-individual conditions affected students' learning and behaviour through my discussions on the vertical hierarchy of ability.

The vertical hierarchy of ability

In their discussions around the social construction of ability, Evans and Penney
(2008, p.42) argued that 'pedagogy predicates a social order characterised by
'vertical hierarchies', in which individuals are ascribed *positional* status by virtue
of how well they can perform'. These ability hierarchies are engendered through
the political ideologies and the requirements of the subject seen through the
national curriculum and the performance cultures within schools (Evans, 2004).
Subsequently, the labelling of students' physical ability through the national
curriculum attainment targets and the notions of 'gifted and talented' are some of
the clear indicators of ability that allow students to locate themselves, in
comparison to others, on these ability hierarchies (Evans, 1985, 2004; Evans &
Penney, 2008). Others might include playground games, self-perception, physical
education lessons, and prior successes and failures (c.f. Brunton, 2003; Hills,
2007; MaÔano *et al*, 2004).

Learned ability and social status are further exemplified through the teachers'
actions during lessons. Evans (2004, 1985) reported that labelling and the
segregation of students into ability sub-groups are a common feature of teachers'
practice. Indeed, it is worth noting that in both schools, before Cooperative
Learning was introduced to the teachers' classrooms, students were often grouped
by ability. Furthermore, Hay and Macdonald (2010) suggested that the more able
are often privileged and given more opportunities and resources to practice than
their less able peers. As a result of participating on the periphery, the less able
learn their positional status in reference to their more able peers dominating the
lesson (Hay & Macdonald, 2010). In addition, less able students learn that others
in the class are more competent movers when the teacher asks them to watch their
more able peers demonstrate the *perfect skill* at the front of the class (Carlson,
1995; Ennis, 1999; Garrett, 2004). Through the way the teachers' manage their
classroom environment, which has been suggested, places the more able on a
podium of excellence, the other students within the class learn their ability status
in comparison to their more competent peers.

Through the labelling of students' ability and the teachers' actions during lessons, it could be argued that students understanding of what it means to be a *good student* from the 'institutionally-mandated forms of commoditized activities' (Barab & Duddy, 2012, p. 39) is extended within the practices of physical education. In this study I argue that the students had already learned their social status and the ability hierarchy, from both within physical education and the practices inherent within their school, before the Cooperative Learning model was used. Indeed, and as a result of the vertical ability hierarchies, the more able students *took control* and learning was dependent on these students.

In Jane and Christina's (Buckingham) year seven class[18] the students who had low literacy levels struggled to read the information on the sheet. Indeed, these teachers had not accommodated for their students low literacy levels in their planning of the resources. Subsequently, and potentially as a result of their inability to read the sheet, these students did not perform in their roles or help their team complete the tasks; welcoming and accepting the more able students' preparedness to take over. However, whilst literacy levels are a common reason for hierarchy and inequality in teams (Cohen, 1994), in other classes, when literacy levels were not noted as a concern, the success (indeed the initial functionality of the learning teams) was dependent on the more able or higher status students taking control. For example, Phil (Buckingham) said 'I think they are dependent on each other and they need each other, but they are probably just needing one person' (PL Interview U1 L1). Furthermore, the students suggested that there was one dominant leader within a team that was accepted and seen to support the social dynamics of the group.

> Like there was one leader, like in mine it was Jamie and she said right let's do this, who has got something to share and then we would all like say our bits that we needed to. (Annika, Birchwood, FG Interview U1).

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[18] Jane and Christina shared classes and taught both a year 7 and a year 8 class

It could be suggested that the dominant position of the more able was accepted because it was both easier, and seemed more natural as a result of the labelling of ability and their subsequent learned social position within a team. However, whilst students accepted the more able student's position within a team, they were rarely given a chance to perform in coaching roles, or have a voice in the decision making process. In fact, the more able took control they began the tasks without discussing or including the thoughts of their team members. Furthermore, in a number of cases they didn't trust their peers to lead the group, even before the less able students had attempted to lead their learning teams and the students had left the changing rooms.

> Ellie (more able student) began writing down the group processing points for the whole team. She did not discuss with her team or allow the discussion manager [which it was their task to do so] to lead this part of the lesson. (Nikki, Birchwood, CLVT, U1, L2)

> In the changing rooms it seemed the students didn't trust each other. Melvin said, 'Sir, Cameron is supposed to be the coach but I don't think he is going to get it, shall I just do it'. To which Chris replied, 'the idea is that everyone has their roles and they stick to them each lesson' (Chris, Buckingham, CLVT U1 L1).

Through the changing of power hierarchies within Cooperative Learning (Dyson & Casey, 2012a), the responsibility for learning shifted away from the teacher to be assumed and adopted (as if it was their birth) by those students who had been identified as being more able. Indeed, in Tom's class Harry and George (as two more able students), in the discussion below position themselves as the leaders of the group due to their perceptions of ability.

> Harry: Mr Jam has put somebody that has already played for a football team in the group and then they could teach the others and help them
> George: Like with me that's what happened because the other people didn't even play for a football team, then Mr Jam put me in there because I know how to play football and so I can teach them how to play. (Birchwood, FG Interview U1)

As a result of the vertical hierarchy that existed, the way in which groups learnt and worked together more closely resembled the notions of peer-tutoring (Lafont, 2012) than Cooperative Learning. Drawing on Darnis and Lafont (2008), Lafont

(2012, p.137) suggested that peer-tutoring is when one person 'assumes a partial solution by helping or advising the other partner and so allowing him to progress'. The following is an example peer-tutoring, which serves as a representation of learning team's behaviour in most of the classes. Whilst sometimes learning was a result of the teachers' actions during lessons (which will be discussed later in this chapter) these notes from the CLVT show how John (more able student) gave examples and demonstrations to help Eric (a student with Asperger's) understand how to perform the breaststroke, which subsequently allowed Eric to perform the skill. Indeed, the extract from the lesson shows that John was able to engage Eric and enhance his ability to perform the breastroke.

> John says 'you know when you see a frog and they go like that and push out that is what you have got to do' John from the side of the pool shouts 'that's it' - asks Eric to stop and then starts demonstrating on the side of the pool. Corby [another student in the team] was not receiving any feedback from John as he was focusing his attention on Eric. Later in the lesson John runs around to the side of the pool to stop Eric and change the woggle to a float to see if that can help him – after changing float and after watching another demo from John Eric's use of his legs in the breaststroke technique significantly improves – he is more horizontal in the water with the correct circular(ish) action (Joey, Buckingham, CLVT U1 L5).

This notion of peer-tutoring was consistent within most classes and re-enforces that instead of students being positively interdependent on each other, as seen in Cooperative Learning (Johnson & Johnson, 2009), the students were dependent on one particular member of their team. However, the more able had a positive effect on learning and engagement, and similar to my own experiences as a physical education teacher using the Cooperative Learning model, the more able could extend their peers learning when they performed in a role that was similar to a coach (Goodyear *et al,* 2012a). Yet the other student in the example above, Corby, provides an indication that whilst the more able sought to extend the learning of the less able, they *neglected* the performance of the remaining team members. In this way, all students within a team were not working together to support the successes of each other. Instead, learning was occurring in pairs or on an individual basis, rather than as a team. Perhaps this was a result of the more able students staying within their own comfort zones. The more able students could

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'spot' the more noticeable errors in performance of their less able peers and then use the information from the resources to help these students learn. However, when it came to supporting their more competent peers, the more able were challenged with providing specific feedback and 'spotting' the areas for improvement. Indeed, they 'neglected' the more competent students who could perform the skills, and only required subtle refinements to performance (such as just the arm or the leg action), rather than the whole movement. Therefore, it seems reasonable to suggest that it was 'easiest' for the more able to adopt a hierarchical role with the less able and ignore their more competent peers in the team, something which may not be too dissimilar to the approaches taken by undergraduate students (Capel & Whitehead, 2010).

Taking my discussions on the vertical ability hierarchies together, it seems reasonable to suggest that the students had learned their ability status in the classroom as a result of the activities within the respective institutions and their teachers' previous use of the dominant and residual pedagogical practices. Subsequently, learning conformed to the notion of peer-tutoring, rather than Cooperative Learning. Indeed, the more able students controlled the learning that took place within the learning teams.

In discussing the extra-individual conditions, this section has shown that the students had formed cultural expectations for how they should learn and act as a result of the dominant and residual pedagogical practices. Indeed, through the discursive positioning of girls and boys, I have explored how the girls (who were positioned as needy) continued to depend on the teacher for direction and for ideas of what to do. Similarly, I have discussed how the boys desire to play games rather than learn the lesson content was potentially a result of their teachers' use of 'roll out the ball' as a pedagogical approach (Rovegno, 1993). Furthermore, in my discussions on the vertical ability hierarchies, it was evident that through students learned ability status, the more able students controlled classroom learning in unit one, and subsequently, learning occurred most probably as a result of peer-tutoring (Lafont, 2012). The students were still 'learning to learn' through Cooperative Learning (Casey & Dyson, 2009) and they had yet to understand how

they should act and how they should work together to learn within Cooperative Learning. Drawing on Deustch (1949) and social interdependence theory (Johnson & Johnson, 2009), whilst learning occurred students' achievement was not positively correlated with their peers and learning was dependent on either, the teacher managing the learning, the teacher monitoring students group work, or the more able peers leading the group.

Having identified how the students responded to Cooperative Learning I will now discuss how the teachers' reacted to this pedagogical change. Using Cognitive Dissonance (Cooper, 2007) as a theoretical framework I explore how the teachers' experienced frustration, and, similar to Dyson (2002), felt out of their comfort zones. What follows is a discussion on how the dominance of the performance culture within physical education and how the practice architectures of, for example OfSTED, affected the teachers' understandings of their practice and their subsequent actions. The teachers had yet to acknowledge that it takes time for their students to learn to learn in a new way and hadn't yet appreciated the multi-dimensional focus of learning within the Cooperative Learning model (Dyson & Casey, 2012a).

Cognitive Dissonance

Cognitive dissonance is based upon Fesitnger's (1957) social comparison theory (Cooper, 2007; Tripp & Sherill, 1991). This theory holds that one experiences feelings of inconsistency and psychological discomfort, when two opposing psychological cognitions compete against one-another (Cooper, 2007; Tripp & Sherill, 1991). Cognitive dissonance is when 'an action is different from an attitude which, in turn, is different from an observation of reality' (Cooper, 2007, p.5). Using this theory as a framework, I now explore how the teachers' experienced cognitive dissonance as a result of their initial use of the Cooperative Learning model. In keeping with Cooper's (2007) explanation, Cooperative Learning is positioned as the action and the dominant and residual pedagogical practices are positioned as the attitude.

Following their respective first lessons of Cooperative Learning, a number of the teachers found the experience to be negative, where Christina (Buckingham) described it as being 'so hard' (PL Interview, U1, L2), Joey (Buckingham) said it was 'difficult' (PL Interview, U1, L1) and Tom (Birchwood) claimed that he had 'never been so frustrated in a lesson before' (PL Interview U1 L1). However, their challenges and frustrations were not in relation to students' dependency on them, their students' desire to play games or the more able students taking control of the learning teams. Instead, it was the pace of the lesson, their students' organisation, the amount of content the students had got through and the perceived lack of progression in their students' physical performance that the teachers found problematic.

> It doesn't worry me for OfSTED…but it worries me in terms of what we have always been engrained with, this is what an outstanding lesson is, it's pacy and you're doing this and this is what happens. [in Cooperative Learning] things are going off left right and centre and actually it's not pacy because it seems so slow (Tom, PL Meeting 9.2.12).

> It seems that although they [the teachers] believe in the social learning and cognitive learning aspects to physical education, which are developed through the Cooperative Learning model, their perceived success of a lesson is still the physical and how well the students were able to perform the drills. (FJ 9.2.12).

Whilst in the professional learning programme there was synergy between Cooperative Learning and the 'talked about' (Casey, 2013, p.79) expectations around good practice, which in turn influenced *buy in*, it seemed that when these 'talked about' ideas were transferred to practice they were more concerned about the observational criteria of OfSTED i.e. 'pace' and 'progress'. Similar to O'Sullivan and Dyson (1994) and Kirk (2010), good teaching was defined by the discipline, the management, the organisation of the lesson and students' ability to perform a skill. Indeed, although students' dependency on the teacher reduced, they began to re-focus themselves on the learning tasks rather than games, and there were gains in the social, cognitive and affective domains, the success of a lesson was not defined by these improvements. The practice architectures, which had developed a performance culture within the subject and a performative culture

for teaching and learning (Cale & Harris, 2009b; Evans, 2013, 2004; Evans & Penney, 2008), served instead as a measure of good practice.

At this juncture it is important to summarise the notion of dissonance experienced before I move on to discuss the ways in which the teachers sought to achieve consonance. Cooperative Learning was the action focusing on the multi-dimensional aspects of learning and requiring students to learn for themselves without direct supervision from the teacher (Cohen, 1994; Dyson & Casey, 2012b). However, the teachers' attitude towards teaching and learning resided with the dominant and residual pedagogical practices, and was influenced by the practice architectures i.e. OfSTED criteria. Indeed, whilst learning in each domain was taking place, and students were developing their management, organisation and interpersonal skills, the teachers failed to acknowledge this and became frustrated with their students' responses to their pedagogical choices. The teachers' observations and reflections were not consistent with the multi-dimensional focus of learning that was taking place in their lessons i.e. their attitude blinded their perceptions of the reality of students' learning and behaviour. In the following sections, I explore how the teachers' attempted to achieve consonance through changing their beliefs and actions. Drawing on Cook's (2009) discussions on the messiness of changing practice, I suggest that the teachers' existed within a messy area i.e. a time when teachers have begun to deconstruct their beliefs but they have not yet accepted the emergent pedagogical approach. Yet through the teachers' engagement with PAR (i.e. analysis, dialogue and negotiation (Ax *et al,* 2008a)), the teachers' dispositions and actions began to change and the teachers' perceived that Cooperative Learning was an important inclusion into their practice.

Achieving consonance: the messy area

Once dissonance is aroused there is a drive to reduce the inconsistency, and subsequently achieve consonance (Cooper, 2007; Tripp & Sherill, 1991). 'When the pieces do not fit' the easiest way to reduce the feelings of inconsistency or discomfort is for one to change their attitude (Cooper, 2007, p.2). Yet for some

teachers it seemed they achieved consonance by allowing their actions to reflect their attitudes. In other words, they sometimes followed a teacher-centred approach which was consistent with their attitude towards the traditional pedagogy and OfSTED. Indeed, whilst the non-negotiable of the teacher facilitator was consistently observed at Buckingham, and was observed in more than half of the lessons at Birchwood (Table.7, p.125), in order for the students to meet the teachers' expectations of pace and physical progress, some teachers' switched between teacher-centred and student-centred approaches. Indeed, I observed Nikki (Birchwood) 'either shout or she told the whole class what they need to do… when the squads were struggling with the warm up she said 'come on girls hurry up'' (CLVT, U1, L2). By exploring Christina's (Buckingham) behaviour in lessons my argument around the pace and progress of learning and the use of a teacher-centred approach can be further understood. The group goal in Christina's (Buckingham) lesson was to, as a team, perform three fitness tests. 'At the beginning of the lesson she tells the class what they need to do' and said 'let's try and get through them as fast as possible and get your results' (CLVT U1 L5). Her behaviour in the lesson was focussed on getting students to complete the tests.

> She questions them on, for instance, how to measure the standing broad jump but then gives them limited opportunity to respond and then demonstrates how they should measure the jump. (FJ 27.1.12)

I further noted she 'doesn't wait for groups to approach her in questions – she approaches them' and she said 'quickly do this then and then I want you to try this' (CLVT U1 L5). As a result of her re-enforcements the students completed the tasks and met the physical performance outcomes of the lesson, but they had not learnt or discovered this for themselves. Yet she came and spoke to me during the lesson and said 'they are all getting on with it though…they are actually working, to be fair compared to what they are normally like' (DD U1 L5). It seemed that she perceived the lesson was a success since the students were performing in-line with her expectations, although she had chosen to ignore that she was telling rather than facilitating.

In discussing the process of transforming practice, the teachers' cognitions in the first unit could be likened to them being positioned in a messy area. Cook (2009) describes the messy area as a place where participants have begun to deconstruct their old beliefs, yet whilst they are aware of a new emerging practice, they have neither accepted it nor made sense of it. However, whilst the messy area is uncomfortable, Cook (2009) argued that it acts as a pre-cursor for the transformation in one's knowledge, beliefs and subsequent actions, known as the messy turn. In accordance with Cook's (2009, p.282) discussions around transforming practice, through 'perceiving, knowing, critiquing and learning from multiple perspectives' the teachers' beliefs about the dominant and emergent pedagogy changed over the course of the first unit. Whilst some of their behaviours allowed them to meet their performance expectations, by the end of the unit their perceptions of students' learning and behaviour had begun to change. In the following sections I discuss how the teachers' attitudes changed and they reached an initial level of consonance. Consonance was achieved through teachers' engagement with the three features of PAR extolled by Ax *et al.* (2008); analysis, dialogue and negotiation.

Dialogue with the boundary spanner and each other

During post lesson interviews the teachers often expressed their concerns about the impact of the model on their students' learning. These interviews were a time when I facilitated the teachers' understanding of the model and encouraged them to reconsider their immediate thoughts on students' learning. My discussions with the teachers were comparable to the experiential format of dialogue within the Sunday Afternoon Drive model, which is applied to group processing (Sutherland, 2012). I neither judged their practice nor imposed my own views of what I saw of their practice. Instead, by guiding them through a reflection using questions comparable to what happened?, so what?, and what now? (Sutherland, 2012), I was able to challenge them to consider their pre-existing beliefs about the dominant and residual pedagogical practices, help them consider the value of Cooperative Learning, and develop their understanding that it takes time for their students to learn in a new way. The following, is a discussion of how this

occurred with Jane (Buckingham). The post lesson interview shows that her immediate thoughts were that the lesson would have been better if it was teacher-led. Yet by guiding her through a reflection she came to acknowledged that the students were still 'learning to learn' (Casey & Dyson, 2009) and she recognised that the students had achieved more than just the performance-based outcomes.

> **What Happened?**
> Victoria: So how do you think it went?
> Jane: it's really hard because I wanted them to do all three fitness tests… it was better than I thought it would be but not as good as if I was leading it myself… There are pictures but it's in her head it's in her head a lot more
>
> **So what?**
> Victoria: Is a key theme then their own competence in themselves?
> Jane: yeah
> Victoria: What, they go and do it they set up a drill and then they go we don't know what we are doing?
> Jane: But this is only their second lesson in theory though isn't it
>
> **What Now?**
> Victoria: Think about the learning
> Jane: Yeah they probably got more from it because they know what they are doing now because they had to learn how to do the test and in fact the second test they did I had to have little input (Yr 7 PL Interview U1 L1).

This post lesson interview with Jane potentially served as the fulcrum for changing her expectations for students' learning. Indeed, following this initial lesson I had observed that Jane paid less attention to the physical domain and even spent thirty minutes developing her students' understanding of how to discuss their learning with each other during group processing. She began the whole class discussion by saying 'I want group processing to be important as this is about you as a team' (Yr8 CLVT U1 L2), and then began modelling and demonstrating how as a team the students should reflect together. By drawing on Jane as an example, through my discussions with the teachers I was able to challenge their pre-defined expectations for learning, which subsequently, encouraged the teachers to focus their attention on multi-dimensional aspect of learning and the process of learning, rather than the physical domain as seen in the dominant pedagogy of physical education.

However, whilst the post lesson interviews were an important time for me to challenge the teachers' perceptions of their practice, I was only in their lessons during the first and last lessons of their units. The informal conversations in the physical education office (when I was in to see other teachers within their respective departments teach) and the interactions through social media served as means for me to sustain my discussions with the teachers and support their practice. Indeed social media was a platform for them to contact me with concerns about what they should do in their lessons and was a space for me to reinforce, either through private messages or my tweets/ status updates about their practice, that they were doing something right.

> Twitter and Facebook have proven an effective way for me to communicate with teachers this week, further establishing the support which is available to them 24/7. For instance, Jane and Christina (Buckingham) spoke to me on Friday night about how their lessons went. Chris (Buckingham) spoke to me on a Thursday night about how the rain was affecting his lessons and what he could do in terms of resources. Nikki (Birchwood) spoke to me on Wednesday night about how her lesson went and Kelly (Buckingham) contacted me through twitter on Sunday night about what she could do in the next unit. (FJ 16.1.12)

Despite my sustained support through the first unit, either through face-to-face discussions or through social media, Tom and Nikki's (Birchwood) perceptions of the success of Cooperative Learning was still strongly related to the physical domain and they continued to lead and control their students' learning in lessons (Table 7. p.125). Indeed, their practice differed from the teachers at Buckingham and it seemed Tom and Nikki had more difficulty in moving beyond the dominant and residual pedagogical practices, and the practice architectures of OfSTED. In light of this, I initiated a professional learning meeting with them at the end of their first units. In preparation for the meeting I began 'filming Ash's [PhD supervisor] CL lesson and my CL lesson…to try to help Tom and Nikki with an understanding of what a student-centred lesson is/looks like' (FJ 2.2.12). During the meeting I asked them to share their experiences of the first unit and we watched the videos I had created. The video and my discussions with them went someway to challenging their perceptions of their students' learning. Furthermore,

they began to consider how their practice was governed by practice architectures of OfSTED and the subsequent school's teaching and learning expectations.

> Nikki: I think again if we go back to OFSTED, have they all made progress in the lesson, I mean I suppose you link it to the group goal and the group processing they have made progress just not in terms always of the physical skill.
> Tom: what has dawned on me is that the learning is probably happening but we are thinking it is slow because they are not doing anything, because you can't see it, but then doing isn't always learning, the doing is to some extent following what you have told them to do, following instructions…I think it is slowly dawning on me that in actual fact an awful lot of the learning is going on without us actually seeing them doing anything. (Birchwood, PL Meeting 9.2.12)

Analysis

The teachers' analysis of their students' learning, in comparison to other classes they taught through an amalgamation of sport, skills and a teacher-led approach, was a method that further facilitated the acceptance of the Cooperative Learning model as a worthwhile inclusion in their programmes. This comparison proved to the teachers, and in some cases surprised them, that their students could learn and progress without direct instruction from them. However, although the teachers' valued and observed the students' gains in the social and cognitive domains, my discussion with Joey (Buckingham) below is an example of how the students' progress in physical performance was perceived to be no greater than the traditional pedagogy. Moreover, the discussion with Joey is an indication that Cooperative Learning was not seen as more valuable to the teachers' practice than the traditional pedagogy, at this stage.

Joey: what I have been doing is I have been using the other group to see and experiment so I still use the same resources and I still use the same tasks but I have slightly more involvement so I use more demonstrations so I get certain kids to do certain demonstrations for the whole group to do things like that to see what improves their swimming quicker and erm it is quite tight there is not a huge amount between it.

Victoria: Is there a difference in the other side [of learning] though?
Joey: they are probably not progressing as quickly socially erm possibly not as much cognitively they are possibly edging slightly more on the skills one. (PL Interview U1 L5)

Negotiation

The student focus group interviews served as a final source of confirmation as to the effectiveness of Cooperative Learning as a pedagogical practice. The interviews served to develop teachers' understanding of their students' conceptions of learning. Indeed, I had provided the teachers with sample questions to use in their interviews with their students, but the teachers began to ask additional questions to confirm whether their students could develop their physical performance by learning from each other, and whether they enjoyed this way of learning. For example, Jane (Buckingham) asked, 'okay so extra question from me then, so if you were to do this type of unit again, so working with teams, would you want to?' (FG Interview U1). The students responded positively and were keen to continue learning through the model stating, 'yes I think it gave us the opportunity to work with different people and we got the opportunity to work with other people, which was really nice' (Alice). Similar to Jane, Phil's (Buckingham) students challenged the analogy that students could only develop their skills through a teacher-led approach.

Phil: So do you think your skills have improved?
Rob: I think I have improved quite a lot actually, especially in trampolining because before my seat drop wasn't very good but now I think I am actually quite good at it
Phil: So do you think that is a result of how you were taught in the lesson i.e. teaching each other?
Rob: yeeah (sic.) (FG Interview U1)

As a result of the understanding from their students that their use of Cooperative Learning was a success, the teachers also used the interviews to negotiate with the students around how, as a teacher facilitator, they could better support students' learning in the next unit. The students were keen to respond and a number of the discussions highlighted how the students' felt that the teacher could modify the resources to support their learning. However, the comment by Simon (Chris's class, Buckingham), and similar to my discussions earlier in this chapter on the extra-individual conditions, shows how the students still viewed the teacher as the giver of information and asked the teachers to give their teams more feedback on their physical performance to help them improve.

> So you could have maybe given us points to improve on each week, so you could say well you weren't particularly good at this so next time it might be a thought for you to go and think about. (FG Interview U1)

In this section I have shown that the practice architectures of a performance culture, and that of OfSTED and the school teaching and learning expectations, obscured teachers' understandings of what counted as good practice within Cooperative Learning. Subsequently, when the teachers began teaching through the model they experienced cognitive dissonance since their practice, and the subsequent outcomes of students' learning, did not reflect their beliefs. Yet in support of the findings reported by Kemmis (2010, 2009), Kemmis and McTaggart (2008), through teachers' engagement with PAR, and with the support of myself in the role of the boundary spanner, PAR began to challenge teachers' pre-defined expectations of students' learning. In addition, the teachers began to critique the dominant pedagogical practices and see that the emergent pedagogy was having a positive effect on their practice. As a result of these newly formed understandings the teachers were motivated to continue using the model and it could be suggested that the teachers were beginning to move from the messy area into the messy turn i.e. the transformation in a teachers' beliefs (Cook, 2009).

Chapter Conclusion

This chapter has identified that teachers' and students' engagement with Cooperative Learning was constrained by practice architectures. Indeed, through the three month period of initiation, teachers' prior relations with me, and Cooperative Learning's synergy with OfSTED criteria and whole school strategies, *buy in* was developed. The teachers were motivated to use the model and the period of initiation had served to develop the teachers' understanding and ability to implement the non-negotiables. However, in the first unit the teachers' pedagogical understanding of the model and these 'talked about' ideas were not always 'actioned' (Casey, 2013, p.79). For example, in the teachers' lessons and units, whilst they restructured the classrooms into a Cooperative Learning classroom through the non-negotiables, Cooperative Learning was immersed within the dominant and residual pedagogical practices of sport, games, skills and a teacher-led approach.

Through my discussions on the extra-individual conditions, as a result of the discursive positioning of girls and boys and the vertical ability hierarchies that are engendered through the dominant and residual pedagogical practices, the students had cultural expectations for learning. Indeed, the students were dependent on the teacher, saw freedom and responsibility as an opportunity to play games, and the more able students held a hierarchical position in the teams. Consequently, learning was a result of the teacher managing the learning environment and peer-tutoring (Lafont, 2012). In consideration of social interdependence theory, students' learning was not positively correlated with each other (Deutsch, 1949; Johnson & Johnson, 2009) and learning, was therefore was not attributed to the Cooperative Learning model.

Finally, this chapter has shown that the teachers' perceptions of their practice and their students' learning were constrained by the practice architectures. The dominance of 'physical learning', 'pace' and 'progress', as a result of the dominant pedagogical practices and OfSTED's criteria for teaching and learning, the teachers experienced cognitive dissonance. In order to reach consonance some

teachers' reverted their actions and beliefs back to the dominant and residual pedagogical practices, assuming this approach would allow them to meet the practice expectations. Yet through teachers' use of PAR, the teachers' perceptions of their students' learning within Cooperative Learning began to change. The findings from their engagement with dialogue, analysis and negotiation afforded the model currency in their practice and subsequently, the teachers were motivated to move beyond their first use of the model.

I conclude this chapter by suggesting that the three month period of initiation, that developed *buy in,* could be positioned as the honeymoon period. Whilst the honeymoon period has normally been considered to occur during the first unit taught and when there is an excitement about using a model (Kirk's, 2011), through an extended period of initiation (i.e. beyond a one-day workshop) teachers' experienced excitement when experimenting with Cooperative Learning. However, whilst this honeymoon period brought excitement, motivated the teachers' to use the model and they felt prepared to teach through the model, these three months were not strong enough to challenge the practice architectures which pervaded into teachers' and students' experiences of the model in the first unit. In order to begin to challenge the pre-defined expectations for practice, the model needed to be immersed within the milieu of the practice architectures. Thereby, the three month period of initiation (involving workshops, experimentation and professional discussions), and the first unit taught could be conceptualised as a period of initiation (Fullan, 2007) for both teachers and students. A familiarisation period that developed *buy in* and allowed both students and teachers to begin to understand, but not yet fully, a student-centred approach that radically differed from the dominant and residual pedagogical practices. At this juncture the teachers had begun to move into a messy turn i.e. a time when new understandings are revealed, developed and articulated (Cook, 2009, p.282) and the model was becoming accepted as a worthy approach to teaching physical education. The following chapter discusses how they now needed to move forwards with both these new understandings and the changing practice architectures in an attempt to achieve a messy turn.

CHAPTER 5: MOVING FORWARDS WITHIN THE MESS, WITH THE MESS, TOWARDS A MESSY TURN

Drawing on Cook's (2009, p.286) discussions on the messiness of changing practice, this chapter considers how the teachers moved 'forward *within* the mess and *with* the mess, towards a messy turn'. There were two overarching *messes* (as I discussed in Chapter 4). First the practice architectures[19], and the inherent features of the dominant and residual practices i.e. OfSTED criteria, skills, games and a teacher-led approach. The second mess was the extra-individual conditions[20] i.e. the students' dependency on the teacher, the students' desire to play games and the vertical ability hierarchies. During the second and third units taught theses *messes* did not disappear. The teachers' dispositions and actions were still constrained by the practice architectures and the teachers had to use the model as one emerging approach out of many that existed within the dominant and residual practices of their departments and schools, and which was confused by the vertical ability hierarchies that operated through teams. This chapter explores the second and third units taught and how the teachers moved forwards *within* and *with* the mess towards a messy turn. A messy turn is when 'new understandings are revealed, developed and articulated' (Cook, 2009, p.282). Yet, and as I will show, moving forwards *within* and *with* the mess was not an easy process (Cook, 2009).

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[19] How the practices *constructed* by those outside of the classroom influence the practice within a classroom (Kemmis & Grootenboer, 2008).

[20] The pre-determined responses to a given situation based on culturally discursive conditions (Kemmis & Grootenboer, 2008)

Underpinning my discussions of how teachers moved forwards *within* and *with* the mess is the disposition of phronēsis. Phronēsis is understood as a 'doing' action which involves the development in a teacher's understanding about, 'what is wise and proper to do in a given situation' (Kemmis & Smith, 2008a, p.16). The disposition to act wisely is dependent on the transformation in one's sayings (what is thought and said), doings (transforming how one acts) and relatings (the way one relates to others and the circumstances around the practitioner) (Kemmis, 2010, 2009). Accordingly, the development in the disposition of phronēsis is used to discuss how the teachers addressed the practicality of implementation and how Cooperative Learning faced 'the tough test of reality' (Hargreaves, 1994, p.12). The teachers learnt how to respond to the unanswered questions about how to use the model within the practice architectures and how to use the model to overcome the vertical ability hierarchies that existed (Fullan, 2007; Hargreaves, 1994).

I firstly show that the teachers were merely a 'cog in a machine' (Kemmis & Smith, 2008b, p.269) through the professional and curricular constraints. Yet the teachers moved forwards *within* the mess of these practice architectures by jockeying and negotiating their use of the model. Secondly, I explore how the teachers were continuing to develop the disposition of phronēsis through changing their doings to break down the vertical ability hierarchies that had existed. Subsequently, by engaging *with* the mess of the vertical ability hierarchies students' learning was considered to be a result of the creation of positively interdependent learning teams. Finally, I discuss how as a result of engaging *within* and *with* the mess, the teachers began to transform their sayings, doings and relatings (Kemmis, 2010, 2009). However, although the teachers were transforming their practice they were still only moving towards and had not yet reached a messy turn.

Moving Forwards *within* the mess: A Cog in a Machine

Building upon my discussions in Chapter 4, whilst teachers' muster the power and demonstrate a desire to use an innovation, their use of an innovation is often hindered by their power over the social resources and the practice architectures

(Fullan, 2007; Kemmis & Grootenboer, 2008; Kemmis & Smith, 2008b; Lawson, 1988). Indeed, Kemmis and Smith (2008b, p.269) argued that the teacher is merely an operative to the 'system they are part – no more than a 'cog in a machine''. In other words, in a teacher's use of an innovation the teacher is often required to conform to the conditions for practice, designed and created by those outside of the classroom. Transforming practice is dependent on a teacher's ability to work beyond the practice architectures, and the support a teacher receives for changing their practice from within the professional context (Casey, 2010, 2012b; Fullan, 2007; Hargreaves, 1994; Kemmis & Grootenboer, 2008a; Kemmis & Smith, 2008b). The use of a curriculum (or pedagogical) model, Lawson (1988) claimed involves cultural exchange, social negotiation and a level of political jockeying.

This section explores how the teachers were a 'cog in a machine' (Kemmis & Smith, 2008b, p.269). Whilst there was a motivation to use Cooperative Learning, as a result of their previous experiences in unit one (as I discussed in Chapter 4), there were a number of professional and curricular constraints. However, teachers' acknowledged how the *mess* caused by these practice architectures constrained their use of the model. Subsequently, jockeying and negotiation occurred in the teachers' attempts to use the model where the teachers changed their relatings (the conditions in which they practiced (Kemmis, 2009, 2010), developing the disposition of phronēsis (Kemmis & Smith, 2008b), for Cooperative Learning to be implementable in their classrooms. Before I discuss the jockeying and negotiation that took place, I begin by exploring how *mess* existed through the professional and curricula constraints. Indeed, as I begin this discussion, my field notes below show how during the second and third units the teachers' use of the model was disjointed.

> I rang the PE office and spoke to Chris (Buckingham), he said that this term had been really disjointed in terms of the study and the consistency of lessons had been affected. (FJ 12.3.12)

Whilst in the first unit the teachers had their units pre-planned (as a result of the workshops in the period of initiation), they were now faced with the reality of

planning their lessons and units within the day-to-day realities of teaching (Almond & Thorpe, 1988). Yet the extraneous demands placed on the teachers limited the time they had available to invest in this planning. For example, at Buckingham, a curriculum review week (teacher observations, monitoring of their practice and discussions with the senior leadership team) and a cross-curricular week (which the physical education department led) were given priority. Indeed, my reflection on Jane's (Buckingham) lesson, which was during the curriculum review week and two weeks before the cross-curricular week, shows that as a result of these extraneous demands, planning for Cooperative Learning and the teaching through the model was compromised.

> She had planned it [the lesson], but she hadn't had the time to plan the unit properly, the resources or the exact details of the lesson….In comparison to her HRF unit [unit 1] which was extremely well planned…in today's lesson (which was the day before the review) it was clear, not only from her telling me the lesson wasn't planned, but also from watching it. I could see that it wasn't very structured. I observed and further noted in the CLVT that, for instance, group processing was not achieved, the structure of think-share perform was not adhered to, the lesson was mainly teacher-centred and students weren't held individually accountable for their contribution to group work. (FJ 20.2.12)

However, although the teachers' acknowledged that they needed to allocate more time to planning in order for their lessons to be a success, the extraneous demands continued to limit the time available to engage with such a process. Indeed, with examination physical education holding an important and privileged place in physical education (Casey & O'Donovan, In Press; Thorburn, 2007), priority, in some instances, was given to planning and assessment for BTEC or A-level[21] classes. In addition, the format of the programmes of study (which in both schools was structured by the multi-activity approach), constrained teachers' use of the model. For Nikki (Birchwood), who was the co-ordinator of examination physical education in her department, the practicality of the implementing the model was

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[21] BTEC and A-level are examination physical education courses that students begin typically from age 14 onwards. Courses assess students via coursework, practical assessments and exams of their theoretical understanding of human movement and their sports performance.

constrained by both examination physical education and the programme of study. The time she needed to invest in moderating assignments and preparing students for exams limited the time she had available to plan for Cooperative Learning. Furthermore, a number of her lessons were cancelled, due to poor weather limiting the facilities available, and in addition, senior colleagues within her department made changes to the planned programme of study which hindered her use of the model.

> She had planned to do a unit of dance through Cooperative Learning for 6 lessons after half term… However, on return after half term the programme of study has changed. This meant that she now only has 2 lessons of dance and 3 of lacrosse …. Nikki was keen to continue but she explained, through the text messages, this is a really busy time of year for her with being head of key stage 5 in PE she has lots of BTEC marking to complete. She said it would be beneficial for her just to continue with the Netball unit. I agreed and said this was a constraint with planning and the students may find it difficult to settle into the unit if the activities are changing mid-way through the units. On the phone after the series of text message conversations and Nikki sounding quite stressed on the phone this decision [to pause her unit of Cooperative Learning and return to it later] seemed to re-assure her (FJ 21.2.12).

As a consequence of both examination physical education and the programme of study, Nikki paused her teaching through the model, cancelling her six lesson unit of dance. Yet it was not only Nikki whose lessons were cancelled. Across the second and third units only 66 out of a possible 100 lessons took place due to poor weather limiting the facilities available, teacher absence for external professional learning or illness, in-house school sport competitions, school trips, teacher interviews and the cross-curricular week. However, whilst a number of lessons were cancelled, the teachers' jockeyed through their use of the model, exploring every means possible and teaching lessons when and where possible. In order to prevent lessons being cancelled, some teachers were able to negotiate with other members of their department for space, either in the sports hall or in the gymnasiums. For example, Tom (Birchwood) sent me an email informing me that his gymnastics lesson was going to be cancelled. Yet, a few weeks later he said that whilst the plan had been to cancel the lesson, by sharing equipment with another member of staff, he was able to continue.

> Tom said to me that he had still tried to do a bit of Cooperative Learning with them, with the focus being on them in their learning teams…He seemed pleased with how the lesson had gone…he mentioned that the students were really good and were taking more responsibility for their learning and that he was shocked how well they were doing. (FJ 5.3.12)

Although Tom negotiated a space to be able to use the model, he had not been able to use Cooperative Learning in its entirety, it seemed he focussed on just learning teams and had not attempted to implement all of the non-negotiables. In acknowledgement of the constraints of space and equipment, and as a result of his students' positive experiences, Tom decided to abandon his gymnastics unit and negotiate a space in the main sports hall to do a different activity. Tom considered that by having more space and equipment to practice, that he could use Cooperative Learning in its entirety. Subsequently, he began a short two lesson unit of health in the main sports hall. However, while Tom's role as curriculum leader for physical education at Birchwood afforded him the autonomy to change both the activity he taught and where he taught it, Nikki was not in the same position. In a department of ten teachers her place as a participant in the study was less important than her place in the department. Indeed, while Tom could adapt she was forced to cancel a Cooperative Learning dance unit due to the extraneous demand (such as examination physical education) and the wider programme of delivery (i.e. the changes to the multi-activity curricula). It could be argued that vertical hierarchy existed that gave Tom a freedom that Nikki simply did not enjoy and that Tom didn't share with her.

In further consideration of how the model was implementable within the professional and curricula constraints, the shortening of units from the planned 6-8 lessons was a common feature of many of the teachers' approach that enabled them to sustain their use of Cooperative Learning. Consequently, at Buckingham, due to the cross-curricular week being in the middle of the term, the second unit the teachers' taught consisted of four lessons (Table.4, p.93-94). However, it could also be assumed that due to the professional and curricular constraints that existed, the shortening of units was common practice in all of the lessons the teachers taught and not just the lessons taught using Cooperative Learning. Yet

whilst in their other lessons, this may have been ignored by the teachers, in the second and third units of Cooperative Learning, the short 6-8 lesson units now started to be frustrating. For example, 'during an informal conversation with Chris (Buckingham), he said how he just gets going on something and then *bam* you have got to change to a different unit' (FJ 29.2.12). Furthermore, whilst the disruptions to the units were frustrating for the teachers, the students also found it difficult to cope with the frequent changes and disruptions to their lessons. The following is an example of a discussion I had with Chris. Whilst Chris was frustrated with the frequent changes, it seemed that he had failed to acknowledge that the changes to the lessons may have also been difficult for his students. Indeed the discussion below shows how I, through questioning and guiding Chris to new understandings, helped Chris to see that, whilst his teaching through the model was compromised, his students' learning was also affected by these professional and curricular constraints.

> Chris: they have not been as good though, I don't know why
> Victoria: So are they going off task?
> Chris: No I wouldn't say they are going off task they are just, organisation
> Victoria: It has been a bit crazy hasn't it though, they have had interviews and everything?
> Chris: Yeah that's true
> Victoria: They haven't had a consistent
> Chris: So yeah maybe it is more that
> Victoria: It might not be them then, it might just be that, are we being taught by Mr Moy today or are we doing our own thing? And then say one person was supposed to be equipment manager and then it changed because of interviews, then what lesson are they on on their own rotas. So it might actually not be you or them
> Chris: Yeah that's a point as they were like, is that lesson three or are we on lesson four? (ID 29.2.12)

In this section I have shown that despite teachers' best intentions to use the model, they were merely a 'cog in a machine' (Kemmis & Smith, 2008b, p.269). Through the decisions made by others outside of their classrooms, such as a curriculum review week or the changes made by senior colleagues to the programme of study, the time teachers had to invest in planning and their use of the model was constrained. In addition, the teachers' commitments to examination physical education, and events that were out of the teachers' control (for example the

weather) caused a number of lessons to be cancelled. Yet it seemed that despite these professional and curricular constraints the teachers were motivated to continue using the model *within* this mess. Indeed, they negotiated their practice and jockeyed through their use of the model, teaching lessons when and where possible, shortening unit length, and changing the activities from the planned programme of study. The teachers changed the conditions in which they practiced (relatings (Kemmis, 2010, 2009)) for the model to be implementable in their classrooms (Fullan, 2007). However, it could be suggested that whilst the teachers were developing phronēsis, through changing the conditions in which they practiced (relatings (Kemmis, 2009, 2010; Kemmis & Smith, 2008a. 2008b)), the teachers were not acting wisely in a sense that would allow their students to learn. In consideration of Kirk's (2010) critique of the multi-activity approach and how short intermittent units have a limited impact on students learning, it is questionable how students' learning could be progressed within units which were lasting less than the planned 6-8 lessons. Thereby, the teachers were acting wisely as they were doing what was possible in the space and time available, yet the teachers were not acting wisely with regard to providing learning experiences which lasted an acceptable length that would allow a progression in learning.

In the next section I further consider the disposition of phronēsis and show how the teachers changed their actions (doings) to support students' learning within these short intermittent units (Kemmis, 2010, 2009; Kemmis & Smith, 2008a. 2008b). Specifically, the teachers changed the way they used the model and their actions as a facilitator of learning, which subsequently broke down the vertical ability hierarchies (i.e. a form of mess) that had previously existed.

Moving Forwards *With* the Mess: Changing 'Doings'

Cooperative Learning creates a form of natural support through peer interaction and 'promotes cultural sensitivity through the integrally bound relationships of the

group' (Grenier & Yeaton, 2012, p.132). The non-negotiables[22] (Table 2. p.88) are suggested to facilitate social interaction and mutual support within students' learning teams (Cohen, 1994; Dyson & Casey, 2012b; Johnson & Johnson, 1994; Kagan, 1989; Slavin, 1996). However, drawing on Deutsch (1949) and social interdependence theory (Johnson & Johnson, 2009), I concluded Chapter 4 by suggesting that students' learning was not positively correlated with their peers and that most students were not involved in the decision making process. Whilst the non-negotiables were consistently implemented and observed in unit 1 (Table 7, p.125) learning was often controlled by the vertical ability hierarchies. Thereby, when moving into the second and third units, mess existed as the students had cultural expectations for learning.

A number of authors have suggested that the teacher plays an important role in the promotion of equal status relationships (Cohen, 1994; Cohen *et al,* 1994; Gillies, 2006; Gillies & Boyle, 2005). In order to break down social hierarchies, Cohen and her colleagues argue that the teacher needs to facilitate learning and promote equality amongst students (Cohen, 1994; Cohen *et al,* 1999). Moreover, Gillies (2006) and Gillies and Boyle (2005) claimed that, in order for students to be able to work together as equal partners, the teacher should develop students' interpersonal skills and the language they need to use to communicate with one another. Similar to Cohen and Gillies, in this section I explore how the teachers sought to promote equal status relations and create positively interdependent learning by changing the way the model was used. Furthermore, I explore how the teachers adapted their actions to better occupy the position of a facilitator of group work. Drawing on the disposition of phronēsis the teachers were developing an understanding about what 'was wise and proper to do' to support students' learning (Kemmis & Smith, 2008a, p.16). I firstly discuss how the teachers' modified their plans and their use of the non-negotiables to afford those of lesser ability equal status within a team. Secondly, I explore how the teachers, in their

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[22] Positive interdependence, individual accountability, group processing, promotive-face-to-face interaction, group goals, heterogeneous teams, a Cooperative Learning structure, teacher-as-facilitator.

role of facilitator, supported the development in students' interpersonal skills and the language the students needed to use in order to be able to work together and be equal participants in the learning process. Finally, I suggest that as a result of teachers' changing both how they used the model and their actions, students began to learn within positively interdependent teams.

The non-negotiables, the resources and less-structured tasks

In her discussions on treating the expectations for competence and social hierarchies, Cohen (1994, p.118) argued that one effective way to change the low expectations for competence that an individual and other group members may hold, is to 'design a situation where the student who is expected to be incompetent will actually function as the expert'. Whilst Cohen (1994) was referring to providing a task in which lower ability students had intellectual hierarchy, for example a Spanish student teaching the non-speaking students a Spanish song, I guided some of the teachers to adopt a comparable approach. In learning teams it was common that when the less able students were given the role of the coach, and even if they were willing to guide their team through tasks, the other students were not prepared to wait and would take over rather than supporting these students in their leadership role. To overcome this I suggested to Kelly (Buckingham) and Tom (Birchwood) that they could modify how the students received the instructional tasks. For both Kelly and Tom, they began to discuss the information with each student in their roles and then ask them to relay this information to their team. Kelly's reflection below provides an indication of how this occurred and the impact on developing equality.

> You do find that the more dominant characters in the group will look at the sheet and will dominate, so you make sure that you set them off on a task and do a warm up and then bring the coaches into you, then you give the coaches verbal instructions so that they have to go back to the group and explain it, then if they need to come back and ask you more questions, then they can, but you need to relay it to them verbally so that they have to kind of go back and make sure that they talk to each other, because at the start you found that they were stood around and not talking to each other, but when they realised that they weren't going to get any other input, other than the coach, they started listening and the coaches started stepping up and talking to them a little bit more. (YE Interview).

A common reason for social hierarchy and inequality within learning teams is varying literacy levels, which results in some members of the team holding an intellectual advantage (Cohen, 1994; Cohen *et al,* 1999). For Kelly this may have been reason why the high ability students controlled the learning. However, for Jane and Christina (Buckingham) (as I discussed in Chapter 4, who had a number of students in their classes with low literacy levels), this was certainly true. Adopting a similar approach to Kelly and Tom, Jane and Christina modified their approach by changing the way that students accessed the information. Instead of providing learning teams with instructions on a resource card, through the structure of think-share perform (which presents teams with a problem and requires students to a) think individually for a solution, b) share their ideas with their learning team, and c) perform the teams collective decision (Dyson & Grineski, 2001)), they presented the problem to the classes by asking students to use pictures on a resource or watch videos and teacher demonstrations. In contrast to their first unit, it was observable that when a visual rather than written source of information was given there was an increase in the interaction and inclusion of the team members who had low literacy levels. At the end of the unit, and as a means to assess the effectiveness of this approach, Jane and Christina asked the students which method they preferred and whether their attempts had supported the learning of those with poor literacy levels. Whilst these students' responses cannot be documented, due to no parental consent and assent granted, a number of students in their classes suggested that they preferred the visual information. For example, 'I preferred seeing it like Chloe liked because then you are seeing how to do and where to put yourself on the trampoline' (FG Interview, U3).

Returning to Cohen's (1994) discussion on designing tasks which provide lower status students with a level of intellectual hierarchy, whilst it was not Joey's (Buckingham) intention, his games making unit broke down the vertical ability hierarchies that existed. Indeed, Casey *et al.* (2011) reported that the taken-for-granted ability levels were diminished through games making and the construction of non-traditional games. Subsequently, Casey *et al.* (2011) observed that equal status relationships were established between group members. Considering this

further, within Cooperative Learning, through the use of less-structured tasks that provide no definitive answer and are open and discovery based (which is similar to the concept of construction in games making (Casey *et al,* 2011)), it has been reported that promotive face-to-face interaction is more frequent between all group members (Cohen *et al,* 1999; Gillies, 2006, 1999). Similar to these reports Joey suggested that, within games making unit, his students' interactions with each other had changed from the first unit (i.e. the discussions within Chapter 4) and the students had begun to accept each other's opinions – even for those who were less *popular* within the class.

> I don't know if you can remember, one of the first lessons, they were always a bit more arguing and they were more confrontational with each other and certain people, there was more of a hierarchy within the group, whereas now they work well as teams and individuals. For example, Peter was more on the outside of the group coz he doesn't really fit in with everybody else, and he probably doesn't share friendship groups with any of them either, but now he is kind of more accepted, his opinions are listened to, so no, it is quite interesting how it has changed. (PL Interview U2 L4).

Considering games making and the interaction between students further, through such a less structured task students not only share their ideas but they are required to integrate them into a response in the process of construction (Casey *et al,* 2011; Gillies, 2006). In the process of sharing ideas and the construction of the game, cognitive conflict between group members arose in Joey's class as a result of opposing perspectives for the game. Cognitive conflict is a based on Piaget's (1985) theory of constructivism and happens in the 'presence of disagreements, opposite answers or different solutions' that requires students to re-think their initial understandings and build upon their peers opposing views in order to create their learning and generate new understandings (Lafont, 2012, p.137). I will now explore a discussion in Joey's (Buckingham) unit which is one example of how cognitive conflict occurred that supported learning. Yet my purpose of exploring this discussion is to also show that students within teams were learning to accept the less able students having a form of responsibility and a role in their team's learning. Furthermore, team members were positively interdependent on each

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other for their cognitive learning i.e. creation and application of new understandings.

In the discussion between students below, Rick (low able student) had been assigned the responsibility in his team for creating a rule for the game. Yet when Rick put his ideas across his more able peers disagreed with his rules and attempted to take over. Rick wanted his team to throw the ball, yet other team members agreed that it would be better kicked or chipped in. However, it was still Rick's decision on the rules for the game, and whilst the other members in the group disagreed, Curtis (a confident student) and John (a more able student) reminded the group that it was Rick's decision. As a result of the opposing views, but at the same time the opportunity to decide and contribute to the team task as a result of Curtis's and John's support, Rick was in conflict between either throwing the ball or kicking the ball. However, Rick did not ignore the opposing perspectives of his team members. He began to see the value of his other team member's views through their justifications for kicking the ball. Subsequently, and with the support of Curtis, Rick combined his own idea of picking up the ball and his team members' idea of kicking the ball in the construction of his rule. The example below shows that the students had opposing views on how to proceed with the tasks, yet they listened to each other, accepted each other's roles in the design of the game and negotiated the game design.

Rick: Well for the rules, for like the football game [seems to struggle]
Carl: you have got to decide what actually happens in the game
Rick: yeah well that is what I am trying to do. Well for the rules like football I think we should have a rule on how to kick it
Carl: yeah like dodgeball you have to kick it at each other
Rick: no not kick it, okay I think I have got it, no listen, if you have got the ball and then they come near to you, you have to pick it up and throw it to them and then if they hit you, you are not allowed to hit them and then you get pass that person
Sean: no that would be rubbish
Carl: I think we should just like chip balls at each other
Lewis: no corrie has to decide what we have to do
John: yeah Cameron
Rick: why don't we use the hoops so like football but you have got to kick it into the hoops
John: yeah
Curtis: yeah you have just like got to hit the squares so you are like running like that and then you have to pick it up but you are not allowed to pick it up anywhere else
Rick: yeah you are only like allowed to pick it up in that football pitch bit- your keeper has got to tackle them to get it off them
Carl: so basically we are playing a sort of football like basketball game
Rick: yeah so you for the rules, to start you go like football, pass it pass it, but when you get to there you are allowed to pick it up and shoot but then, say if it goes off the pitch, we have sort of got to make a, well football they have a throw in and rugby they have um line out
Carl: chip it in then
Rick: yeah
John: right I'll use the cones to mark the area (CLVT, U2 L4).

Drawing on cognitive conflict, the discussion shows that the team had to re-think their initial thoughts as a result of the opposing perspectives, and in doing so they created a new rule for their game which accepted all team members' opinions. In order to generate new understandings students were positively interdependent on their peers. Indeed, Rick needed his team members opposing views in order to create a game that his team could play and enjoy. His team held him accountable for creating the rule, with the support of two team members the rule he created was accepted. Through the social constructionist nature of games making (Casey *et al,* 2011) used by Joey (Buckingham) hierarchies were broken down and positively interdependent learning was created.

Whilst in the absence of cognitive conflict choices about a game are made quickly, Lafont (2012) suggests that cognitive-conflict, and students' ability to confront disagreements and opposing views, is an important aspect of promotive face-to-face interaction. Indeed, I noted in Joey's games making unit that, as a result of the time spent creating and discussing the games, 'the games were very short and this did not allow for sufficient time for students to develop their skills and playing ability within a game' (CLVT U2 L4). Yet, whilst cognitive conflict may have reduced the time students had to play in the game and develop their physical performance, this social process of learning facilitated the breaking down of vertical ability hierarchies. Indeed, the students were afforded time to discuss, and it could be said that they developed their interpersonal skills and were learning how to learn within Cooperative Learning.

This sub-section has explored how the teachers moved forwards *with* the mess of the vertical ability hierarchies by changing the way the students accessed the information (i.e. through modifying the use of non-negotiables and resources) and through the use of less structured tasks (i.e. games making) in an attempt to improve how students' learnt within Cooperative Learning. Subsequently, a greater level of interaction was observed between students, the vertical hierarchies that existed were broken down and students were able to construct new understandings and new meanings. Indeed, through the teachers' explicit actions, or as seen with Joey (Buckingham) his implicit actions, the teachers began to understand what was wise and proper to do (phronēsis (Kemmis & Smith, 2008b)) to support students' learning and change the expectations for competence (Cohen, 1994). By drawing on Joey's games making unit, through the time students were afforded to discuss their learning, cognitive conflict occurred and I have argued that students were learning to learn from all members of their team, regardless of the perceived or assumed ability hierarchy. However, whilst these are examples of the changes the teachers made to their practice, in the following section I discuss how, in their role as a facilitator, the teachers supported their students' ability to work together within lessons and establish equal status relationships.

Teacher Action

In order to actively break down the vertical ability hierarchies, the teachers needed to do more than simply create tasks and learning experiences. This section explores how the teachers became a facilitator of social interaction and were positioned as the 'guide on the side' (Hertz-Lazarowitz, 1992, p.77). The teachers developed students' understanding of how to include group members, work together, and listen to each other. Indeed, the teachers' prompted students to engage in dialogue, prepared the less able students to engage in discussions with their teams, and gave specific feedback to learning teams on how they could support and help their less able peers.

On many occasions during both the second and third units, the less able students were not included into the discussions. However, this was not always intended by members of learning teams, but occurred as a consequence of team members' excitement about the task, where they quickly bounced ideas off of each other. Indeed, this frequently occurred in learning tasks that required teams to create or develop an aspect of their learning, such as the design of their own drill in a specific activity. Consequently, when listening to team discussions the teachers either reminded them that they should not take over the responsibilities of other team members, or they prompted the low able students to have a voice. For example, in Joey's (Buckingham) first lesson of games making he had to remind the class that each person in their team had a responsibility for the learning tasks.

> During the discussions some dominant members begin to take over each other's discussions. After their discussion time Joey reinforces the dependency on each other. He says 'remember guys you shouldn't be doing the jobs of other people today okay so that is up to them of what they choose to do. So, we can't just have Tim saying we are just going to do this sport because the equipment manager chooses what equipment they use, the scoring person decides how you score. (CLVT, U2 L1).

However, whilst Joey (Buckingham) paused his lesson to inform students not to take over the responsibilities from each other, Phil (Buckingham) prompted the less able students to be included in discussions. Indeed, when Connor was still to contribute to his team's discussion on the design of their football session, Phil

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(Buckingham) said 'Connor what do you think to that idea?, you haven't contributed much' (CLVT, U2 L2). From here Connor was able to share his thoughts on the task with the rest of the team and began to engage in the discussion. Indeed, in response to Phil's prompt, Connor said 'yeah I think that is a good idea as everyone is getting the ball and so there is pressure and everyone will achieve and have accurate passing' (CLVT, U2 L2). Through the teacher's prompt Connor was given an entry point into the team's discussion and was then included in the design of the football session.

To support the inclusion of less able students, Tom (Birchwood) decided to prepare these students for promotive face-to-face interaction. Tom prepared the less competent members of his learning teams for group discussions by asking these students to share their ideas with him first, before they engaged in a discussion with their team. In the creation of a fitness circuit, I observed Tom asking Luke (a student with learning difficulties) 'to share with him his ideas for the 6 stations, and then ask him to repeat the stations several times so that he remembers and can share with his team (CLVT, U2, L2). Consequently, Luke was able to share his ideas with his team, and I observed that some of the ideas shared were used in the performing phase of the task. Tom was preparing the less able students with the language they needed to use to communicate with their peers.

In further consideration of the teacher being 'the guide on the side' (Hertz-Lazarowitz, 1992, p.77), when tasks involved a creative element, and the less able students were given the responsibility within their team to design the task, the teachers encouraged other team members to support the less able students in the creation of the practices. Indeed, when the creation of a drill or task was within a traditional sport, such as basketball, it seemed that the less able students did not have the knowledge or understanding that would enable them to create a drill that could progress all team members' learning. For example, Phil (Buckingham) gave the team time to begin performing the task that the less able student had designed. He then asked the team to come together and discuss how they could make it more challenging in order to progress all team member's physical performance.

> After the group has had a chance to set up and perform their practice (which was led by Vince [a less able student]) he asked them to discuss [prompting face-to-face interaction] how they can make the drill harder and to consider the teaching points of passing (CLVT, U2 L4).

In Kelly's (Buckingham) lesson, when Ellie (a less able student) had created a drill in basketball that was not developmentally appropriate, and Kelly helped the other team member's understanding of how they could support Ellie in her role of the coach. My notes on the lesson shows that through Kelly's discussion with the team, the team were subsequently able to support Ellie in her role, and modify the drill she had created to support their team's learning.

> Ellie was the coach today, a student who is very quiet and shy in lessons and struggled with talking to her group….The initial drill to work on dribbling was developed by Ellie, which in itself showed a progression in her confidence and teaching her peers, was about dribbling the ball around the whole of the courts…
> Kelly: who is coach?
> India: Ellie, but she is really quiet so it is quite difficult
> Kelly: alright if Ellie is a little bit quiet what I would suggest is that you all get together and see if we can do it on a smaller scale so everyone is a little bit more engaged then. What we could do is ask yourself the question as a group how can you make this harder because are you being challenged with what you're doing? So how could you challenge yourself?….talk to Ellie share that and then try to come up with something After this conversation her team then worked with Ellie to reduce the size of the area for the drill focused on dribbling to be more effective. (CLVT, Yr 9[23], U2 L4).

However, whilst most teachers facilitated teams working together during their Cooperative Learning lessons, for Chris (Buckingham) he needed to pause his unit to develop his students' understanding of how to work together and learn within Cooperative Learning. Building upon my discussions in Chapter 4, Chris's class were more interested in playing games instead of completing the learning tasks. Indeed, Chris's students' desire to play games had continued from the first unit and into the second and third units taught. For example, during the third unit Chris said to me, 'all they want to do is just rally, with no focus and just rally… it needs

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[23] Kelly taught both a year 7 and a year 9 class

me to say right what is your focus do it' (PL Interview, U3 L2). Subsequently, rather than using prompts or preparing students to engage in discussions (as seen with the other teachers), I encouraged Chris to pause his unit and develop his students' interpersonal skills.

> Victoria: I wondered if it is if you need to have a teaching moment- do they know how to all coach?
> Chris: It is a good point
> Victoria: So like you come back in, so when you coach you make sure everyone is listening, you then have tasks and you get ideas to use cones, you structure the task and then after you have done it you have a discussion
> Chris: No I think that will work maybe we have rushed too much from one thing to another… I think yeah if I was to do it again then I would have a couple of teacher lessons and teach them how to be a teacher
> Victoria: Or you could do it in the next lesson that's what a teaching moment is
> Chris: Oh I didn't realise you could do that
> Victoria: yeah. (PL Interview, U3 L2)

The discussion with Chris shows that the students' desire to play games, in unit two and three, may have been a result of their limited understanding of how to coach and lead a learning team. The discussion also highlights that Chris was not aware that he could pause a unit to develop his students' understanding of how to coach. The discussion served to develop Chris's understanding of how he could use the Cooperative Learning model to support his students' learning. The following lesson, Chris took my advice and dedicated a lesson to the development of his students' coaching skills. The use of this teaching moment (Metzler, 2011), where the teacher intervenes in the learning process to support learning, proved to be a success. At the end of term, in a podcast Chris stated that, 'their cooperation had most definitely improved [and] their leadership skills have improved…they are taking responsibilities and going with it themselves' (Chris Podcast, 29.3.12).

This sub-section has shown that in order to break down the vertical ability hierarchies, the teachers needed to prompt the low able students to engage with discussions and develop the language these students needed to use to communicate with their peers. In addition, the teachers facilitated team members' understanding of how to support their less able peers and, in one example, the

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teacher paused a unit to develop his students' understanding of how to work together to learn. The teachers worked *with* the mess of the vertical ability hierarchies and through changing their actions they were developing the disposition of phronēsis through changing their doings to support students' learning. In the following section I build upon some of the outcomes of students' learning and discuss how, as a result of the teachers' changing their plans and actions, students' learning became positively correlated with one another.

Positively interdependent learning

As a result of beginning to break down the vertical ability hierarchies and the development in students' interpersonal skills there was an improvement in students' ability to work together to learn towards the end of the second unit and during the third units. In contrast to my discussions in Chapter 4, learning no longer occurred as a result of peer-tutoring (Lafont, 2012), or the teacher managing the learning teams. Instead, students began to depend on each other to learn, taking responsibility for their own and their team's learning, and in some cases, supporting their less able peers in their leadership roles. The following comments made by students, shows that the students began to depend on each other to learn, rather than the teacher.

> Sam: Instead of Mr Witt teaching our lessons, it has been about us teaching each other to get our own improvements and stuff.
> Andrew: yeah like today it was to improve our passing, which we did in our own groups and he only quickly asked us what we were doing and he didn't tell us that or anything, so we had to work it out for ourselves
> Keith: yeah we always chipped in and we all helped the other members (Phil, Buckingham, FG Interview U2).

Building upon my discussions in the previous two sections, it was also evident that the less able students were more included within the teams and became more confident working with their peers. Indeed, the less able students often said they felt more confident in lessons and they were more willing to lead their teams. For example, when I asked Molly (a very shy and quiet student) what was the best thing about the second unit, she said 'having more confidence'. When I asked her why, she said 'I just felt better than I did maybe last term when I couldn't do it,

but now I can go ahead and do it and stuff' (Kelly, Buckingham, Yr9, FG Interview U2). Christina (Buckingham) suggested that for her, as a teacher, it was the increase in all the students' confidence that was one of the most positive aspects of the second and third units.

> Most positive aspect of the unit, probably the progression they have made and the confidence that they have got to be honest. To see that they have got out there and they are actually doing it. It is such a nice feeling inside that what they are doing, they are achieving and they are smiling because they are achieving something they have never achieved before (PU Interview 3).

Taking this discussion further, similar to Casey (2013b) and Dyson and Strachan (2004, 2000) who discussed the progression in students' learning in a second unit taught, all students became more mature in the Cooperative Learning process as the number of units and lessons progressed. Indeed, the teachers suggested that they were seeing a development in the 'whole person' (Kelly, PU3 Interview) and they were 'seeing the student as a more rounded person as opposed to someone going, okay Sir I'll go off and do that' (Chris, Buckingham, Podcast 29.3.12). Furthermore, Tom (Birchwood) suggested that the developments in his students' confidence and interpersonal skills began to transfer into aspects of school life. Tom said that during the inter-house school sports competitions, 'these two forms [the classes involved in the study] just knocked spots off the others, in terms of their organisation, in terms of getting fair teams and listening (DD, U2 L3).

Considering the students' responses to the model further, similar to Dyson and Strachan's (2004) and Dyson *et al's* (2010) analysis of the ecology of the Cooperative Learning classroom, the students became increasingly fluent (Casey, 2010) in their learning as a result of the developed interpersonal skills and their increased understanding of how to learn through Cooperative Learning. Indeed, reflecting on the third unit, Graeme said 'we got our heads down and we just worked, there was no fuss or anything we just thought we have to do this so we just done it (Tom, Birchwood, FG Interview, U3). Consistent with Dyson and colleagues findings, when the social skills had become more developed and the management system was established, students were able to learn from each other

and develop in each of the learning domains. In some cases, through sharing knowledge and each other's opinions of the tasks, the students were able to extend each other's learning. For example, teams began to include their knowledge and understanding from other curriculum subjects to facilitate their team's performance.

> What was surprising was the Einsteins [a student role] lot brought in their knowledge from Science and started working out how fast they were. Literally someone would go, oh we could work out how fast we are going and the Einsteins would say, that is distance divided by time and the triangle that they use, and they were like oh it is this…and it was quite amazing how many of them were working out the speed that they were travelling over 30m (Kelly, Buckingham, PU3 Interview)

However, whilst students' learning was progressing, findings from the CLVT indicated that students' development in the social and cognitive domains were much greater than in the physical domain (Table 7, p.125). The teachers suggested that the greater learning gains in the social and cognitive domains were a result of the students still developing an understanding of how to coach each other and their understanding of teaching points for a 'sport'. Furthermore, the teachers claimed that if, for example, a student in a learning team couldn't perform the 'basic skill' of hitting the shuttle cock and yet the team were working on the overhead clear, the rest of the team were challenged with helping these students. Furthermore, in the team's pursuit to help the less able, other team members spent less time focussed on performing the skill which was relevant for their own physical competence level, and consequently, the progression in the team's physical performance was hindered.

> Sometimes it is basics, if they can't recite three teaching points and they don't know what the end result is and what it should look like, the final product of it, then they can't teach others to do it. (Jane, Buckingham, PU3 Interview).

> They are good with the lower able but they, again, they need that extended knowledge of how to, so poor little James can't perform a serve he keeps swinging and missing, the students haven't got the knowledge or skills to kind of help him. (Chris, Buckingham, PU3 Interview).

Whilst the teachers suggested that the students' developing ability to coach hindered gains in the physical domain, the greater development in the cognitive, social and affective domains may have also been a result of the learning tasks used in the second and third units. Indeed, a greater amount of time in the lessons had been afforded to students creating and designing their learning. For example, and building upon my discussions on Joey's (Buckingham) games making unit, Joey said that his unit 'was more about the creation of the new sport, and the discussions, and the cognitive learning about the sport, rather than the practical side' (PU2 Interview). An understanding approach (Casey, 2013b) and the focus on promotive face-to-face interaction limited students' progression in the physical domain.

At this juncture it is important to acknowledge that, in contrast to the first unit (i.e. Chapter 4), for the two students who had Aspergers, their learning and engagement declined as the lessons and the units went on. Speaking of Jim, Chris (Buckingham) stated that 'in badminton he has closed off, he has really put barriers up and he has been very, very difficult to get anything out of' (PU3 Interview). Whilst Chris had modified his groupings to support Jim, and paired him with a more able student, Jim did not speak to his team or partner. Similar to Chris, Joey (Buckingham) had to focus Eric on working with his group, and over the course of the units, despite Joey's facilitation, Eric was given several behaviour warnings in line with the school behaviour policy. The other students became frustrated with Eric. Joey claimed that 'they all learnt that they dislike Eric' (PU2 Interview) and his team were no longer able to engage and motivate him to perform as seen in the first unit. Thereby, whilst the change in the way the model was used and the way teachers' actions had supported equal status relations and positively interdependent learning, the teachers needed to do more to support the learning and engagement of the students with Aspergers. However, I did not observe the teachers make any modifications to support these students in the second and third units. Whilst it is beyond the scope of the thesis to explore this further, it could be suggested that the teachers were teaching to the middle abilities and not those who were below the normal boundary level of social

competence. Indeed, it has been argued that the notion of teaching to the middle is not the exception but the rule in many physical education programmes and is something, as a profession, that we need to address (Vickerman, 2010).

This section has explored how the teachers moved forwards *with* the mess of the vertical ability hierarchies that existed within learning teams, and during the second and third units taught the teachers changed their 'doings' (Kemmis, 2010, 2009) to support positively interdependent learning. Indeed, in order to break down the vertical ability hierarchies, the teachers were developing the disposition of phronēsis (Kemmis & Smith, 2008b) by changing how they used the model and their actions. Specifically, the teachers' changed the way they used the non-negotiables, their students' use of resources, and the teachers used less structured tasks (for example games making). Furthermore, in their role as a facilitator of learning, the teachers prompted students to engage, developed the language the less able students needed to discuss with their peers, and one teacher, paused a unit to develop his students' interpersonal skills. I have shown that the teachers' ability to act wisely was either developed through their own experience with the model, as it was situated in their practice, or through the support I provided the teachers in my role as a boundary spanner. However, regardless of how the teachers developed the disposition to act wisely, as a result of a change in the teachers' use of the model and the teachers' actions during lessons, students' learning during the second and third units was a result of positively interdependent teams. In contrast to unit one (as I discussed in Chapter 4), learning was no longer controlled by the more able. Instead, students' learning (except for those with Aspergers) in each was positively correlated with their peers. The findings explored in this section are another example of how the teachers were developing the disposition of phronēsis, which it seems reasonable to suggest supported students' learning being as a result of Cooperative Learning and not peer tutoring.

In the following section, I build upon the discussions within this chapter to show how the teachers were continuing to develop the disposition of phronēsis (Kemmis & Smith, 2008b). Indeed, for many teachers, as a result of engaging

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within and *with* the mess, Cooperative Learning was legitimized as an effective pedagogical approach and the teachers were beginning to move towards a messy turn (Cook, 2009) i.e. a change in which the emergent pedagogical practice started to become the dominant approach to teaching physical education. Furthermore, I discuss how the model was situated within the teachers' practice, respective departments and respective schools.

Changing Sayings, Doings, and Relatings: Moving Towards a Messy Turn

In continuing to discuss the concept of phronēsis, I now expand upon the messages within the previous two themes to explore how the teachers' sayings (what they think and say), doings (how they act) and relatings (the conditions of practice, how they relate to others and the conditions around us) (Kemmis, 2010, 2009) were transforming. It has been evident through the previous two themes that teachers changed their relatings by changing the conditions in which the model was used. Furthermore, the teachers changed their doings, by modifying their use of Cooperative Learning and their actions as a facilitator of learning to support the development of positively interdependent learners. The purpose of this section is to firstly discuss the changes in teachers' sayings and doings through the transformation in their perceptions of the emergent pedagogical practice and their reported increased levels of confidence to teach through Cooperative Learning. Secondly, I discuss how the teachers began to change their relations to others (their relatings) within their schools.

Sayings and doings

Similar to my discussions in Chapter 4 (whereby the students' positive responses to Cooperative Learning acted as a motivation for teachers to continue using the model), through their observations of students' learning the teachers continued to de-construct their beliefs about the dominant pedagogical practices and see the worth of the Cooperative Learning for its multi-dimensional focus on learning. For example, where Christina (Buckingham) had previously *pushed* students through the lesson to meet the performance related outcomes, she now said that

her students' learning gains were 'beyond what I expected' (PU3 Interview). Christina suggested that in comparison to her teacher-led approach 'they [the students] are learning a lot more from trampolining, learning together and working together as pairs to find out the skill that they have got to learn' (Podcast, 29.3.12). Furthermore, the centrality of 'sport' and physical performance in defining the success of a physical education lesson was beginning to move to the periphery of their practice. It was the multi-dimensional focus of learning which was seen by the teachers as important, and not how many tests students could perform or if they could replicate a skill in question (as seen in Chapter 4). Indeed, Kelly (Buckingham) suggested that when 'sport' did not define teaching and learning the students' learning was progressed in the social and affective domains.

> You know even though the sport hasn't been at the centre, they have learnt to teach each other, they have learnt to listen to each other and they have learnt to actually create and challenge each other, and I think having more of a holistic development of the child, rather than having a sport centred curriculum, has definitely been more beneficial. (PU3 Interview)

Although the findings from the CLVT (Table 7, p.125) showed that there was a decline in the consistency of the implementation of the non-negotiables, towards the end of the third unit the teachers were 'beginning to also state that the non-negotiables [were] becoming more autonomous' (FJ 30.3.12). In other words, the teachers had to think less about how they were implementing these in their lessons. Whilst there was a decline in the consistency of implementing the non-negotiables this could be attributed to the professional and curricular constraints (for example, the limited time to plan for lessons) and not solely the teachers' challenges with using the model. Alternatively, it could have been as a result of teachers 'pushing back' against the emerging pedagogical constraints of Cooperative Learning by finding ways to revert to dominant and/or residual practices. However my observations suggest that as the teachers understanding of the model increased so did their ability to use it. Indeed, once the teachers had to use the model *within* and *with* the mess, the teachers began to feel more comfortable and confident using the model. In particular, their role as a facilitator,

similar to Casey (2013b), was in 'marked contrast to the didactic teacher…in the early stages'. During the third unit it was 'the very act of trusting' (Casey, 2013b) their students. The teachers felt more comfortable with and allowing their students to discover things for themselves. For example, building upon the discussions earlier in this chapter, rather than telling students what to do, many of the teachers' afforded the students time to discover things for themselves and were even comfortable with allowing their students to make mistakes.

> I suppose it has become a bit easier because I suppose that is what is sometimes hardest, just sitting back and not giving them the answer or guiding them too much to the answer. I don't think I really gave them the answer that much but it is making sure that you do the leading questions rather than giving them closed questions and they have to find a way as a group to work out the answer. (Jane, Buckingham, PU3 Interview)

> I felt that the emphasis was very much on the students, to work out the problem, to work out the issue and to address the issue, and giving them time to do that rather than jumping in. (Phil, Buckingham, PU3 Interview)

> I allow myself to take a step back and allowing the kids to make mistakes and realising that they are only going to learn from it and as long as you question them in the right way about it, then actually them making the mistake has allowed them to learn a lot more than what it would have been if I had just gone in and corrected them. (Kelly, Buckingham, PU3 Interview).

The content that students were taught during the third unit also changed as a result of seeing what their students could do and what the students were capable of achieving. Indeed, Fullan (2007) argued that as a result of success teachers are motivated to do more, and during the third units I had observed that Tom (Birchwood) and Kelly (Buckingham) began to extend their students' learning by planning for content which was beyond the expected grade level. For example, in Kelly and Tom's separate units of health, the content was comparable to that used in their examination physical education classes. Yet the year seven students responded well to this and could engage with higher order thinking processes, calculating their $V0_{2max}$, deciding upon their teams' work to rest ratio and analysing their perceived exertion. As a result of the success, Tom began to re-

consider how he taught activities within his curricular and how Cooperative Learning could impact students' longer term learning within physical education.

> They understood the rating scale, they were able to apply it and reflect on how hard they had worked. Moreover, they were able to create their own circuit and develop their own work to rest ratios…This led Tom to consider how he normally teaches health and fitness. He suggested that if they are able to do this then it is something to consider for the future as it would improve their understanding of circuits for when they get to GCSE level and he actually wouldn't need to teach this area of the spec again. (FJ 15.3.12)

However, returning to Cook's (2009) discussions on the messiness of change, and that moving from a messy area to a messy turn is not an easy process; the changes in teachers' sayings and doings were inconsistent. For example, many of the teachers would facilitate a team's learning by guiding them to the answers, yet when they went and spoke to another group they would then begin telling them the answers. Moreover, whilst the role of the facilitator was valued and the teachers recognised 'it is about the teacher and students coming together' some of them found their role still 'quite bizarre' (Phil, Buckingham, PU2 Interview). Indeed, Christina (Buckingham) suggested that she still found facilitating learning quite hard, particularly when the students were struggling to understand the lesson content.

> The year sevens I think I found it hard to, like if I was working with a partner off of the trampoline and they don't know the teaching aspects of it, or they were struggling with the teaching points (Christina, Buckingham, PU3 Interview).

The teachers' perceptions of their practice and Cooperative Learning changed haphazardly. For example, despite Tom's (Birchwood) successful health lesson, where students were learning what he perceived to be above and beyond his expectations (a time when he felt comfortable in his approach), in the next lesson his perceptions of his students' learning within the model had changed. Despite my observations of students' learning and engagement being comparable to the previous lesson he taught, at the end of the lesson he said 'sometimes I do think there is still a lack of pace' (PL Interview, U2 L3). Similar to Casey (2013b),

whilst there was a transformation in teachers' sayings and doings, the dominant pedagogical practices and it could be said the practice architectures (OfSTED and the teaching and learning expectations), continued to obscure the teachers use of Cooperative Learning. Whilst there was a transformation, the teachers were continuously going backwards and forwards in their dispositions and actions, and had not reached a messy turn (Cook, 2009). In the following sections I discuss Kemmis's (2010, 2009) third concept of phronēsis, relatings, and show how for some teachers they had begun to transform the way that they related to others as a means that would support their use of Cooperative Learning.

Relatings

Kemmis (2010, 2009) suggested that the concept of relatings refers to how one transforms the conditions of practice, the ways they relate to others, and the circumstances around them. Drawing on the notion of relatings to others, this section explores how teachers' social relations and communication with others supported their practice. I begin by exploring how the department at Buckingham were emerging into a community of practice (CoP) (Wenger, 1998). Secondly, I discuss how the emergence of a CoP did not occur at Birchwood. Indeed, Tom and Nikki (Birchwood) rarely worked together and were dependent on my support for their changing practice.

The emergence of a community of practice at Buckingham

My role as a boundary spanner and the use of technology in the form of social media fostered the emergence of a CoP at Buckingham. An emerging CoP was seen through the development in the three dimensions of a CoP: mutual engagement, a joint enterprise and a shared repertoire (Wenger, 1998). Mutual engagement is where each participant occupies a unique identity where their contributions are important for other members. Through joint enterprise members facilitate the development of each other's practice, and the practice of the community, in order to achieve a common and negotiated goal. Finally, shared repertoire is used to identify how the community begin to develop routines,

actions, or ways of doing things that become a sustainable part of their practice. In this section I explore how these three dimensions were emerging. However, I am not suggesting the department had emerged into a CoP, I recognise that CoP take time to emerge and that a CoP must have some form of history to emerge from (Barab & Duffy, 2012; Hoadley, 2012). Thereby, I consider that the professional learning meetings, social media and recognition for their practice showed signs of the emergence of the dimensions and gave the CoP a form of history to emerge from, which will be discussed further in Chapter 6.

Over the course of the second and third units taught the teachers at Buckingham were reluctant to discuss their use of the model with each other. Although they knew that other teachers in their department were teaching through the model 'they didn't know the ins and outs' (FJ 27.2.12). Subsequently, during the third unit taught, I tried to encourage dialogue between teachers through two professional learning meetings. In the first meeting I initiated a discussion to discuss the writing of a piece for a professional journal with the teachers: *Physical Education Teachers' Top Tips for Teaching Physical Education through the Cooperative Learning Model* (Goodyear, 2012). The teachers were keen to discuss their practice and when voicing common experiences through the top tips, the teachers learnt that their opinions of best practice showed significant commonality across their department. This, in turn, legitimized the ways that they were using the model and strengthened their belief that they were doing it 'right'.

> Jane: depends on how good you are at doing open and closed questions, so you become more of a facilitator not someone who gives the answer to them, I think that can come with experience
> Chris: yeah so start your questions how, why, if or how could you improve this
> Joey: yeah, or if you [also] put questions on your resource cards as a separate box then you don't even have to deliver them to the pupils. Rather than you having to interject and formally question you can enhance and deepen their discussions that have already begun
> Kelly; yeah that is almost the thing that I did with progressive questions….
> (PL Meeting, Buckingham 16.3.12)

The second meeting I initiated was at the end of the third unit. Based on my observations of each teacher's use of the model I encouraged them to open up a pedagogical dialogue with their colleagues as I felt that it would help them to further both their understanding of the model and their use of it. For example, in acknowledgement of the challenges that some of the teachers were facing with their implementation and use of group processing, I asked Jane (Buckingham) to share how she had modified her use of group processing (as I discussed in Chapter 4). This process was then repeated with each teacher where I asked them to share examples of how they were supporting students' learning. Subsequently, they began to develop shared understandings about how they were teaching through the Cooperative Learning model.

> Victoria: Jane found that when she was doing group processing
> Jane: it lasted thirty seconds
> Victoria: yeah and it was really short….[looking at Miss Sand] do you want to describe what you did?
> Jane: …. I went back and I completely stopped the lesson and I think I spent a good 15-20 minutes on what I expect from group processing…..
> (PL Meeting, Buckingham 29.3.12)

The teachers' use of the model became further legitimized through the virtual world of Facebook and Twitter. During this phase of the study there was a heightened number of re-tweets and the liking of the Facebook photos by Joey, Jane and Kelly (Buckingham). My status updates, and photos of the workshops during the period of initiation and some of the meetings which took place during the term, served as a method for the teachers to gain recognition for their practice from both me but also from within their own virtual professional learning communities (Casey, 2012c; Sennett, 2012). For example, the most frequent user of the social networking sites for professional dialogue, Kelly shared the photo's I had posted within her virtual network community on Twitter and Facebook by posting them as her own tweets as well as re-tweeting my own: 'Photos from @VGoodyear recent CL study CPD. #pegeeks #physed #edchat[24]' (Twitter). She

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[24] For example, #pegeeks is known as a hashtag on twitter which links a person's tweet to a discussion board and a professional learning network that they are part of.

also changed her Twitter profile background picture to, firstly one of the pictures of the professional learning meeting, and then secondly, to a digital montage of the non-negotiables and the learning outcomes of the model. Subsequently, through the re-tweets and sharing of my messages within their own professional learning communities, the teachers began to gain recognition from those outside the immediate local community of the department. Indeed, at Buckingham, teachers from other subject areas, two members of the senior leadership team and the caretaker liked[25] the photos posted to Facebook.

Considering the social networking sites further and this notion of recognition, in contrast to the first unit, through social media the teachers were contacting me less about 'what to do' in their lessons. Instead, they began to respond to my status updates by sending me updates about their practice or things they had completed, such as their student interviews. Drawing on Sennett's (2012) discussions on users of social media, it could be suggested that through my tweets, my status updates, the tweets about good practice and the liking of Facebook photos, the teachers were developing an identity as a *star performer* within their virtual communities and through the recognition they received from me and these virtual communities. The following is an example of how Jane responded to my tweet on her practice, and shared with me how her lesson had gone, tweeting the successful outcomes.

> @VGoodyear: @Jane gave students whiteboards 2 think & note TP's from a demo & use to discuss in their team: think-share-perform in Badminton @Jane: year 8 lesson went better. I also put on group processing before we did match play so I didn't forget about it or run out of time (Twitter).

The teachers' gained further recognition for their practice through their discussions with senior leaders and colleagues within their schools. In addition, during unit two the teachers began to develop the understanding of colleagues who were external to their department in the use of the model.

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[25] When photos are posted to Facebook by another individual liking the photo it shows a sign of appreciation of what has been captured and posted.

> When Joey explained the study in the school meeting the deputy head said that the PE department are involved in a great study enhancing their teaching and learning and that staff should go down to the department and see what is going on…Moreover, the assistant head has shown some interest, Chris has said that he is shocked and thinks it is excellent that he reflects on his lessons using the Dictaphone whilst he is on break time duty. (FJ 22.2.12).

Returning to my discussions on the emergence of a CoP, when the teachers at Buckingham shared their practice with each other during professional learning meetings, and by communicating their practice to school members, they began to situate their practice within their department and as a collective group of individuals using the same pedagogical innovation within the school (i.e. joint enterprise). Through this *telling of stories* (Barab and Duffy, 2012 the teachers began to construct an identity as a member of a community where they began to see themselves as knowledgeable and skilful and understand that they had shared practices (i.e. mutual engagement). Furthermore, through the sharing of good practice and giving each other ideas on how to use the model, the department showed signs of developing shared actions that could be become a sustainable part of their practice (i.e. shared repertoire). Thereby, this section has shown that the department began to shows signs that they were developing, and could continue to develop, the three dimensions of a CoP: mutual engagement, joint enterprise and a shared repertoire (Wenger, 1998). In Chapter 6, I continue these discussions on the CoP and show how the department progressed in the way they related to one-another to support their practice, where mutual engagement, a shared repertoire and a joint enterprise was observed (Wenger, 1998a).

Working with the boundary spanner and in isolation at Birchwood

Although the teachers at Buckingham began to connect with one another and develop a shared history, this did not occur at Birchwood. Despite my attempts to encourage professional learning meetings to take place, and encourage connectivity, the meetings we had arranged were cancelled by Tom and Nikki. Similar to Hargreaves's (1994) discussions on professional learning communities, the teachers' workload (through their commitment to school trips and examination

physical education) limited the time they had available to talk to each other and engage in the professional learning meetings. For example, when I asked Nikki if she and Tom spoke with one-another about Cooperative Learning, she said, 'we do talk to each other about it when we do get chance. I think it is just timing…it's always more of an ad-hoc process' (PU1 Interview). Whilst the teachers were willing to share their practice with each other in unit one in a professional learning meeting (as I discussed in Chapter 4), the practice architectures had constrained the time they had available to invest in supporting each other's practice.

In consideration of technology, whilst social media served to contribute to the development of an identity and situate the teachers' practice within the wider society at Buckingham, Tom and Nikki were less frequent users of social media. Indeed, Tom was not a user of social media at all and Nikki, whilst she saw the tweets and updates, rarely talked about her practice to me, or anyone else, through social media. Nikki's use of social media was more comparable to the notion of friending i.e. when social media is used as means to connect with friends (Sennett, 2012). Yet in further consideration of technology, whilst Nikki rarely used social media I frequently spoke with Nikki through text messages or phone conversations. Indeed, similar to the retweets and tweets made by the teachers at Buckingham, she would send me text messages about things that were going well in her practice. The accolade of success through text messages was a potential avenue for her seeking recognition and reassurance. However, I only spoke with Tom face-to-face, and rarely through text messages or email, and never on the phone. Whilst the text message below from Nikki shows how she communicated her practice with me through technology, technology did not support Tom's practice or encouraged him to connect with me or his colleagues

> Coop was good today. Some students had groaned but more because it was netball than coop learning. Some of their warm ups were brilliant and two groups even combined together because they thought they could practice their teaching points on each other :0) I had to check myself because I had started off a rant i.e. why are you all working together etc and then once they had explained I thought it was brilliant lol! Control freak or what xx (Nikki, Text message).

However, similar to Buckingham, Tom and Nikki's use of Cooperative Learning was acknowledged by senior leaders and colleagues in the school. For example, Nikki was asked to lead an in-house professional learning session on Cooperative Learning and Tom had begun to talk to a senior leader and another teacher within the physical education department about his practice. Whilst these social relations gave them a form of moral support, their relatings with each other were weak and infrequent. Indeed, the teachers at Buckingham had more comprehensively transformed their relatings to others and the conditions in which they worked through the emergence of an identity as a member of a CoP (Wenger, 1998).

In this section, it is evident that the teachers were developing the disposition of phronēsis through transforming their sayings, doings and relatings (Kemmis, 2010, 2009). Indeed, as a result of the teachers' engagement *with* and *within* the mess, and their observations of students' learning, the teachers' sayings transformed. Cooperative Learning was legitimized as an important part of their practice, where the multi-dimensional focus on learning was valued. Furthermore, the teachers were becoming more comfortable and confident teaching through the model and for some, they transformed their doings by teaching their students content which was beyond the expected grade level. However, these changes in their sayings and doings were inconsistent, and in consideration of the messy process of change, the teachers were continuously going backwards and forwards in their dispositions and actions, and had not reached a messy turn (Cook, 2009). Drawing on the third concept of phronēsis, relatings (Kemmis, 2010, 2009), the department at Buckingham had begun to develop the three dimensions of a CoP: mutual engagement, joint enterprise and a shared repertoire (Wenger, 1998) that could support their long-term use of the model. However, whilst the teachers at Buckingham shared their practice with each other, the teachers at Birchwood worked in isolation and had not changed the way they related to each other as a means to support their practice. Whilst there was a transformation in the disposition of phronēsis, the discussions in this chapter suggest that teachers' sayings, doings and relatings had not consistently or collectively transformed.

5.5. Chapter Conclusion

This chapter has considered how the teachers moved 'forward *within* the mess and *with* the mess, towards a messy turn' (Cook, 2009 p.286). Whilst the teachers were motivated to use the model, as a result of their experiences in unit one (as I discussed in Chapter 4), during the second and third units the teachers were confronted with the mess of the professional and curricular constraints i.e. the practice architectures. For example, examination physical education and changes made by senior colleagues to the pre-planned programme of study (that was organised through the multi-activity approach), limited the time teachers had available to plan and the consistency of their units. In addition to these professional and curricular constraints, the mess also existed in the vertical ability hierarchies that operated through teams. Thereby, in order to use the model and support students' learning, I have shown how the teachers' moved forwards *within* and *with* these messes. The teachers explored the practicality of implementation, and in doing so began to develop the disposition of phronēsis.

In further consideration of phronēsis, over the course of the second and third units the teachers transformed their sayings, doings and relatings (Kemmis, 2010, 2009; Kemmis & Smith, 2008b). Firstly, the teachers changed the conditions in which they practiced (relatings) by using short and intermittent units to be able to use the model within the professional and curricular constraints. Secondly, the teachers changed the way they used the model and modified their actions in the role of the facilitator, to break down the vertical ability hierarchies. Subsequently, the change in these doings (Kemmis, 2010, 2009) led to the creation of positively interdependent learning, and in contrast to unit one, each student's learning (except for those with Aspergers) was positively correlated with their peers. As a result of these changes in teachers' relatings and doings, I suggested that the model became legitimized as an important inclusion into the teachers' practice. Indeed, the teachers' suggested that the multi-dimensional focus on learning was important (sayings), and sport and the physical domain to the periphery of their practice (doings). Furthermore, the teachers began to change the way they related to others as a means to support their practice (relatings). At Buckingham, the most

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significant change was seen through the way the teachers connected with each other and the emergence of a CoP.

I conclude this chapter by suggesting that as a result of changing their actions and engaging *within* and *with* the mess, the teachers were able to use the model within their curricular, create positively interdependent learning and subsequently see that Cooperative Learning was an important inclusion into their practice. However, this was not an easy process, and not all of the teachers' felt comfortable with their changing practice. Cooperative Learning had survived the 'tough test of reality' and the teachers' had explored the practicality of implementation (Hargreaves, 1994, p.12), continuing to move towards, but had not yet reached, a messy turn (Cook, 2009). Drawing on Williams' (1977) discussions on cultural processes and elements, an amalgamation of sports, fitness, games, skills and student-centred approaches was still the dominant pedagogical practice. The teacher-centred approach was the residual and Cooperative Learning was still the emergent by the end of unit three, in both schools. In the following Chapter, I consider how some of the teachers were emerging into the phase of continuation (Fullan, 2007). These teachers made overt changes in how they used the model, they reached a messy turn and I will discuss how Cooperative Learning was becoming the dominant pedagogical approach. Yet at the same time, not all teachers were emerging into this phase of continuation. Instead some teachers were emerging into rejection where sports, skills, games and a teacher-centred approach remained as the dominant and residual pedagogical practices, and the practice architectures continued to constrain teachers' dispositions and actions.

CHAPTER 6: EMERGING INTO A PHASE OF CONTINUATION AND EMERGING INTO REJECTION

In this Chapter I consider two overarching themes, emerging continuation (confirmation, institutionalization or routinaization) and emerging rejection (the act of discontinuance) (Fullan, 2007). The teachers that were emerging into the phase of continuation, who I have termed the adapters, could adapt their use of the model to extend students' learning and meet their classroom, departmental, and school contextual circumstances. For the adapters, Cooperative Learning was emerging as the dominant pedagogical practice and by the end of this yearlong study they had reached a messy turn (Cook, 2009). A messy turn is considered through the 'new understandings [that] were revealed, developed and articulated' (Cook, 2009, p.282) that reflected the long-term use of the model and the continuation of the model beyond this study. In contrast, the teachers who were emerging into rejection, the non-adapters, did not use the model in its entirety. Sports performance and a teacher-led approach remained as the dominant and residual pedagogical practices (Evans, 2013; Kirk, 2010, 2012; Tinning, 2012, 2010). These teachers did not reach a messy turn and remained *within* the mess of the practice architectures[26] (Cook, 2009; Kemmis & Grootenboer, 2008). They are positioned as emerging into rejection as they did not adapt their use of the model to meet the contextual circumstances that would allow the model to become the dominant pedagogical practice and extend students' learning.

At this juncture I am aware that some of the discussions around the teachers' change in practice, and subsequently their students' learning, could be conceived as a *victory dance*. Whilst celebratory research findings are 'necessary and

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[26] How the practices *constructed* by those outside of the classroom influence the practice within a classroom (Kemmis & Grootenboer, 2008).

developmental', Groundwater-Smith and Mockler (2005, p.12) suggest that those
who report on action research need to adopt and acknowledge the power of a
critical appraisal of events considering the evidence which led to the subsequent
change in practice. In recognition of Groundwater-Smith and Mockler (2005) I
have sought to explore the evidence which led up to emerging continuation and
rejection through a critical lens. I also acknowledge that the continuation of an
innovation, where it becomes part of teachers' on-going and daily routines,
usually occurs after 2-3 years of implementation (Fullan, 2007). Furthermore, I
am aware that the rates at which teachers, or a collective group of teachers, move
from implementation to continuation varies and can be dependent on the local
support teachers receive within their schools or departments (Fullan, 2007).
Thereby, the discussions within this chapter show how the model was emerging
from teachers' previous experience (where the change in practice and
development in phronēsis has not been an easy process (Kemmis & Smith,
2008b)) and was beginning to emerge into their future dispositions of pedagogical
change. This chapter could be conceptualised as a segue between implementation
and change: change as the sustained use of Cooperative Learning or change as the
rejection of Cooperative Learning as a worthwhile pedagogical practice. In the
following section I explore the teachers who I have positioned as moving into a
phase of continuation (i.e. the adapters) and those who were emerging into
rejection (i.e. the non-adapters).

Emerging continuation (adapters) and emerging rejection (non-adapters)

The teachers who were moving from implementation and emerging into the phase
of continuation were the six teachers within the department at Buckingham. These
teachers immersed themselves into the model and began to develop 'pedagogical
fluency' (Casey, 2010, p.263). By this means, the teachers became fluent in their
use of Cooperative Learning and similar to when one learns a language, they no
longer needed the *phrase book* for how to use the non-negotiables, how to
implement the model in their practice or curricular and how to support group
work (as I discussed in Chapter 4 and 5). As result of working *within* and *with* the
mess some teachers now worked beyond the mess (Cook, 2009) adapting their use

of the model to extend students' learning and support each other's use of the model within the department. Indeed, the teachers could implement the non-negotiables with a high level of consistency (Table 7, p.125) and they taught as cultivation of experience i.e. they built upon students' emerging learning experiences (Darling-Hammond, 2007; Dewey, 1938,1990). Competition was also included into units as a theme which served to motivate students to learn. Furthermore, through the observations of mutual engagement, a shared repertoire and joint enterprise, the department at Buckingham were emerging into a community of practice (CoP) (Wenger, 1998) which provided moral support and enabled the teachers to work beyond the practice architectures (Kemmis & Grootenboer, 2008) (i.e. time to plan, the programme of study and OfSTED expectations).

Whilst at Buckingham the teachers were emerging into continuation, the teachers at Birchwood returned to their practices from the past i.e. sports performance, games, skills and a teacher-centred approach. Although the findings from the CLVT show that there was a high level of consistency with regard to the implementation of the non-negotiables (Table.7, p.125) (similar to my discussions in Chapter 4), in the final phase of this yearlong study Cooperative Learning was used within the dominant and residual pedagogical practices. In contrast to the teachers at Buckingham moving forwards *with* and beyond the mess, it seemed Birchwood had gone backwards *with* the mess. Indeed, rather than working beyond the practice architectures (Kemmis & Grootenboer, 2008) (i.e. the programme of study, the weather, OfSTED criteria and the time available to plan), the extraneous demands and cultural expectations continued to constrain these teachers' dispositions and actions. Moreover, Tom was the only remaining teacher using the model at Birchwood since Nikki had removed herself from the study due to the practice architectures (Kemmis & Grootenboer, 2008) preventing lessons from taking place and commitments besides her professional life. Therefore, Tom was innovating alone.

Despite the similarity between the teachers' practice within the respective schools, the way Cooperative Learning was used varied between the teachers within the

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schools as well as across the schools. Table 8 (p.193-196) shows how I have
classified the differences in the teachers' use of the model. I have used four
categories: the adapters, the co-adapters, the dependent-adapters, and the non-
adapters. These categories signify the variance in the way the model was adapted
to support students' learning through unit and lesson design and in the teachers'
role as a facilitator to learning. The categories also signify the variance in social
support, from both me (as a boundary spanner) and from each other, that affected
the extent to which the model was adapted. For example, the dependent-adapters
needed more guidance and advice from me than the adapters. Furthermore, the
teachers at Buckingham who were emerging into continuation (the adapters, the
co-adapters and the dependent-adapters) were also emerging into a CoP, where
they together adapted the use of the model for it to be implementable in their
classrooms, department and school.

The adapters are Jane and Kelly (Buckingham). These two teachers had the
greatest overt changes in their unit and lesson design and in their actions as a
facilitator of learning (Table 8 p.193-196). The adapters were pedagogically fluent
and were able adapt their use of the model and apply *new* knowledge fluently with
limited guidance from me. I merely initiated Jane and Kelly's understandings of
how to change their practices during a professional learning meeting at the end of
unit three. Indeed, Jane and Kelly taught as a cultivation of experience (Darling-
Hammond, 2007) (through their use of group processing and in their role as the
facilitator) and they included competition into their units (Table 8). Therefore,
Jane and Kelly have been positioned by me as the adapters because they could
fluently adapt their use of the model to extend students' learning with limited
support and guidance from me.

I have used the adapters' practices as the behavioural and social support frame of
reference for the remaining five teachers. The co-adapters, dependent-adapters
and the non-adapters did not adapt their practice, or become pedagogically fluent
in the same way as the adapters. Whilst at Buckingham I initiated all teachers in
the department's understanding of how to become pedagogically fluent (through
the professional learning meeting at the end of unit three), Chris and Joey

(Buckingham), who were the co-adapters, did not change their practice to the same degree as the adapters. These teachers, whilst they taught as a cultivation of experience, adapted their use of the Cooperative Learning structures, and included competition into their units, needed guidance from me to be able to adapt their use of the model. Co-adapter signals the co-adaptation of lessons and units between teachers and me.

In contrast, the dependent- adapters, Christina (Buckingham) and Phil (Buckingham) needed an additional level of support. For example, they were dependent on me for how they could adapt their role as a facilitator of learning to teach as a cultivation of experience. Christina and Phil were not able to apply their new understandings to their practice as the co-adapters and the adapters had (Table 8, p.193-196). The dependent-adapters category is used to demonstrate how the teachers were willing to change but they were dependent on the boundary spanner for ideas of how to become pedagogically fluent.

Although I was able to support the adapters, co-adapters and the dependent-adapters becoming pedagogically fluent, Tom (Birchwood) and Nikki (Birchwood), the non-adapters, did not adapt their use of the model. The non-adapters use of Cooperative Learning was constrained by the practice architectures. Indeed, whilst Tom (Birchwood) had not discontinued his use of the model yet, as Nikki had, he used Cooperative Learning in a way that was vastly different to the adapters (Table 8, p.193-196). The model remained immersed within the dominant and residual pedagogical practices i.e. sports, skills, games, a teacher-led approach, and was constrained by the practice architectures of for example, OfSTED. The non-adapter category is used show how these teachers did not adapt their use of the model, despite support and encouragement from the boundary spanner.

Building upon my discussions on the difference in the use of the model between schools and between teachers, the key variables that affected the overt changes in teachers practice were a) support from me as a boundary spanner, and b) the social context i.e. the emergence of a CoP in comparison to innovating alone. Drawing

on Rovegno and Bandheur (1997), who suggested that prior knowledge and experience, and time spent using constructivist approaches to learning facilitated teachers' ability to sequence learning, these factors were only relevant to the adapters. Indeed, the co-adapters, the dependent-adapters and the non-adapter had similar levels of experience with other pedagogical models (such as Sport Education and Teaching Games for Understanding) prior to this study, and these teachers had taught a similar number of lessons over the course of the year. Therefore, the experience of leading a programme of Sport Education, the experience of teaching using the Cooperative Learning model, and over forty lessons taught seemed to allow the adapters to adapt their use of the model with limited guidance from me.

In this section I have shown that the teachers at Buckingham were emerging into continuation and the teachers at Birchwood were emerging into rejection. The degree of adaptation varied between the teachers, and I have used four categories that include adapters, co-adapters, dependent-adapters and non-adapters to explore the differences in teachers' practice (Table 8, p.193-196). In order to support my discussions from within this section I will now refer to the teachers by name, school and their category (e.g. Jane, Buckingham, *adapter)*. In the remainder of this Chapter I build upon my discussions in Chapter's 4 and 5 to explore the use of Cooperative Learning beyond the honeymoon period of implementation. I firstly explore the teachers at Buckingham's practice who were emerging into continuation and could adapt their use of the model to extend students' learning and then the emerging rejecters at Birchwood.

Table 8. The adapters, co-adapters, dependent-adapters and non-adapters' use of the model and the variance in social support

	Teacher/ No of lessons taught	Previous experience with pedagogical models	Unit and lesson design	Role of the facilitator	Support from Boundary Spanner	
Emerging Continuation: Adapters	***Jane*** Buckingham 28 lessons	Taught & led a programme of Sport Education	Combined Cooperative Learning structures. Taught as a cultivation of experience: connected learning through group processing where students chose their roles. Used limited resources and when they were used they were a supportive tool. Competition was an overarching unit theme	Teacher-as-expert to movement task using hints and questions *only* to develop students' understanding	Professional learning meeting (unit 3) Limited support – the boundary spanner was used to talk ideas through with on the phone	**Emerging Community of Practice**
	Kelly Buckingham 46 lessons	Learnt of Sport Education and Cooperative Learning during teacher training	Taught as a cultivation of experiences: connected learning through group processing and allowing students to choose their roles. Used limited resources and when they were used were a supportive tool Taught students the non-negotiables of the model. Competition was an overarching unit theme	Teacher-as-expert to movement task using hints and questions *only* to develop students' understanding	Professional learning meeting (unit 3) Designed units independent of boundary spanner. Spoke with boundary spanner on twitter who prompted the teacher to focus on students emerging learning experiences in unit design	

	Teacher/ No of lessons taught	Previous experience with pedagogical models	Unit & lesson design	Role of the facilitator	Support from Boundary Spanner	
Emerging Continuation: Co-adapters	*Chris* Buckingham 26 lessons	Taught through Sport Education and Teaching Games for Understanding	Combined Cooperative Learning structures. Taught as a cultivation of experience: connecting learning through group processing and allowing students to choose their group goals. Students selected roles from pre-determined list. Some resources were used as a step-by-step guide. Competition used through pairs tournaments and STAD*	Teacher-as-expert to movement task using hints and questions to develop students' understanding Sometimes adopted the role of the competent bystander	Professional learning meeting (end of unit 3). Designed units independent of boundary spanner but teacher sought advice about unit design and lessons. Boundary spanner gave the teacher advice on role of facilitator and how to structure lessons and resources.	**Emerging Community of Practice**
	Joey Buckingham 24 lessons	Taught through Sport Education	Combined Cooperative Learning structures. Provided students with step-by-step guide Students were afforded the opportunity to choose their roles Group processing focussed on performance based outcomes only. Competition used through pairs tournaments and STAD*	Teacher-as-expert to movement task using hints and questions to develop students' understanding. Sometimes adopted the role of the competent bystander	Professional learning meeting (end of unit 3) Needed support from boundary spanner to ensure non-negotiables were fulfilled in unit design	

	Teacher/ No of lessons taught	Previous experience with pedagogical models	Unit & lesson design	Role of the facilitator	Support from Boundary Spanner	
Emerging Continuation: Dependent-adapters	*Christina* Buckingham 33 lessons	None	Used one structure per unit. Provided students with step-by-step guide on resources Students were afforded the opportunity to choose their roles from a pre-determined list. Students were given parts of the lesson to create their learning tasks. Competition through the structure of STAD* was central to the units taught	Inconsistently acted as a teacher-as-expert to movement task using hints and questions to develop students' understanding For physical and social learning sometimes adopted do-as-I-do approach.	Professional learning meeting (end of unit 3) Coached and mentored through lessons when trying to act in the role of the facilitator	**Emerging Community of Practice**
	Phil Buckingham 20 lessons	Taught through Sport Education	Used one structure per unit. Provided students with step-by-step guide on resources Students were afforded the opportunity to choose their roles from a pre-determined list. Students were given parts of the lesson to create their learning tasks.	Inconsistently acted as a teacher-as-expert to movement task using hints and questions to develop students' understanding Controlled the start of lessons and teacher-led group processing	Professional learning meeting (end of unit 3) Coached and mentored through lessons when trying to act in the role of the facilitator	

	Teacher/ No of lessons taught	Previous experience with pedagogical models	Unit & lesson design	Role of the facilitator	Support from Boundary Spanner	
Emerging Rejection: Non-adapters	*Nikki* Birchwood 8 lessons	Learnt of Teaching Games for Understanding during PGCE	Only used one structure Provided students with step-by-step instructions No choice in roles Cooperative Learning was immersed in the dominant and residual pedagogical practices[a]	Sometimes shouted over students adopted the do-as-I-do approach	Frequent discussions through text messages and on the phone	**Rejection**
	Tom Birchwood 23 lessons (33 hours)	Taught through Sport Education	Used the model within the dominant and residual practices of sports, skills, games and a teacher-led approach. More able students were placed in the role of the coach. Provided students with step-by-step instructions on resources. No choice in roles, competition in an ego climate	Switched between a teacher-centred and student-centred approach haphazardly within lessons. Often controlled the learning environment used whole class teacher demonstrations	Only spoke with boundary spanner face-to-face when she visited the school.	**Innovating Alone**

*STAD: Student Teams Achievement Division: a Slavin (1995) Cooperative Learning structure that places emphasis on group rewards [a]As discussed in chapter 4

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Emerging continuation

In Chapter 5 I explored how the teachers worked *within* the mess of the practice
architectures and *with* the mess of the vertical ability hierarchies, in this section I
explore how the teachers within the department at Buckingham had continued to
adapt how they were implementing the model to support students' learning and
their own use of the model. However, rather than developing the disposition of
phronēsis (ability to act wisely), for the model to be implementable and to break
down vertical ability hierarchies, these teachers were now acting wisely to support
each other's practice and to facilitate their students' learning in the physical,
social, cognitive and affective domains. Firstly, I discuss how the teachers taught
as a cultivation of experience (Darling-Hammond, 2007; Dewey, 1938, 1900).
Secondly, I explore how competition became a central theme to the teachers' use
of the model. Thirdly, I show how I facilitated the teachers at Buckingham's
changing practice. Fourthly, I suggest that the emerging CoP encouraged the
teachers and their department to move beyond the practice architectures (Kemmis
& Grootenboer, 2008). Finally, as a result of these I show that the teachers at
Buckingham school were emerging into continuation and had reached a messy
turn (Cook, 2009).

Teaching as a Cultivation of experience

Capturing the notion of teaching as a cultivation of experience, i.e. when the
teacher builds upon students' emerging learning experiences (Darling-Hammond,
2007; Dewey, 1938, 1900), Casey (2012c) and Casey and Dyson (2012) claimed
it is when the teacher becomes a co-participant with the students they teach.
Through this lens the teacher responds to the nuances and events that happen in
the classroom to create progressive and authentic learning experiences (Casey,
2012c; Dyson & Casey, 2012b). In his use of pedagogical models, Casey (2010)
described these teacher actions as pedagogical fluency, a time when he, as the
teacher, could think within a model and could respond to students' emerging
learning experiences, changing his actions and tasks to support students' learning.
I will now explore how the teachers taught as a cultivation of experience and were

becoming pedagogically fluent. This will be explored through my discussions on
how teachers' used group processing, how the teachers' actions changed in the
role of the facilitator, and the students' responses to the teachers' changing
practice.

Group Processing

Similar to the conclusions made by Casey and Dyson (2012), that group
processing serves as the central element to Cooperative Learning, group
processing supported teaching as a cultivation of experience. Indeed, Sutherland
(2012) suggests group processing is paramount to facilitating the transfer of
learning, and Vygosky (1978) and Dewey (1938, 1933, 1929) argued that
reflection is one way for the learner to connect their pre-existing knowledge to
their future learning experiences. Drawing on these arguments, in this section I
show how group processing acted as a pedagogical scaffold to connect students'
learning from lesson to lesson. The adapters and co-adapters, whilst at varying
degrees, encouraged the students to reflect on specific aspects of their team work
and encouraged students to identify the roles they wanted to use, and choose their
group goals for the next lesson.

In consideration of students' freedom to choose their own roles first, Jane
(Buckingham, *adapter*) had continued to use group processing as a significant
feature of her practice. In Chapter 4 I showed how Jane spent thirty minutes
developing her students understanding of how to reflect, and then in Chapter 5 I
explored how she supported members of her department's understanding (with my
encouragement) of how she had used group processing. In the fourth and fifth
units, Jane now built upon her own practice and her students' learning experiences
and used group processing as a means for students to make decisions about how
their team could and should work together to learn. Instead of assigning students
to roles, as she had previously (units one, two and three), Jane left the choice to
the teams. She encouraged teams to consider if they needed roles and then the
teams could make changes each week as part of their reflection during group
processing.

> I have not given you roles today, you can decide as a group if you want to
> have roles. I will give you some ideas but you can decide now, so you
> might try giving people roles or you might not, but the onus now is for
> your choice of whether you want to give people roles or whether you don't
> (CLVT U5 L1).

When I spoke to the students in her year eight class at the end of the unit they
stated that 'we basically had a leader for the day' (Tammy) and the leader 'had the
card and they would all tell us what we had to do' (Ali) 'and positions and
position everyone and stuff' (Dee) (FG Interview, U5). When I asked them, 'so
has that person changed each week?' (Victoria), the team replied 'yeah' and
Tammy commented, 'it worked well actually' (FG Interview, U5). The vertical
ability hierarchies that were seen in unit one (Chapter 4) and the teachers worked
against in units two and three (Chapter 5) had been diminished. Even when
students were afforded the opportunity to decide who they wanted to learn from,
where it is worth noting the more able students could have taken over (as they did
in unit one and tried to unit two and three), they shared the responsibility of a
leader regardless of the ascribed or learned ability status. Perhaps it could be
suggested that the students had unlearned the hierarchy in teams from the
dominant and residual pedagogical practices (and even as I will show later in this
chapter the hierarchy between the teacher and student) and had now learnt the
importance of equality. Certainly, the students' comments in Kelly's
(Buckingham, *adapter*) class support this idea. When Kelly adopted a similar
approach to Jane, and asked students to create their roles and then reflect on them
during group processing, the students argued against what the teacher compared to
as *Hitler approach* and felt it was important to have roles, but to support each
other in their roles.

> Everyone has their own role and they are responsible for leading it but
> they think that it is important for everyone in the team supports that person
> in their role because otherwise everyone is left on their own and no-one
> has any input and she actually called it a dictatorship, she went if someone
> has the role and no-one is going to help them then surely that is a
> dictator...oh ok aright Hitler off you go. So yeah that one there could not
> be any more perfect about teamwork really, they've got it (Pre-Lesson
> Interview, U4 L2)

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Whilst group processing was used by most teachers as an opportunity for students to make choices about group work and to choose their roles, in Chris's (Buckingham, *co-adapter*) unit 'the students had to choose their own [group] goals based on what they had done in group processing in the previous lesson' (CLVT U4 L6). Chris used questions such as: 'what does your group need to do in the future?' and 'what would be your goals for tomorrow?' (CLVT U4 L6). In his fourth unit, the students could now make decisions on what content they felt they needed to learn. Indeed, whilst the goals teams created were vague, for example, 'accurate bowling' (CLVT U4 L6), through the opportunity to choose their own goals Chris argued that the students were able apply and connect their learning from lesson to lesson and see the purpose of their learning within physical education.

> They have definitely been constructive and trying to link it to the next lesson, so they are seeing the point of it as such, and the group goals they have set out they have transferred from yesterday… they are now applying it into the next (PL Interview, U4 L6)

These examples of Chris, Jane and Kelly's use of group processing shows that, as a result of the students being given the opportunity to choose their roles, the students developed an understanding of how to organise and manage their team's learning. The vertical ability hierarchies were diminished, even when students were afforded the opportunity to choose who they wanted to learn from and the more able could have taken over. Furthermore, group processing provided the students with the freedom to reflect on what they had learnt and then select their learning goals for the next lesson. Indeed, it is worth noting that in units four and five the findings from the CLVT show that the observations of the, 'what now?' question were higher than in any other unit taught (Table 7 p.125). By asking students to reflect on their roles and choosing their goals for the next lesson during group processing, the 'what now?' question was fulfilled and the findings from the CLVT support my discussions that students were beginning to apply and connect their learning experiences. However, whilst the 'what now?' question was implemented to a greater extent than any other unit, it is worth noting that this was still only observed in thirty per cent of lessons. Encouraging students to transfer

their new understandings was still inconsistent and potentially the most difficult
aspect of group processing for the teachers to implement. Indeed, the dependent-
adapters (Christina and Phil) did not use group processing to support teaching as a
cultivation of experience, and they had not reached this level of fluency in their
use of the model.

In this sub-section I have shown that group processing created a pedagogical
scaffold for the teachers to build upon students' learning experiences and
consequently, teach as a cultivation of experience. Although the adapters and co-
adapters had modified their use of this non-negotiable to extend their students'
learning, the transfer of learning was not always consistent. Yet facilitating the
transfer of learning was not achieved by the dependent-adapters, which perhaps
signals that the 'what now?' question is an advanced practice within the
Cooperative Learning model, and all the teachers emerging into continuation
needed to further develop their use of group processing. In the following I
continue to explore how the teachers taught as a cultivation of experience through
their role as a facilitator.

Teacher-as-facilitator: Teacher-as-an expert to the movement tasks

In contrast to the first unit where the teachers managed the learning environment
(Chapter 4), and in the second and third units the teachers changed their doings
(Kemmis, 2010, 2009) to break down the vertical hierarchies (Chapter 5), in the
fourth and fifth units the adapters, co-adapters and dependent adapters functioned
as an expert to the respective movement tasks (Bähr & Wilbowo, 2012). The
dialogue with students focussed on cognitive and physical learning and, rather
than giving students the knowledge and information, the teachers' channelled
students' understanding of the movement tasks and practices that they were
creating. Drawing on the work of Gillies (2006) through questions and hints the
teachers *scaffolded* students' understanding and their performance. Fundamental
to this change in role, which I will now discuss, was the opportunity for students
to create their own tasks. Furthermore, students at this stage in the yearlong study

now understood how to learn within Cooperative Learning, and the teachers had increased in their confidence when acting in the role of the facilitator.

Considering the creation of tasks first, the students were given a greater level of choice as to how they would create their learning experiences. For example, the students were often given the information on the teaching points for a skill or tactic and it was then up to the team to decide on how they would improve each other's performance. The teams were no longer given specific drills, instead they were asked to create practices. Building upon my discussions in the previous section, where Chris (Buckingham, *co-adapter*) asked students to choose their own goals for lessons, following their creation of the group goals and the learning tasks Chris questioned teams to develop the students understanding of the skill. Subsequently, through these questions team's modified their learning tasks which supported the team's achievement of the group goal. The following is one example of Chris's facilitation in his lessons that supported students' learning when a team had created their own group goals and learning task.

> Chris leaves the groups to work on the tasks…he often stands back and observes and then questions to deepen their understanding or to enhance the feedback that is being given…. After watching Liam's team play whose goal was to be able to field properly he said 'okay so when you are fielding from deep where should you be aiming for and what could be changed in the game?' He then left the team, they discussed and modified their fielding positions and when the ball was hit far out it was thrown to the wicket keeper rather than the stumps. (CLVT U4 L6)

Using Chris as one example, in units four and five the teachers stood back, watched group work and would then, rather than support group work (as I discussed in Chapter 5), question teams or give teams hints focussed on physical and cognitive learning. Yet it seems reasonable to suggest that the teachers were able to function as this *expert* to the movement tasks because their students understood how to learn within Cooperative Learning. The following two paragraphs explores this idea and I show how Joey (Buckingham, *co-adapter*) and Kelly (Buckingham, *adapter*) responded to their students emerging learning experiences from the previous units taught (i.e. Chapters 4 and 5), and provided a scaffold to extend students learning in the physical, cognitive and social domains.

In Joey's sprint start lesson (CLVT, U4, L4[27]) I noted that the 'students were
helping each other using the learning cues and resources'. For example, 'I heard
Perry call out the teaching points'. Yet to progress students' understanding and
performance, Joey began to focus students' attention on aspects of the sprint start
which were not on the resource card. He 'asks a team to look at one of their peers
in the sprint start position'. In their analysis of John, the students were
complimentary stating, 'his knee is in line' (Curtis), 'the hands are right' (Eric)
'he's got the right position' (Rick). Following this demonstration and analysis,
Joey then asked the team, 'where should their body weight be?', to which Curtis
said 'forwards'. The second question Joey asked was, 'why does the body weight
need to be forwards?'. The students struggled to answer this second question and
after a long pause Joey then told the team it was 'to push off'. However, whilst
Joey told the teams the answer in the end, and he could have questioned the
students further, this is an example of how the teachers provided a scaffold for
new understandings. Joey a) asked the students to analyse each other, b) asked
two questions which were beyond the information on the resource card, and c)
afforded the team the opportunity to think before he told them the answer.
Because the students were already helping each other using the resource cards and
learning cues, and they had moved from the notion of peer-tutoring (as I discussed
in Chapter 4), Joey could enhance and progress students' learning. Indeed, it is
worth noting that later in the lesson 'John adopted a more of a correct position
with a straight back, leaning forward and his knee slightly more bent at the back'.
Therefore, it seems reasonable to suggest that Joey's interaction with the team led
to gains in physical performance, which was beyond the initial content provided
on the resource.

However, to get her students to the point where Kelly (Buckingham, *adapter*)
could act as an expert to the movement task, she placed great importance on
developing the students' understanding of how they needed to hold each other
accountable for their contribution to the learning tasks. In order to do this she

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[27] All data explored in this paragraph is from this source

purposefully removed the prescriptive way she had previously implemented
individual accountability. Instead of using tick sheets which measured each
person's contribution, students were held accountable by the overarching unit goal
of a team competition (which will be discussed in the following section on
competition). Reflecting on the lessons, Kelly claimed that removing
accountability in the prescriptive way 'challenged them socially…and they have
started to see how important it is' (Pre-Lesson Interview, U4 L6). In the lesson
following her attempts to teach students how to hold each other accountable, I
observed that during practice tasks 'some teams independently created a scoring
system which meant they had chosen to hold each other accountable for
performing' (FJ 9.5.12). Kelly developed her students understanding of non-
negotiables to support the creation of learning experiences which conformed to
the requirements of Cooperative Learning. She could do this because students
were able to work together, and in order to challenge her students further, and for
her to function as an expert to the movement task she implicitly taught the
students individual accountability. Indeed, it could be argued that this was an
indication that Kelly was fluent with implementing the non-negotiables and was
thinking within the model to enhance her students' learning.

This new expert role of the facilitator was not only fulfilled as the students'
understanding of how to work together to learn had developed. The teachers were
adapting to this new role as a result of becoming more comfortable with
facilitation rather than the teacher-centred approach. Whilst the teachers' ability to
facilitate learning varied (Table 8 p.193-196), the teachers suggested that acting in
the role of the facilitator 'became easier as the units went on' (Phil, Buckingham,
dependent-adapter YE Interview). Indeed, by the end of the study the teachers
suggested that they were spending less time planning for lessons, 'being less
prescriptive on the task cards' (Chris, *co-adapter,* pre-service teacher interview)
and they could now 'control it without having step-by-step' (Jane, Buckingham,
adapter, pre-service teacher interview) instructions. Thereby, this is another
example of how the teachers were becoming pedagogically fluent in their use of
Cooperative Learning.

CHAPTER 6: EMERGING INTO A PHASE OF CONTINUATION AND
EMERGING REJECTION

In this sub-section of exploring teaching as a cultivation of experience I have
argued that the adapters, co-adapters, and dependent-adapters functioned as an
expert to the movement tasks by questioning and giving students hints to support
learning in the physical, cognitive and social domains. It could be said that during
the fourth and fifth units, the role of the facilitator is therefore more advanced and
focuses more on the multi-dimensional focus of learning, rather than
predominantly the social and affective dimensions (as discussed in Chapter 4 and
5). Indeed, the teachers at Buckingham taught as a cultivation of experience being
a co-participant with their learners (Casey, 2012c; Casey & Dyson, 2012) and
building upon students' emerging learning experiences. Yet the teachers at
Buckingham were able to adopt this *new* advanced *expert* role because the
students' knew how to be an active and social learner, and the teachers were
becoming pedagogically fluent. In the following section I discuss the students'
responses to the teachers' change in actions and use of Cooperative Learning.

Power and Control over their learning

As a result of the teachers teaching as a cultivation of experience (through either
group processing or functioning as an expert to the movement tasks), the students
began to suggest that they enjoyed the greater level of power and control over
their learning. For example, the students in Jane's (Buckingham, *adapter*) year
eight class said 'we are more independent' (Tammy) and that we are 'more in
control' (Ali) (YE FG Interviews). Student enjoyment of lessons was also a
noticeable outcome and interestingly they now openly critiqued their teachers'
previous ways of teaching them. Indeed, the year seven boys in Joey's
(Buckingham, *co-adapter*) class described his previous use of the teacher-centred
approach as 'being a long lecture' (Curtis) and 'boring' (John) (YE FG Interview)
and the students' appreciated the independence and the increased amount of time
they had to learn and perform. In the interview with Jane's (Buckingham,
adapter) students (which is shown below) these points can be comprehensively
understood. Her students suggested that they now listen to their peers more than
their teacher. Perhaps at this stage, the teacher no longer held a dominant
authoritative position in the class since they respected their peers support in order

to learn. In addition, whilst the teams were heterogeneous, the students it seems had begun to form new friendships within the class.

> Dee: we can get straight into it we don't have to watch like a teacher demonstrations
> Tammy: yeah because that takes up more time so we kind of just do our own thing
> Emma: we get more done in the lessons
> All yeah
> Dee: we listen more to our peers and you pay attention to what everyone thinks
> Victoria: So do you listen to each other more than Miss Scolly?
> All yeah and laugh
> Dee: I think with Miss Scolly and I think with any teacher it is quite easy to get off track, so when you are with your friends you mess about and stuff, but then when you are with your friends and you actually have to get something done it is easier and we are all like the same age none of us are like
> Ali: no one has any power
> Gabby: and you don't want to be mean to your friends
> Tammy: yeah
> Gina: and you know how to connect
> Dee: and because like you are in the same group nobody is higher or lower
> Tammy: yeah so we all understand. (YE FG Interview).

Drawing on the notion that physical education holds a valued cultural position in education for the promotion of the physically active life (c.f. Kirk, 2012), at this juncture it is important to highlight that both the teachers and the students were suggesting that the social and affective learning was transferring beyond the physical education lessons. For example, Curtis said 'I think they have improved things for me outside of school, well communication I have been better outside of school in my sports clubs' (Joey, Buckingham, *co-adapter*, YE FG Interview). Moreover, the teachers claimed that more students from the classes that were taught through Cooperative Learning were attending after school clubs. Whilst only a tentative link can be made, Christina's (Buckingham, *dependent adapter*) comment below suggests that students' engagement with physical activity beyond lessons could be attributed to friendship, the mastery learning environment and the increased levels of confidence the students had developed. Thereby, students' learning within physical education lessons was being extended and their learning

within physical education, it could be argued, was encouraging students to engage
with the physically active life.

> There is people in there that they would have never spoken to before they
> know speak to and people that you would have never of thought that
> would come to, for example the rounders club, now come to rounders
> club… because she saw that she can improve and it wasn't just a normal
> lesson that everyone is coming in and everyone is doing the same thing
> and it was Mia out there who said oh I can't actually do this and she is
> now coming along and she has now been at district as well (YE Interview).

However, despite the increased level of ownership and responsibility that
enhanced and deepened most students learning within and beyond physical
education, the two students with Asperger's in Joey and Chris (Buckingham, *co-
adapters*) class continued to struggle to learn with their peers. Eric and Johnny
disengaged and despite their team mates continuing to try to support their learning
through the pairing with more able students and encouragement (as I discussed in
Chapter 5), the students were seen to remove themselves from the group work
tasks. At the end of the year Joey suggested that, the increased responsibility for
the creation of their learning in his third and fourth units was a potential reason
for Eric's disengagement.

> Eric struggled to be honest, because of his Aspergers. It is kind of almost it
> provides him with the opposite with what he needs for the task. He doesn't
> deal well with independence, he doesn't deal well without structure, which
> is obviously a key thing with Aspergers it is polar opposite to what the
> tasks are trying to achieve. So unless his group structure it really well for
> him, through the tasks that are given, he is really going to struggle. And
> again for him he wants to be the person with the bat, he wants to be the
> person to be the participant, because he finds it a lot harder to verbalise
> what he is seeing and verbalise his own feelings and his own ideas which
> is very hard for him when it comes to coaching other people. Again his
> lack a concentration is an issue because he gets very distracted easily
> especially in the talking elements he wants to be participating… It was too
> much responsibility for him. (YE Interview).

Joey's comment shows that Eric needed structured tasks and support from the
teacher in order to engage. Whilst Eric was willing to participate in the physical
performance tasks he did not want to, and potentially couldn't cope with the social
dimension of learning. Similar to the points made by Dowler (2012) and Grenier

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and Yeaton (2012) on their discussions on Cooperative Learning as an inclusive practice, for students with learning difficulties such as Aspergers, tasks within Cooperative Learning should be structured and students should be supported by the teacher to facilitate their ability to engage with their peers in order to learn. Building upon my discussions in Chapter 5, this is another example of how the teachers continued to teach to the middle and *neglected* the students whose learning needs were below the expected social competency level. Furthermore, although Chris and Joey had adapted their use of the model by pairing more able students with the students with Aspergers, these teachers had not developed the team member's understanding, or provided them with specific tools, that would enable them support Eric and Johnny's learning and engagement.

In this sub-section that has explored students' responses to the adapters' ability to teach as a cultivation of experience, I have shown that the students appreciated the increased level of autonomy that they were given for their learning. Indeed, Cooperative Learning was now the only way that the students in these classes were taught physical education (apart from, for example, teacher absence), and the students considered that when taught through Cooperative Learning that they engaged more in the learning tasks in comparison to the previously dominant and residual practices. Furthermore, as a result of social and affective learning, students' learning within lessons and their engagement in physical activity beyond the physical education lessons was supported and encouraged. Yet, whilst teaching as a cultivation of experience supported the majority of students' learning, students with Aspergers need a more structured approach to enable them to learn with their peers.

Drawing on my discussions on teaching as a cultivation of experience, the adapters, co-adapters and dependent adapters built upon their students' emerging learning experiences and became a co-participant in the learning process. This was achieved by adapting the way group processing was used and/or their *new* advanced *expert* role as a facilitator to the movement tasks. These teachers became fluent in their use of Cooperative Learning where they could change the way the non-negotiables were implemented and respond to students' learning

through questions and hints. In this way, the teachers at Buckingham were
adapting the way the model was used to support students' learning where they
were showing overt changes in their behaviour and actions. These adapters were
developing the disposition of phronēsis through changing their doings (Kemmis,
2010, 2009) where, subsequently, the students became the heart of the model.
Consequently, students' learning was extended in physical education lessons and
transferred beyond the classroom. In the following section, I continue to explore
the emerging adopters change in practice through my discussions on competition.
I argue that competition played a fundamental role in progressing students
learning in comparison to any other unit taught.

Competition

In this final phase of the year-long study competition ran as an overarching theme
in the adapters, co-adapters and dependent-adapters units. Teams were either
working towards an end of unit tournament, the teams were competing within a
league, or students were competing within their teams in pairs (Table 8 p.193-
196). In the dominant pedagogical practices of games and sports, Harvey and
O'Donovan (2012) and O'Donovan and Harvey (2012) argued that a narrow
conception of competition is often used. Competition has 'traditionally' embodied
an ego climate, re-enforces vertical ability hierarchies and is considered to
disengage learners (Biglin, 2013; Ennis, 1999; Garrett, 2004; Harvey &
O'Donovan, 2012; O'Donovan & Harvey, 2012). However, when competition
was used as an inherent feature of Cooperative Learning students were motivated
to learn. In this section, and in agreement with O'Donovan and Harvey's (2012)
discussions around student-centred competition, I show how Cooperative
Learning created a mastery focus to competition. Subsequently, competition was
used in its entirety, and rather than narrow conception of winning and losing as
reflected in the dominant pedagogical practices (O'Donovan & Harvey, 2012),
through cooperation, teamwork and the drive to help each other to learn, students'
learning in the physical and cognitive domains was strengthened. I begin my
discussions by exploring how competition supported the fulfilment of the non-
negotiables.

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At this juncture and before I move onto discuss how competition within
Cooperative Learning supported the fulfilment of the non-negotiables and
strengthened students' learning, it is important to note that the findings reported in
the CLVT show that the consistency of the use of individual accountability and
positive interdependence declined in this third phase of the study (Table 7 p.125).
Indeed, this is one of the limitations of the systematic observation process. Whilst
I will show that competition served to support the fulfilment of these two non-
negotiables as unit themes and not explicitly lesson by lesson through roles or tick
sheets (as I discussed in the previous section), they were not seen in the videos
and coded as observed, but were understood to be occurring through discussions
with the teachers and through observations of the teachers explaining the unit to
the students in the first lessons. Whilst the findings from the CLVT show that the
use of individual accountability and positive interdependence declined in the third
phase, I suggest that this is a result of these non-negotiables being an overarching
theme through the use of competition that were implicitly used in lessons.
However, it is also important to note at this stage in my discussions that the
findings from the CLVT (Table 7 p.125) show that there was an improvement in
physical and cognitive learning, greater than any of the other units. Whilst social
learning improvements declined (Table 7), this could be attributed to students'
understanding and their ability to learn within the Cooperative Learning model, as
I have discussed in the previous sections. Therefore, the improvements in the
social domain were less marked but cognitive and physical learning enhanced. I
will now return to my discussions showing how competition supported the
fulfilment of the non-negotiables (which contrast the findings from the CLVT)
and show how the gains in cognitive and physical learning could be attributed to
competition.

When competition was included into units, the non-negotiables of individual
accountability and positive interdependence became embedded into each lesson
and became a unit theme. For example, in Jane's (Buckingham, *adapter*) unit,
through the structure of Complex Instruction (Cohen, 1994) where each team
worked on different aspects of the rounders game each lesson (for example,

fielding, batting, bowling or tactical game play) leading up to a team tournament,
I noted that the tournament caused students to be individually accountable for
their learning and positively interdependent on each other within the lessons.
Indeed, students were motivated to help each other to learn the skills and tactics as
a means to win the tournament.

> Accountability and dependence is embedded in her unit as the theme for
> the unit, since the goal of each lesson is to help each other to learn the
> chosen skill in order for them to be able to win the tournament in the final
> 2 lessons of the unit. Therefore, they are accountable for helping each
> other to learn and completing the tasks in order for their team to be as
> successful as they can be in the tournament. (FJ 16.4.12).

It seems reasonable to speculate that perhaps students' progress in the physical
and cognitive learning domains could be attributed to competition and the drive
the students had to help each other to learn. Indeed, rewarding groups based upon
their performance is attributed to the work of Slavin (1983). Specifically, Slavin
(1983) claimed that Cooperative Learning methods that rely solely on social
interaction couldn't produce achievement, but group rewards provide students
with an incentive and membership motive to help each other to learn (Slavin,
1983). Whilst Johnson *et al's.* (2000) meta-analysis on the Cooperative Learning
structures disputes this claim and suggests that learning together produces greater
achievement (which the structure of learning teams is drawn from (Dyson &
Grineski, 2011)), since the gains in students' physical and cognitive learning were
greater in comparison to when competition wasn't an inherent part of the units
(Table 7 p.125) I have considered that group rewards strengthened students'
learning in these domains. Using Chris's (Buckingham, *co-adapter*) class as an
example, the progression in these learning domains from the previous units could
be understood.

Throughout the first, second and third unit Chris's students had a desire to play
games (as I discussed in Chapter 4 and 5). Towards the end of the third unit, and
as a result of a teaching moment the students' cooperation improved. In the fourth
unit students ability to work together continued to improve and I noted that there
'was a distinct difference from the students' engagement and ability to work

together within the unit of Badminton [Unit 3 Chapter 5]' (FJ, 26.4.12). However, despite the improvement in students' ability to work together Chris felt, and in similarity to a number of the teachers that (as I discussed in Chapter 4), 'I think the social and the cognitive is flying ahead of the physical' (PU3 Interview). To further encourage students to work together to learn and improve their physical performance, I suggested to Chris that he could consider using Student Teams Achievement Division (STAD). STAD is a structure originating from Slavin (1995) and places emphasis on team scores. The lesson sequence could be understood as:

1. All team members complete an assessment task
2. The scores for all team members are added together
3. Team scores are announced to the class
4. Teams repeat the practice task to try to improve their score
5. The assessment task is repeated
6. A team improvement score is calculated
7. Team improvement scores announced to the class the winning team is the team who improved the most

(Adapted from Slavin, 1995)

At the end of the Athletics unit taught through STAD, Chris suggested that it was the incentive to help each other learn which resulted in significant gains in students' physical performance in comparison to any other unit that he had taught. Indeed, competition further reinforced positively interdependent learning teams, where the students were motivated to discuss their practice and *chip in*.

> Using the STAD, basically they all had to chip in. They all had to obviously achieve their score, their distance or their time and then try and improve on it because they realised that if they didn't their team was going to suffer I think in this I have seen the spike. So in athletics they have definitely improved practically. So that was one of the main aims and goals within this part of athletics was to really focus on their practical improvements and obviously they have gone through all of the different field events track events, and there has been a massive, massive improvement in their practical ability. (PU5 Interview)

Similar to Chris, Joey (Buckingham, *co-adapter*) claimed that students' progress in each of the learning domains was a result of 'the competition element, the will to succeed the will to try to beat the other team and the will to have to work as a

group to compile their ideas to develop the skill' (YE Interview). Moreover,
Christina (Buckingham, *dependent-adapter*) suggested that through the desire to
win, the students began to transfer their knowledge from other events within
Athletics to support each member of their team's learning.

> They have learnt is how to transition the skills from one event to another
> because for example when they did one throwing event to another
> throwing event they tried to implement what they had learnt from the last
> lesson to try to help each other (YE Interview).

In this section, and in agreement with Slavin (1983), I have shown that through
the inclusion of group rewards within competition students were motivated to
learn. Students' strived to help each other achieve and the success of others was
inherent in each student's success. Similar to Casey *et al.* (In Review) and Casey
et al. (2009) competition reinforced the notion of learning together where
academic and social learning were on par with one-another. Furthermore, and
drawing on O'Donovan and Harvey (2012), when competition was embedded into
Cooperative Learning, competition was used in its entirety. The focus of
competition moved from a narrow conceptualisation of winning and losing (as
seen in the dominant pedagogical practices) to embodying the principles of
cooperation, team work, and the drive to win and succeed. Indeed, through STAD
a mastery learning climate was created where comparisons were not made
between each other's performance related outcomes, but instead students were
rewarded on how they worked together to help each other improve. Cooperative
Learning challenged the dominant approach to competition in physical education
and proved to be an effective means to motivate students to work together to
learn. Consequently, and in the case of the adapters, co-adapters and dependent-
adapters, I argue that as a result of students' learning how to learn through
Cooperative Learning (from units one, two and three), the teachers' teaching as a
cultivation of experience and through the inclusion of competition into units and
lessons, learning in each of the four domains was progressed in comparison to any
of the other units taught.

CHAPTER 6: EMERGING INTO A PHASE OF CONTINUATION AND
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To this end I have explored how the teachers at Buckingham who were emerging
into continuation changed the way Cooperative Learning was used to support
students' learning. These teachers modified their use of the non-negotiables and
they functioned as an expert to the movement tasks in their role as a facilitator,
which encouraged teaching as a cultivation of experience. In addition, competition
was included as an inherent theme to their units. It could be said the
implementation of the model was more advanced in comparison to any of the
other units and, subsequently students' learning was progressed. In the following
sections I explore how and why the teachers at Buckingham were able to make
these overt changes to their practice, which progressed from and contrasted
against their previous use of the model. I firstly discuss my role as the boundary
spanner and then the emergence of a CoP.

The Support from the Boundary Spanner: technical implementation

In contrast to unit one where I developed the notion of *buy in* (Chapter 4) and in
units two and three where I supported the emergence of a CoP (Chapter 5), during
the fourth and fifth units I facilitated the teachers ability to adapt their use of the
model and their ability to reach a level of pedagogical fluency. Indeed, the moral
and social support I had given these teachers was replaced by communications
with each other in the emerging CoP (which will be discussed in the following
section) and my role had reverted back to developing teachers' knowledge and
understanding of the model as seen in the period of initiation (Chapter 4). In
parity with Siedentop's (2002) arguments that teachers have a lack of content
knowledge and the same introductory unit gets taught again and again, the period
of initiation was enough to support teachers' knowledge and understanding of
how to use the model in units one, two and three. Yet the adapters (Jane and
Kelly), co-adapters (Chris and Joey) and dependent-adapters (Christina and Phil)
needed support in how to extend their practice to facilitate students' learning
beyond the honeymoon period of implementation. In order to do this I needed to
draw on my supervisor's advice as he had had taught through the model over a
seven year period. As a teacher, I had not reached pedagogical fluency and I
hadn't moved beyond the honeymoon period of implementation (Goodyear et al

2013a, 2012a). This section explores how I, with the guidance of my supervisor
through our discussions and his published research, supported teachers' practice.

The professional learning meeting that took place at the end of unit three served to
plant the seeds for teaching as a cultivation of experience and the inclusion of
competition into their units. Indeed, whilst I encouraged the teachers to share
ideas with each other (as I discussed in Chapter 5), I had also posed questions to
the teachers on how they could modify their approach.

> It seems the teachers have really engaged with what I said during the
> departmental meeting and they have responded to the questions that I
> posed to them 'how can you give students more ownership and
> responsibility?' And 'how can your students be challenged more?'
> Furthermore, it seems that they are challenging themselves which was
> another thought I left with them at the end of last time. (FJ 20.4.12)

For the adapters (Jane and Kelly, Buckingham), they responded to these questions
and had developed the notion of pedagogical fluency without my explicit
guidance (Table 8 p.193-196). My support and guidance with the adapters was
minimal, and I noted that with Jane I was merely acting as someone 'to literally
talk it through with… to check that her ideas would work, [and] if her unit met the
non-negotiables' (FJ 11.4.12). On most occasions I only challenged their practice
and unit design. The Twitter conversation with Kelly below is an example of how
I challenged her to build on her students' emerging learning experiences.

> @Kelly; massive ownership being seen by pupils now within my CL
> lessons
> @Victoria: really interesting!!! Down to all the hard work and planning u
> have put in☺
> @Kelly; think it's more on the pupils understanding and now they have
> choice on roles and responsibilities instead of me choosing them
> @Victoria: what's your next challenge for them?
> @Kelly: not too sure at this point something I need to think over.
> Suggestions?
> @Victoria: see after next week if there are any themes in your reflections
> before next unit - team comps may challenge socially further (Twitter)

Both Jane and Kelly could apply the complex tasks and teach as a cultivation of
experience with minimal support from me in my role as a boundary spanner. They

could build upon my questions and it seemed that these teachers were more daring and willing to take risks. Yet it is worth noting that these teachers had a) the most experience with pedagogical models (through leading a programme of Sport Education and teaching through Cooperative Learning during an undergraduate degree) and b) for Kelly she had taught the highest amount of lessons through the model (Table.8, p.194-197). Indeed, at the end of unit three (as I discussed in Chapter 5) Kelly who had taught the highest amount of lessons at that stage, felt that she was able to competently question students to develop their learning (p.174). Therefore, another indication that time using the model affected the rate at which pedagogical fluency was achieved.

Joey and Chris (Buckingham, *co-adapters*) were similar to the innovators, in that they were creative in their unit designs combining the Cooperative Learning structures and allowing the students the freedom to choose their roles and set their own learning goals for the lessons (Table 8 p.193-196). However, distinct from the adapters was that these two teachers took longer to immerse themselves into the model and develop the notion of pedagogical fluency (Casey, 2010). Indeed, whilst they were risky and daring they both needed my support in their unit designs. For example, my field notes show that whilst Joey had combined two structures, Pairs-Check-Perform and learning teams, he had failed to include the non-negotiable of individual accountability. To support his practice, I used an informal conversation to guide him to a new understanding of how he could ensure individual accountability was present. However, this discussion is significant for another reason. In Chapter 4 I explained that Joey was my previous head of department and this was one power differential in the intra-professional collaboration. Whilst introducing Cooperative Learning to his department I was working against the existing practice architectures condoned by both Joey and the department. Any residual power differential could have hindered the collaboration, and yet it was me that found the collaboration challenging. In the later units in particular, I found it difficult to give advice and guidance on how Joey could change his practice, for example, when I had observed that individual accountability was not present in his unit. However, in order to be trusted and

respected I supported his practice and he was welcoming of my suggestions. Subsequently, he made changes to his unit to include all non-negotiables and the equal relationship between the researched and the researcher was further ensured.

> During break I spoke with Joey about his unit. I was particularly nervous about this as he is my ex head of department and I look up to him, yet I had found a hole in his unit through accountability. When speaking with him I went through my planned approach and he confirmed what I written out as the structure and how he was fulfilling the non-negotiables. I then said something on the lines of, I was wondering how you could make them more accountable for their learning towards the group goal – he replied with they come and speak to me about what they have achieved which led me to question him on how they were accountable for achieving the physical goal of the lesson which was to improve their accuracy and consistency. Joey responded positively to this, which was a surprise. He said something on the lines of, that is a good point and he seemed pleased that I had brought it up. He said that in the future lessons he will build something in either related to the coach checking their performance or checking that the coach is giving the teaching points they have learnt to the performer. (FJ 28.4.12)

The difference between the adapters and the co-adapters was the support provided by me for them to be able to immerse themselves in the model. Yet importantly, Joey and Chris (Buckingham, *co-adapters*) had taught a fewer amount of lessons in total taught and had less experience with pedagogical models in comparison to Jane and Kelly (Buckingham, *adapters*) (Table 8 p.193-196). In addition, it is important to acknowledge that since students act as change agents and students' responses to an innovation can affect teachers' dispositions and actions (Fullan, 2007; Hargreaves, 1994), Chris's students who had a desire to play games could be positioned, themselves, as students who needed more support in adapting to the model. These students took longer than any other class to learn how to learn through the model and adjust to the routines of Cooperative Learning which may have affected Chris's (Buckingham, *co-adapter*) ability to use the model in its entirety during the first, second and third units taught.

Christina and Phil (Buckingham, *dependent-adapters*) used the model to a different degree of adaptation in comparison to the adapters and the co-adapters (Table 8 p.193-196). Although Christina and Phil allowed students to choose their

roles and acted as experts to the movement task, throughout the fourth and fifth units their actions were not consistent. Furthermore, it took a longer period of time for these two teachers to feel comfortable with their changing practice. The challenge for both teachers, as Phil suggested, was 'giving the lesson away' (YE Interview) and facilitating the physical and cognitive learning. To support these teachers I coached them within the lessons on how to facilitate students' learning.

For Phil he 'wanted me to have the microphone in so that we could talk to each other during the lesson' to give him advice on how to facilitate students' learning (FJ 22.4.12). Subsequently, through the discussions on the microphone (which functioned as a walkie-talkie), 'I found myself coaching him on how to facilitate the students' learning and telling him that he should step back and wait and see what they do before intervening' (FJ 22.4.12). Subsequently, he began to adopt a role which was comparable to the adapters (Jane and Kelly) and a teacher-as-expert to the movement task. I adopted a similar approach of coaching and mentoring with Christina. My field notes below show how during a lesson I gave Christina advice on how to change her role in the lesson that resulted in the students being afforded more ownership and responsibility for their learning.

> It was a bit of a lesson where I was coaching her through what to do and she was using me for moral support. During the lesson she kept coming over and asking if it was alright and asking what I thought…I suggested that she goes around each group and asks them what feedback points they have been giving-…subsequently she did this and I feel that she learnt herself what the students were doing more…Overall I was really pleased more so in her willingness to let go and try to overcome not telling the students as much. It seemed to pay off as well, the students had more time to practice, more time to do the lesson and as a result I feel that they were more engaged and their performance within the shot putt improved. (FJ 12.5.12)

My discussions on the dependent-adapters (Christina and Phil, Buckingham) and to some extent the co-adapters (Joey and Chris, Buckingham), show that my role within teachers practice had changed. In the fourth and fifth units I was acting as an expert to the Cooperative Learning model (with my supervisor almost working as my 'guide on the side' –albeit a hidden one), developing this notion of fluency encouraging the teachers to be able to function as a facilitator. At the end of the

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year it is therefore not surprising that the co-adapters (Chris and Joey,

Buckingham) and the dependent-adapters (Christina and Phil, Buckingham)

attributed their changing practice to both the department and me.

> Victoria: were there any factors that helped you to teach through
> Cooperative Learning?
> Joey: sharing resources, erm obviously the training we received, your
> input of how to develop the lessons and yeah generally the support and the
> discussions, discussing what happened in lessons, working as a team
> (Joey, Buckingham, *co-adapter*, YE Interview)

> Victoria: were there any factors that helped you to teach through
> Cooperative Learning?
> Phil: I think how the whole process has been managed, sought of put
> forward about giving the members of staff the tools to deliver a
> Cooperative Learning unit and then reviewing your own sought of delivery
> and how well it has impacted the students. I think the continual dipping in
> and topping up the Cooperative Learning skills, which is what you have
> done across the units…What I found useful as well was the department
> were using different strategies so therefore if I wanted to I could bounce
> ideas off of them about how did they do x how did they do y. Because they
> were doing different strategies, that helped me in evaluating the impact of
> what I was doing. (Phil, Buckingham, *dependent-adapter*, YE Interview).

In this section I have shown that the teachers at Buckingham's ability to teach as a

cultivation of experience, include competition into their lessons and function as an

expert to the movement task varied. For these teachers it can be suggested that I

(with the guidance of my supervisor) initiated this change in practice through the

questions I posed during the professional learning meetings. However, whilst the

adapters could make these changes to their practice with minimal support (which

was potentially a result of their previous experience with pedagogical models and

the amount of lessons they had taught), it was the on-going professional support

provided by me, which was relevant to their own units and the lesson-by-lesson

experiences which allowed all of the teachers to develop the concept of

pedagogical fluency towards the end of the study. It seems reasonable to suggest

that emerging continuation was a result of developing teachers understanding of

how to move beyond initiation and implementation, developing the teachers'

skills to support the long-term use of Cooperative Learning. However, whilst my

role was now to support teachers' practice, in the following section I show that the

social and moral support was not required by me as the teachers were now seen to be working together in an emerging CoP.

The emerging community of practice

In consideration of the social context playing an important role in teachers' use of an innovation, the emergence of a CoP was a potential reason for emerging continuation at Buckingham (Fullan, 2007; Hargreaves, 1994). Building upon my discussions in Chapter 5, in this section I explore how the teachers at Buckingham continued to develop the three dimensions of a CoP i.e. mutual engagement, a shared repertoire and a joint enterprise (Wenger, 1998). I discuss how the teachers supported each other's practice through formal and informal conversations and through the sharing of resources and lesson plans. The purpose of this section is to show how together, and in agreement with Ax *et al's*. (2008b) discussions on PAR, the teachers worked beyond the practice architectures.

One way in which the teachers supported each other's practice was through frequent and informal discussions. During departmental meetings the model became one of the formal meeting minutes where the teachers shared their practice with each other. In addition, I had observed that discussions took place on the way back from the sports field and in the physical education office where they began to reflect in front of each other, ask each other how their lessons had gone, and gave moral support or suggestions for how lessons could be modified. As Jane (Buckingham, *adapter*) comments below suggest, there was an open conversation about their changing practice.

> There's always quite an open conversation about it and sharing of experience, if things didn't work you often came back and said it didn't work, or if someone had had a really bad lesson we would come back and laugh about it (YE Interview).

However, the teachers claimed that the most beneficial thing about working together was the sharing of lesson plans and resources. Building upon my discussions in Chapter 5, where the professional and curricula constraints had hindered teachers' use of the model and the teachers were working *within* the

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mess of the practice architectures (Cook, 2009; Kemmis & Grootenboer, 2008),
during the fourth and fifth units these constraints did not disappear, whilst they
were spending less time planning (as I have discussed in the previous sections) the
time that the teachers had available to plan for lessons was still limited. Yet
through the sharing of resources and lesson plans their ability to use the model
was facilitated.

> My Athletics one today on STAD I hadn't planned any of it really. I went
> to Joey and Christina who had done it already, took their resources,
> adapted them for my group and yeah I spent 30 minutes at most (Chris,
> Buckingham, *co-adapter*, pre-service teacher interview[28]).

The dimension of mutual engagement, where each person holds a unique identity
and their contributions are important for other members (Wenger, 1998), can be
understood through this sharing of practice. The teachers within the department
had begun to develop an identity in relation to an area of expertise in the activities
taught through Cooperative Learning or the Cooperative Learning structures that
they could go to for advice on resources, lessons or units. What was happening I
suggested at the time was comparable to 'Chinese whispers' (FJ 31.5.12). For
example, Christina (Buckingham, *dependent-adapter*), Joey and Chris
(Buckingham, *co-adapters*) were modifying the resources based upon each other's
previous use of the Cooperative Learning structure STAD, to be specific to their
classes and practice.

> Joey took Christina's and modified hers to have distinct sections for each
> person to write down their score. Chris has then modified these [from
> Joey] to have another section where students must write down their
> improvement score (FJ 31.5.12).

Importantly, it was not just the adapters (i.e. Jane and Kelly), who were more
fluent in their use of the model that the teachers went to for advice. Instead, each
member of the department occupied a unique identity and had become an 'expert'
in an activity or structure taught through Cooperative Learning, where their

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[28] Pre-service teachers were part of an additional project that was taking place at the school (Table,
5, p.99) and since reference was made to the teachers' practice, this data source has been drawn on

'expertise' was important for other members of the department's use of the model (i.e. mutual engagement). Building upon each other's use of the model and through moral support they were then re-inventing their practice together, subsequently developing shared methods of teaching through Cooperative Learning (i.e. a shared repertoire, routines, actions, or ways of doing things that become a sustainable part of their practice (Wenger, 1998)). Indeed, through the act of sharing plans and resources they worked beyond the extraneous demands, and therefore the practice architectures (Kemmis & Grootenboer, 2008) that had previously constrained their use of the model.

However, it was not only time to plan that the department worked against. The teachers began to change and adapt the six lesson programme of study (organised around the multi-activity approach). Whilst in Chapter 5 I discussed how the teachers' maintained the conditions of the programme of study and subsequently taught short units of four lessons, in the fourth and fifth units despite lessons being missed due to the weather, school trips, teacher absence and a another curriculum week 'they didn't want to cut the units short and continued with the planned number of lessons for their units' (FJ, 23.4.12). Furthermore, the teachers extended the unit length. For example, Christina (Buckingham, *dependent-adapter*) taught eight lessons to her year eight class and ten lessons to her year seven class (Table 4 p.93-94). The teachers, as a department, were developing the dimension of joint enterprise (i.e. where members of the community work together to achieve a common and negotiated goal (Wenger, 1998)) by working together to support each other's practice in working against the practice architectures of the school. The emergence of the dimensions of a joint enterprise and shared repertoire could be further understood through the development of routines and ways of doing things to support each other's use of the model. Indeed, priority for the facilities and equipment was given to the teachers if they were teaching a lesson through Cooperative Learning. In Athletics the teachers allowed others in the department to have a large space on the sports field and to have priority over the equipment which enabled the teachers to allow the teams to work independently.

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Taking the discussions on the modifications to the programme of study and the
space and equipment available it could be said that the teachers were continuing
to develop the disposition of phronēsis (the ability to act wisely) by changing their
relating (the conditions in which they practice) to facilitate their use of the model
(Kemmis, 2010, 2009; Kemmis & Smith, 2008b). However, instead of acting
wisely for the model to be implementable (Fullan, 2007; Hargreaves, 1994) they
were now working beyond the practice architectures for the model to support
students' learning by maintaining unit length and together modifying the space
and equipment available. It could be said they were no longer working *within* the
mess of the practice architectures they had moved beyond the mess (Cook, 2009;
Kemmis & Grootenboer, 2008). Furthermore, it seems reasonable to speculate
that by placing priority on the Cooperative Learning lessons, the mess now
existed within the lessons which were not being taught through the model.

The final way I observed the department work beyond the practice architectures
(Kemmis & Grootenboer, 2008) was through their willingness to confront
OfSTED and school teaching and learning expectations. During the fourth units
taught (and for some the fifth or additional lessons) the department welcomed an
evaluation of their practice by members of the senior leadership team to assess the
quality of teaching and learning through OfSTED criterion[29]. The teachers wanted
to be judged on their use of the model by the practice architectures (Kemmis &
Grootenboer, 2008). It seemed the teachers needed to determine whether teaching
through the model could meet these extraneous expectations and determine
whether it had credence as an effective pedagogical approach in their school. I
noted, 'all the teachers seemed to be quite up for it, getting an external opinion of
Cooperative Learning but to also see how it matches with OfSTED criteria' (FJ,
13.6.12). Subsequently, Chris (Buckingham, *co-adapter*) and Kelly (Buckingham,
adapter) were observed by members of the senior leadership team in their units of

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[29] In the UK schools are assessed on the quality of teaching and learning and their ability to ensure
students make progress in a lesson. A teachers' lesson is then graded on a scale of: outstanding,
good, satisfactory and unsatisfactory based on the quality of teaching and learning (c.f. Cale &
Harris, 2009b).

Athletics, and Jane (Buckingham, *adapter*), who chose to teach an additional lesson to her examination physical education class in tennis through the model, was observed by Joey (Buckingham, *co-adapter*, curriculum leader). The outcome of the assessment was that Jane and Kelly's lessons were graded as outstanding and Chris good (with outstanding features).

Returning to my discussions on the significance of the 'OfSTED' observations on teachers' use of Cooperative Learning and the emergence of a CoP, by addressing the practice architectures (for example, through OfSTED) Cooperative Learning became situated within the teachers' practice, department and school as an effective approach to teaching and learning. By gaining outstanding reviews from Joey (Buckingham, *co-adapter*) and the senior leadership team, the teachers gained proof that the model worked within the practice architectures that their teaching and students' learning was assessed. Furthermore, Kelly, Jane, Chris and Joey's contribution to the assessment of their practice showed signs of mutual engagement and a joint enterprise, since a) the teachers were making contributions to the department that were important for other members to understand how the model was situated within the practice architectures, and b) they were supporting the practices of the community to achieve the common goal of using Cooperative Learning (Wenger, 1998).

In this section I have shown that the emerging CoP facilitated the teachers at Buckingham's ability to work beyond the practice architectures (Kemmis & Groonetnboer, 2008). In agreement with Fullan (2007) and Hargreaves (1994) the social context was a potential reason for emerging continuation and the adaptation of the model. Indeed, their practice was not only developing within their own classrooms but within their department where each person occupied a unique identity and could support other's changing practice (i.e. mutual engagement), the teachers shared practice with each other and developed common methods of using Cooperative Learning (i.e. a shared repertoire), and finally, through developing shared routines, changing the programme of study and addressing the teaching and learning expectations of the school, the teachers were working towards a common goal (i.e. joint enterprise) (Wenger, 1998). Furthermore, through the

social and moral support provided in the CoP, as I discussed in the previous section, I was no longer required to facilitate the practicality of implementation (Fullan, 2007; Hargreaves, 1994). In the following section I suggest that, as a result of the adaptations to teachers' use of the model, and the support I provided and the emerging CoP, the teachers at Buckingham had reached a messy turn. Cooperative Learning was emerging into their future dispositions and actions of pedagogical change.

Emerging Continuation and the messy turn

Whilst there were differences in the degree of adaptation to the model, in the previous sections I have suggested that the teachers were emerging into the phase of continuation through the overt changes in their behaviour, which were akin to the notion of pedagogical fluency. In other words, they could think within the model and build upon their students emerging learning experiences creating authentic and motivating learning contexts. In this section I consider how the teachers had reached a messy turn and the change in their dispositions and actions were emerging in their plans for the next academic year.

Cook (2009, p. 282) argued that a messy turn occurs when 'new understandings are revealed, developed and articulated'. Indeed, a messy turn was consistent with all teachers at Buckingham and this could be explicitly understood by Joey's (Buckingham, *co-adapter*) comment below. He suggests that Cooperative Learning was progressing his students' learning more than in the dominant pedagogical practices and therefore there was no reason why he shouldn't continue to use it. Importantly Joey's comments build upon his reason for *buy in* to Cooperative Learning. Indeed, in Chapter 4 I explored Joey's statement that suggested a reason for Cooperative Learning being valued was to be able to use the PLTS (QCA, 2009) and a student-centred approach in a structured and formalised way. Following his yearlong use of the model, it could be said that his longer term *buy in* was strengthened as a result of the evidence of effectiveness.

> I think that this gives you a better picture how it can be and how the results can be gained through using it as a structured unit of work which focuses on not just the physical abilities but the social and cognitive side of pupils' education…and if this style of learning is going to create an improved progression rate in the pupils then surely you should use this over traditional methods. (YE Interview)

When I asked the teachers if they would continue to use the model in the future they suggested that as individuals they would continue to use it within their own practice as it was a benefit to the students' learning and they felt they had enough professional learning to support their enduring use of the model. Furthermore, as a department they would develop a central resource to share practice and to support each other's use of the model. Their continued use of the model would be aided by working together to support each other's practice even when I was removed from the school context, to a lesser degree. Indeed, the department and I, at this stage in the study, had agreed to continue to work together so that I could understand how the model would be used, and even further adapted beyond this academic year. However, I would visit the school on a termly (every three months) basis, rather than bi-weekly basis. Thereby, it can be said that the teachers had gone forwards and backwards through being inconsistent in the changes to their sayings and doings (Kemmis, 2010, 2009) in units one to five before they reached a messy turn (Cook, 2009). The sustained professional support and the contextual support through the emerging CoP were mediating factors for the teachers' future dispositions and actions with regard to their sustained use of Cooperative Learning.

> I can't see why I wouldn't because I mean once you have done your years' worth, you have your resources, you have your planning so it is not like you're going to be starting from scratch every year. And I think you will then start to see the benefits later on in the school, because obviously the 9s go into 10s, start on their GCSE's or carry on their GCSE's , yeah I think I will. (Chris, Buckingham, *early adopter*, YE Interview)

> Every unit now, people have gone off over the summer and we are redesigning our schemes of work…and we are having a Cooperative Learning box and people are giving example of what they could do and what [Cooperative Learning] structures they could use and what structures had been used in the past and then setting up a central resource for each of the sports through Cooperative Learning (Jane, Buckingham, *innovator*, YE Interview)

In Chapter 4 I introduced Williams' (1977) cultural processes and elements, and I suggested that the dominant pedagogical practices of physical education were sports, skills and games. The residual pedagogical practice was the teacher-centred approach, and the emergent pedagogical practice was Cooperative Learning. In this section, and at the year end of the study, I consider that for the teachers at Buckingham, Cooperative Learning was emerging as the dominant pedagogical practice. Indeed, Cooperative Learning embodied the social views of the collective department and it could meet the practices architectures of, for example, OfSTED. Thereby, I am not suggesting Cooperative Learning had become the dominant pedagogical approach but through the messy turn, the supportive social context, the overt changes in the teachers' practice and the critique of sports, skills and a teacher-centred approach, it was becoming the dominant pedagogical practice. In this case, sports, skills, games and a teacher-centred approach would become the residual pedagogical practices i.e. something archaic but still present in the dominant (Williams, 1977) and the emergent would be the student-centred practices from the 21st century, such as other pedagogical models (Sport Education, or PLTS).

In conclusion on the teachers at Buckingham were emerging into the phase of continuation. The teachers within the department immersed themselves into the model and were developing the notion of pedagogical fluency. Whilst how they taught as a cultivation of experience and how they included competition into their units varied, all teachers had reached a messy turn (Cook, 2009) where the sustained professional learning from me in my role as a boundary spanner and the emerging CoP had facilitated their current use of the model, and their future dispositions and actions. Indeed, the teachers' developed the disposition of phronēsis (the ability to act wisely) (Kemmis & Smith, 2008b), to facilitate their

students learning in the physical, social, cognitive and affective domains. In the following section I explore the use of Cooperative Learning at Birchwood through my discussions on the emerging rejectors.

Emerging Rejection

Rejection is the act of discontinuance and the decision not to use an innovation following a period of implementation (Fullan, 2007). In agreement with Fullan, (2007) and Hargreaves (1994) I will show that Nikki (Birchwood, *non-adapter*) discontinued her use of the model, and Tom (Birchwood, *non-adapter*) was emerging into rejection as a result of the dissatisfaction with the student learning outcomes and the practice architectures that continued to constrain his dispositions and actions (Kemmis & Grootenboer, 2008).

For Nikki the act of discontinuance happened after teaching only eight lessons (Table 8 p.193-196). Building upon my discussions in Chapter 5, the programme of study, her commitments to examination physical education and the weather continued to inhibit lessons from taking place. Coupled with events outside of Nikki's professional life, her use of the model was further constrained. She decided with my support that it would be best for her to remove herself from the study. Whilst in Chapters 4 and 5 I showed that I could influence teachers' *buy in*, support their inquiries and I had played a pivotal role in motivating the teachers to sustain their use of Cooperative Learning, I did not have enough influence to enable Nikki, who was even a friend of mine, to use Cooperative Learning *within* and beyond the mess of the practice architectures (Cook, 2009; Kemmis & Grootenboer, 2008). Nikki did not adapt her use of the model. Discontinuance was a result of the practice architectures, the work life balance and potentially the notion of innovating alone. Indeed, Nikki and Tom did not share their practice with one-another in the second and third units, and Tom who was also the curriculum leader of the department, had not supported Nikki in re-arranging the facilities for her lessons to take place (as I discussed in Chapter 5).

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In this section I therefore consider Tom, the non-adapter's, use of Cooperative
Learning and how the dominant and residual pedagogical practices were used
with Cooperative Learning. Whilst Tom did not discontinue his use of the model,
through innovating alone and his teacher-centred approach I suggest that he was
emerging into rejection and would discontinue his use of the model.

Cooperative Learning immersed within the dominant and residual pedagogical practices

> At the start of the lesson Tom tells the teams to read the sheets
> He then led the warm up which was throw and then follow
> He told the whole class the practice task for Relay and then following the
> teams' practice he brought the whole class in to watch one team for a
> demo
> Students were asked to evaluate each other
> At the end of the lesson he organised a competition which he ran involving
> which team could complete the relay the fastest. (CLVT U5 L2)

Whilst I suggested in Chapter 5 that Tom had transformed his sayings, doings and
relatings (Kemmis, 2010, 2009), in his fifth unit, as my field notes above show, he
used a teacher-led approach. Although students worked in learning teams, he
controlled the structure and format of the lesson and often brought the whole class
in for teacher demonstrations. 'He [was] on a different journey' in comparison to
the other teachers and 'for him it is not a case of the non-negotiables not being
planned for but his ability to follow the format of a student-centred approach' (FJ
13.5.12).

Fundamentally, Tom believed that the less able students could not lead the teams
and progress their peers' physical performance. In the pre-lesson interview with
Tom below, his statements show that he was now re-enforcing the vertical ability
hierarchies in order for the students to meet his performance related outcomes,
which in the second and third units I had seen him break down (Chapter 5). The
more able students were placed in the role of the coach and he told these students
that they were put in this role to lead the team, almost because they were seen as
the *special ones*. In consideration of Cohen's (1994) arguments on hierarchies
with teams, it could be said that ability hierarchies didn't exist because no-one had
an expert ability in, for example volleyball, and Tom was creating ability

hierarchies and enforcing inequality within his teams. Furthermore, the pre-lesson
interview with Tom also highlighted that in previous lessons he had placed
students into ability teams rather than heterogeneous teams and he was not
consistently teaching through the Cooperative Learning model in his units.

> Tom: I am going to tell them today that I have handpicked the coaches
> because two weeks ago they really didn't get the technique, although
> within that I put them in their learning teams and then I grouped them into
> ability
> Victoria: so they have been working in ability groups then?
> Tom: yeah and it worked for the top top set, but one boy didn't think he
> was in the right group and completely switched off
> Victoria: so are they in ability groups today then?
> Tom: no they are in their learning teams, but I have handpicked the
> coaches…I thought for today because of the ability difference last time I
> thought some of them are just going to go, he is trying to tell me to do this
> and he can't do it himself, but actually none of them can do it because it is
> so new and different, but when the coaches come over I am going to say I
> have handpicked you today, just to get them to say, oh yeah I am actually
> really good, the coaches will have sheets with pictures and teaching points
> on. (Pre-Lesson Interview, U4 L1)

In similarity to the first unit (as I discussed in Chapter 4), it seems reasonable to
suggest that Tom was experiencing cognitive dissonance, and in order to achieve
consonance he was changing his actions to support his beliefs that reflected the
practices of the dominant and residual pedagogical practices i.e. a teacher-led
approach and sports performance (Cooper, 2007). Indeed, the CLVT shows that
he never facilitated learning and whilst in 100% of the lessons there was physical
improvement, learning was a result of peer tutoring (Lafont, 2012) and a teacher-
led approach (Table 7 p.125). Furthermore, there were no signs of
social/emotional and cognitive improvement (Table 7). These findings on learning
go some-way to suggest that even though Tom was attempting to use Cooperative
Learning (through placing students in teams) he was using a watered down
version (Curtner-Smith *et al,* 2008), where the dominant and residual pedagogical
practices were used with Cooperative Learning, and as a result only physical
performance was progressed.

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Whilst Tom had begun to use the dominant and residual practices and even place priority on a teacher-centred approach within Cooperative Learning, I did try to give him advice and coach him during the lessons, similar to the approach taken with Christina and Phil (Buckingham, *dependent-adapters*). However, Tom was not willing to adapt his use of the model as the other teachers at Buckingham had. Whilst Christina and Phil where receptive to my comments and attempted to make changes to their practice, when I tried to give Tom advice during his lessons he wasn't very receptive and his future actions did not reflect my comments. Yet in contrast to, for example, Christina who I had observed six of her lessons during the fourth and fifth units, due to a number of Tom's lessons being cancelled, I only saw two of his lessons in this final phase of the study. It can be suggested that the lack of professional support from me in the role as the boundary spanner, contributed to the emerging rejection.

> Tom: it is quite difficult for them isn't it
> Victoria: I think they are doing alright though, I wondered if you changed your role in the lesson, so you know in the Football you went in to doing whole class demonstrations because it was mad (unit one), but now they do go off and they do it and set themselves up, even if it is not all in lines or set, so I wonder instead if you do go off and do those mini discussions with each group
> Tom: right, yeah I don't know, yeah with this I think that because it is so new to them you want them to go, oh I have actually learnt that and I want them to go I have got that, rather than them going I know how to do it but I can't do it, you almost want to see some success
> He then went off and paused the whole class and sat them down to watch another teacher demonstration. (CLVT U4 L1)

During my interview with Tom at the end of the year he had acknowledged that he was confused with his own use of Cooperative Learning. For example, he said 'I am not quite sure where I am with it at the moment' (YE Interview). Yet is became apparent that it wasn't that Tom had lost interest with the model, which is a reason for discontinuance (Fullan, 2007; Hargreaves, 1994), but instead the practice architectures (Kemmis & Grootenboer, 2008) in this final phase had constrained his use of the model to such an extent that he was beginning to give up. This was reflected in his comment three weeks before the end of term, 'I think I need to stop now…I need a fresh start' (YE Interview). Indeed, 'over half

of the lessons were cancelled due to rain, athletics events, a middle managers meeting' (FJ 2.7.12) and the programme of study was becoming a burden to his practice. Furthermore, there was a growing concern about how his practice would be seen in light of OfSTED and the whole school teaching and learning criteria.

> So you do something one week and you think great it worked and then you look at the programme of study and we are doing volleyball next week. I think that one of the issues that we are faced with is, so actually progressing over a number of weeks…I think that it still remains for me, whether somebody else coming in and observing it and going what would you grade that, not just for the grading sake but whether they would go yes there is learning going on and yes they are all making really good progress (YE Interview)

It can be said that whilst at Buckingham the supportive climate created within the emerging CoP allowed the teachers to work beyond the practice architectures of the programme of study and address the OfSTED criteria, innovating alone was a potential reason why Tom had retained a teacher-centred approach, and had not moved beyond the practice architectures. However, Tom had persisted in his use of Cooperative Learning and despite these practice architectures constraining his dispositions and actions he had not rejected Cooperative Learning yet. He attributed his continuance with the model to the sustained professional support provided by me and critiqued standalone workshops as a form of professional development (c.f. Mockler, 2005) claiming that they would not have motivated him to continue using the model. However, whilst Tom suggested that he would use Cooperative Learning to teach physical education in the future, he was uncertain as to how he would implement it. He felt that it was a challenge to sustain the use of the model over the course of the academic year, but also appreciated that if you use a model once and then not again the impact on students' learning is dampened.

> Victoria: So what has motivated you to keep going then?
> Tom: I think when you came in in September I think if there hadn't of
> been that input all of the way along, so if you think what you delivered in
> September, if that had just been a course we had had it would have been
> forgotten about, I am pretty certain of that, so yeah I guess you should to
> take credit…
> Victoria: I don't know is the answer to that at this stage. My worry is that
> if I dip in and out of it you do it a disservice and you lose some of the
> impact. I think that if you do it all the way through it loses impact and it
> runs out of steam or whether I run out of steam…But I don't want to do it
> in the way that we used to do Sport Ed and we just thought that's great and
> we didn't it for everything and it ran out of steam…So maybe that is the
> answer kind of keeping going I don't know. (YE Interview)

In summary, this section has shown that Tom and Nikki were emerging into
rejection. Both Tom and Nikki's use of the model was constrained by the practice
architectures which prevented lessons from taking place and the pedagogical
practices of a teacher-centred approach and sports performance governed their
dispositions and actions (Kemmis & Grootenboer, 2008). As a result of Tom's
overt changes in practice, which did not reflect using Cooperative Learning in its
entirety, I did not consider that he had reached a messy turn (Cook, 2009). Tom's
use of the model was based around the dominant and residual pedagogical
practices, and he had not adapted his use of the model to support students working
together and their learning in the physical, cognitive, social and affective domains.
Since he was innovating alone, he had limited local support from his department
or schools and he was not responding to my support or showing signs of working
beyond the practice architectures (Kemmis & Grootenboer, 2008) I suggest,
similar to Nikki, he was emerging into rejection rather than adoption.

Chapter Conclusion

In this Chapter I have considered how the teachers at Buckingham were emerging
into the phase of continuation and the teachers at Birchwood were emerging into
rejection. The teachers at Buckingham immersed themselves into the model where
Cooperative Learning was emerging as the dominant pedagogical practice. These
teachers were developing pedagogical fluency (Casey, 2010) and taught as a
cultivation of experience connecting students' learning and building upon their

students' emerging learning experiences through the use of group processing and
acting in the role as a facilitator to the expert movement task. Coupled with the
inclusion of competition into their units, the students were afforded more
ownership and responsibility for their learning, they were motivated to support
each other's learning and learning in the physical, cognitive, social and affective
domains was strengthened in comparison to any other unit taught. However, how
the teachers adapted their use of the model varied. The ability to adapt their
practice was dependent on the number of lessons taught through Cooperative
Learning, previous experience with pedagogical models, support from me in my
role as a boundary spanner and the emerging CoP. The teachers at Buckingham
reached a messy turn (Cook, 2009) and began to consider their future use of the
model and how they could support each other's practice to sustain the long-term
use of Cooperative Learning.

In contrast to the teachers at Buckingham who were emerging into continuation,
the teachers at Birchwood were emerging into rejection. The emerging rejectors
did not use the model in its entirety and one teacher discontinued in her use of the
model before the end of the study. Sports performance and a teacher-led approach
had remained as the dominant and residual pedagogical practices and
subsequently, students' learning was a result of peer-tutoring (Lafont, 2012) and a
teacher-led approach. These teachers innovated alone and had less social support
from me in my role as a boundary spanner. Indeed, these non-adapters did not
reach a messy turn and their use of the model and their perceptions of how
Cooperative Learning could be used in the future were constrained by the mess of
the practice architectures (Cook, 2009; Kemmis & Grootenboer, 2008).

I conclude this chapter by suggesting that the social context, such as an emerging
CoP, and sustained professional support from a boundary spanner plays a pivotal
role in facilitating teachers' movement from implementation to continuation, and
to innovation with change. Furthermore, teachers' previous experience with
pedagogical models and the time spent using the model affects a teacher's ability
to adapt their practice to extend students' learning become pedagogically fluent
with the Cooperative Learning model. Thereby, the variables of time, sustained

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professional learning and a CoP should be considered for the enduring use of a

pedagogical model and innovation with change.

CHAPTER 7: CONCLUSION

In keeping with the notion that group processing is the central element of Cooperative Learning (Casey & Dyson, 2012; Sutherland, 2012), it seems appropriate to conclude this thesis by following a similar reflective process to the one that the students and teachers engaged with in this yearlong study. In reflecting in this way, I reflect on the messiness of changing practice. I consider how participatory action research (PAR) enabled the teachers to break the dominant practice architectures of physical education and how PAR supported teachers' use of an emergent pedagogical approach (i.e. Cooperative Learning). My purpose is to consider how I have answered the questions I set out to explore, how the findings discussed can inform practice and future agendas, and finally, how I take this project forwards beyond doctoral study. Therefore, I conclude this thesis by considering 'What Happened?', 'So What?' and 'What Now?'.

What Happened?

As I argued in Chapter 2 the purpose of engaging with this research was for the concern that the practices inherent within physical education are obsolete (Brown, 2013; Gard *et al,* 2013; Kirk, 2010; Lawson, 2013; Penney, 2013; Tinning, 2010, 2012). Physical education has been placed on the *endangered species list,* and whilst there are a number of emergent pedagogical innovations, physical education since the 1960s has existed in a time of innovation without change (Bailey *et al,* 2009; Evans, 2013, 1985; Goodyear & Casey, In Press; Kirk, 2010; Tinning, 2012). One of those emergent pedagogical practices around the future survival of physical education is the idea of pedagogical models (Haerens *et al,* 2011; Kirk, 2013, 2012). Casey (2012a) suggested that anyone advocating models-based practice as a future for physical education would occupy a crowded space and it was in this space that I argued for the development of a student-

centred approach to teaching and learning in physical education. Specifically, I explored Cooperative Learning as one of many emergent pedagogical practices that has rarely been used beyond the honeymoon period of implementation. Through four research questions (p.53) I set out to understand, not only if Cooperative Learning was capable of meeting the legitimate learning outcomes of physical education[30], and could therefore provide relevant and transferrable learning experiences, but how and why the model can be sustained and if its enduring use is feasible within physical education. The answers to these questions were not as black and white as I had anticipated. It was not a case that Cooperative Learning could be merely placed into teachers' practice, departments and schools and I could explore the outcomes. As I discussed in Chapters 4-6, Cooperative Learning conflicted against the practice architectures and the dominant and residual pedagogical practices.

In Chapter 4 I explored how Cooperative Learning entered the classroom as an emergent pedagogical approach, radically different from the practices that had been learned by the students, endorsed by the teachers and acted as a result of the practice architectures (Kemmis & Grootenboer, 2008). What it meant to be a *good student* from the 'institutionally-mandated forms of commoditized activities' (Barab & Duffy, 2012, p. 39) and the dominant and residual pedagogical practices of physical education, differed to the requirements for being a *good student* in a Cooperative Learning classroom. Furthermore, teaching as telling and the control over the management and organisation of lessons (O'Sullivan & Dyson, 1994; Kirk, 2010) was no longer a means to define a *good teacher*. Subsequently, whilst *buy in* occurred during the honeymoon period and there was an observed excitement about implementation, when Cooperative Learning entered the classroom as a bona fide approach (i.e. one whole unit of activity using all non-negotiables) rather than as separate elements or non-negotiables, Cooperative Learning contrasted markedly with these already formed subjectivities. The model

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[30] The legitimate learning outcomes of physical education were positioned as being the physical, cognitive, social and affective learning (c.f. Bailey *et al,* 2009; Kirk, 2012, 2010).

was immersed within practice architectures and used within the dominant and residual pedagogical practices (Kemmis & Grootenboer, 2008). As a consequence of the extra-individual conditions, student learning conformed to peer-tutoring (Kemmis & Grootenboer, 2008; Lafont, 2012), and the teachers experienced psychological discomfort in their changing practice. Yet by comparing and contrasting Cooperative Learning against their use of the dominant and residual practices through PAR, I concluded this thesis chapter by suggesting that the model was becoming accepted by some of the students and teachers.

Once the teachers had developed an understanding about what Cooperative Learning does and how it works, Chapter 5 considered how the teachers worked *within* and *with* the mess of the practice architectures (Cook, 2009; Kemmis & Grootenboer, 2008). The teachers jockeyed through the professional and curricula constraints, where the use of the model was not always feasible in their practice or curricula. However, *within* this mess new practice architectures, and therefore new expectations for teaching and learning were being created (Cook, 2009; Kemmis & Grootenboer, 2008). The teachers began working against their students' cultural expectations, changing the way the model was used to create positively interdependent learning teams. Indeed, engaging *within* and *with* the mess allowed teachers to address the practicality of implementation (Cook, 2009; Fullan, 2007; Hargreaves, 1994) and develop an understanding of how Cooperative Learning could exist within their practice, department and schools. Subsequently, the model was increasing in currency as a worthy approach to teaching physical education.

However, beyond unit three the use of Cooperative Learning differed by school. In Chapter 6 I discussed the emergence continuation or the emergence of rejection. The teachers at Buckingham were emerging into the phase of continuation, and as they worked together in an emerging community of practice (CoP), they worked against the practice architectures and redefined *good teaching* as teaching through Cooperative Learning. Furthermore, Cooperative Learning was used in an *advanced* manner and more orientated to social constructivism, where the teachers at Buckingham were becoming pedagogically fluent. Subsequently, and for the first time in the yearlong study, the four student

learning outcomes (physical, cognitive, social and affective) were progressing at the same rate. In addition, I tentatively suggested that Cooperative Learning began to impact upon students' engagement with physical activity beyond the classroom. However, for the teachers at Birchwood who were emerging into rejection, they did not move forwards with the practice architectures and began to discontinue their use of the model. Whilst in the following section I will explore the role of social connectivity with a boundary spanner and with colleagues as a contributing factor in the process of the enduring use of Cooperative Learning, similar to Hargreaves (1994) and Fullan (2007) discussions on innovations and change, the teachers who innovated alone returned to their traditional routines.

Therefore, in concluding the yearlong unit, it is possible to see that the teachers were working against the practice architectures and Cooperative Learning was emerging as a dominant pedagogical approach. Drawing on Casey (2010) it seems reasonable to suggest that both students and teachers had unlearned the dispositions and actions inherent within the previously dominant and residual pedagogical practices, and then re-learnt how to act and be a participant in a Cooperative Learning classroom. Through persistence, accruing successful outcomes, PAR, and social connectivity, it was seen that Cooperative Learning is feasible and can sustain 'the tough test of reality' (Hargreaves, 1994, p.12) to achieve and progress the four student learning outcomes. Building upon and extending my discussions on what happened the following section serves to explore the significant findings within this process of change as a means to contribute to future research agendas and the practices of physical education.

So What?

Whilst I do not consider the findings to be significantly different from the arguments made around how to facilitate educational change (Fullan, 2007; Hargreaves, 1994), they do extend the discussions by Casey (2010), O'Donovan et al (2013, 2012, 2010) and Dyson and his colleagues (Dyson & Rubin, 2003; Dyson & Strachan, 2004, 2000), on the impact and longer term use of pedagogical models. Indeed, the significance of this research is that it has explored

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Cooperative Learning beyond the honeymoon period of implementation, and it has responded to Rovegno's (2008) argument that we need to unpack the complexity of these learning environments over enduring periods of time to inform practice and future research agendas. By this means, the discussions provide implications for those advocating the enduring use of Cooperative Learning, the broader overarching framework of pedagogical models and to some extent the use of other emergent pedagogical innovations.

To conceptualise the process of changing practice during interrelated and sequential units within an academic year, Figure 2 (p.251) serves as a benchmark for what we can expect of students' learning, the focus of teachers' learning, how the model is situated within teachers' practice and how social connectivity enables the enduring use of Cooperative Learning. However, at this juncture I acknowledge that the conclusions I am making are based on only two contextual environments that reflect the pedagogical practices, practice architectures and social contexts within these schools. In addition I understand that, as a result of friendship, I held a different type of epistemological position in this research process. Whilst I have provided a rich description of events in Chapters 4-6 for transferability (Lincoln & Guba, 1985), the conclusions I am making can be considered as a benchmark not a specific measure of practice. I will now highlight some significant conclusions which evolve around how the use of the model is context dependent and I explore teacher learning as a means to support the enduring use of pedagogical models.

Context Dependent

Metzler's benchmarks and the fundamental elements of Cooperative Learning have been used as a means to guide teacher action, maintain the authenticity of implementation and facilitate and deepen the four learning outcomes (Casey & Dyson, 2012; Dyson *et al,* 2010). Although I used non-negotiables, which drew on the perspectives of the protagonists of Cooperative Learning (i.e. Johnson and Johnson, Cohen, Slavin, and Kagan) and encompassed the fundamental elements and benchmarks, I consider that the non-negotiables and their ability to achieve

the learning outcomes are context dependent, as teachers move beyond the honeymoon period of implementation. Whilst they all should be used as a means to achieve the student learning outcomes (Casey & Dyson, 2012), how they are used implicitly and explicitly to facilitate students' learning depends on the emerging learning experiences.

To explore this idea further, and in contrast to Casey and Dyson's (2012) conclusion that Cooperative Learning facilitates students' learning through the five fundamental elements, the non-negotiables did not ensure that learning was a result of positively interdependent teams during the period of initiation (Figure 2, p. 251). Indeed, students need time to learn how to learn through the model (Casey *et al*, 2009; Dowler, 2012) and to support positively interdependent learning teams the teachers need to modify their explicit use of the non-negotiables. For example, one teacher in this study emphasised promotive face-to-face interaction through the use of games making to enhance equality within student teams. In further consideration of the non-negotiables, whilst Casey and Dyson (2012) argued that group processing was the fulcrum to the other four elements[31], this thesis has only tentatively supported this claim. Following initiation teachers then modify the model to suit their own contexts where group processing, as Sutherland (2012) suggests, is one way to orientate the classroom to a constructivist learning environment. Yet modifying the use of individual accountability and how the teacher acts as a facilitator are other ways to extend students' learning. Thereby, at different phases in the use of Cooperative Learning, non-negotiables are implicitly or explicitly used. By this means I consider there to be no hierarchy in the use of the non-negotiables, but rather the use of each is context dependent based upon how best to facilitate students' learning.

In consideration of Cooperative Learning structures (that I positioned as one non-negotiable), I found answering the research question "what Cooperative Learning

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[31] The five elements: positive interdependence, individual accountability, group processing, small group and interpersonal skills and promotive face-to-face interaction (c.f. Casey & Dyson, 2012).

structure would best facilitate students' learning and teachers' use of the model?"
to be problematic. On the basis of the findings explored, I consider the
Cooperative Learning structures to be also context dependent. For example, whilst
Jigsaw embodies accountability and serves to motivate students to engage in
learning tasks with their team (Aronson *et al,* 1978; Slavin, 1983) this structure
had an ill-effect on student engagement unless students' understood how to learn
within the structure, and the overarching framework of the Cooperative Learning
model. Furthermore, Johnson *et al.* (2000) position learning together as being the
most challenging structure to learn to use, and as such their argument suggests
that learning teams which is drawn from their conceptual approach (Dyson &
Grineksi, 2001) should be used once teachers are familiar with the model.
However, since the teachers had previous experience with similar constructivist
pedagogical models, learning teams allowed teachers to feel comfortable with
their changing practice and to focus on how to implement the non-negotiables. By
this means, rather than focussing on what a structure can and should do, teachers
should focus on the structure relevant to their contexts as a means to develop
students' learning by the implicit and explicit use of the non-negotiables. Thereby,
I have not defined specific structures in Figure 2 (p.251).

In summary, students' learning should be progressed and whilst all the non-
negotiables should be used, at times they are used implicitly and at other times
explicitly to extend students' learning. Drawing on social constructivism, the use
of a Cooperative Learning structure follows students' emerging learning
experiences and the non-negotiables are simply there to scaffold the learning
outcomes (Darling-Hammond, 2007). As teachers emerge into a phase of
continuation and develop their pedagogical fluency, they are better placed to adapt
their use of a model. They become apt at understanding the context and the non-
negotiables, and take a more flexible approach to their use of Cooperative
Learning structures and the model as a whole. In the following section I explore
teacher learning as a means to support students' learning, the enduring use of a
model and how teachers can become pedagogically fluent.

CHAPTER 7: CONCLUSION

Teacher Learning

Teacher learning over the course of the year can be understood through Aristole's three dispositions, epistēmē (to seek truth through contemplation), technē (to act in a true and reasoned way to gain outcomes) and phronēsis (to act wisely) (Kemmis & Smith, 2008b). Praxis development, which these three dispositions serve, is an on-going process (Kemmis & Smith, 2008b) which can be, and as I have explored in this thesis, facilitated through the use of PAR (Ax *et al*, 2008b; Kemmis & McTaggart, 2008). I will now show how the focus of these dispositions changes as a teacher advances in their use of the model and I make recommendations for teacher learning focussed on pedagogical models. Furthermore, I explore social connectivity as one way to strengthen teacher learning.

During initiation the non-negotiables acted as a *phrase book* that facilitated teachers' understanding of how to use Cooperative Learning and how to plan for teaching through the model (technē). The extended period of learning about the model, through the three month period of initiation was successful in terms of its ability to support the fidelity of implementation during first unit. In addition, during initiation the teachers sought evidence of effectiveness as a means to justify their current and sustained use of Cooperative Learning (epistēmē). Technē and epistēmē serve as means to develop teachers' understanding of how to use a model, what it does, how it works, and subsequently, as a result of these new understandings, motivated teachers to move into the next unit. As the teachers progressed in their use of Cooperative Learning, phronēsis enabled them to address the practicality of implementation and understand how the model could exist within their practice, the department and the school. Collectively, once these three dispositions have been developed, teachers moved were emerging into a phase of continuation. It seems reasonable to suggest that one reason for the teachers at Birchwood to emerge into rejection was that all three of these dispositions had yet to develop.

CHAPTER 7: CONCLUSION

Beyond the initial development of technē, epistēmē and phronēsis these dispositions continue to develop. The teachers at Buckingham who adapted their use of the model to extend students' learning moved beyond the initial *phrase book* of the non-negotiables to develop *advanced* practices and pedagogical fluency (technē). Furthermore, the teachers began to work beyond the practice architectures modifying the conditions in which they practice (phronēsis) and teachers continued to contrast the model against the dominant pedagogical practices which, in turn served to facilitate longer term *buy in* (epistēmē). The continued development in these dispositions shows that, in order for students' learning to be progressed and to support the enduring use of Cooperative Learning, teacher learning should be continually progressed beyond that developed during initiation.

Similar to Siedentop's (2002) discussions around teacher content knowledge, teacher learning for pedagogical models should move beyond equipping teachers with the knowledge to teach introductory units. In particular teachers need to know how they can adapt the use of the non-negotiables to build upon their students' emerging learning experiences, and subsequently extend students' learning in the physical, cognitive, social and affective domains. For example, teachers need to be equipped with an understanding of how to adapt their use of individual accountability that would enable them to a) break down potential vertical ability hierarchies, and b) extend students' ability to work together to learn independent of support or instruction from the teacher. Drawing on the findings in this study, adapting the use of individual accountability involved moving from the use of 'tick sheets' (unit one), to modifying the way students accessed the information for learning in their teams (unit two and three), to teaching students how they could design group work tasks that ensured each team member was held individually accountable (units four and five).

In further consideration of the content knowledge for Cooperative Learning beyond the introductory units, and on the basis of the findings explored in this study, teachers understanding of how to teach as a cultivation of experience (Darling-Hammond, 2007) should be developed. Similar to my previous example

on the use of individual accountability, teachers should gain an understanding of how to use the non-negotiables both implicitly and explicitly. One way the teachers who were emerging into continuation re-structured their units and lessons to support the implicit and explicit use of the non-negotiables was through the inclusion of competition into their units. Therefore, teachers' understanding of how individual accountability and positive interdependence can be used as unit goals as well as lesson-by-lesson implementation could be developed. Furthermore, and in order to teach as a cultivation of experience, an understanding of how to use group processing should be considered. For example, teachers could be provided with various approaches that they could use to 'start the car' or strategies for 'nearing the final destination' (Sutherland, 2012) that move beyond 'what went well in your group work today?' and 'what does your group need to improve on?' that were often implemented during the introductory units. Examples could be drawn from how the adapters and co-adapters spent time developing their students' understanding of how to reflect, and their use of additional questions to prompt students to choose their roles and create their own learning team goals.

In further consideration of the content knowledge for teaching beyond introductory units and the use of the non-negotiables, teachers should become aware of how to change their actions in the role of the facilitator to support students' learning. Indeed, with research predominantly exploring teachers' use of the model during the honeymoon period, this study provides an indication of how the role of the facilitator changes over time. As teachers and students moved beyond the introductory units, the teachers' role changed from supporting group work to becoming an expert to the movement task. For some teachers, such as the dependent-adapters, they may need support in understanding how to 'act as the guide on the side' (Hertz-Lazarowitz, 1992, p.77) to support group work and the types of questions that can be used to advance students' understanding and performance within movement tasks.

In summary, teacher learning for the enduring use of the Cooperative Learning model involves the continual development in Aristole's dispositions and the

extension of teachers' content knowledge for Cooperative Learning beyond the introductory units. It seems reasonable to suggest that without such continual development the same introductory units could be taught again and again, students' learning may not be progressed and teachers may begin to discontinue their use of a model (Siedentop, 2002). In the following section I explore how social connectivity is one way to support teacher learning, the development in these dispositions and teachers' content knowledge.

Social connectivity

I use the term social connectivity to show how, as a boundary spanner, I acted as a 'guide on the side' (Hertz-Lazarowitz, 1992, p.77) to facilitate changing practice. In addition social connectivity is also understood through the social learning framework of a CoP (Wenger, 1998). In agreement with Fullan (2007) and Hargreaves (1994) this section explores how social connectivity is potentially a more powerful mediating factor than Cooperative Learning itself and social connectivity should therefore be considered as a strong facilitation in teacher learning about pedagogical models.

Perhaps the importance of social connectivity with a boundary spanner can be understood by the divergence in practice between the two schools following unit three. Indeed, I visited Birchwood bi-monthly and Buckingham bi-weekly. I therefore saw the teachers at Buckingham on more occasions in an informal capacity, in addition to my formal visits to observe their lessons. Furthermore, I had more connectivity with the teachers at Buckingham through social media than Birchwood. I paid a more of an inherent role in the teachers at Buckingham's changing practice through my greater investment in the communicative spaces of PAR. It seems reasonable to speculate that since I developed teachers' advanced use of the model and fostered the emergence of a CoP at one school, less connectivity with the other is a potential reason for the slow progression in Aristole's dispositions and the emergence into rejection. Whilst the variability in the social connectivity between the teachers and me is a limitation of this research, and suggests that it contributed to the findings in one school being

'celebratory' and at the other it being understood as a *somber affair*, it does exemplify and reiterate the arguments made for sustained professional support to facilitate the enduring use of Cooperative Learning (Dyson & Rubin, 2003; Dyson & Strachan, 2000, 2004).

Working with me also appears to have speeded up the process of developing pedagogical fluency. For example, Casey (2012c, 2010) learnt how to use the model as an individual practitioner where his attempts, similar to the events at Birchwood, were sometimes lambasted by the school and his colleagues. Indeed, although he had support through critical friends, and academic study contributed to the development in Casey's (2012c, 2010) understanding of models, he only became pedagogically fluent after a number of years. Since some teachers in this study reached fluency within one year, support from a boundary spanner could be said to be a catalyst for greater fluency. Furthermore, as I explored in Chapter 6, time spent using the model, previous experience with similar pedagogical models and the emergence of a CoP 'speeded up' the process of developing pedagogical fluency. Whilst I have considered that with less social connectivity Cooperative Learning remained immersed within the dominant and residual pedagogical practices, drawing on Casey's (2010) use of the model, it can be said that it takes longer to develop pedagogical fluency with less social connectivity.

Whilst I acknowledge that it would take a lot of PhD students like me who act as boundary spanners to go into schools to mimic this catalyst, technology is a pedagogic device that could be considered for future research agendas that aim to facilitate the enduring use of pedagogical models. I facilitated the teachers' use of the model from within the social context and through the virtual social media platforms of Facebook and Twitter. With social media acting as a global phenomenon and teachers checking tweets and status updates before, during and following school (Lieberman & Pointer-Mace, 2010), social media can act as a new social orientation and pedagogic device to facilitate the use of pedagogical models. Indeed, reflections can be shared, developed, teachers' practice extended and teachers can be encouraged to develop new understandings. Yet such an undertaking is similar to the way Casey (2010) learnt how to use pedagogical

models, i.e. through individual inquiry with the support of critical friends, and therefore the development in pedagogical fluency may take longer than an academic year. Furthermore, not all teachers will want to use social media and whilst social media serves to open communicative spaces, other means should be explored as well. Email, telephone and text message conversations are just as viable a means to 'drip feed' best practice and to provide moral and social support.

In consideration of CoPs as a form of social connectivity, I played a role in fostering the emergence of a CoP which, in turn, served to facilitate teachers' changing practice at Buckingham. Whilst CoPs can be created with teachers from different schools to facilitate the use of pedagogical models (Deglau & O'Sullivan, 2006), CoPs enabled the teachers at Buckingham to work together to move beyond the practice architectures that were prevalent in their school. For example, when working together teachers can address workload, the OfSTED criteria, space to use the model and unit length on the curriculum. Indeed, comparing and contrasting the two schools experiences is another means to exemplify the importance of social connectivity through CoPs. In contrast to Buckingham, the teachers at Birchwood did not create communicative spaces. Indeed, at times they didn't support each other's practice and they did not work beyond the practice architectures. In this way, researchers or boundary spanners should look at engaging a collective group of individuals within a physical education department, rather than focussing on sole practitioners. Teachers should be encouraged to open up pedagogical discussions, both formally and informally, and explore how they can work beyond the practice architectures. In concluding my discussions around teacher learning, social connectivity with a boundary spanner and CoPs are forms of teacher learning that facilitate teachers' use of advanced practices, the development of pedagogical fluency and facilitate a model emerging as the dominant pedagogical approach.

In this section I have explored the significance of my findings as a means to inform future practice and future research agendas. I have argued that beyond the honeymoon period, teachers move away from merely technical implementation of

the non-negotiables. Whilst all non-negotiables should be used, at times they are implicitly or explicitly used to extend students' learning based upon students' emerging learning experiences. Yet in order to progress student learning, teacher learning should also be advanced. Indeed, teachers need to develop an understanding of how to teach through a social constructivist lens in order to progress the four student learning outcomes. Aristole's three dispositions can serve as a framework for the focus of teacher learning through and beyond the honeymoon period. PAR and the inherent social connectivity strengthens the development in these dispositions and those advocating the enduring use of pedagogical models should consider how they can extend teachers knowledge beyond the *phrase book* of the non-negotiables, and how they can create supportive social contexts, such as CoPs.

Figure 2: The benchmarks of how Cooperative Learning is situated in teachers' practice, students' learning, teacher learning and the role of social connectivity beyond the honeymoon period.

Initiation

The Honeymoon Period

Teacher excitement and success.

Teacher learning is focussed on the understanding of the non-negotiables (technē) and the gathering of evidence of effectiveness (epistēmē).

Unit 1: immersed within the milieu of the practice architectures

Students' learning is constrained by the extra-individual conditions and conforms to peer-tutoring.

Teachers' experience psychological discomfort

Teacher learning focuses on the understanding of the non-negotiables (technē) and the gathering of evidence of effectiveness (epistēmē).

Unit 2-3: Working *within* and *with* the mess of the practice architectures.

Compromises are made to the model due to professional and curricula constraints. Teachers use the model within the practice architectures but begin to work against them

Students' learning is a result of positively interdependent teams. Learning in the social, cognitive, affective domains is greater than the physical.

Teacher learning focuses on the practicality of implementation (phronēsis) in curricula, workload and learning teams.

A CoP should be fostered.

Strong social connectivity, Innovate together (CoP)

Emerging Continuation:

Teachers develop pedagogical fluency and begin to modify their use of the model to be specific to their classrooms and students - teaching as a cultivation of experience.

Together in an emerging CoP teachers work beyond practice architectures

Learning outcomes progress at an equal rate. Learning impacts on students' engagement with physical activity beyond lessons.

Teacher learning is focussed on technē (an advanced understanding of the model) epistēmē (to ensure longer term buy in) and phronēsis (changing the conditions of practice)

Weak social connectivity, Innovate alone

Emerging Rejection: Units 4-5

The model remains immersed within the dominant and residual pedagogical practices. Teachers do not move beyond the practice architectures.

Student learning is a result of peer-tutoring.

Teacher learning focuses on the non-negotiables (technē), the gathering of evidence of effectiveness (epistēmē) and the practicality of implementation (phronēsis)

What Now?

I conclude this thesis by arguing that Cooperative Learning is one feasible emergent pedagogical approach that can move beyond the practices of the mid-20th century and move physical education off the *endangered species list*. However, whilst this thesis has explored the use of the Cooperative Learning over time, its use is still in its infancy. Further research should explore the sustained used of a model beyond one year to understand how and why a pedagogical model becomes the dominant pedagogical approach and indeed why it doesn't. Furthermore, research could explore what happens when the boundary spanner is removed from the social context. Moreover, how technology can be used to support teacher learning and the longer term impact of departmental CoPs should also be investigated.

As I now look forwards to how I will engage with the pedagogical practices around physical education, Figure 2 (p.250) will serve as a benchmark for me as I continue to work with teachers in schools. I have developed an understanding of how to support teachers' use of a model, and what the focus of teacher learning should therefore be in each phase of changing practice. Moving into a lectureship role I will also use and consider the framework presented in this thesis for undergraduate study and supporting the future generations of teachers using pedagogical models.

Yet whilst this thesis will support my own individual practice as a boundary spanner and as a lecturer, through the findings explored and the conclusions that I have drawn, this thesis has empirical, practice and theoretical implications that serve to support the practices within the wider physical education and sport pedagogy community. Empirically, this thesis has shown the impact a pedagogical model can have on students' learning over time, and how learning in all four domains (physical, cognitive, social and affective) is enhanced but also constrained by the practice architectures. Importantly, and I emphasise only tentatively, my findings suggest that if pedagogical models are used over an

enduring period of time and learning in these four domains is extended, then students' engagement with the physically active life can be enhanced.

Practically, this thesis informs the process of professional learning and the methods that facilitate teachers' changing practice that enable the enduring use of an innovation. For individual teachers and departments, Figure 2 (p.250) can serve as a framework to guide teachers understanding of how their students might respond to a pedagogical model over time. Furthermore, it provides an indication of how teachers can change their use of the model to support students' learning. Through the methods of PAR and a CoP teachers can develop Aristole's three dispositions. Yet importantly, for those who work with teachers and create university-school partnerships, the importance of social connectivity with boundary spanners to facilitate teachers' pedagogical content knowledge for Cooperative Learning within and beyond the honeymoon period is understood. Finally, the practical implications are that pedagogical change is strengthened when it is a participatory, rather than individual endeavour. Teachers should work together to support each other's changing practice where local support from senior leadership teams in the school contexts also aids changing their practice.

Theoretically this thesis can inform physical education teacher education programmes (PETE). In order to influence future generations of teachers to adopt a models-based approach, the process of in-service teacher learning can be applied to teacher education programmes. On the basis of the conclusions I have drawn, one example would be that pre-service teachers should be afforded the opportunity to use pedagogical models in schools where they engage in a process of dialogue, analysis and negotiation (PAR). In the initial stages of their use, the pre-service teachers should experiment with the model rather than using all non-negotiables in the first instance. Such an approach might allow them to experience success or excitement as seen in the honeymoon period, rather than a low self-efficacy which may hinder their future use of models (Zach and Cohen, 2012). Mentors in the school context, that support pre-service teachers' learning, could be guided to support the developing use of a model through the stages of Aristole's dispositions represented in Figure 2 (p.250).

CHAPTER 7: CONCLUSION

Therefore this thesis has empirical, practical and theoretical implications for students, teachers, PETE programmes and those wanting to create school-university partnerships to facilitate the 'talked about' ideas of innovations becoming sustainable 'actioned' futures. I aim to publish these implications drawing on the findings and conclusions that I have drawn from the yearlong study.

The fieldwork for this thesis ended in July 2012. However, since this time I have begun investigating, what happens when the boundary spanner is removed from the school context, and how and why a pedagogical model becomes the dominant pedagogical approach. Indeed, I have continued to work with Buckingham, but I no longer play the inherent role in the communicative spaces of teachers' practice as I did in this thesis. I visit the school twice per term (every three months) but mainly in the role of a researcher, rather than someone who is there to support practice. I engage with dialogue with teachers informally on my visits and through social media, where at times I 'drip feed' ideas for changing practice.

Supporting the predictions in this thesis i.e. that the teachers at Buckingham were emerging into adoption, Cooperative Learning has become a daily feature of the teachers' practice across multiple classes and within examination physical education, something that was previously rejected as a curriculum area for Cooperative Learning. Furthermore, the department now leads professional learning on Cooperative Learning for the whole school. They are using the three month period of initiation as a framework for teacher learning. With the support of the head teacher (and my sustained drip feeding of ideas,) Cooperative Learning is becoming a model for teaching within the whole school. The evidence of effectiveness from within an emerging CoP and a sustained form of professional learning has allowed the teachers to not only break the practice architectures of physical education, but now to become leaders of change who are breaking the dominance of 'teaching as telling' in the whole school. I will maintain a research relationship with the school and strive to explore whether beyond this two years Cooperative Learning becomes and remains a dominant pedagogical approach.

However, in further parity with my arguments in this thesis, Birchwood have discontinued their use of the model. Whilst Nikki plans to continue teaching through Cooperative Learning, the practice architectures have continued to constrain the model's use. Furthermore, despite my attempts to contact Tom I have not seen or heard from him. Therefore, I now reiterate the importance of social connectivity in changing practice when comparing the schools eighteen months from when the study began.

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APPENDIX 1

Modified version of PLTA (Dyson, 1994).

Date…………….   Time………………

      Class………………….

1. What were your goals for the lesson
    a. Teacher
    b. Pupil
2. What did you see in your lesson that met your goals? Be specific
    a. For you as a teacher
    b. For your pupils
3. What were the most positive aspects of the class?
    a. For you as a teacher
    b. For your pupils
4. What aspects did you feel did not go well?
5. What changes would you make to the lesson the next time you teach it?
6. Learning outcomes: Did you see learning occur? Specifically what? For all students?
7. What are your specific goals for the next lesson? What strategies will help you achieve your goals:
    a. Teacher goals
    b. Pupil goals

APPENDIX 2

Cooperative Learning Validation Tool

Observer: **Content:** **School:**
Teacher: **Year:** **Date:** **Class:**

	Observed	Not Observed
Were the goals of the lesson clearly stated during the lesson? a) Social and/or Emotional goals [Define this in field notes]		
b) Physical/ skill goals		
c) Cognitive goals		
Are there heterogeneous groups (i.e. equitable)?		
Was the instruction student-centered? [Define this in field notes]		
Did the teacher facilitate student activity? Did the teacher monitor and interact with students?		
Was a specific cooperative learning structure used? Ex. STAD, Learning Teams, Jig-saw...		
Did student groups have shared ownership? Groups assign students to specific roles; groups record/ chart contribution of each group member; and groups use peer teaching to help teammates.		
Did students work closely together? Was there face-to-face promotive interaction?		
Did the task/s enhance students' Positive Interdependence?		
Did students demonstrate small group skills and interpersonal skill (social skills)?		
Individual accountability: Was there a performance assessment strategy Were students assessed? [Elaborate in field notes]		
Did the teacher design assessments of performance for a)physical, b)cognitive c) social or emotional learning? [Elaborate in field notes]		
Was there student improvement? a) physical? b) Congitive? c) social or emotional learning?		
Did student self-assess Were students involved in assessment (peer, group, task sheet)?		
Did students encourage one another?		
Did the teacher facilitate group processing to draw out: a) What Happened? [Field notes]		
b) So What? Interpretation		
c) Now What? Transfer		

Summary Items	Low	Moderate	High
High academically focused class time			
High level of student attention/interest/engagement			

END MATTER