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Moving beyond subject boundaries: Four case studies of cross-curricular pedagogy in secondary schools

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ABSTRACT

Cross-curricular work in schools across the United Kingdom generally involves the use of a cross-curricular dimension or theme that spans the work of several subject teachers. The limitations of this type of curriculum planning have been noted in the research literature both within the United Kingdom and across Europe. The research reported here explores a different approach to cross-curricularity, focusing on cross-curricular pedagogy within the work of individual subject teachers. Drawing on observation and interview in four UK secondary schools, it presents a case study analysis of the ways in which secondary school teachers develop cross-curricular elements within their subject pedagogies in terms of their interface with the micro, meso and macro levels of schooling. Rather than seeing cross-curricularity as primarily a feature of curriculum design, it argues that there are many benefits of relocating it within an individual teacher's subject pedagogy.

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1. Introduction

Recent research conducted during 2007–2009 (see [Savage, 2010](#)) has identified that cross-curricularity within schools across the United Kingdom is generally conceived as being related to school-level curriculum design rather than being applied within an individual teacher's pedagogy. Similarly, [Ofsted \(2008\)](#) reported that, for the majority of secondary schools, a cross-curricular approach to curriculum development meant the adoption of a specific cross-curricular theme. Once chosen, this theme was explored by each subject teacher with their pupils for a designated series of lessons, with the skills, knowledge and understanding within each subject being applied to the chosen theme.

This approach is consolidated within the National Curriculum framework itself ([QCA, 2009a](#)). This document contains various claims about the benefits of cross-curricular ways of working that teachers are encouraged to adopt, and it includes a number of 'cross-curricular dimensions' that, although non-statutory, are promoted to facilitate cross-curricular teaching. These dimensions include:

- Identity and cultural diversity;
- Healthy lifestyles;
- Community participation;
- Enterprise;
- Global dimensions and sustainable development;
- Technology and the media;
- Creativity and critical thinking.

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Accompanying guidance from the QCA (QCA, 2009b) outlines the purpose of these cross-curricular dimensions as making learning 'real and relevant', thus reflecting "some of the major ideas and challenges that face individuals and society" (QCA, 2009b, p. 1). Additionally, the dimensions approach should have the effect of "unifying areas of learning that span the curriculum and help young people make sense of the world", whilst their non-subject focus places them as "crucial aspects of learning that should permeate the curriculum and the life of a school" (QCA, 2009b, p. 1). Schools are recommended to use the dimensions to design and plan the whole curriculum, so that they "can provide a focus for work within and between subjects, in personal, learning and thinking skills (PLTS) and across the curriculum as a whole, including the routines, events and ethos of the school" (QCA, 2009b, p. 1).

Once designed, however, the thematic curriculum is then delivered within separately timetabled subject lessons – the vast majority of UK schools use subjects as a key component in their curriculum design, staffing and organisational frameworks. However, the relative importance of individual subjects within schools can lead to difficulties, as can the fact that they are not necessarily compatible in terms of their epistemological, discursive or pedagogic approaches. Subjects may have a range of competing values, definitions and interests (Jephcote & Davies, 2007, p. 210) that can lead to conflict and tension, both within and across subjects (Bresler, 1995, p. 34). A recent example of conflict on the level of the perceived value of subjects is reaction to the new English Baccalaureate (EBacc) for pupils aged 14–16. The implications of some subjects being seen as more important, or being more highly valued than others by pupils, parents and employers has led to the demise of some subjects and associated staff and resources at the expense of others (Coughlan, 2011).

Across Europe, the Consortium of Institutions for Development and Research in Education in Europe (CIDREE) provided further evidence of the limited impact of a thematic approach (CIDREE, 2005). It identified a range of factors that influenced the success or failure of a cross-curricular theme (either as a stand alone component within a curriculum or embedded within existing subjects). Having surveyed 27 countries, the research identified the most common problem as teachers' lack of confidence with respect to their content and pedagogic knowledge in delivering cross-curricular themes:

Many teachers report a lack of self-confidence with respect to cross-curricular themes or they feel themselves ill prepared in addressing these themes. This inadequacy relates to both the lack of content knowledge and to the inability to employ a range of teaching and learning approaches appropriate to the theme (CIDREE, 2005, p. 8).

Other problems clustered around embedded school cultures, ways of working, and management structures. Despite targeted teacher development being a 'top priority', for schools, its impact was found to be limited, "because teachers have insufficient time to put their training experiences into practice" (CIDREE, 2005, p. 9). Additionally, the new need to the extent to which teachers were able to motivate, co-operate and collaborate was another important factor on whether or not a cross-curricular approach was facilitated within a school hindered by the "lack of a communication culture", and staff hierarchies:

Furthermore, members of the school community who are asked to coordinate cross-curricular work in schools, often find it difficult to motivate colleagues and do not have the same influence on their colleagues as school directors usually have. (CIDREE, 2005, p. 10)

On the basis of the research evidence, the interpretation of cross-curricularity as the adoption of particular themes within subjects is problematic. As Kelly points out, it is an example of a form of curriculum organisation that is 'quite inappropriate and which inhibits the attainment of education for all pupils' (Kelly, 2009, p. 86). Pursuing this idea, one of the curious aspects of the focus on cross-curricular themes or dimensions, is that it can deflect teachers' attention from one of the most powerful sets of concepts and ideas that they possess, i.e. their individual subject cultures. Many teachers define themselves through their subject, with research in this area indicating that the opportunity to develop one's subject and teach others about it is high up on the list of most teachers' job satisfaction (Spear, Gould, & Lea, 2000, p. 52). Subject knowledge (which I take to include the 'pedagogical content knowledge' through which that the subject is presented and traditionally taught) is a strong, formative force on the beginner teacher (Shulman, 1986).

Another approach to cross-curricularity is, then, to focus on how individual subject teachers develop their own subject-based approaches (Fautley et al., 2011). Despite the problems associated with cross-curricular themes, the CIDREE report was able to identify positive features, many of which focussed explicitly on the individual pedagogy of the teacher. For example, the report recommended that teachers should adopt a pedagogy that:

- Is characterised by an objective and open-minded approach to controversial issues with attention for the quality and quantity of evidence;
- Uses concepts as the intellectual building blocks and as essential aids to the categorisation, organisation and analysis of knowledge and experiences;
- Uses participatory and experiential teaching and learning styles;
- Deals explicitly with questions and issues that enable pupils to explore fundamental aspects of our lives (CIDREE, 2005, p. 10).

Thus the research presented here primarily focuses on the individual pedagogies of four teachers working within their own subject areas, on lessons that they had planned themselves within their standard curriculum time, and which did not adopt any specific cross-curricular theme or dimension. It relied on a key definition for cross-curricularity, established on the basis of previous research, as follows:

A cross-curricular approach to teaching is characterised by sensitivity towards, and a synthesis of, knowledge, skills and understandings from various subject areas. These inform an enriched pedagogy that promotes an approach to learning that embraces and explores this wider sensitivity through various methods. (Savage, 2010, pp. 8–9)

The research aimed to explore in detail the pedagogical features that this 'enriched pedagogy' might contain, by identifying the key elements of a cross-curricular pedagogy within an individual subject teacher's subject pedagogy, and classifying them in terms of Jephcote and Davies' (2007) micro-, meso- and macro-level accounts of changes in practice:

At the micro-level accounts have been concerned mainly with teachers, school classrooms and subjects and at macro-level with processes of policy-making and its implementation. At the same time, the meso-level has been taken to comprise of subject associations, local education authorities and sponsored curriculum projects where there are mediating processes which provide means to reinterpret macro-level changes and to assess the range of new choices they present to subject factions. (Jephcote & Davies, 2007, p. 208)

Whilst previous research has predominately focused on the meso and macro levels, in this study I have focused on what Jephcote and Davies call the micro-level, the work of the individual teacher. In addition to detailing cross-curricularity at an individual pedagogic level, I wanted to include the teacher's voice which is frequently and peculiarly absent from many studies. However, this focus does not mean ignoring the meso- and macro-levels that an individual teacher's work relates to. At the macro-level, Jephcote and Davies point to the structures of the National Curriculum, examination specifications and the like; at the meso-level, they highlight subject associations, local education authorities and other types of curriculum projects. All of these, they argue, have implications for what a subject is and how it is represented within the structure of the school. They mediate the pedagogy of the individual subject teacher who works within that context. As I will note in my conclusions, the meso- and macro-level had varying degrees of impact on the work of the four teachers I observed.

2. Research framework

The research examined how teachers utilised cross-curricular elements within their pedagogy whilst teaching Year 9 classes (i.e. pupils aged between 13 and 14). It took place during October 2009 to January 2010 and encompassed two main phases.

2.1. Phase One

Phase One, completed in late 2009, involved observation of a range of Year 9 classes (i.e. pupils aged between 13 and 14) in three comprehensive schools in south Manchester. A total of 15 lessons were observed across a number of subjects, as detailed in Table 1.

During each lesson, I took notes using an observational grid (see Table 2). This grid was specifically designed to help me record any elements of the teacher's pedagogy that contained a cross-curricular element (e.g. in their use of language, the design of a teaching activity, the chosen context for a particular lesson, their learning objectives, etc.).

After general details about the subject, school, date and time of the lesson being observed, I included a short section about the lesson objectives and scheme of work. In particular, I was interested to note whether or not the teacher shared the learning objectives at the start of the lesson with the pupils (and by what means, e.g. verbally or on an interactive whiteboard). The statement about the unit of work was purely there to help me contextualise the observed lesson within the broader work being done with that particular class.

Following these general items of information, I used a time line for my observation differentiated by five-minute segments and two principle columns (teacher and pupils). This allowed me to make short notes about any significant elements of a cross-curricular pedagogy or subject content at the appropriate point within the lesson structure. At these

Table 1
Lesson observation and subject.

Subject	School		
	A	B	C
English	1 ^a	1	1
Mathematics	1		
Science		1	1
History			1
Geography		1	
Music	1		1
Religious education		1	
Art			1 ^a
Drama			1 ^a
ICT	1	1 ^a	

^a This teacher was interviewed as part of Phase Two of the case study research.

Table 2
Lesson observation grid.

Subject:	School:	Date:	Time:
Lesson Objectives	<i>Add details here if known.</i>		Stated: YES/NO
			Displayed: YES/NO
Scheme of Work	<i>Add statement of broader context for individual lesson here.</i>		
TIME-LINE	Teacher	Pupil	Notes
0			
5			
10			
15			
20			
25			
30			
35			
40			
45			
50			
55			
CLOSE			
Potential Focus Points	Central stimulus (question, resource, etc.)	Learning objectives	Teacher language
	Common resources including technologies	Explanations	Pupil language
	Subject content (and links to other subject content)	Modelling	Pedagogical devices
	Social interaction	Use of Metaphor	Assessment devices
	Widening discourse	Questioning/ Conversations	Pupil engagement and organisation

specific moments, I was interested to note what the teacher was doing and, importantly, what the pupils were doing at the same moment.

The potential focus points at the bottom of Table 2 were drawn from a review of published studies of cross-curricularity in various teaching contexts (e.g. CFBT, 2008a,b; CIDREE, 2005; Dorion, 2009; Harris, 2008). They were included as an aide memoire for my observations.

2.2. Phase Two

I conducted the second phase of the case study during January 2010, interviewing four teachers about the lessons that I had observed in Phase One (see Table 1). I invited these four teachers for interview because each of their lessons had included what I considered to be significant cross-curricular elements, either in pedagogy or subject content (or both). I used a semi-structured interview format for these interviews, with a prepared set of questions that were common for each interview. The key interview questions included:

1. Can you define what a cross-curricular approach to teaching in (*insert teacher's subject*) entails? What do you suppose are the benefits of such an approach?
2. Describe your planning for the lesson, in particular whether or not you made a deliberate choice to develop a cross-curricular link at the following moments (*insert reference to key incident(s) drawn from the observational grid*).
3. If a deliberate choice was made, to what extent did you think that the cross-curricular approach adopted was successful? Did it add value to the learning and, if so, in what way?
4. If this cross-curricular incidence was 'accidental' or 'spur of the moment', what impact did it have on the pupils' learning? Would you use that particular approach again? If not, why not?
5. If you adopted a collaborative approach to the lesson (i.e. through working with another colleague), can you explain how this approach developed and how long it took? Why did you work with that particular colleague? What has been the benefit of that approach on your own pedagogy and, if applicable, your continuing professional development?

Each interview was audio-recorded and transcribed for further analysis. Following the end of Phase Two, I wrote short case studies of around 800 words each about each lesson. These case studies contained the following sections:

- A brief introduction to the school, the teacher, the unit of work and the lesson observed (i.e. its location within the unit of work);
- A general description of the lesson drawing on notes drawn from the observational grid and responses to the second key interview question;
- A more detailed description and tentative analysis of the cross-curricular incidences contained with that lesson. This included an exploration of statements made by the teacher to key interview questions 3 and 4;
- When appropriate, a detailed description and tentative analysis of any collaborative work undertaken by the teacher in preparation for the lesson I observed. This included references to any explanations given by teachers in response to key interview question 5.

These case study were emailed to the individual teachers approximately one month after the completion of the interview schedule, together with an invitation for comments about any of the case study's contents. In particular, I was concerned to ensure that any analytical points I had made within the case studies were shared by the teachers themselves, and justified by the observations I had made or the discussions I had held with these teachers. Two teachers replied ([case studies 2.4.1 and 2.4.3](#)); both asked me to stress the wider context of their work (as outlined within their unit of work within which the lesson I observed was contained).

In the following section I present the key data from the research. I will start with some reflections on the general observations of the classes in Phase One (Section 2.3) and justify my choice to focus specifically on the work of four teachers in Phase Two (Section 2.4). Section 2.4 presents *shortened versions* of each of the four case studies. I discuss my findings in Section 3.

2.3. Phase One: general observation of Year 9 classes

Analysis of the fifteen completed lesson observations revealed four significant incidences of a cross-curricular pedagogy. I defined 'significance' in this context quite loosely as what seemed, from my perspective, to be a deliberate choice on the part of the teacher to make and sustain a cross-curricular link as part of their pedagogy in that lesson. Within this definition of 'significance', 'sustain' meant that the link impacted on the lesson for a period of five minutes or longer. As I will show below, these cross-curricular links were often formed between subjects, but sometimes extended beyond the subjects included within the curriculum to other contexts too.

In addition to these four significant incidences of a cross-curricular pedagogy, I observed numerous smaller incidences of teachers using elements of a cross-curricular pedagogy within their lessons. These smaller incidences, and a note of the number of times they occurred in the fifteen lessons observed, included:

- Short references by teachers to work done in other subject classes (8/15 lessons);
- Illustrations drawn from other subjects to help introduce a new concept within the lesson (3/15 lessons);
- Setting homework that explored an aspect of the lesson in a new context drawn from another curriculum area (1/15 lessons);
- Comparisons of technical vocabulary from different subject areas to help inform pupils' understanding of a new word within the particular subject (3/15 lessons);

- Humorous references to other members of staff within the school (and their associated subject area) by way of conversation about a particular topic (1/15 lessons);
- Using lesson materials that contained a cross-curricular theme or dimension (e.g. an exercise within a worksheet or text-book) (4/15 lessons).

Whilst these incidences were smaller in significance than the case studies recounted below, they are nonetheless important in that they illustrate teachers making connections between subjects in a basic way. The four case studies described below were significant not just in the time devoted but, as we shall see, because, as the interviewed revealed, they were initiated by deliberate choices of various types on the part of the teacher.

2.4. Case Studies

A condensed summary of each case study is presented below. In these broadly descriptive summaries I aim to give the reader a flavour of cross-curricular pedagogy that each teacher adopted within the lesson I observed. Detailed analysis of these four case studies, and a consideration of this analysis in light of the research framework discussed above, will be carried out in the ensuing discussion (Section 3).

2.4.1. Case Study 1: art and English

During this [art] lesson the pupils were explicitly asked to 'play' with colours in a way that correlated to the 'playfulness of language' that had formed part of a previous (unobserved) English lesson (taught by a different teacher). The teacher drew a connection between the use of colour (in the art lesson) and language (in the English lesson) that was underpinned by a common creative process. When questioned about this, the teacher commented that:

As an art teacher, creativity is central to my work. I wouldn't be where I am today without it. Creativity is key to my own making practices. I try and utilise every opportunity to bring creative processes into my own teaching.

When questioned further, the teacher outlined a deliberate, informal approach to linking her definition of creativity to those of other colleagues within the school (in this case, her English colleagues). She continued:

We'd [her and another art colleague] looked together at some of the cross-curricular dimensions but this didn't seem to inspire us very much. On the QCDA website, I noticed that they had a tool for comparing subjects together side-by-side. This got me thinking. Which other subjects had creativity as a Key Concept? I was surprised to find that most other subjects did! I quite liked the definition of creativity in the programme of study for English. So we went to chat to {x} who taught English to see what he thought about it [creativity].

The definition of creativity as a 'Key Concept' within the English Programme of Study includes the following statements that pupils should be to:

- Make fresh connections between ideas, experiences, texts and words, drawing on a rich experience of language and literature;
- Use inventive approaches to making meaning, taking risks, playing with language and using it to create new effects.

These statements resonated with this art teacher's understanding of her own subject's approach to creativity. It resulted in a deliberate link between these two subject teachers and their use of a specific creative process.

2.4.2. Case Study 2: ICT and English

During the observed lesson, pupils were editing a short film using digital video editing software. The ICT teacher was encouraging them to explore different ways of ordering the video clips to create an appropriate narrative to the film. His instructions to the pupils at the beginning of the lesson, and his advice to them as he worked with pairs of pupils, made reference to storyboarding work completed during a previous lesson. Pupils used the storyboards as an integral part of their work in the observed lesson.

When interviewed about this lesson, the teacher reflected on similar lessons taught in previous years:

Up until this point, I think my approach would have best been described as 'traditional'. We took a standard piece of software like Movie Maker and got pupils to edit a piece of video that we provided into a short sequence. Although this approach taught the pupils some technical skills in Movie Maker, it didn't seem to tap into their creativity. As part of the new National Curriculum we have been asked to provide opportunities for pupils to work creatively and collaboratively, and to try to forge links with other subjects.

This teacher identified an English colleague to work with. Through discussion, he learnt about how English teachers use a range of approaches (storyboarding, word-processing techniques, scaffolding, etc.) to teach pupils how to structure a longer piece of text. When asked what had changed in the observed lesson, the teacher commented:

Well, now pupils plan out a short digital video sequence using a word processor-based storyboard similar to that which they would use in an English lesson. They use the 'cut, copy and paste' function in the word processor to help sequence their ideas. Having done that, they shoot some video using a digital video camera and import it into the new iMacs running iMovie. As before, the editing processes are undertaken within the software, with pupils making similar choices using the cut, copy and paste functions. The project involves them collaborating with each other more than they would have done. They also get more of a chance to be creative both in their storyboards and in the types of digital materials that they can collect and put together into their final short video story.

2.4.3. Case Study 3: English

Throughout the majority of this English lesson, pupils were working independently on materials drawn together by the teacher. All of these materials (covering music, drama and film) related to Shakespeare's play, *Romeo and Juliet*.

In interview, this is how the teacher described the lesson content:

Within the lesson, I wanted to create some cross-curricular links using *Romeo and Juliet* as a starting point. I chose music, drama and film, specifically Prokofiev's ballet score for *Romeo and Juliet*, Bernstein's *West Side Story* and Baz Luhrmann's film of *Romeo and Juliet* starring Leonardo DiCaprio. In the lesson that you came to see, I had asked the pupils to explore each of these three settings of the *Romeo and Juliet* story. They were working in small groups at computers watching and listening to various clips. Having spent quite a significant amount of time studying the Shakespeare text, I really wanted the pupils to have some freedom in how they analysed these three settings of the story. I was intrigued by how they might approach it.

During the lesson, pupils wrote a short piece related to their explorations. The teacher encouraged them to identify any similarities or differences that they could find. In interview, this is what he had to say about their work towards the end of the observed lesson:

I was pleasantly surprised by their work. One of the things they commented on extensively was characterisation. This is probably because I go on about it a lot! But they talked about the ways in which characterisation was portrayed in the Prokofiev score (through musical themes), the accompanying ballet (and in the *West Side Story* production) through gesture, and, to a lesser extent it seemed, in the film (although that might be because they spent less time on that). One pupil had obviously understood it quite deeply. He commented on the way that different types of music accompanied the different characters in Bernstein's approach, with the Latin American sounds representing the Sharks and the Jets having a different type of beat. I learnt something about it from him!

2.4.4. Case Study 4: drama

This final case study is slightly different from the previous three, in that it involved the teacher making an explicit link to a pedagogical device drawn from the world of the theatre, her 'home' subject. This device is then applied for a new purpose within the classroom. Whilst this might not be considered 'cross-curricular' in the traditional sense, it does reveal an approach to teaching a subject that builds upon its wider heritage and the tools or processes within it. For this reason, it is included here.

The specific technique used throughout a significant portion of the lesson was called 'freeze framing'. During the lesson, and as part of a unit of work on developing a character's identity, pupils were improvising a scene that depicted Rosa Parks' refusal to give up her seat on a bus for a white passenger in Montgomery, Alabama. At key moments, the teacher would shout 'Freeze!' and the pupils were required to stop what they were doing and remain absolutely still and quiet. At this key moment, they are asked to reflect, in character, about their feelings at that specific moment. In the drama teacher's words:

I find it a very helpful way to try to understand whether or not the pupil really understands the role of their character. I make use of a technique called 'freeze framing'. This is when the action in a particular scene is frozen at a particular point in time. Normally I will decide when this happens, although sometimes I will let pupils decide. At the particular moment when I shout "Freeze!", every pupil involved in the scene has to stop what they are doing or saying and remain absolutely still. They stop moving, talking or anything else. This allows us to think together about the situation that the pupils are presenting through their acting. It is a technique drawn from the theatre and it allows a particular actor to talk about their perceptions in the situation they find themselves in or to give the audience further information about how they might be feeling or thinking. Some directors called this 'thought tracking'.

In interview, I asked the teacher why she had adopted this tool. Again, in her words:

As a teacher, I use this technique quite a lot to help my understanding of whether pupils are really engaging with a particular scene. I would say it is a key part of my assessment for learning strategy. During the freeze frame moment I will ask questions to a particular character in the scene. Sometimes I will also ask pupils who are watching the scene with me to ask questions too. I find it a very helpful way to try to understand whether or not the pupil is really understands the role of their character. Obviously it has limitations. In drama, pupils often feel things that they can't express in words. But, when used with other assessment devices, freeze framing is a really useful assessment tool. And I'm pleased that it is an adaptation of a tool from the theatre.

3. Discussion

The four case studies presented above and, to a lesser extent, the noted incidences of cross-curricularity in other teachers' work in Phase One, illustrate that there is an undercurrent of cross-curricular thinking and practice that informed their work with the Year 9 pupils. More significant incidences were initiated by deliberate choices that teachers made. On occasions these were justified or explained by curriculum changes, but often they were the result of teachers working collaboratively and sharing elements of their pedagogical and subject knowledge. Given the strongly focussed subject frameworks that these teachers worked within (explored in Section 1), this finding surprised me.

It was interesting to reflect on these case studies further and to try to identify in more detail the specific motivation or trigger for the adoptions that the teachers had made. In Case Study 1, it seemed to be related to a conceptual question in the teacher's mind about creativity. This, as the quotations from the interview illustrated, was an integral part of her work and her curiosity about it drove her to explore what it meant in other curriculum areas. This, in turn, led to her adopting and adapting specific making techniques within her own subject in light of that cross-curricular link.

In terms of Jephcote and Davies' (2007) levels or location of analysis, this development is clearly situated within the 'micro-level' of this individual teacher's pedagogy. However, the teacher has also made links to both the meso- and macro-levels. Her engagement with the National Curriculum documentation and frameworks, including her identification of how creativity was defined in the English Programme of Study, is characteristic of a macro-level influence; her discussions and engagement with an English colleague who helped her understand more fully the way in which he adopted creative practices within his English teaching, could be seen as her engagement with the meso-level, i.e. the subject culture of English as represented through her colleague's work.

In Case Study 2 the issue seemed to centre on a teacher's dissatisfaction with her current pedagogical approach. He considered it to be too traditional, lacking impact and, in his own terms, 'it needed updating'. He was able to see beyond the specific skills that pupils needed to learn to accumulate (to edit, structure and revise digital materials), and considered the context within which they were being utilised (the narrative structure of the film). It was at this point that his pedagogy needed further support and development. He found this by working collaboratively with his English colleague, enhancing his pedagogical skills by the adoption of tools and techniques drawn from the English curriculum. Explicit linking of these to work done by pupils in their English lessons ensured that his pedagogy became more focussed and his observation was that pupils responded more enthusiastically to the specific tasks within the lesson.

Although this case study still concerns the micro-level of an individual teacher's work, it is a good example of a meso-level impact. The explicit borrowing of a set of ways of working from another curriculum area was a bold move on the part of this teacher, and not without danger. Tools, pedagogical approaches and ways of working in one curriculum area (English) may not transfer across to another (ICT). Yet the interview data confirmed that this concern was ameliorated in his mind by the positive reception the pupils gave to the use of these approaches. What had been become quite a technical and skill-based exercise in editing digital video materials, was given a new life through a more creative context.

Like the teacher in the first case study, this teacher had a general concern about creativity and what this might mean at the macro-level (i.e. the National Curriculum requirements). But in this case, the teacher went one step further and adopted specific tools, frameworks and ways of working from another curriculum area.

In Case Study 3, there was an explicit focus on the content of the curriculum. The teacher's decision to choose three related pieces of content (a ballet score, a musical and a film) and allow pupils to explore the links and commonalities within them in different ways placed the cross-curricular focus explicitly on their learning as much as his teaching. However, the freedom that pupils felt to work independently within the task was, to some extent, delimited by the choices that the teacher had made. The curriculum content was strongly classified by the teacher in the first instance. He had made the choices as to which film, musical and ballet score the pupils had access to during the lesson. But out of this apparent restriction something surprising happened. Pupils were able to draw on their understanding of characterisation (from their study of Shakespeare's play) and relate this to the curriculum content they were studying. One pupil explored the Bernstein's musical interpretation of the Romeo and Juliet story within *West Side Story* in such a way that the teacher himself learnt something. This process was something that he obviously enjoyed and reflected on positively within the interview.

Out of all the case studies, this is probably the strongest example of the teacher adopting a traditional cross-curricular approach within their pedagogy, in that he had made quite an obvious selection of curriculum content (made up of the three interpretations of the Shakespeare play). However he did allow the pupils a considerable degree of flexibility in how they engaged with these materials, with the result that their learning seemed deeper to this teacher than he expected.

In terms of Jephcote and Davies' framework, there was no explicit sense in which this teacher had chosen to work at the meso- or macro-level. His approach was subject-orientated and he had made decisions about enriching this through an extended choice of curriculum materials. But there was no deliberate strategy to draw on cross-curricular themes or borrow pedagogies or approaches from other subject areas. But, cross-curricular learning still took place.

Finally, in Case Study 4 the teacher made explicit use of a tool from her own subject and applied it in a new pedagogical approach to help her assess her pupils' understanding of the characters within a specific scene. From the perspective of the individual teacher, this seemed like a celebration of her own subject's tradition by taking a traditional tool and re-imagining it for a new purpose. This, for her, was a strong element in its success. She knew the historical and cultural background behind the tool and could cite its successful use in the staging of quality dramatic productions. In terms of Jephcote and Davies' framework, this is an obvious meso-level borrowing. The freeze-framing technique comes from the world of the

theatre and was well known by this individual teacher. She had seen it used in workshops and had, herself, been put 'under the spotlight' of the freeze-frame within her broader experiences as an actress. There is a sense in which the tool itself is only meaningful when it is embodied within a thought and feeling at a specific moment, in a particular scene as a certain character.

In that sense, this case study presents what is probably the most ingenious and sophisticated cross-curricular 'borrowing' although, in one sense, it is not really cross-curricular at all. This tension of origin is worth pausing on for a moment or two further. Does this tool's strength within the drama lesson come from the fact that its origins lie in the closely related world of the theatre? What would a freeze frame technique look or sound like in a geography or science lesson? This would be an important considerations that teachers would need to explore together. As a technique, freeze framing may have several benefits. But there are also limitations to it, even within drama teaching (as the teacher points out in the case study). These limitations may be exaggerated in the hands of someone who does not understand the historical and cultural traditions of the technique (as an 'insider' to that tradition). So, the tool needs to be handled carefully and with due consideration to the context from which it has been taken.

At the macro-level, the position of drama within the curriculum is also curious. It is absent from the National Curriculum itself and, perhaps, this has resulted in teachers demonstrating a degree of freedom in their pedagogy that other teachers can only aspire to. Further research would be needed to ascertain whether or not this teacher, or drama teachers as a whole, are more creative in their pedagogy than those of other subject areas, because of this freedom at the macro-level.

4. Conclusion

Clearly, this study is too small-scale to make generalisations. However, these case studies demonstrate a range of potential approaches to cross-curricularity within the comprehensive school which centre on individual teachers' pedagogic practice. These four examples of significant cross-curricular interventions, together with the more general observations drawn from the other lessons, show that individual teachers do work productively and creatively, at various levels, in a cross-curricular way.

As the analysis shows, cross-curricular pedagogy can be found in many varied aspects of an individual teacher's pedagogy, including the selection of resources for a lesson, approaches to assessment, the types of questions that a teacher might ask, and their use of metaphor to encourage new ways of thinking about a creative process. There were also examples of teachers adopting metaphorical language from another curriculum area to assist the introduction of new concepts within their own subject, explicit linking of technical vocabulary across subject areas, and using a general awareness about what pupils were studying in other curriculum areas to frame their own lessons.

My presentation of the case studies and the ensuing discussion suggest a journey through Jephcote and Davies' micro-, meso- and macro-levels. The first two case studies illustrate how teachers have drawn on the meso- and macro-levels to help develop their own pedagogy (the micro-level). The third case study, despite the adoption of curriculum content from outside the 'home' subject area, provides an example of a teacher's pedagogy facilitating new forms of pupil-led learning within that subject. Finally, the fourth case study is about a pedagogical embodiment, starting with the meso-level, going beneath the micro-level in returning a subject (drama) to its origins (in this case, the theatre). In recontextualising a specific tool (freeze-framing) for a new purpose (assessment) it reasserts a link to that teacher's pedagogy (the micro-level).

As a piece of educational research, the study is too small to draw large-scale implementations from. However, I can assert that there are examples of teachers working creatively at a cross-curricular pedagogy in what are strongly framed, subject orientated school contexts. Since this research was completed, the days of central curriculum control for schools in the United Kingdom seem numbered. Increasingly, individual schools are opting out of National Curriculum frameworks and determining their own curriculum arrangements. Within the deregulated curricula that result from these policy changes, it remains to be seen whether teachers will continue to forge links within and across their subject pedagogies. The obvious question for further research is whether the development of localised curricula frameworks will empower teachers to develop their pedagogy in new ways and whether or not a cross-curricular pedagogy will have any part to play in this at all.

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