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Reflected

St Mary's Journal of Education

Edition 03 / 2014

ReflectEd

St Mary's Journal of Education

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Aims and Scope

ReflectEd provides a forum for the publication of interdisciplinary articles that celebrate the challenging and changing nature of educational research and practice. It is published by the School of Education, Theology and Leadership to encourage, celebrate and disseminate research, scholarly activity, and exciting pedagogical practice that is in keeping with our mission. This mission is to advance education through continuing reflective practice and professional development in diverse schools.

Editorial Correspondence

All contributions and materials for review should be addressed to

Dr Christine Edwards-Leis

School of Education, Theology and Leadership,

St Mary's University, Twickenham, London TW1 4SX

Tel: 020 8240 4254

Email: christine.edwards-leis@smuc.ac.uk

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ReflectEd is available online (ISSN 2046-6986)

Please connect to www.smuc.ac.uk/education/research.htm for further information.

ReflectEd is published twice a year.

ISSN 2046-6978 (Print)

ISSN 2046-6986 (Online)

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Editorial: The Sofa of Knowledge

Dr Maureen Glackin
Head of the School of Education, Theology & Leadership
St Mary's University, Twickenham, UK

In considering what to write as an editorial for the first *ReflectEd* of the School of Education, Theology & Leadership (SETL), I was drawn to consider the characteristics of colleagues within the school and how these were manifest in the articles presented in this edition. At the launch of the school I enunciated these and, if you will indulge me, I should like to consider them here, once more.

SETL is an audacious school. It seeks to be a transformative experience for those who engage with us whether this be through a pastorally ministerial, catechetical engagement, a physical engagement that is characterised by an understanding of the body and its capabilities, the holistic engagement of being nurtured into life as a teacher or the scholarly challenge of engaging with life in thought in masters or doctoral research. This level of engagement requires courage: the courage to dare, to put out into the deep and to allow oneself to fully engage with this transformative experience. This is risky and risk can make us feel vulnerable, however, this must not prevent us from daring to do so because, if we are to be meaningful teachers, we can do no other.

SETL is a school of wisdom. Wisdom makes meaning from life experienced because it invites us to take time to discern and to consider; to extrapolate what is important, what is significant, what is of value and allow this to inform the decisions that we make. The establishment of SETL gives each discipline within our school a value and a new understanding within a collaborative framework so that we may come to a fuller realisation and inhabitation of our core purpose and mission which is 'to assist in the advancement of human dignity and cultural heritage through research [and] teaching' (*Ex Corde Ecclesiae 1990 para 12: quoted in The Canon Law Society of Great Britain and Ireland The Canon Law: Letter and Spirit, p 442*).

SETL is a loving school. In all teaching there is love and this love can be enormously challenging. It can be difficult at times to like some of the people we work with as students and colleagues and I recognise this, however, I am not asking us to like everybody ... but I am asking us to love them. Professor Ron Best put it rather more succinctly: 'relate to them. Enrich their lives with warmth and acceptance. Encourage them to reach out to others and share experiences with them' (*Best, R. 'Too hot to Handle? Struggling with the Spiritual in Education', presentation at the Chaplaincy Theological Society Lecture Series, Southlands College, University of Surrey, 23rd April, 2003*). To love in this way is not easy but we all know that anything worth striving for is constructed by tenacity, endeavour and not a little determination. And so we are called to be a school that places love at the heart of all it does.

SETL is also a passionate school. Passion for our disciplines is what inspires our scholarship, teaching and learning and it is what drives our desire to communicate and share our ideas with students and colleagues. This passion is audacious and courageous not a reckless, ill-disciplined whim: passion without discernment can ride roughshod over the thoughts of others, impeding rather than nurturing transformative growth. Therefore, the passion of SETL is one that is rooted in respect for others' thinking and the traditions they espouse.

What is at the heart of passion, audacity, wisdom and love is a knowledge of self that invites others to engage in the thinking of SETL and through which all are altered by the experience. Within academia, scholarly recognition is validated by the award of 'chairs', we talk about the 'seat' of knowledge. The chair, therefore, is associated with enhanced knowledge which is respected and affirmed. However a chair is a solitary seating place and positions one separately from others. What I prefer within SETL is a sofa of knowledge. A sofa invites others to sit down with you and to collaboratively engage in your learning and thinking. Within this exchange lies a generosity of knowledge – sharing which characterises SETL and the foundational, mission-focused aspects of St Mary's that it realises.

This third edition of *ReflectEd* presents three scholarly articles that reflect the passion and scholarliness of their authors. Masters student, Laura Saunders, delivers a strongly supported piece of research about the strategic leadership of music services. Her analogy of orchestral collaboration demonstrates what can happen when passionate professionals work together to create and lead. Michael Hast continues the exploration of collaboration – this time self-collaboration – with his study of children working to develop conceptual change in science education. Our third article is by Jane Renowden who explores the value of research informed practice as a fundamental aspect of accountability for teachers.

This edition also launches several new features. First, *ReflectEd Report* announces the new Aquinas Centre at St Mary's by its director, Anthony Towey. This new section will offer snapshots of initiatives in education. Second, we are delighted to include the *Seminar Series* section where the material presented in SETL Research Seminars is included to provide previews of the scholarly activity of Education staff. Material from a seminar about professional identity by Jane Chambers is included in this edition. Third we will present a *Reflection* piece in each edition where practice, research or experiences are shared. In this edition, Judith Bourne recounts her experience of undertaking a doctoral research study. The final feature is the *ReflectEd Review* section where contributors are invited to share a review of a publication that they feel may offer significant interest to other practitioners. This edition showcases a review by Linda Saunders of a text about teaching non-fiction writing.

Finally, *ReflectEd* welcomes new members to the editorial team: dedicated and professional reviewers strengthen the team and ensure that you are able to read first-rate material that will inform, challenge and guide you in your own practice. We welcome Prof Phil Bassett, Glydwr University, UK, Carol Callinan, Bishop Grosseteste University, UK, and Dr Angela Turner, Southern Cross University, Australia.

In closing, I wish us to be ...

- an audacious school that shares its knowledge generously
- a wise school that discerns its decisions in the educational marketplace
- a school that loves its disciplines and shares that love with others
- a passionate school that defies, with integrity, those who would challenge its core values and seek to undermine its spirit.

The articles within this edition of *ReflectEd* are testimony to this vision so I invite you to curl up on the sofa of knowledge with a copy and enjoy.

ReflectEd Report

The Aquinas Centre at St Mary's: What's in a name?

Dr Anthony Towey
School of Education, Theology & Leadership
St Mary's University, Twickenham UK

The Past: Should Old Aquinas be forgot?

Way, way back, in 1850 at the foundation of St Mary's by the Catholic Poor Schools association, the priorities of the College were set – the training and formation of students in the skills of teaching and the communication of the faith. Translated into modern jargon, we can rewrite this as 'pedagogy and theological literacy' but, whichever way we express it, this twin purpose remains at the heart of the instruments of governance of St Mary's, Strawberry Hill. Times move on and by 2010 St Mary's had developed other academic strings to its bow in sports, management and the arts, but these original core concerns were vividly recognized when St Mary's was chosen as the educational focus for the Papal Visit of Benedict XVI that year. By then, in order to retain a focus on these core concerns, strategic consultations had led to the foundation of the Aquinas Centre for research, training and resourcing in faith education. Everyone agreed it was 'a good thing,' but there was some murmuring about its name since 'Aquinas' connoted for many a somewhat stodgy Catholic traditionalism rather than the cutting edge research and pedagogical enterprise envisaged.

Rigorous

The answer lay in three basic arguments, a sort of '3 Rs', which together act as guiding principles for the Centre. The first of these is that the name 'Aquinas' even today implies *intellectual rigour*. While attempting to generate enthusiasm for compulsory RE among sixth-formers in Moss Side, Manchester, I hit upon a sales pitch that *guaranteed* all students would be studying with world-class teachers. Their attention captured, I assuaged the quizzical looks and the odd raised eyebrow by introducing the team – "Jesus, Moses, Buddha, Mohammed, St Paul, Augustine and Thomas Aquinas". Of all these, Aquinas proved arguably the most relevant thinker in dealing with the 'Big Questions' that dominate the contemporary RE syllabus in both secular and faith schools. As one wag put it: "Should old Aquinas be forgot? – No!" Hence, the first principle of the Centre is to contribute to theological literacy and the task of faith development among a new generation in a rigorous but accessible fashion.

Revolutionary

For 'stodgy' he is not. Thomas was born c.1275 in Aquino, a small village situated in the foothills of the Apennines between Naples and Rome. His family were minor nobility and sent him to the richly endowed monastery of Monte Cassino with the hope that if he made abbot their financial worries would be over. In classic teenage fashion, however, Thomas rebelled and, while at the University of Naples, he joined the Dominicans. At the time these were somewhat disreputable 'mendicant' (beggar) friars, who, along with the Franciscans, transformed the medieval Church. In terms of scholarship, Thomas also swam against the tide. It would probably amuse him to be known as a paradigm of traditionalism since his thinking overturned the more conceptual/theoretical approach of Plato and helped set the West on its incredible adventure of scientific discovery. How? By determinedly basing his reasoning on the more empirical observations of Aristotle, he sought to integrate everyday experience with reflective wisdom in the service of flourishing lives. The Aquinas Centre aims to be similarly innovative, rooted in experience, but finding new thinking for new challenges and finding new ways to speak old wisdoms.

Relevant

Lastly, Aquinas's work was Catholicism in dialogue with the philosophers and non-Christian thinkers of his time. His core principle was that if humanity is made in the *imago dei* the 'image of God', then life lived to the full (*John 10:10*) is the standard set. This meant that his work was 'kath-olon', 'catholic', 'according to the whole.' This is the opposite of exclusivist, since it applies this dignity to everyone – the least of one's brothers and sisters. As Christ's parable of the sheep and the goats describes (*Matt 25:25-41*), it is not always easy to recognise dignity in the poor, the sick, even the criminal. If St Mary's is to be a place 'where the Church can come to think', then the thoroughgoing principle which underpins the endeavour is the ennobling of human lives. Hence the Aquinas Centre is mindful of the need to progress research and resourcing for St Mary's ministry programmes in Healthcare, Youth work, school and prison chaplaincy and beyond.

The Present

If these are the guiding principles, how is the reality working out? St Mary's is a place 'where the Church comes to think' and the configuration of the new School of Education, Theology & Leadership has given a new impetus to the work of the Centre. Recent research work on institutional ethos and the experience of headteachers, chaplains and deacons is being published and disseminated, augmented by current projects on youth work and faith transmission. Already, publications such as *Faith and Unbelief* by Stephen Bullivant, *Life in Christ*, a theology DVD series edited by Karen North and the first ever *Hospital Prayer and Activities Book* for children by Fr Peter Scott, have all been launched. Public lectures also feature regularly in the academic calendar attracting audiences both within and external to St Mary's.

The Future

Plans for the coming year include specific continuing professional development (CPD) initiatives and a series of 'Unisaturdays' aimed at those on the penumbra of access to higher education. Moreover, fostered in no small part by the success of postgraduate programs, 'Leading Innovation and Change' and 'Catholic School Leadership', direct empirical feedback on contemporary school issues is nurturing investigative ideas and the development of an adjunct research network is under discussion. Last, but not least, the increasingly international discourse germane to theology and pedagogy is explicitly recognized by the Centre with one of its members, John Lydon, serving on the editorial board of *International Studies in Catholic Education*. Whatever the future holds for St Mary's as a new phase beckons under a new principal, the Aquinas Centre is confident it will be at the heart of it.

Dr Anthony Towey is Director of the Aquinas Centre at St Mary's and has recently published An Introduction to Christian Theology: Biblical, Classical, Contemporary, Bloomsbury (2013).

The Conductor And His Orchestra Or The Improvising Jazz Group: The Influence Of Collaborative Working On The Strategic Leadership Of Music Services

Laura Saunders (Griffin)
St Mary's University, Twickenham, UK

Abstract

The topics of *collaborative working* and *strategic leadership* in music education in England are currently in the political spotlight with the conception of Music Education Hubs following the publication of *The Importance of Music; the National Plan for Music Education* (DfE & DCMS, 2011b). The purpose of the research study discussed in this paper was to explore the conceptual and practical interdependencies of *collaborative working* and *strategic leadership* of music services; analysing the extent to which *collaborative working* influences *strategic leadership*, and presenting a policy for change based on the findings. The research was undertaken through a small-scale interpretive case study approach in a qualitative paradigm within the context of a local authority music and arts service, leading the local Music Education Hub in South East England. This paper presents a summary of the research study, including the findings of a critical review of contemporary literature into *collaborative working* and *strategic leadership* and the findings of a rigorous qualitative practitioner-led enquiry. It presents the policy proposal for cultural change towards the establishment and implementation of a professional *Learning Community* created as a result of the research, and recommendations for future related research.

Key words:

collaborative working; partnership; strategic leadership; management; complex change; culture; learning community

Introduction

Context

The leadership of music education in England changed recently in line with recommendations published in the *National Plan for Music Education* (DfE & DCMS, 2011b) which drew upon the independent review of music education undertaken earlier that year that stated that:

where music education is delivered at its best ... budgets [are harnessed with] exciting collaborations ... The best music education comes through partnership; no one teacher, performer, school, organisation, group or body has all of the requisite skills to deliver every part of a rounded music education to every child (DfE & DCMS, 2011a: 5).

Alongside this the review (DfE & DCMS, 2011a) and plan (DfE & DCMS, 2011b) both stressed the importance of *clear leadership* in the delivery of music education, emphasising the 'requirement that it is delivered in a coherent and cohesive way' (DfE & DCMS, 2011a: 8). In recognising the emphasis placed upon *collaborative working* and *strategic leadership* in English music education currently, the purpose of the research study was to understand better the interdependencies of the topics, both conceptually and practically, in the given context.

Key terms

The terms were defined for the clarity of the study, subscribing to Davies' (2006) description of *leadership* as direction setting and *management* as being concerned with effectively dealing with the current shape of the organisation. The study adopted Gortner, Mahler and Nicholson's (1987) definition of *strategic leadership* where it is vital to create an environment that supports the achievement of organisational goals and monitors external factors, taking advantage of opportunities and defending against threats. Furthermore, *collaborative working* was defined using Wetenhall's (2009: 1) assertion that it is a means of working 'whereby people from different departments and/or organisations work together to achieve something, or some benefit, which they could not achieve through working alone'. It was further refined using Carnwell and Carson's (2004: 4) distinction between *partnership* in the formal sense of 'what something is' and *collaboration* as 'what one does'. These definitions pervaded the entire study through the use of the metaphor prefixed to the research title, which present a visual analogy of *strategic leadership* and *collaborative working* in a musical context.

Literature – the missing chord

A comprehensive review of the literature revealed a breadth of internationally wide-ranging contemporary research into the fields of *collaborative working* (e.g. Carnwell & Carson, 2004; DuFour & Eaker, 1998; James, 2007) and *strategic leadership* (e.g. Davies & Davies, 2008; Lyman, 2012; Spillane, Halverson & Diamond, 2001; Sugrue, 2009; Taylor, Martin & Jinks, 2007). However, with the exception of some evidenced dependency of the fields (e.g. Coleman, 2006; Eisler & Carter, 2010; Kelley, 2006; NCSL, 2007; Ncube & Wasburn, 2006) and very little reference to either field in the context of music education, the notion of interdependency between the two within music education in England was a topic relatively unexplored. Given the importance placed upon the topics and their links in the National Plan (DfE & DCMS, 2011b) to benefit young people, this was an area that presented as a missing chord in the research.

Literature – the conductor needs his orchestra

Having demonstrated the breadth of the relevant literature and the exposed conceptual framework requiring research, the study focussed on deepening an understanding of the interdependencies between *collaborative working* and *strategic leadership* in music education in England.

A variety of international literature (e.g. Huxham & Vangen, 2000; Lemay, 2009; Spillane, Diamond, Sherer & Coldren, 2005) has developed research around the interdependencies of the fields in various contexts, with Getha-Taylor & Morse (2013: 72) summarising a clear and necessary link that ‘today’s leadership context, particularly in the public sector, is inter-organisational’. There are also vast amounts of research and professional texts exploring the concept of leadership and its distribution (e.g. Collins, 2001; Edwards, 1992; Lemay, 2009) and the importance of *collaborative working* in that distribution. Lacey (2001: 16), for example, presents the concept of ‘transdisciplinary teamwork’, and Lambert (2005) and James (2007) frame leadership as a collaborative process of reciprocity, learning and action as a form of strategic development of people working in schools. Edwards (1992: 28) emphasises the value of the interdependency between the fields through ‘symbiotic leadership’, defining it as a factor that ‘enhances organisational performance by promoting contributions from all organisational members’. With the exception of Hallam (2011), the fields are not discussed or linked in the context of music education in any literature searches; in that case Hallam describes the importance of cross-organisational *partnership* (as opposed to *collaborative working* as described earlier) in music education leadership.

Whether a conductor and his orchestra or an improvising jazz group, music is by definition a collaborative process, so the scarcity of research into the interdependencies of the fields were highlighted as being incongruent with the fields themselves.

Methodology

I subscribe to the view that there are multiple realities (Lambert, 2005) based on individuals’ views and experiences. As a researcher and a learner I assume the Deweyian (1938) view that people learn through active participation in reflection and consequential action (Ryan, 2005; Schon, 1983) which in turn informs their emotions, beliefs and norms. The methodological positioning of the research was therefore a qualitative one assuming an interpretive approach to collecting and analysing information through a practitioner-led case study based in a local authority music and arts service (and lead organisation of the local Music Education Hub) in South East England. The aim of the research was to affect the practice of the organisation’s leaders in light of the findings. This section outlines the key processes for data collection and analysis.

Data Collection Methods – the composition and chord progression

In support of Stake (1995) and Thomas’ (2009) descriptions of case studies as a methodological approach, the study was designed to collect data from a variety of facets of the main research title, combining them to tell the complete story related to the fields in the given context. These facets were broken down to gain an understanding of the breadth and depth of data through a rapid literature review, semi-structured questionnaires, an in-depth critical literature review and in-depth semi-structured interviews. A set of subsidiary aims were created to structure the data collection including the identification of:

- the professional journeys of the strategic leaders, providing context of their experience;
- the strategic roles and responsibilities of leaders in music education in this context;
- how *strategic leaders practice collaborative working*;
- the benefits and challenges to working collaboratively at a *strategic leadership* level; and,
- the emphasis placed upon *collaborative working* by the leaders involved, considering the changing context.

All participant-based data collection methods were trialled and revised accordingly to increase trustworthiness and further develop the facets of data.

Participants were chosen through 'purposive sampling' (Cohen, Manion & Morrison 2011: 114) because of their strategic focus within the service, the Hub and its collaborations. The sample was therefore made up of four strategic leaders with varying roles in the service and Hub's leadership and strategy.

Semi-structured Questionnaires

The questionnaire was designed to seek contextual information about the participants and their perceptions of the fields in the context. All four participants took part, and answered a variety of open questions which were administered online through a survey monkey to provide structure.

In-depth Semi-structured Interviews

Data analysis of the questionnaire results and cumulative triangulation with the literature review informed the design of the in-depth interviews which were carried out with two of the participants. The participants were chosen for interview based upon the questionnaire responses and focused on the two participants whose perceptions of *strategic leadership* had higher frequencies of responses referencing *collaborative working*. Eight open questions were designed to deepen my understanding of participants' initial questionnaire responses, in order to triangulate with all other data, draw conclusions and propose a policy for change. Both interviews were audio recorded, transcribed and presented alongside researcher annotations which observed participant vocal emphases and frequencies of reference to the fields.

Data Analysis

Analysis was cumulative and reflected all facets of data collected. In choosing to collect data in these ways, Denzin's (1978) methodological triangulation was used alongside Thomas' (2009) iterative Theme Mapping method of coding to minimise the impact of my interpretation as the researcher. Temporary constructs were created for each participant according to their responses, with culminating theme maps, in addition to question-based temporary constructs and theme maps, and an overall theme map of all data collected (see Diagram 2). The coding process was an inductive iterative one, and whilst the method was time-consuming, it was also the most appropriate method for sifting through a large amount of qualitative data in order to fairly represent the specific case and its uniqueness, increasing the trustworthiness of the study's outcomes.

Results – a critique of the rehearsal and performance

Discussion

The process created a vast amount of qualitative data which explored the influence of collaborative working upon strategic leadership in music services. Key themes are discussed in this section. Asking participants about their professional journeys to date gave me a better view of their current professional positions, and what has ultimately shaped their epistemologies (Garnett, 2013). More specifically, the data demonstrated that Participants (P) 1, 2 and 3 held the job title 'manager' and P4 did not which had the potential to place an important bearing upon the results of the study in considering participants' perceptions of leadership and management. Furthermore, it is crucial to consider the stability of the participants' 'professional selves' (Day, Kington, Stobart & Sammons, 2006: 601) as there are a number of factors potentially influencing their perceptions of themselves in the workforce with regards to title and role (which are not necessarily synonymous). Pertinent aspects such as the impact of the study itself upon participants, and external factors, were considered, but in the main it was decided that this area demanded further in-depth research outside the remit of this study.

There were numerous questionnaire responses from all participants referencing the interdependencies. Participant 3's response to Question 4 (P3Q4) epitomises the imperative of collaborative working for strategic leaders echoing Getha-Taylor and Morse's (1987) assertion of the imperative of collaborative working:

[A benefit of *collaborative working* is] 'two heads are definitely better than one! Benefits include making a bigger impact together. Shared use of resources can bring down cost, add value and attract wider funding resources.'

Links cited about the fields at this stage of the study included listing strategic elements of the participants' leadership roles as working collaboratively internally and externally (defined as 'partnership' previously). It also included supporting colleagues and clients through *collaborative working*; partnerships and collaborations being a staple part of the participants' roles, where 'building relationships with customers and partners and promoting the organisation' is vital (P2Q6). Temporary constructs were created from the questionnaire results, showing eight clear constructs in a theme map (Thomas, 2009); two of these were 'Partnership/ Collaboration' and 'Leadership & Management'. The constructs were linked using relationship arrows and evidenced through quote references and are shown in Diagram 1, where evidence is quoted using 'P' for 'Participant' and 'Q' for 'Question'.

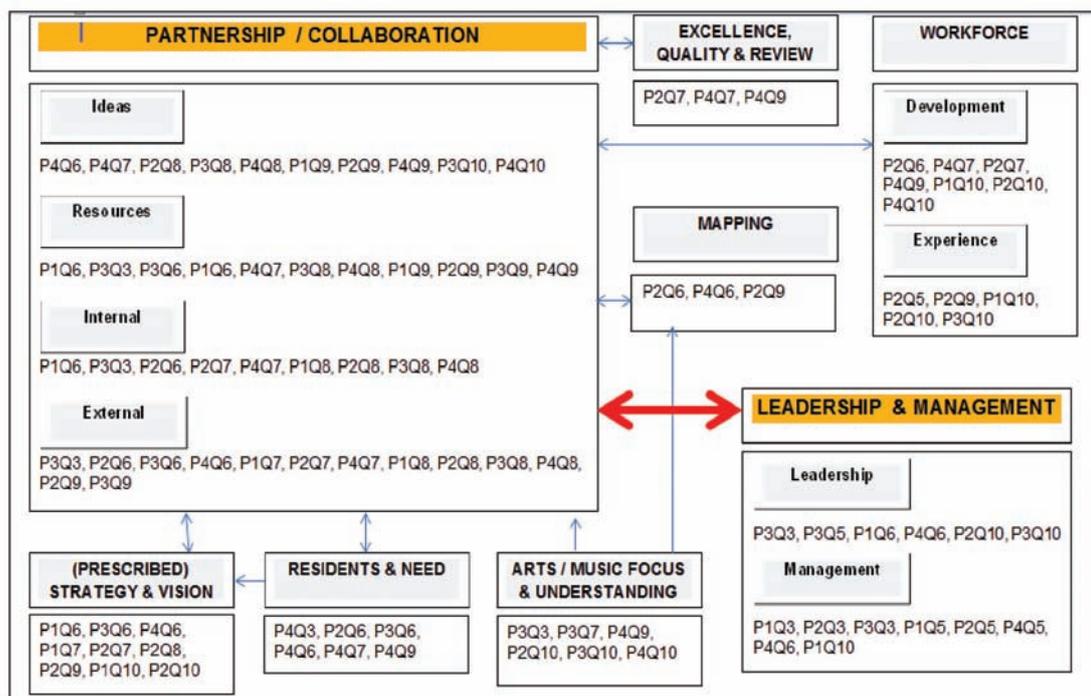


Diagram 1 – Questionnaire Theme Map (all participant responses)

This stage of data collection was undertaken before *Partnership and Collaboration* were defined and the distinction between *Leadership* and *Management* made, and this was identified as a focus for the next stage. The questionnaire was presented to strategic leaders through the lens of *strategic leadership* and the map clearly shows a number of responses citing *collaborative working* in light of this, as demonstrated with the red arrow and yellow highlighting. However, Table 1 shows clear responses about the organisation’s need to work collaboratively when asked about *strategic leadership*, but there is not a wholly clear link between the fields demonstrated across all participants.

P=Participant Q=Questionnaire question	Questionnaire quote [and question references]
P1Q8	[A way I work collaboratively as a strategic leader is] ‘collaborating internally with colleagues in all aspects of the organisation and its development’
P1Q9	[A benefit of collaborative working is] ‘shared ideas, shared costs & resources and signposting’ [as a function of strategic leaders
P2Q6	[A strategic element of my leadership role is] ‘building relationships with customers and partners and promoting the organisation’
P3Q6	[A strategic element of my leadership role is] ‘maximising the value added through a joined up approach to the use of resources.’
P3Q10	[A top five feature of a ‘good’ leader is] ‘a broad experience of successful partnerships and collaborations’
P3Q8	[A way I work collaboratively as a strategic leader is] ‘bringing people and resources together. Challenging, enquiring, signposting and motivating’
P3Q9	[A benefit of collaborative working is] ‘two heads are definitely better than one! Benefits include making a bigger impact together. Shared use of resources can bring down cost, add value and attract wider funding resources’
P4Q6	[A strategic element of my leadership role is] ‘identifying and working closely with key strategic partners in order to effectively reach our target group’
P4Q7	[A strategic focus of our organisations is] ‘Partnerships - work with our partners in the interests of the area.’
P4Q10	[A top five feature of a ‘good’ leader is] ‘a good understanding of partnership working’

Table 1: Selection of questionnaire quotes demonstrating a perceived link between collaborative working and strategic leadership

Table 1 shows the compelling evidence (particularly from P2, P3 and P4) about the necessity to work collaboratively in the context. This led well onto the second facet of data collection and analysis through semi-structured in-depth interviews with P3 and P4. The interviews produced further data to add to the cumulative analysis process. In the interests of concision, this paper presents the summarised quotes relating directly to the interdependencies of the fields only in Table 2.

P3's interview took place before P4's so the quotes are shown in chronological order in the table to account for any external drivers that may have influenced the interview responses. Coloured text and highlighting shows the themes arising from the interviews which relate to the coded themes shown in Diagram 2.

Quote No.	P=Participant Int=Interview	Quote [and related points provided for clarity]
1	P4Int	'I think the most important one [day to day strategic leadership practice] that I'm working on ... is around working in partnership with other services'
2	P4Int	'We are relying on partnerships ... for lots of practical reasons [e.g. finance, resources]'
3	P4Int	[working in partnership] 'is bringing things together'
4	P4Int	'So successful collaborative partnership working is actually about...the right individuals working together'
5	P4Int	[You need] '... some interpersonal skills to work collaboratively'
6	P4Int	'Also at that level we have got to have really good strategic thinkers and that's not just about policies, strategy is about personnel and linking the right people up together'
7	P3Int	'working in isolation isn't really an option'
8	P3Int	'if we weren't interested in collaboration we wouldn't have a Hub'
9	P3Int	[Strategic leadership is] 'about bringing other people in the organisation with you'
10	P3Int	[An aspect of strategic leadership I employ day to day] is 'I also consciously try and bring other people or I'm conscious that I am trying to bring other people to come up with positive ideas and solutions. So I think it's very, it's easy to kind of step in and try and present a solution but actually, a preferable thing is to actually let people come up with solutions for themselves.'
11	P3Int	'If people feel empowered to be able to have ideas and contribute positively that's a very empowering thing and hopefully that's something that will make people feel more motivated rather than being told what to do. To actually appreciate that they've got a big hand in shaping the way in which things are being worked out'
12	P3Int	'The personal relationship accounts for an awful lot because it can only take one person in an organisation that can make quite a difference in terms of how that partnership or collaboration develops'
13	P3Int	'if they [collaborations] are not successful we don't progress'
14	P3Int	'anybody who is operating strategically can't do it in a bubble'
15	P3Int	'So it was one of the qualities that I suppose if you need somebody in a role like that that has got the ability to develop partnerships, develop collaborations, and keep them going ... If you don't have that ability, you don't have that to kind of have synergy and explore those things I think you are not going to be much of a leader in the context in which we work'
16	P3Int	'clearly there's a lot of imperative around working together, maximising value for money by working together, maximising your resources, reducing your costs'

Table 2: Selection of interview quotes demonstrating a perceived link between collaborative working and strategic leadership

At this stage partnership and collaboration had still not been defined so the two terms were being used interchangeably in the interviews, and when asked, P4 felt it crucial to differentiate them giving the reason below with reference to collaborative working positioned synonymously with the arts.

There is a difference ... and it is that a partnership is ... a set of organisations ... A multi-agency approach to a project ... [or] working, whereas a collaboration, and ... I think this is more an arts term ... I would see more as working collaboratively on a project and that might well ... be creatively and artistically. Whereas as a partner your ... contribution might be just [contributing the use of] a venue and then you don't have much to do with the project ... and again partnership ... for me reflects a set of logos attached to a project but what's behind every logo could literally be anything.

Further engagement with the literature to differentiate the terms, as defined previously, arose from this response, proving critical to the progress of the study in terms of the policy proposal for change.

Collaborative working *practices*

In the interviews participants were asked about their daily *strategic leadership* practices to which Quotes 1, 2, 10, 13 and 16 in Table 2 are examples. Quotes 3, 4, 5, 9 and 12 summarise how they work collaboratively; quote 11 suggests an organisational benefit to this mode of working; and conversely quote 12 offers a drawback. The conclusion can be drawn therefore, that these participants employ collaborative working practices regularly as part of their leadership roles, and have a clear and shared perception of how and why it works as a mode of working in the context. However, an important step in developing the evidence base for a policy for change was to ascertain the participants' perceptions of the consistency of this practice in the organisation. In doing so, they were asked about successful and unsuccessful examples of *collaborative working*, to which quotes 11 and 12 respond, acknowledging that it is happening to varying levels of success in the organisation, and that it is not happening as a consistent culture of practice which is a vital assertion for the study: 'there are so many people with ideas doing their own thing that actually collaboration is not always as easy as you think it is' (P3Int).

The imperative of *collaborative working* for strategic leaders

Moreover, a crucial set of quotes to the study were the ones pointing to the imperative of *collaborative working* for *strategic leaders*. Quotes 6, 7, 8, 14 and 15 highlight the perceived innate influence of collaborative working upon the strategic leadership of the organisation's music services. This is a vital finding for the study; quotes 6 and 15 are highlighted as they support one another and the study's focus:

Also at that level we have got to have really good strategic thinkers and that's not just about policies, strategy is about personnel and linking the right people up together (P4Int: Quote 6).

So it was one of the qualities that I suppose if you need somebody in a role like that that has got the ability to develop partnerships, develop collaborations, and keep them going ... If you don't have that ability, you don't have that ... synergy [to] explore those things ... you are not going to be much of a leader in the context in which we work (P3Int: Quote 15).

Collaborative working and *strategic leadership*: the interdependencies

Whilst P3 and P4 are both strategic leaders, of the four participants these two differ most in their professional journeys to date and while the language they use throughout the interviews positions them using different hierarchical lenses, they clearly share a similar view of the world when it comes to *collaborative working*. For example, additional interview quotes from both participants also moved beyond the influence of *collaborative working* upon *strategic leadership*, to how *strategic leadership* influences *collaborative working* (e.g. P4Int: 'Again it [*collaborative working*] comes down to personalities and people ... but there's still some strategic groundwork to be done'). This version of the interdependency was presented by P4 as a 'more obvious way to look at it' and he supported his thoughts by stressing the importance of suitable structures and visions. By involving strategic leaders in conversation about the interdependencies of the two fields through this research, the influence of strategic leadership upon *collaborative working* was ultimately what the study resulted in through the proposal for change, with me, a strategic leader, as the researcher. Moreover, P3 developed more deeply the idea of *collaborative working* functioning as a system for learning (as with Senge, 1992; Lemay, 2009) and in turn influencing the *strategic leadership* of the organisation and the Hub as a network of partnerships between organisations:

The people you collaborate with can influence you the way we should do things. If you suddenly find that somebody out there [has] got a really innovative way of doing stuff and you think, yes, that's a great thing, that's going to influence the way in which you look at the world, it's going to possibly change the way in which you do things (P3Int).

Final Themes

Further theme maps were created to represent each interview and were then combined and re-coded with the data from the questionnaires to create an overall theme map (see *Diagram 2*). Black text demonstrates language arising from the interviews and red shows language accumulated throughout the study.

The final constructs *People & Views of the World*; *Clarity of Strategy & Shared Vision*; and *Formal Partnerships & Structures* were given equal emphasis as *Collaborative Working & Personal Relationships* by the participants as the research progressed, when related to *strategic leadership*. Together, they informed the creation of a policy proposal for cultural change towards a *learning community* (Morrissey, 2000; Senge, 2006), forming aspects to support *collaborative working* towards *strategic leadership* in the context.

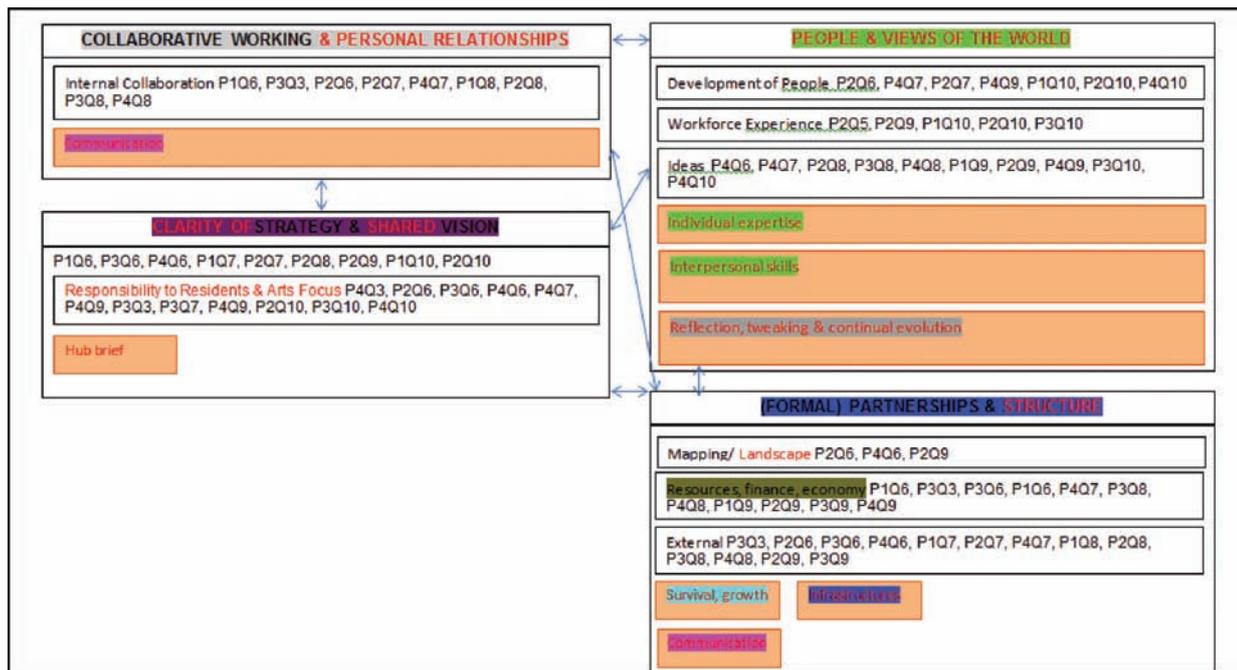


Diagram 2 – Final Overall Theme Map (all participants and all forms of data collection)

The constructs and the policy were aligned with an apparent constructivist epistemology of participants (Garnett, 2013) as shown in the construct *People & Views of the World*, and supported by participant quotes such as:

I think it's also about being ... open and honest about where things are at, not ... building an ... empire or a view of the world that is a ... fixed view which ... puts you as the people that have got it completely right (P3Int).

... Successful collaborative partnership working is actually about ... the right individuals working together with a shared vision, with a shared passion and interest with the right chemistry and the right understanding (P4Int).

The good strategic thinkers that are really good planners that can actually capitalise on or ... get the best out of people's personalities and skills and join up those structures (P4Int).

Summary of results

In summary, the questionnaire responses from the four participants revealed data about their professional journeys to date, putting their responses into context and about their views on the links between *collaborative working* and *strategic leadership*. However, compelling quotes from participants about the necessity to work collaboratively led into in-depth interviews with two of the participants where a deeper understanding of the perceived interdependencies were explored. The imperative of *collaborative working* and its influence upon the *strategic leadership* of music education in the context were detailed and the consistency of the *collaborative working* practices across the organisation problematised. Participants explored the impact of the fields upon each other and the definitions of *partnership* and *collaborative working*. Cumulative data analysis built upon participants' original responses to develop individual theme maps, and an overall theme map accumulating all of the data. This map supported the perceived influence of *collaborative working* upon *strategic leadership* in the context based upon participant assertions about its vitality for organisational survival and the necessity to collaborate to lead change as well as demonstrating their values about collaboration for learning. They stressed the positive effect *collaborative working* can have in empowering team members, especially if the notion of distributed leadership is harnessed, as well as the financial benefits of collaborating. They emphasised the importance of a clear and shared vision, with an appropriate workforce structure, tools, resources and communication, to support *collaborative working* as well as the place of individuals with flexible views of the world to complement working collaboratively. These constructs and sub-constructs were supported by key literature to provide stimulus for the creation of a policy proposing cultural change towards the establishment of a learning community.

The crescendo towards leading change

In line with the epistemological and methodological positioning assumed for this research, as well as the very fields of research themselves, a complex view of change (Hoban, 2002; West-Burnham, Farrar & Otero, 2009) was adopted towards a cultural change (Bush, 1998) policy for the organisation. It was decided that Hoban's (2002: 23) definition of complex change aligned well with both the research focus and the metaphorical image of musicians at work: 'interrelationships among multiple elements that act collectively as a system to produce ripple or 'butterfly effects' across related networks'.

Appendix 1 presents the policy proposal for change which assumes an aim to establish the culture of a learning community in the context. I suggest a number of key themes within which to position the policy where a professional learning community is defined by Senge (2006) as 'a shift of mind – from seeing ourselves as separate from the world to connected to the world ...'. The policy is justified in the local and national context and as a result of this research, and whilst it is specific to the described context, it has been kept intentionally broad so as to aid application in other organisations and contexts. I have presented a visual model for the implementation process which is based loosely on Fullan's (2007) and Trowler, Saunders and Knight's (2003) change models. In doing so, the model proposes the initial stages of the change in a more linear manner followed by a cyclical idea of continual review based upon Kai Zen (e.g., Trowler, Saunders & Knight, 2003) to ensure continued effectiveness and relevance. The model plans for change over time showing key concepts (white), key activities (green), supporting conditions (light blue) and other drivers affecting its implementation (orange). As a policy for cultural change, it presents sets of beliefs and practices belonging to a learning community (e.g. Morrissey, 2000) in order to benchmark the continual review process. The final policy was a result of numerous iterations and revisions based upon the accumulation of data and a pilot.

In combining a number of change theories, I present a complete plan for cultural change to support *collaborative working* for *strategic leadership* in the same way that the improvising jazz group shares the leadership of a performance.

Conclusion

The rigorous and comprehensive practitioner-led research enquiry into the interdependencies of collaborative working and strategic leadership has demonstrated the compelling conclusion that *collaborative working* is a crucial part of the *strategic leadership* of music education in the local authority music and arts service identified. A key recommendation of the research was to ensure full implementation of the policy proposal for change in order to facilitate a growing culture of *collaborative working* for strategic leaders and others (in the sense of distributed leadership) in the context.

Further research

In addition to implementing the policy, other recommendations were made from the study. The research recognised the pertinence of further exploring the strategic leaders' professional journeys into leadership roles. Alongside this, and something that was not attended to in the study, was the issue of the gender of strategic leaders in music education and the impact of gender upon the values and practices related to *collaborative working*: the conductor and *his* orchestra. Moreover, as all participants were at some point practising musicians, a further recommendation was to explore P4's suggestion about the links between collaborating as a musician and collaborating as a strategic leader. Furthermore an important application for this research in practice would be to explore its dissemination nationally (whilst maintaining anonymity), which would require a further broadening of the literature and development of the data collection in other local authority music services and partner organisations in England's music education hubs.

An additional recommendation of the study was to extend beyond the analogy of the conductor and his orchestra and the improvising jazz group. We know that neither ensemble can exist without *strategic leadership* nor *collaborative working* and the links between the two. However, we should perhaps now attend to the importance placed by participants on the interdependencies between a number of other factors: individuals; organisational vision; appropriate workforce structure and partnerships; and the children and young people we serve. The performers, the score and the audience are all essential in the concept, framing the interdependencies for meaningful *collaborative working*.

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Appendix 1

Policy Proposal

Developing as a Learning Community: A Plan for Cultural Change

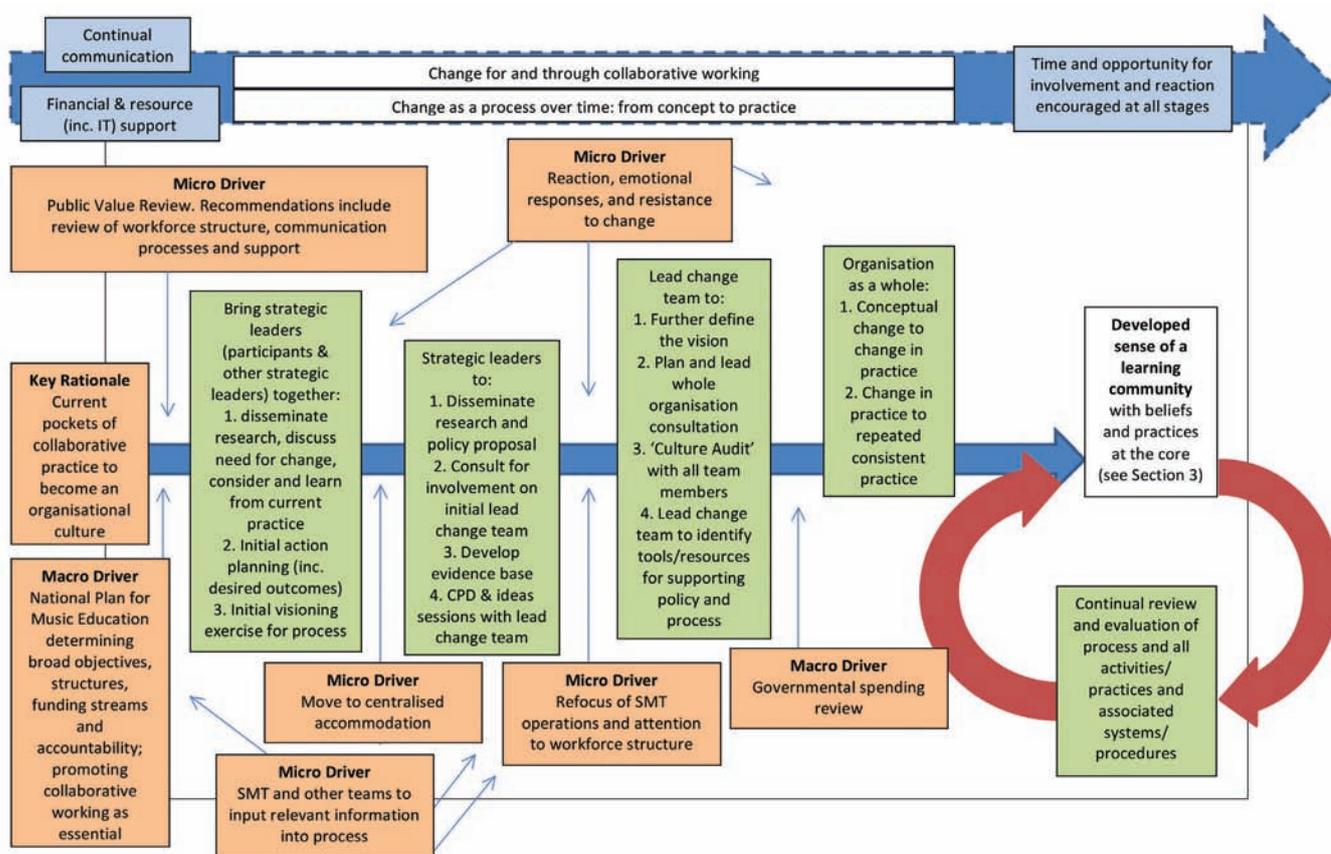
Iteration 2: June 2013

At the heart of a learning organisation is a shift of mind – from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by something ‘out there’ to seeing how our own actions create the problems we experience. *Senge, 2006: 12*

1. Purpose, Definitions & Justification

- a. This policy proposal aims to outline the process of innovative change towards developing an organisational culture of a learning community at [organisation name] who provide music education as part of the Music Education Hub to young people in [area].
- b. Morrissey (2000: 3-4) defines a professional learning community as an organisation where the entire group of professionals come ‘together for learning within a supportive, self-created community’, where collaborative working, relationship-building and a sense of reciprocity amongst colleagues is the focus for achieving the organisation’s goals and withstanding external drivers.
- c.
- d. The policy arises from a piece of academic practitioner research undertaken in 2011-2013 that recommends the adoption of a learning community culture at [organisation name] in order to create a cohesive and efficient culture for leading and delivering music education in [area] in line with the organisation’s educational, musical and business planning goals. The supporting research can be accessed by contacting [researcher name & contact details].
- e. In aiming to develop the culture of a learning community, the concept of ‘culture’ is defined as stressing ‘the informal features of organisations...[Culture] focuses on the values, beliefs and norms of people in the organisation...’ (Bush, 1998: 32).
- f. At the core of a culture of the learning community is collaborative working. Through the Hub we are charged with working in partnership with other organisations, and in order to do this we need to work collaboratively as an organisation. Carnwell and Carson (2004: 4) provide apt definitions for partnership (‘what something is’) and collaborative working (‘what one does’) upon which to base our understanding of a professional learning community.
- g. The policy is presented as a broad set of considerations, drivers, activities and possible outcomes to break down the process of change towards meeting the long term goal of developing the culture of a learning community (2). The proposal encapsulates considerations for cultural change but does not propose a step-by-step process at this stage, as the importance of continual review; the need to address organisational and individual beliefs; and the necessity of involving stakeholders is recognised.
- h. Key concepts are shown in white; activities to achieve those concepts in practice in green; supporting conditions in light blue and additional drivers for change in orange (2).

2. Concept & Plan



3. Beliefs & Commitments denoting the culture of a professional learning community

- Everyone as a leader and a learner
- Applying learning to produce results
- Valuing each other as people in relationships of care, respect and challenge
- Using quantifiable evidence and shared experience to inquire into...issues and make judgments about how to improve them
- Synthesising a shared organisational vision
- Questioning traditional assumptions about learning and change
- Commitment to raising expectations
- Commitment to improving the social environment
- An appreciation and understanding for different world views and interpretations; peoples' individuality
- Individuals' commitment to their own learning and the organisations' development

4. Practices denoting the culture of a professional learning community

'Professional learning communities ... should not be confined to latest ideas and innovations. And they should not be places for well-meaning superficial exchanges ... these communities must foster an open exchange where teachers can explore elements of their own practice' – Fullan (2007: 50)

- Peer coaching, peer learning, and group professional dialogue
- Mutual planning
- Engagement with knowledge and research
- Continual reciprocity in communication and action
- Reflective practice
- Facilitating action and practitioner research
- Dialogue that surfaces assumptions, expresses curiosities, and poses questions
- Active and deep listening and questioning
- Language choices that suggest openness, value orientation and flexibility
- Forums (online and physical) for staff to collectively reflect and collaborate on the ethical and moral dimensions of their work and behaviour
- Active engagement with a wide range of CPD opportunities

5. Implementation Plan

a. Who?

- Strategic leaders of the service (any leader involved in strategy, no matter their hierarchical position or art form focus)
- Opportunities given to the whole organisational team
- Partner organisation leaders (Hub and other partners)
- Other [council name] services strategic leaders
- Identified Change Lead Team

b. What?

- Activities in green on the previous page and timeline (5e)
- Dissemination of research study
- Continuation of active research
- Continual review and evaluation
- Consultation of full team
- Consultation of other Hub leaders
- Identification of Change Lead Team through consultation
- CPD and ideas sessions for generating more details and plans
- Additional activities will undoubtedly take place due to the non-prescriptive nature of the policy framework

c. Where?

- [Service name] base
- Online forums and learning
- Virtual live streamed discussion sessions and online conference meetings

d. How?

- A variety of physical working spaces suitable for collaborative working
- Digital streaming resources and equipment
- Learning platform & online discussion forums
- Strategic planning sessions
- CPD & Ideas sessions
- Financial resource allow where necessary
- Development of workforce structure review of roles and responsibilities
- During cross-section of meetings: Senior Leadership Team meetings, Leadership Team meetings, staff meetings and INSET sessions
- Communication strategies (internal and external) to be considered

e. When?

When KPI (key performance indicator) has been completed, activity blocks to change to green; or amber when ongoing or in process.

May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	Dec 2013	Jan 2014	Feb 2014	Mar 2014	Apr 2014	May 2014	Jun 2014	Jul 2014	Aug 2014	Sept 2014 onwards			
Accommodation move			School holidays				School holidays					School Holidays		Gov spend review		Work to readdress gov spending?			
Refocus of SMT & development of workforce structure																			
Proposal feasibility check KPI: all participants to take part in trial & agree to move forward		Disseminate final research study to participants KPI: all Ps to receive final research KPI: all Ps to approve final policy (iteration 2)		Strategic leaders to meet: action planning & visioning KPI: 2 SL meetings & 1 initial action plan		Disseminate research to whole team KPI: whole org receive research & opportunity to attend discussion meeting		Consult for involvement in initial lead team KPI: online consultation to whole org. Initial Lead Team of 6-10 chosen		CPD & Ideas sessions with initial lead team around visioning & planning KPI: 2 ideas sessions for initial lead team & 1 developed action plan produced		ID tools & resources needed KPI: list of resources /capacity identified & detailed							
						Further develop evidence base KPI: an increased evidence base (literature & internal information) to support culture audit, consultation process & LC activities				Undertake culture audit KPI: culture audit tool designed, disseminated, collected & analysed		Design consultation KPI: whole team receive opportunity to feed in							
												Design Learning Community activities & initial lead team & SLs to enact KPI: policy & activity list expanded							
																LC activities underway KPI: all staffmembers enacting LC activities			
																Evaluation and feed back into activities (ongoing) KPI: written evaluation from cross-section of org			
						Shift in cultural beliefs, values and norms KPI: language of LC in constant and consistent use across some to all areas of the org. See shift in practices below KPI: culture audit to be undertaken again & compared at a later stage													
												Shift in practices KPI: language & activities of LC in constant and consistent use across some to all areas of the org							

6. Additional Considerations

- a. As this proposal points to cultural change across a whole organisation, other aspects of the organisation's work is likely to be affected by, and create an effect upon, developing a sense of a learning community.
- b. Key aspects affected include policies for Workforce Development/CPD/training and Recruitment. These policies will need to develop alongside the development of a learning community as they too are closely linked to a culture of collaborative working since they are about people, relationships and learning.
- c. Attention to these policy areas will need to be paid as part of the culture audit and whole-organisation-visioning and action planning processes, in order to demonstrate and reflect their complex interdependencies and to prevent or encourage the development of subcultures misaligned with the learning community.

Collaborating with the 'more capable' self: Achieving conceptual change in early science education through underlying knowledge structures

Dr Michael Hast
School of Management and Social Sciences
St Mary's University, Twickenham, UK

Abstract

It is well documented that children do not begin school as blank slates but that they bring with them extensive knowledge about how the world around them works. This conceptual knowledge, embedded within rich theoretical structures, is not always accurate and requires change through learning and instruction. Yet some ideas – such as object motion – appear to be particularly resistant to such change. So how can conceptual change be achieved or facilitated? Collaboration, for one, has long been recognised as a beneficial learning and teaching approach, including early science education. However, for deep-rooted ideas collaborating with others may not always have the desired impact. Instead, the notion of self-collaboration is considered in this review. The current state of research in the field of predictive and underlying knowledge in childhood is outlined and different models of how the knowledge systems relate to each other are discussed. While further work is still needed to establish a clearer picture of how self-collaboration might effect conceptual change, research to date clearly identifies significant differences between predictive and underlying knowledge structures throughout childhood, how these structures can be related to traditional conceptual change theories, and how they may play a role in future learning and instructional approaches.

Key words:

Early science education; object motion; conceptual change; underlying knowledge; self-collaboration

Conceptions in the early science classroom

It is widely acknowledged that children are not blank slates when they begin school. On the contrary, they hold a wide range of well-developed theoretical conceptual structures, and many ideas – particularly in science – are based on their extensive experiences of and interactions with the everyday physical world around them (Klaassen, 2005). However, many of these ideas are erroneous or incomplete. Such inconsistencies have been widely noted, with currently over 8,000 studies having been collated to illustrate this point (see Duit, 2009, for a comprehensive list). One particular aspect of science is that of object motion – understanding how objects move under consideration of different variables such as gravitational force or friction. The importance of this area is due to the rather extensive opportunities for everyday world experiences, practically from birth (Planinic, Boone, Krsnik, & Beilfuss, 2006). As far as children's predictions are concerned, we now know a good deal about what their theories are and how they relate to scientifically acceptable ideas, with children displaying notions largely incommensurate with accepted scientific views (see Howe, 1998, for a review).

Having such ideas in childhood may not seem critical, since they are perceived to be sufficient to navigate within the everyday world (Reif, 2008). Furthermore, the purpose of education should be to facilitate change in conceptions – to encourage the modification of personal knowledge or theories – and to instil correct views, so there should be opportunities for such change when necessary. Yet we also know that adults hold very similar views regarding object fall in particular (e.g. Cahyadi & Butler, 2004; Sequeira & Leite, 1991).

Such ideas are highly resistant to change through instruction and interfere with further learning of related concepts (Bloom & Weisberg, 2007; Duit, Treagust, & Widodo, 2008). Given such resistance conceptual change needs to be addressed early. Looking at these concepts in childhood to see whether they can be changed at this stage – before ideas become too resistant to change – is crucial. Despite problems with conceptual change in the context of science education, all children are believed to hold the capacity for conceptual change (Carey, 2000). This raises the question as to why some conceptions do not change.

A key approach to conceptual change is outlined by Posner, Strike, Hewson and Gertzog (1982). According to this approach there are four conditions that need to be met before conceptual change can occur: 1) there must be dissatisfaction with the existing conception, 2) a new and intelligible conception must be available, 3) the new conception must appear plausible, and 4) the new conception should open up to new fruitful research. The final condition is not seen to be relevant for most primary school children. The main problem, however, seems to lie in the fact that the first two conditions are frequently not met effectively – students will, for example, conduct an experiment and find that their predictions are not met, but instead of reformulating their theories they may place blame on other factors such as the experimental setup (Howe, 2012). Importantly, Posner et al.'s (1982) theory is, to their own acknowledgement, merely epistemological, and the approach has shown little positive effect in its applications to classroom teaching (cf. Duit et al., 2008). However, what if the conditions of their theory can be met by using a different approach? Using object motion as a key example to highlight its potential application, an alternative of self-collaboration is explored next.

Collaborating with the 'more capable' self

Collaboration plays a key role in several traditional approaches to education. Piaget (1985), Vygotsky (1978) and Bruner (1996) all emphasise the importance of interaction in learning – though they may differ in their views as to how exactly interaction benefits the learner. It is unquestionable, though, that regardless of the exact mechanisms, collaboration among peers or with more knowledgeable adults can be a useful approach to effecting conceptual change in early science education in general (Howe, 2009, 2010; Howe, McWilliam, & Cross, 2005). However, such approaches may not always be most effective. Certainly where ideas are deeply entrenched due to experiences with the everyday world practically from the first day of our lives – as is the case for object motion – even collaboration with more capable peers or adults may not suffice in meeting the conditions set out by Posner et al. (1982). This may be because the plausibility of new or alternative conceptions is not given, or because the collaborator's views are not 'trusted' enough (Howe, 2013). As a result conflicting ideas are rarely resolved particularly in younger children's science classroom interactions (cf. Howe & McWilliam, 2006). However, collaboration in a different manner could still be seen as a potential solution to the conceptual change problem – that is, by seeking collaboration with the underlying self.

Over the past thirty years a significant body of work has built up that demonstrates infants do not live in a world of "blooming buzzing confusion" (James, 1890: 488) but that they are, in fact, among many other things, capable intuitive physicists who are able to interpret the world around them according to how they expect it to behave. Many studies have demonstrated that babies understand principles related to object motion, such as what kind of trajectories objects should follow (e.g. Friedman, 2002; Kannass, Oakes, & Wiese, 1999; Kim & Spelke, 1992). By relying on some form of internal reasoning system that monitors events, infants respond to scenarios that violate their expectations of how an event should have occurred, in accordance to physical laws, by spending more time looking at and scrutinising these incorrect events (Baillargeon, 2004). The assumption is that humans are born with what is termed core knowledge (e.g. Kinzler & Spelke, 2007) and these core beliefs represent an initial theory of the physical world.

According to the core knowledge view, these beliefs should also stand at the centre of adults' understanding, and while they can be enhanced through additional or new knowledge, the core itself cannot be altered (Carey, 2009). Indeed, research with professional ball players shows that while they are successful on a playing field, knowing where to be to catch a ball and what kind of trajectory that ball will follow, they cannot explain this knowledge and they perform poorly on related pencil-and-paper tasks (Reed, McLeod, & Dienes, 2010). Similarly, there are studies showing adults are able to recognise dynamic trajectories correctly, even if their predictions are incorrect (Kaiser & Proffitt, 1984; Kaiser, Proffitt, Whelan, & Hecht, 1992; Shanon, 1976). Importantly, this ability to 'do' or 'see' not only differs from the ability to explicitly know, but it also seems to be decidedly different from guessing, for which performance success rates should be much lower (cf. Fu, Dienes, & Fu, 2010).

If underlying knowledge exists in childhood and it needs to become available to children so that conceptual change can occur, what is the best approach? The method traditionally used to evaluate what babies know about physical laws does not work very well beyond around the first year of age (Rosenberg & Carey, 2009). Instead, judgement tasks can be used, by enforcing decisions as to whether an event appears to be correct or incorrect (Broaders, Cook, Mitchell, & Goldin-Meadow, 2007). Particularly helpful in this respect are computer simulations, as in addition to demonstrating events that should elicit feelings of familiarity they also allow the creation of dynamic events that cannot exist and therefore would not be observable in the everyday world because physical laws would have to be violated (Hennessy, 2006; Hennessy et al., 2007). Moreover, the role of digital technologies has become more and more important in educational contexts, including in the primary classroom (e.g. Livingstone, 2012; Porter, 2013). As such, it offers an excellent opportunity to approach conceptual change from a new perspective and to evaluate new techniques.

Research with children in this area is still limited, but relevant studies are beginning to emerge. Howe, Taylor Tavares and Devine (2012) conducted a computer-based study with primary school-aged children, assessing their predictions and recognition of the trajectories of objects being dropped from a moving hot air balloon. Predictions mainly fell into the category of straight-down or backward parabolic motion trajectories and only rarely into the correct forward parabolic trajectory category. In contrast, when required to decide whether a shown trajectory was correct or incorrect these children were quite able to recognise that the forward parabolic motion trajectory was correct, rejecting the remaining two. Taylor Tavares, Howe and Devine (2009) showed similar effects with the same age groups, though focusing on motion direction along a horizontal.

Hast and Howe (2010) also investigated 5 to 11-year-olds' underlying recognition of various dynamic events by specifically focussing on the role of object mass, since this element seems to play such a crucial role in predictive theories. At the same time, it should bear no effect on the ability to recognise dynamic events since speed, even taking into account air resistance or friction, has little effect on the speeds of two balls identical in size and differing only in their mass. Indeed, while predictions of speed of a heavy and a light ball were largely erroneous, as in other research (Baker, Murray, & Hood, 2009; Chinn & Malhotra, 2002; Hast & Howe, 2012, 2013a, b; Inhelder & Piaget, 1958; Nachtigall, 1982; van Hise, 1988), most children were able to correctly identify dynamic events as correct when they showed natural same-speed object motion and to reject events where one ball was simulated to be faster than the other.

Interestingly, the children in Hast and Howe (2010) were much more accurate in their rejections when the simulation events did not match their predictions. That is to say, while overall they were able to select the correct events as correct they also often judged the – incorrect – event to be correct that matched their predictions, but rarely the event that was neither correct nor matched predictions. Howe et al. (2012) found similarly that while the correct forward parabolic motion was recognised as being correct children frequently accepted incorrect trajectories as being correct in a manner that reflected their predictions but not so for trajectories that neither were correct nor had been predicted.

An explanatory model of underlying knowledge

Prediction tasks seem to necessitate deliberation, reflection, and a conscious understanding of rules or decisions involved, that is, an explicit engagement with knowledge structures (cf. Plessner & Czenna, 2008). At the same time, we have seen that primary school-aged children are able to recognise dynamic trajectories that are physically correct and to reject trajectories that appear unnatural to them, even if they are more likely to predict the unnatural events beforehand. It has been hypothesised that such recognition tasks may need merely to engage underlying knowledge structures (Collins, 2010; Polanyi, 1967) – structures set to provide quick responses without conscious awareness but eliciting feelings of familiarity (Scott & Dienes, 2010).

There are currently at least three different views on the relationship between expressed and underlying knowledge models. The first view posits that explicit knowledge is merely underlying knowledge elevated to a new level, and inaccuracies in expressed knowledge are explained as a result of omission of knowledge elements during the process of elevation (Kim & Spelke, 1999; Spelke & Hespos, 2001). The second view holds that there are two coexisting systems, each unaffected by the other, and depending on the task requirements, only one system is accessed (Hogarth, 2001; Plessner & Czenna, 2008). The third view, in contrast, rejects both omission and separation, and proposes a hybrid model in which there are two, partially associated knowledge systems wherein explicitly expressed knowledge is, at least in part, an embellishment of underlying knowledge (Carey, 2009; Hast & Howe, 2010; Howe et al., 2012). The question that remains is, then, how the two knowledge representations are linked. Which of the three theories is most likely to account for the differences?

The research with children outlined earlier would suggest that the omission theory cannot be upheld for, if the disparity observed by Hast and Howe (2010) were due to omission of conceptual elements, then deliberation should call upon underlying knowledge and leave elements out. However, given that in actuality object mass plays a very minor role in relevant dynamic events, correct recognition would not need to depend on any understanding of mass. Yet children clearly specifically call upon mass in their largely erroneous predictions – adding conceptual information rather than omitting any.

Arguing between separate systems and the hybrid model is a more formidable task at this stage. Mathematical research, for one, can help reject the notion of separate systems. Explicit mathematical computations are carried out on the basis of several underlying processes, such as approximate representations of numerical magnitudes (cf. Stanescu-Cosson et al., 2000). When such underlying processes are damaged, mental arithmetic suffers as a result (Lemer, Dehaene, Spelke, & Cohen, 2003), suggesting the underlying and the explicit representations must be linked in some manner. As a result the research on motion recognition (Hast & Howe, 2010; Howe et al., 2012) suggests an overlap of systems, but merely through partial association. In both studies recognition performance was generally accurate, but not always – and where it was incorrect it was far more likely to reflect predictive knowledge of dynamics rather than any alternative view.

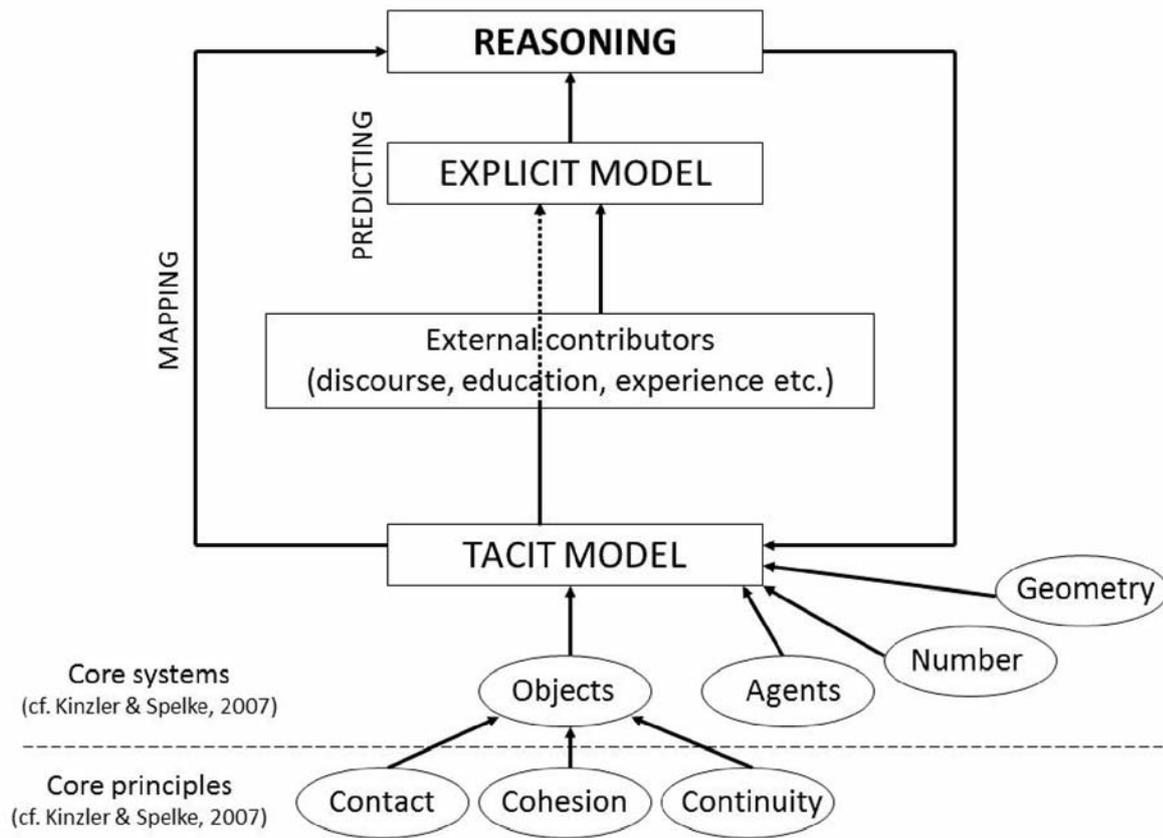


Figure 1. A dual-pathway model of reasoning (Hast, 2011)

Hast (2011) details a model that explores the possible relationship between predictive and underlying knowledge (see Figure 1). Earlier the notion was introduced that humans are endowed with a set of core knowledge principles and systems (cf. Kinzler & Spelke, 2007). According to the model these principles and systems are, in appropriate combinations, loosely connected to form prototypical representations of, for instance, dynamic events. In recognition tasks we may merely need to map witnessed events onto the relevant model and depending on the goodness of fit between actual event and prototype we then either accept or reject that event's correctness. The models relied on in predictive reasoning, on the other hand, require some incorporation of symbolic representations (e.g. language, mathematics or maps), and this incorporation may be interfering with the process of fully accessing the underlying structures at an explicit level.

Applications to education and future directions

More interesting for educationalists might now be whether this knowledge differentiation – in whatever form it manifests itself – has any applicability to the classroom in effecting conceptual change. The short-term answer is in the affirmative and is demonstrated by a recently published study by Howe, Devine and Taylor Tavares (2013). Between them, 8 to 12 year olds generally demonstrated similar levels of predictive knowledge about fall events in a pre-test. Some of these children then worked with an intervention program developed on the basis of Howe et al. (2012) where the children worked with recognition tasks; the remainder did not follow the intervention. A post-test on predictions given several weeks later showed that those children who had worked with the program were now much more successful in their predictions, whereas the control group's results mostly remained static.

What seems to be the case is that the computer program elicited personal dissatisfaction with concepts already held, evident by the rejection of incorrect scenarios. In addition, a new conception was available, and it was a plausible conception because it was recognised to be correct by the 'more competent' self. All crucial conditions laid out by Posner et al. (1982) can be met here. There has been some discussion about interventions and timing, raising the question of how much time is needed to effect conceptual change. Frequently, change can still occur several weeks after intervention (e.g. Howe et al., 2005), and long-term evaluations may be needed to provide a more accurate picture. So as such the findings provided by Howe et al. (2013) may need to be treated with some caution but they certainly provide an optimistic outlook.

A further point that has been addressed in the past is that many primary school teachers show low levels of confidence when it comes to teaching physical science topics (Murphy & Beggs, 2005). Integrating underlying knowledge assessment can provide at least two benefits here. Firstly, teachers can work on their own conceptions – an unpublished follow-up study based on Howe et al. (2013)¹ showed that adults, too, are able to address a change in conceptions using such programs. Doing so could, as a result, help develop confidence in teaching science topics. Secondly, teachers can avoid unsuccessful superimposition of ideas by letting children access their personal underlying knowledge systems. In either case teacher willingness to engage with such technologies is needed in order for benefits to be applied (Ifenthaler & Schweinbenz, 2013). Working together with teachers in future research undertakings is therefore crucial to understand how they incorporate such assessment possibilities into their classroom activities.

So while currently there may not be any clear indication whether or not approaching conceptual change in this fashion may have long-term benefits or what these benefits may be – simply because the research is too recent to be able to reach any such conclusions – there is already a call for continued work. It has been proposed that future research could expand particularly into other areas showing similar conceptual issues as found with object motion, such as floating and sinking, or heating and cooling (Hast, 2012; Howe et al., 2013). Moreover, the usefulness of this knowledge distinction may also provide applications in other educational fields where underlying rules play some role, such as learning of mathematics or grammar. Especially given the notion of underlying knowledge appearing to exist in both of these particular areas – innate numerical understanding (see Dehaene, 2011, for an extensive review) or the slightly more debated notion of innate grammar (e.g. Chomsky, 2007) – one might expect similar dichotomies between predictive and underlying knowledge, which could serve as opportunity for conceptual change programmes.

Conclusion

With high resistance to conceptual change being an issue to overcome in early science education, new approaches need to be taken into consideration. What has been shown in this review is that we do not need to move away from traditional theoretical approaches per se. Looking particularly at the emphasis on collaboration to advance knowledge and skills (Bruner, 1996; Piaget, 1985; Vygotsky, 1978), it seems we can draw parallels to these ideas although no interaction with *others* needs to take place. Instead we have seen that self-collaboration by addressing underlying knowledge structures could provide a suitable solution as all relevant conditions outlined by Posner et al. (1982) can be met. It appears that humans may be endowed with a core repertoire of knowledge and skills from a very early age, and that humans maintain this core throughout their lifespan. Being aware of this provides a take-home message for teachers in particular, but also for researchers interested in science education (or indeed other areas of education) – the knowledge expressed by children may not necessarily demonstrate the actual limits of what they already know.

¹See www.educ.cam.ac.uk/research/projects/objectmotion/classroomuse-download where the software used during the intervention phase of Howe et al. (2013) is also available.

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Some thoughts on why research informed practice is so important in the changing teacher education landscape

Dr Jane Renowden
School of Education, Theology and Leadership
St Mary's University, Twickenham UK

Abstract

Drawing on my doctoral research (Renowden, 2012) this paper sets out a case for the need for teachers to put research at the heart of their pedagogy to enable them to set their own validated standards of practice which can become part of the discourse in the field of education. These criteria and standards of practice will then become part of an educational form of accountability which has the potential to lead to genuine improvement in practices.

Discussion

It is the current government's declared aim to alter the way that pre-service teachers are trained in England moving it out of Higher Education Institutes (HEIs) and more and more into schools through the development of initiatives like School Direct. They are setting up Teaching Schools or Teaching Schools Alliances to deliver this training (www.gov.uk/government/news/new-school-led-teacher-training-programme-announced). What concerns me is that these changes are taking place in a context where there is an increased focus in schools and teacher education faculties on an externally standards-driven model of accountability, grounded in a concept of accountability that has become politicised (Epstein, 1993) and a view of education that is seen as a commodity (Longhurst, 1996). This bureaucratic and highly time-consuming process is, it seems to me, making it increasingly difficult for those of us involved in university-based teacher education to be able to consider our role in the coming changes. As so much of our time and energy goes towards seeking the holy grail that is the Ofsted outstanding judgement it is inevitable that there will be diminishing opportunities for my colleagues and me in the field to learn to explicate and theorise what we do through rigorous and impactful research. There are, after all, only so many hours in the day! This lack of time to engage in research has the potential to impact on our ability as academics to be what Said (1994) calls a public intellectual who is able to influence the normative discourses that influence policy and it comes at a time when it is, I would argue, more and more important that we do so.

The technical rational models of accountability, epitomised by the standards used by such bodies as the Office for Standards in Education (Ofsted) are supporting a generally-held view that teachers (including those of us in higher education contexts) are not able to determine their own standards of practice and this is leading to a teaching profession that is increasingly seen as unable to determine its own epistemological standards of practice (Whitehead, 2004) and to account for what it does in such a way as to lead to improvement through increased understanding. Indeed, I suggest that these models of accountability are leading to teacher passivity and compliance which is distancing us even further from the locus of power (Renowden, 2012). Over the last twenty years in schools and higher education teacher training institutions there has been an increase in an outward model of accountability. The general public have been given the impression through prevailing discourses, that teachers cannot be trusted to account for what they do and with the increased propensity towards industrial models of accountability in education there has been an acceptance of and emphasis on technical models of accountability as being the best way of judging outcomes. As children's attainment has fluctuated over the years the idea that if what quality in education looks like is left for teachers to determine then the resulting attainment will not be good enough. It has become one of the normative assumptions that underpin the rationale successive governments give to justify increased interventions and initiatives in teaching. There is a tacit understanding that teachers either do not know how to raise attainment or they do know, but cannot do it. This has led to an acceptance by the public at large that the governments of the day need to decide what quality and good practice looks like. The role of the classroom practitioner in all of this is to pilot and implement the endless materials produced to drive up standards. This contributes to the normalisation of the idea that teachers are technicians rather than professionals. This is significant because now, more than ever before, the voice of the practitioner is needed to act as an antidote to the waves of policy.

At the heart of my concerns is the current accountability processes. Accountability is a complex concept which takes on its true meaning more fully when it is contextualised and it has become embedded in the current discourses around school improvement and teaching. Within those fields it is very much the top-down model with those doing the holding of others to account being invested with credibility and power by successive governments. As Rowland (2006: 22) says, regimes of audit and accountability are emerging which are 'emphasising compliance and predictability at the expense of critique and imagination'. This is an important point to be made when exploring the concept of accountability. The ontological and epistemological position from which it emerges as an action determines the methodology and purpose of it in practice and as Morley (2003) points out privileges certain types of knowledge and favours particular outcomes and managerial processes.

Accountability which is emanating from a positivist, objective, detached position, where those holding practitioners to account see their power and authority legitimated by being the knower, creates the possibility that those being held to account will not have been trusted to be involved. As Sachs (2008 cited in Sugrue 2008: 194) suggests 'in the context where the enactment of power is taken for granted, audit and accountability become powerful technologies of control'.

Once teachers begin to lose control over the standards by which their practice is judged then their autonomy and professionalism begins to be eroded and the perception of many is that this is now the case. The current public perception of teachers is mixed but it is heavily influenced by the way the successive governments project the rationale for change and reform. The outwardly observable processes of inspections which are how schools and teacher education institutions are held to account, may have been reviewed, changed and presented with a friendlier face but the underlying power dynamics and modelling remains just as much an exercise in top down, positivist accountability as ever.

What concerns me is that the top-down accountability mechanisms are not supporting the learning of those involved in teaching and learning in all contexts. The accountability systems, as epitomised by Ofsted, are a manifestation of a power dynamic that has taken upon itself the authority to determine the criteria and standards of judgement that will decide what is effective and what is not, what is worth having and what is not and what works and what does not, in classrooms at all levels. This has reduced the teacher to the role of the mediator of policies and practices and the number of policies that have come out from government over the last decade or more has been high. This has the potential to keep teachers occupied implementing, mediating and engaged in high stakes testing (Skrla & Scheurich 2004) and time consuming bureaucracy. Even more concerning than this is that teachers are not involving themselves in putting forward what they know in such a way as to challenge the normative discourses which are, according to Foucault (1977), the result of disciplinary power. The power invested in such bodies as Ofsted is so well accepted that it has assumed a self-perpetuating aura about it and so teachers' voices become more marginalised. What McNamara (1991) calls vernacular pedagogy, such as my knowledge and the professional knowledge of colleagues about what is effective, is not being taken into account.

Foucault's (1977) model of power is very helpful when trying to understand the way that power underpins the accountability models used in education institutions and how this can lead to teacher compliance and a sort of learned helplessness (Peterson, Maier, Martin & Seligman, 1995) in the path of authority. The way that the quality of teaching is evaluated in schools and universities is through comparison and normative standards have been established. A hierarchy is established with a best and worst, and the pressure to conform is accepted. Compliance with policy is required and if the normative standards are not met and policies are not being followed then failure could be seen to be as a result of this. Exclusion from the norm can come in the shape of special measures in schools or non-compliance in teacher education, both of which have serious financial and practical consequences for schools and universities.

Foucault (1977) suggests that institutions are the sites of disciplinary practices, which can lead to passivity on the part of the actors. Those being held to account become what is expected of them and are forced to change their priorities according to what is deemed to be the latest priority. As teacher-training institutions are inspected by Ofsted, against foci determined by them, they are forced to put effort and resources in to those areas even if they consider other priorities to be of significance. Students become what the universities want in order to get on to the courses. Teachers want to progress along a career path or have a voice in the institution so they adopt the necessary norms of behaviour. Faculties of education need an 'outstanding' judgement so they do what seems to be necessary. As Foucault (1977: 164) says, 'the chief function of disciplinary power is to train'. Indeed, people become compliant as those in power define them. Clifford (2001: 47) concurs and says, 'disciplinary practices are designed to produce a body that can function like a cog in a wheel of a vast machine.' As we become resigned to the inevitability of inspection processes and jump through the hoops one more time, I would suggest that we become accepting of this model and indeed begin to be part of the normalisation of the implication of the models designed to hold others to account in much the same way as we are held to account. This concerns me because we are becoming, out of necessity, more and more compliant.

Educational accountability as a way forward

As an antidote to this I would like to suggest a process of accountability which holds within it the possibilities for learning and improvement through transformation. It is what I have chosen to call 'educational accountability' (Renowden, 2012). In my doctoral thesis I used a self-study action research methodology which enabled me to focus on the key question, 'How do I improve what I do as a teacher educator?' The outcome of this research was the generation of my own living theory of educational accountability which is grounded in a type of accountability that relies on the practitioner, in this case, holding themselves to account for what they know and how they have come to know it.

Educational accountability, as I conceptualise it, emerges from my understanding of education and it is part of educational processes embedded in a transformative vision of education. It has the potential to contribute to the development of those involved in it as what Ricoeur (1995) calls capable human beings. Hoveid and Hoveid (2009) suggest that educational practice is the process through which we learn to become capable human beings. Using Ricoeur's thesis they suggest that there are four basic abilities that capable human beings display and it is my contention that they can be part of an understanding of educational accountability. These are the ability to speak, to act, to tell and to be able to engage in imputation.

The ability to speak puts the 'I' at the centre of the act of accountability and it involves communication with others as relationships develop. It is about acknowledging individuals as persons. Educational accountability is about enabling individuals to make something happen and exercise their capacity for agency. The ability to tell is enabled because educational acts of accountability create the possibility of individuals being able to have a voice to articulate what they know and to seek critique as they tell others.

This way of holding oneself to account and when expected, as in my case, holding others to account, puts learning at the heart of the process. It looks to the development of capable human beings which in the case of my practice means being capable of determining standards of practice that lead to sustainable improvements in classrooms and schools. This is not what I am learning to do as I am held to account in a technical rational way. I am learning to 'play the game' and tick the boxes so that I can get back to good teaching which Hargreaves (1997: 108) says 'is not just a matter of being efficient, developing competence, mastering technique and possessing the right kind of knowledge. Good teaching also involved emotional work.' Educational accountability is all about striving for improvement because as Hargreaves (1997: 116) says 'in the complex rapidly changing post-modern age, if you do not get better as a teacher over time, you do not merely stay the same: you get worse.'

This accountability is not a soft process that lacks rigour and relevance. It requires the setting of criteria and standards of judgement grounded in challenge and informed assumptions which emerge from practitioner-led research. It is about what is learnt as one engages in the process of holding oneself to account and it is about holding this new knowledge as provisional and available for critique. It is not grounded in discourses of control and power but in dialogue and critical reflection which are important actions that contribute to emancipatory and democratic forms of education. Sachs (2008 cited in Sugrue 2008: 193-194) puts it well when she says:

Accountability itself isn't the enemy – teachers need to be accountable to their students, their colleagues and their school communities – but rather that this accountability to narrow sets of 'performance' standards and the whims of the government of the day is antithetical to any kind of transformative vision of the profession or of education.

The view of accountability as responsibility is from a different ontological and epistemological position to the current models and it is one that can hold out an opportunity for teacher influence. It is possible for those being held to account for their practices to be part of the process that establishes the criteria for decision making and to be involved and acknowledged as a knower in the accountability process. Accounts can be given but outcomes and decisions made by those holding to account will be focused more on the processes rather than possible outcomes and sanctions. It is within this positioning that the self-regulation methodology resides. Hargreaves (1997: 115) describes what this might look like:

The teaching profession must become, and be allowed to be, self-regulating. This self-regulating must not be symbolic or tediously bureaucratic. It must be rigorous and robust getting to the heart of what good quality teaching and learning is all about. A self-regulating profession must set, maintain and constantly look for ways to raise its own standards of practice, rather than having other people's standards imposed upon its members'.

Hargreaves' (1997) call is premised on the idea that those involved in actions are able to account for what they do against professional standards determined by themselves and this will ensure appropriate actions with an inbuilt ethical dimension. I would suggest that research is at the heart of this and that research would play a crucial part in the setting of the standards of practice.

So, as we stand in the middle of the current power dynamics and changing contexts, how can teacher educators re-define their roles and maintain and re-establish their voice in the educating of the teachers of the future? First I suggest that we continue to support our students through high quality Masters-level modules which can enable them to explore their emerging values as teachers. Embedded in these modules are opportunities for dialogue and critical engagement. Students are encouraged to develop their own theories of practice and hold them up for critique by a group of critical friends thus seeking validation for their emerging pedagogical understandings. The more secure our student teachers are in creating knowledge together and being accountable for that knowledge then the more chance there is that they will exercise a voice in the future. For those foundation and undergraduate students who do not engage in Masters work we need to continue to focus on enabling them to engage in their own learning and to support their development as thinking and critical practitioners.

Second I suggest that, as teacher educators, we can re-define ourselves through supporting schools and teachers to become researching communities who are able to make significant claims to knowledge around their own practices. It is my thesis that it is essential that this knowledge becomes embedded in a culture of educational accountability (Renowden, 2012) which enables teachers to set their own validated standards of practice which have the opportunity to influence policies. Teachers can learn to research what they do and in so doing contribute to the school improvement discourses.

Last, but not least, I suggest it is imperative that teacher educators engage in rigorous research which has the potential to impact on the various discourses taking place in the field of education and especially the 'what works' debate. Fullen (2003: 381) discusses the reshaping of the teaching profession and change when he puts forward the following definition of change that emerged from a workshop he was leading; 'change for us is a planned journey into uncharted waters in a leaky boat with a mutinous crew'. It is essential in my view that we become an informed but mutinous crew and following the metaphor have a say in the direction that the boat is taking.

Concluding comments

Research should be at the heart of our teaching and if we believe in a values-led pedagogy then this needs to be defended against a system that can keep us so occupied chasing targets and requirements that we have to struggle to hold on to what is important and of real worth. It is my hope that as teacher educators, who put teaching and learning at the heart of what we do, we can take every opportunity to share our accounts of 'what works' and to engage in rigorous practitioner research that can impact on transformational practices. At the heart of this there needs to be a vibrant and inclusive vision of the power of research for change which supports the dissemination of good practice. It is time we used the changed landscape to support teachers, through research, to articulate what they know and how they come to know it through the dissemination of our transformational pedagogies.

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Seminar Series

School of Education, Theology and Leadership Research Seminars

This section of *ReflectEd* celebrates the sharing of educational research from the School of Education, Theology and Leadership staff at St Mary's. The research seminar series was launched by Dr Jane Renowden, Programme Director in Research, in 2013 as a vehicle to disseminate the research being done across the faculty and to encourage new researchers to take those important steps toward developing their own research interests. This edition of *ReflectEd* presents one seminar. *Forming a professional identity: Step in, step out and shake it all about!* was presented by Jane Chambers on 10 December 2013. This seminar provided a review of Jane's research enquiry into the formation of a teacher educator's professional identity.

Forming a professional identity: *Step in, step out and shake it all about!*

Jane Chambers
School of Education, Theology and Leadership
St Mary's University, Twickenham, UK

My research into the concept of the professional identity of teacher educators, that is those working with students on initial teacher training programmes and qualified teachers on academic professional development programmes, came into being as I moved roles at St Mary's from being a lecturer working on initial teacher education programmes to lecturing on Masters in Education programmes and taking on wider responsibilities within the School. I was particularly interested in whether my professional identity would alter as a consequence of this change in role, and whether this might manifest itself in my professional identity. My research was therefore focusing on what shapes the professional identity of a teacher educator, and to that end it still is but it now has a more meaningful and personalised pinpoint for its enquiry, which has become so by taking account of a more significant event than that which I had otherwise previously appreciated.

And so what is that event that sharpened the enquiry focus? I realised that despite a change in role, for which I won no awards but neither, and thankfully, did I make a complete hash of, life was going on as before. My existence outside of St Mary's University was all but the same, and this felt disconcertingly significant. Significant to such an extent that I was jolted into stepping into the spotlight of my own world and shaking out what really mattered in terms of an identity, both professional and personal.

Now here I am beginning to sound either like I have read too much of Sheryl Sandberg's (2013) *Leaning In* or read a large helping of motivational texts, but neither case applies. I have neither the money of Sheryl Sandberg to consider whether feminism is concerned with one's posture nor the desire to read about getting to the front. But what I did realise was that I could not, for any longer, deny that the stuff of life seemed to be pulling at what Merleau Ponty (1962) refers to as the 'threads' of my professional identity more than I had cared to realise. My research therefore refocused to take account of how life and lived experiences shape the professional identity of teacher educators.

Professional identity in education: people matter

'...teaching is done by somebody' and thereby that person is 'at the centre' of the learning process which is a 'fundamentally inter-personal and relational endeavour.' (Kelchtermans, 2009:258)

It is perhaps a sociological concern as to whether teaching is a profession or as others contend a 'craft' (Pratte & Rury, 1991) but the kinds of expertise that are required to teach, that being the knowledge, skills and attitudes and the nature and disposition of the person who teaches is of fundamental importance, for as Kelchtermans (2009: 258) expresses 'teaching is done by somebody' and thereby 'is at the centre' of the learning process. It therefore matters who teaches; it matters to the students, it matters to those with whom we work and, I suggest, as does Kelchtermans (2009), it matters to us as teachers. More so, how we see ourselves as teachers and how others understand what we do is significant because teaching is, as Kelchtermans (2009: 258) expresses, a fundamentally 'inter-personal and relational endeavour'.

The profession of teaching is, surely we would agree, centred on people and it is the relationships between people that enable learning to take place that are the essence of our professional identity. But professionalism as such is not a localised affair for as Shulman (1999) suggests, the professional identity of a teacher is grown through making public their practice, being open to critical review and evaluation by their professional community and by building the knowledge base of professionalism through critical reflection.

Making the familiar strange – stepping into experience

In exploring the professional identity of teacher educators the concept of the self was essential for the methodological approach taken to the enquiry. Integrity of the enquiry has been driven therefore not least by the need to understand how individual experiences have influenced the professional identity of the teacher educator. The ways in exploring the question necessitated as Merleau-Ponty (1962: XIV) writes, a means by which one can 'break with our familiar acceptance' of what we take for granted and to 'slacken the intentional threads which attach us to the world.' In doing so, those involved in the enquiry including myself as the enquirer could begin to tease out the essential experiences that influence the formation of a professional identity, and thereby, as McAdams (1993: 12) writes 'comprehend the specific nature of our unique life course and personal journey if we are to know who we are and how our own life may be meaningful.'

A phenomenological approach thus provided the weave for gathering information; it necessitated that I set to one side my preconceptions, that is the 'what is, what was and what will be' (Husserl, 1931: 43) about the formation of professional identity and to listen carefully to the spoken. And it was through this listening process that I began to identify an interplay between the self and the formation of a professional identity as a teacher educator. My 'habits of thought' (Husserl, 1931: 43) were challenged, they were shaken up, the taken for granted (Wolff, 1984) elements were questioned and in doing so the horizon of perceived professional identity was widened. The teacher educator began to be nested within the individual; the expression of being a teacher is, it seemed, concerned with the person who is teaching and so who that teacher is, as a person, really does matter to the profession.

Through this seminar I have made reference to the teacher educator as a teacher; this use of language is not sloppy nor, I believe, misunderstood. Rather, one of the most striking findings of the research was the way in which teacher-educators identify themselves as being teachers. This is what they, including myself, trained to be: we trained to be teachers of children and, indeed, teachers of people. Whilst we endeavour to be scholarly, the translation between learning and teaching is the 'purpose' (Tirri & Ubani, 2013: 21) and the binding threads of the identity of what it is to be a teacher-educator. The enquiry also revealed that for those asked, professional identity was considered to be a changing and complex construct, and unique to individual experiences. This point is expanded by Canrinus, Helms-Lorenz, Beijaard, Buitink and Hofman (2011: 593) when they wrote that professional identity is shaped by 'job satisfaction, self-efficacy, occupational commitment and their level of motivation.'

The professional history of a teacher was highlighted as a determining feature in the formation of professional identity, a theme corroborated by Rus, Tomsa, Rebega and Apostol (2013: 318) who report that the length of time being a teacher in part determines professional identity. Furthermore, the work of Cabrius, Helms-Lorenz, Beijaard and Hofman (2011) report that whilst there is a need to develop the evidence base, duration of experience is more often associated with professional identity.

A professional identity is not, therefore, a creaseless and uniform coat that one adorns, rather it is, as Day, Stobart, Sammons, Kingston, Gu, Smees and Mujtaba (2006) suggest, three dimensional, made up of personal aspects, external expectations of what is to be a teacher and the context in which the teacher works. The enquiry similarly reported that professional identity is shaped by what others conceive of their role.

The person in the teacher matters

'Professional identity is part of a personal identity which develops as an ongoing process'. (Weinberger & Shefi, 2012: 262)

In so far as the enquiry unfolds, the formation of the professional identity of a teacher is driven by who we are as a person and not simply who we are at work. This may, for some, be simply obvious, but for me, being shaken into the spotlight, has offered the opportunity to 'find the human in the human being' (Dostoevsky) and in doing so allowed an opportunity to question the threads between the professional and personal narratives of being a teacher educator.

Forming a professional identity – honouring responsible freedom as a teacher educator

In summary, therefore, I would like to extend the opportunity to you to consider whether the professional identity of a teacher educator involves valuing being a teacher; the importance of relational and value-led practice and whether professional identity is a complex and changing construct which is bound up with in the lives which we each lead.

If you came to this seminar on the basis of the title, I may have you here under false pretences for there is no rehearsal of one step in and one step out. Rather when considering the formation of professional identity it has, for me at least, felt more like a stumbling journey of what was, what has been and what is longed for. And so now I invite you not to journey through a biographical narrative of what I understand professional identity to be, rather I offer you the opportunity to consider and reflect upon the freedoms which learning offers and the professional responsibilities that are conferred upon us. There is time, as (Weinberger & Shefi, 2012: 261) request, 'to think about what it is to be a teacher educator'.

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Reflection

Saying Farewell to Helena: Reflections on a thesis (by a student who has recently submitted)

Judith Bourne
School of Management and Social Sciences
St Mary's University, Twickenham

Discovering Helena Normanton in 2002 changed my career, and probably my life, although that sounds too dramatic. At the time I was lecturing Land Law and feminist jurisprudence at London Metropolitan University (London Guildhall as it was then) and following a management career path. Until 2013 the Women's Library was part of London Met and they requested my help in choosing a personality to symbolise women and law in their new building exhibition. It was then that I stumbled on 18 un-catalogued boxes containing the archives of Helena Normanton. Helena was the first woman to join an Inn of Court, after the passing of the Sex Disqualification (Removal) Act 1919 and was called to the Bar of England and Wales in 1922. The Bar was closed to women until the passing of this legislation. She was also the first woman to be briefed both in the High Court and the Central Criminal Court. She went on to become one of two first women King's Counsels and practised law past retirement. Helena's childhood ambition was to become a barrister. She declared that her one goal in life was to open the legal profession to women. Unlike other women pioneers (such as Amy Johnson, or Marie Stopes) Helena's contribution to women and society had been lost or forgotten. I could not ignore her having stumbled across those boxes. That was the start of my quest to rediscover Helena.

Very little has been written about the first lawyers in England and Wales, only three journal articles and an international comparative study. Finding a supervisor was difficult. Professor Thane at King's is an expert on women in this period and agreed to supervise me. She has provided me with encouragement and the confidence to complete this project. She has also had unlimited patience and understanding with the delays I have incurred due to my role as mother that began after embarking on this project. Finding an experienced and excellent supervisor is key to the Ph D process.

My thesis considered what role Helena Normanton played, if any, to the formal opening of the legal profession (in particular the Bar) to women in 1919 with the passing of the Sex Disqualification (Removal) Act and examined her subsequent legal career in order to better understand her role in the fight for substantive equality. Helena's battle to practice was an essential part of the struggle for women's legal equality during that period and therefore her life required recording, especially as the effort for equality is still ongoing. Helena's archives were too sketchy for an honest and complete biography, but much of her journey towards practice as a barrister could be told, especially when placed in the context of the women's movement. Her story is essential because as Parry (2010: 208) wrote "appreciation of the role of the individual agent ... can influence if not steer the course of the wider legal, historical and social development". Female lawyers need to understand their heritage as women now total half of law undergraduate entrants. Her story needs to be revealed and examined "to produce a more complete and truthful explanation of how things were, and how they are now" (Auchmuty, 2011: 201).

Probably everyone believes that their thesis was the most difficult. But for me the lack of material made the project almost impossible. Apart from the 18 boxes in the Women's Library there is very little other material. Her archives consist of no personal letters or diaries and so it is difficult to fill in the gaps behind the facts. The Lord Chancellor's Department records at the National Archives in Kew provide no substantive record of Helena's contribution, although there is correspondence between her and that office. Middle Temple (her Inn) has excellent records, but again they consist of formal letters and no real sense of what was being felt or going on behind the scenes. Legal-history biography is a new area and little written about, so I felt that I also had to justify my project. At times, it seemed an impossible task.

However, on the Thursday before Christmas I handed my thesis into the examinations office at King's. Rather than being a big momentous and emotional moment it felt decidedly flat. All I could see as I descended in the lift was the viva ahead and then probable corrections. The journey is far from over. I have an overriding need for it to be over. The thesis has been a monster on my shoulder, always making me feel guilty when I've been having fun and not working. To a certain extent all the big events in my life have been overshadowed by the unfinished thesis. However, that need for closure is more complicated than that: a chance conversation with my office neighbour at work revealed that I have had also had a problem with letting go of the thesis-letting go of Helena. She has been part of my life for a very long time now. I deeply admire her and owe her a huge debt, without her determination and sacrifice I would never have become a barrister. She did so much for women. I want desperately to do the best possible job for her. She deserves a place in history. I also owe her a debt for revealing to me how exciting research is and that a research career is the only path I now want to follow. At the same time as all these feelings there is a sense that in telling her story I legitimise myself.

Realistically, the thesis is never going to be perfect, it could possibly go on forever. There are so many other things I need to look at (I had to cut 3000 words from the thesis in order to get it within 100 000 words). Space constraints provide me with possible future projects. For example, the thesis has brought the names of other women called to the Bar in 1922 with Helena into focus. Research into their lives and careers would be desirable to establish a fuller understanding of life at the Bar in 1922. Only fragments of their lives may survive, but putting them together would establish a fuller understanding of this phase of history.

The beast is tamed (for now) and the nightmare is over until the viva. At least I have come to this stage; I just hope I complete the next.

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ReflectEd Review

Talk for Writing Across the Curriculum: How to teach non-fiction writing for 5-12 years

Pie Corbett and Julia Strong
Open University Press/McGraw Hill Education
2012 ISBN -13:978-0-33-524088 £26.99

Dr Linda Saunders
School of Education, Theology and Leadership
St Mary's University, Twickenham, UK

Recent years have seen a revival of the importance of teaching writing across the curriculum. Cross-curricular writing is seen to be an integral part of raising standards of literacy across and within subject areas. Embedding pupils' literacy knowledge and skills is the primary objective. *Talk for Writing Across the Curriculum* provides a practical classroom-ready resource to address this need. It both complements and extends other whole school frameworks for teaching writing such as Ros Wilson's popular Big Write publications. In 2009, the 'Talk for Writing' approach was adopted nationally as part of the former Primary Literacy Framework.

Teachers of English have always had a strong tradition of teaching writing in a relevant context. They have recognised that understanding how to write effectively is founded on authentic audiences and purposes for writing. This authenticity allows pupils' spoken and written language to blossom. In the wake of the new KS2 Spelling Punctuation and Grammar tests, new National Curriculum and the demise of the Primary National Strategies, this timely publication, offers a systematic, context-based approach to the teaching of non-fiction writing through talk. It is suitable for use across the primary and early secondary curriculum.

First seen in *Literacy: What Works?* (Corbett & Palmer, 2003), the 'Talk for Writing' approach has been further developed through collaboration with the National Literacy Trust. The premise of their original fiction writing research was that story dramatically improved pupils' written composition. Through story telling and story reading, pupils internalised language patterns and reproduced them in their written work. The 'Talk for Writing' approach now incorporates a sequence for teaching this writing process. It describes a systematic method for scaffolding writing through talk, via pupils' extensive personal reading and through excellent shared writing practice. The opening chapters carefully describe the three stages of teaching in the classroom: imitation, innovation, and independent application. An accompanying DVD provides valuable illustrations of precisely how, why and when each stage is introduced. Building on the National Literacy Trust research and calling on many recent international examples, advice is given to illustrate how fiction-writing skills form a basis for transition into non-fiction writing. Later chapters are devoted to methodically applying the 'Talk for Writing' approach to the six main non-fiction text types. A tight structure in each genre chapter enables the reader to navigate recurring themes within and across contrasting text types.

Contemporary models of teaching writing see the teaching of process as the key factor in developing effective writing skills. Like reading, process-writing skills are underpinned by speaking and listening skills that provide pupils with the language to talk about their writing, to read as writers and to write as readers. This level of critical literacy is fundamental to establishing cross-curricular literacy skills. With lively pictorial text-mapping exercises that seamlessly merge into boxed planning grids, Corbett and Strong's ideas reinforce the need for teachers to read aloud, for pupils' oral rehearsal of the text and generic linear planning boxes. Central to the transition from speech to independent writing are the teachers' shared writing abilities. While genre structure purists would question the merits of using a one size fits all planning frame for all text types, the generic nature of this approach may perhaps serve as a stepping-stone to more genre based writing frames and genre skeletons. It certainly encourages pupils to attempt their own planning frameworks.

Generic and genre specific lesson introductions are another useful element of the 'Talk for Writing' approach. These activities entitled 'warm ups to the tune of the text' have many of the features of Corbett's Jumpstart Literacy publications. The games especially provide teachers with witty and inventive ways of contextualising the language features of non-fiction. However, although implicitly addressed, further explicit grammar teaching may be required in order to embed sentence structure and paragraph cohesion.

It is always helpful to present the big and important messages of theory alongside classroom application. The big and important theoretical message of this book is that effective non-fiction writing is born from pupils' absolute familiarity with the language patterns of non-fiction. The strength of this book for the classroom practitioner will inevitably be the clarity of the sequential framework for teaching and the wealth of motivating teaching ideas within it. These ideas reflect the long and distinguished educational careers of both authors. Each comes across as a highly committed teacher with a passion for making a difference to pupils' literacy skills. Indeed, the abundance of successful publications from Corbett himself would suggest that he is on something of a personal mission to improve the teaching of writing in school. Most of all the 'Talk for Writing' approach is about having fun while pupils learn to become writers for life.

Guidelines for Contributors

Submissions are welcome from nursery, primary, secondary and higher education sectors. Contributions are encouraged from any country and it is expected that the Journal will publish articles that offer readers insightful, inspirational as well as practical information about teaching, learning and assessment across the curriculum.

The word limit for articles can be negotiated. We would welcome the opportunity to publish articles that describe good practice in schools, literature reviews that increase understanding of particular educational domains, research articles that explore new ideas, and articles from practitioners that demonstrate the contribution that reflective practice and informed action can make to effective teaching.

Articles for consideration by the Editorial Board should be emailed to christine.edwards-leis@smuc.ac.uk. Detailed notes on the preparation of articles are provided here but if you have any questions then please do not hesitate to email.

The articles will be 'blind' refereed by two referees, who will remain anonymous and authors will receive feedback through the editor.

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Developing research assignments for submission

Many teachers and students write assignments that include literature reviews or that report on inquiries into aspects of their practice undertaken in a range of settings. These pieces of writing could be considered for submission once they have been restructured to include an abstract, key words, introduction, research methodology and results. Please reference according to the Harvard Method of Referencing.

Notes for research articles for submission

It is expected that research articles make an original contribution to education research. They should be based on evidence such as newly acquired data through empirical research, historical data, or published work.

Sharing good practice and school projects

Great things happen in schools. Teachers and head teachers are encouraged to share their practice with the education community through descriptions of projects that they have created, implemented and evaluated. While these pieces are not expected to be supported by evidence from the literature (as a research article would be) the theories that underpin the practices described should be included to demonstrate informed pedagogy.

Preparation of articles

Title

Please write a succinct title and include author/s and affiliations.

Abstract

An abstract should be 200-250 words. It should have 6 key words for reference purposes. The abstract should provide the argument put forward, a rationale for the research, method used and major findings/recommendations. A good practice abstract will include an explanation of the project (length, participants, curriculum focus), its purpose and pertinent outcomes.

Article format

The article should include the abstract, all figures, tables and reference list. Do not include a bibliography. It should be typed on A4 portrait in Word and pages should be numbered. Use Times New Roman font 12pt typeface. Include only one space after full stops. Underlined headings for each section are recommended to guide the reader. Avoid footnotes and endnotes unless essential to clear communication. All figures and tables must be numbered and labelled and be on separate pages rather than embedded in the text. Indicate where they are to be inserted. Avoid grey or coloured shading on graphs. If photographs are to be included then ensure that you have both ethical approval for publication (this is particularly necessary for children) and copyright approval. Photographs and all images should be of highest resolution to ensure quality reproduction. We publish in colour.

Referencing

The article is to be referenced and the Reference List compiled using Harvard Method of Referencing.

Other sections in the Journal

Report

Has something new happened in your school, college, university or sector? Please consider writing a report about the initiative. Contact the editor, Christine Edwards-Leis, to discuss your ideas or forward your review to christine.edwards-leis@smuc.ac.uk.

Reflection

If you have had a significant experience in learning or teaching please consider writing a reflection piece. Teachers and learners look to others to provide inspiration, support and guidance and your experiences are an important contribution to the profession.

ReflectEd Review

Book and resource reviews are helpful to others. If you have used a resource or read a book that you feel contributes to effective practice or reflective research then please consider writing a review. Contact the editor, Christine Edwards-Leis, to discuss your ideas or forward your review to christine.edwards-leis@smuc.ac.uk.



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