



Developing effective learners through a school/university partnership in curriculum making

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<CT>Developing effective learners through a school/university partnership in curriculum making

An important point in the establishment of a new secondary school is the making of its curriculum'. In 2013, XP School, Doncaster, invited researchers from Sheffield Hallam University (joined in 2016 by Auckland University) to work with its teachers, involving school visits, sharing of curriculum plans and curriculum evaluation. This paper describes the research-informed outcomes of this school (trust)/university partnership process in two parts: first, the collective theorising that has taken place; and second, how the curriculum is being enacted by the school to develop effective learners and learning.

<CT>Theorising curriculum thinking and making: The case for powerful knowledge

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<A>Introduction

How can a curriculum be exciting and engaging while also meeting the important need to educate young people for a world of work and democratic citizenship? This was the question asked by teachers at XP in 2013 when building their new school and beginning to address what kind of curriculum they might create. It became the basis of a series of 'conversations', shared and discussed with researchers, on the purpose of the curriculum; the relationship between curriculum and pedagogy; and the role of teachers as curriculum-makers. The exchange of ideas constituted curriculum thinking, a form of collective theory-building arising from an instrumental case study research design (Stake, 1995). It was further developed into three challenges that emerged for XP teachers setting out a new curriculum, which can determine the type and form of a school's possible futures (Young and Lambert, 2014).

A new school starts with an existing knowledge base for curriculum-making – the aggregation of knowledge, skills and dispositions held by professional teachers. It is the experience that teachers bring with them that contributes to a repertoire of what they understand to work in practice, partly based on their subject identities, as their theories in action. This common-sense approach to what works can lack a developed theory of the curriculum, valuable because it throws light on taken-for-granted knowledge of how the curriculum is made. By working together, teachers and researchers are better able to turn this theory into practical know-how that can be used to think about and make the curriculum (Deng, 2017).

One use of this theory-informed teacher expertise is to help transform subject content knowledge into forms suitable for teaching, such as schemes of work, topic plans and individual lesson plans (Shulman, 1986b). By content knowledge, Shulman means both the substantive structure (essential concepts, principles and frameworks) and the syntactic structure (modes of inquiry, canons of evidence and ways of proof) of the school subject or academic discipline (Schwab, 1964). For teachers, this distinction has become blurred by the demands for a new approach to education – to create a new type of global citizen, capable of dealing with a fast-changing world, who is also a flexible critical thinker, committed to learning as a lifelong enterprise.

Exposure to the influential rhetoric for curricula focused on generic or meta-skills, in which the goal is 'learning to learn' (McPhail and Rata, 2016), led to a whole-school debate at XP on the purpose of the curriculum. Partly in response to this, teachers at XP in 2014 were drawn to make the case for an integrated curriculum, one that is centred on the value of student-led, problem-based learning and cross-curricular projects that involve students in constructive investigation.

<A>The purpose of the curriculum

It was helpful for XP to distinguish between a National Curriculum and the curriculum of individual schools as it is implemented by teachers and experienced by students. Deng (2017) suggests that teachers' curriculum thinking favours an emphasis on Shulman's (1986b) pedagogic content knowledge (PCK) as the basis for designing the curriculum and pedagogy. Many of the XP teachers were from 'traditional' schools where the cohesiveness of the subject curriculum is given form by specialist subject-trained teachers, who are able to interpret the official curriculum 'through the lens of their specialist knowledge' (Lambert, 2014, p. 167). In discussing the integrated curriculum, XP teachers became mindful of the relative strength of curriculum boundaries (e.g. whether to combine school subjects or to teach them discretely) and the systems of meanings formed by their own school subjects, which provide a sense of coherence for themselves and learners. A fear expressed in conversation was that weaker (disciplinary) meanings could lead to learners becoming adrift from the notion that learning has a purpose, in and of itself.

This mode of curriculum thinking by XP teachers enabled them to question dominant 21st-century learning, viewpoints that favour the fundamental purpose of achieving experience of something, while often neglecting what is to be gained from the experience. Indeed, XP's emerging focus on both purposeful learning and learning standards echoes Michael Young's theory of powerful knowledge (Young and Muller, 2013) in that it attends to *what*, as well as *how*, something is learned. By this theory, knowledge that is powerful, it is argued, is theoretical, abstract, specialised and disciplinary knowledge that equips learners with powers to think beyond their everyday experience, to think the 'not yet thought' and to participate in social and political debates (Young and Muller, 2013). In this view, the teacher interprets the National Curriculum to create 'educational encounters' – specialised learning experiences that can be combined with powerful disciplinary knowledge – which can take students beyond their everyday experience and equip them with capabilities (Lambert, 2014). The argument for powerful knowledge, therefore, became the underpinning of the purpose of XP's curriculum, and led to the first challenge: *How can a school create a curriculum that develops powerful knowledge?*

<A>Teachers as curriculum-makers

Teachers at XP are typical in that they are charged with interpreting and enacting the revised 2014 National Curriculum as 'a core of essential knowledge' based on school subjects (DfE, 2010). While they are responsible for the selection, sequencing and pacing of knowledge, teachers rarely feel in control of the curriculum, reflecting perceptions of their own 'low capacity for agency' in the current educational climate with respect to curriculum development (Priestley et al., 2012, p. 192).

There is evidence, however, of a developing case for integrating the curriculum (Pountney and McPhail, 2017), in order to offer teachers a degree of autonomy in curriculum decision-making, including what subjects to integrate and how. It is the nature and the quality of this 'bringing together' or integration that became a central concern for XP teachers – namely how to distinguish forms of the curriculum that are better able to combine substantive and syntactic structures (Schwab, 1964) across subject boundaries. An example would be the contrasting ways that schools can choose to organise the curriculum, as 'chunks' of learning structured with close attention to National Curriculum standards, as opposed to areas for investigation in modules, in which learning targets are retro-fitted. Pountney and McPhail (2017), in a study of schools' curriculum-making, identify this variation in curriculum practice as a continuum from principled to functional. Principled curriculum integration is seen to have a stronger emphasis on the internal conceptual structure of content, while functional integration favours external organisers, such as pragmatic decisions about what fits together.

Given that curriculum integration is realised in practice, in the first instance at least, by teachers creating structures for curriculum delivery and texts such as curriculum plans, attention to subject content seemed to be a good place to start for teachers at XP. Indeed, some would argue that disciplinary knowledge is essential for the teacher to engage in curriculum thinking, because it provides the 'big ideas' from which teachers draw and organise the contents (Donaldson, 2015), enriched and broadened by knowledge of related academic disciplines (Deng, 2017). XP teachers, therefore, were called upon to make decisions about whether to teach the curriculum in a cross-curricular thematic approach or in discrete subjects. This led to challenge 2: *To what degree, and in what sense, are teachers curriculum-makers?*

<A>The separation of curriculum and pedagogy

Pedagogy has taken centre stage in research in the last few decades, so much so that curriculum knowledge itself (its forms, structures and affordances) is seldom considered (Young and Muller, 2013). The everyday knowledge held by students, while being an important resource for the pedagogic work of teachers, has become the basis of the curriculum – 'pedagogy trumps curriculum' as Dylan Wiliam puts it – leading partly to a merging, or conflating, of curriculum and pedagogy. Meanwhile, the theoretical distinction between curriculum content (the what) and pedagogy (the how) provides a powerful means to distinguish where 'progressive' ideas of constructivism and student-centred learning are important, i.e. in regards to pedagogy, and where such ideas have serious limitations, i.e. in relation to curriculum content (McPhail, 2016).

Disciplinary knowledge allowed XP teachers to engage in deep thinking about curriculum questions of what to teach and why. This went beyond the straightforward appreciation of how content is selected, sequenced and paced, to consider the idea of epistemic progression (McPhail and Rata, 2016) – how learning is deepened over time. The XP curriculum is seen to have a purpose of its own – the intellectual development of students.

A carefully developed understanding of learning through, and from, experience (Dewey, 1938) is often missed out in current debates around progressive versus traditional pedagogy. As explained in Part 2, experiential learning has become central to XP's curriculum, and the measure of their efforts

will be determined by how well they respond to this. Dewey argues that the belief that all genuine education comes about through experience 'does not mean all experiences are genuinely or equally educative' (p. 25). Furthermore, he says that 'The next step is the progressive development of what is already experienced into a fuller and richer and also more organised form.' (p. 73) This provokes challenge 3: *How can a school best distinguish between curriculum and pedagogy?*

<A>Conclusion: A heuristic model for the curriculum

The purpose of the curriculum and the role of teacher as curriculum-maker can be seen to be related to the idea of powerful knowledge, elaborated as three challenges that have helped XP School think about and develop its curriculum. In their book *Knowledge and the Future School*, Young and Lambert (2014) translate this into a heuristic model of three futures. In Future 1, the school has an emphasis on the transmission of traditional knowledge, with strong disciplinary boundaries and less attention to the social aspects of learning. Future 2, on the other hand, is over-socialised, with reduced boundaries between the school and the community and between types of knowledge, favouring generic skills and an outcome-based curriculum. Future 3, they conjecture, aims to combine a knowledge-led curriculum with an engaging pedagogy, and is a response to the incomplete answers offered by Futures 1 and 2 to the question 'how can we develop effective learners?' The three challenges set out above invite teachers to engage in powerful curriculum thinking and to theorise a possible future for their schools.

<A>References

<CT>Enacting the curriculum: The case for powerful learning

Martin Said, Head of XP School, Doncaster, UK

'To start a school is to proclaim what it means to be human.'

(A sign above the entrance to Springfield Renaissance School, Massachusetts, USA)

XP School, Doncaster, UK, is an 11–19 secondary school, established in 2013 as a 'free school'. In 2017, it was graded as 'outstanding in all aspects' by Ofsted. The school is part of a growing academy trust, currently three schools, also comprising a second new secondary school and a local primary school, each following an approach to curriculum and pedagogy developed in the EL (Expeditionary Learning) Schools in the United States. EL Education is a marriage of the philosophies of Kurt Hahn, the founder of Outward Bound, and the best of the Harvard Graduate School of Education's theoretical and practical approaches to teaching and learning.

<A>Establishing the purpose of the XP curriculum

It was a number of visits by XP School leaders to EL schools in the USA over a year that convinced us to build a school that followed the principles of the outstanding schools that we observed. We were very mindful of leaping into the unknown, in which our ambitions would be tested by the 'fragility of a progressive school in a traditional setting' (Solo, 2014), and therefore we were determined to

ensure that our design principles were rigorous. We were fortunate to be advised by Ron Berger, Chief Academic Officer of EL Education, on the school's ethics of excellence (Berger, 2003) and student-centred learning (Berger et al., 2014), and to have the services of an EL School Designer, Anna Switzer, who was experienced in 'seeding' new schools and supporting them at the 'start-up' stage. In 2013, we formed a school/university partnership with researchers from Sheffield Hallam University, inviting them to work with us in building and reviewing our curriculum and to provide challenges that shape our theory of how the curriculum works and our place in making it.

The design principles we established to underpin the work that we do at XP are:

- <BL>a common mission
- personalisation
- connect with the world
- teachers are learners
- language is our culture.

Our common mission for effective learners is to enable every child to go to university, if they so wish – a simply stated outcome that is built on a similarly simple proposition: our learners will be known, equally, for the quality of their work and the growth of their character. This is the 'DNA' that runs through the school, realised in how the school, the curriculum and the pedagogy is organised and planned – it is our culture.

Central to this is the metaphor of 'crew' – the idea that each student is supported by and contributes to a group, whose strength can be measured by that of its weakest member (Greeley, 2001). In each year group, there are 50 students organised into four crews. The strength of relationships at XP is verified by research (Loe et al., 2017) that shows higher than the norm levels of student–student (8% higher), student–teacher (5% higher) and teacher–student (20% higher) relationships. The report concludes that 'this is the direct result of the school's culture and its curricular practice' (p. 14).

<A> Teachers making the curriculum together

We made three important decisions at the outset: first, that we would follow an integrated curriculum, with expeditions as our signature curriculum element; second, that curriculum-making by teachers was a shared and collaborative enterprise; and third, we decided to follow the National Curriculum and standards in planning and mapping the curriculum.

Working in expedition teams, teachers are collectively responsible for rigorously designing and testing their plans, a process they find both exciting and liberating. XP's curriculum is standards-based and our curriculum differs from other '21st-century' curricula in that while the organising principle is external to the disciplines themselves, it is the inferential links between bodies of knowledge that determine the organisation of what is to be studied. Therefore, our curricular structures flow from the bodies of knowledge to be studied, rather than from arbitrary themes, topics or products.

The signature element of the XP curriculum, drawing from EL Education, is a 'learning expedition', an interdisciplinary project that lasts eight to 10 weeks (Patton, 2012). Each expedition is organised around a guiding question, and comprises fieldwork, case studies, key challenging texts, experts external to the school and a final product, or culminating performance, that the students share with their families and a wider audience at a celebration of learning event.

In order to map our curriculum, we first atomised the standards to a degree that was manageable but, at the same time, meaningful – we refer to these as 'power standards', representing bodies of knowledge given structure by identifying interdisciplinary links. For example, it was from this exercise that we recognised the links between cooking and chemical and physical changes that eventually became our '*Chefistry*' learning expedition. Thus, in addition to a detailed curriculum map, we have developed a knowledge map that shows how the standards are linked and met.

The review of the curriculum is ongoing and expeditions are evaluated after every run, and the university has helped us with this. The chronological organisation of standards themselves is fairly immutable, as this gives rise to progression and, therefore, this aspect of the curriculum map changes little from year to year. However, the expeditions themselves, and therefore the contexts for case studies, are modified following review, in a process of evaluation and improvement.

<A>Developing powerful learning

At XP, we distinguish between curriculum as the organisation of the standards and pedagogy as how the curriculum is enacted, with the aim being powerful and deep learning that springs from purposeful work. For our students, their first week at school is an Outward Bound expedition with their new crews. Following this, they begin their first (Year 7) learning expedition, '*From the Ground Up*' (FTGU).

FTGU is a broadly interdisciplinary learning expedition, combining STEM and humanities and arts, with the guiding question *What does Doncaster owe to the miners?* The subjects that were integrated in the expedition are shown below:

- <BL>English standards: the book *Kit's Wilderness*
- History: Industrial Revolution; the miners' strike of 1984; using evidence to make claims and the second-order concept of cause and consequence; historical and biographical accounts of the miners and mines
- Mathematics: written and mental methods for the four operations; rounding and estimation; area/perimeter of compound shapes
- Science: the structure and composition of the earth as well as the rock cycle
- Geography: historical maps of pit villages, tracking their changes over time; plate tectonics and the geological process and timescales that led to the formation of coal
- Art: form and tone; work in charcoal to produce illustrations of mining artefacts and portraits of miners
- Music: composed responses to the guiding question, informed by stimulus pieces.

Fieldwork was carried out in disused quarries across the three strata in Doncaster. Like all expeditions, FTGU started with an immersion experience where, initially, students were not aware of the guiding question or the targets, topics and texts to be studied, or what the final product for the expedition would be. On the first day of the expedition, students travelled to the National Coal Museum and went down a pit, guided by a former miner. When the guiding question was revealed, many students identified as being from mining heritage, and all students spoke that weekend with their families about stories from the pits, which once dominated the borough, bringing these stories back into school with them.

<A>Curriculum and pedagogy: 'It's not just what you do, it's the way that you do it'

Knowledge within a learning expedition is organised into case studies, each of which focuses on a specific context that serves to illuminate the standards. One piece of fieldwork, a visit to the National Union of Mineworkers (NUM) headquarters in Barnsley to sketch their collection of miners' banners, coincided with the NUM's press conference in response to the news that there would be no inquiry into the events at Orgreave in 1984. Students sat in on that press conference and were interviewed by the press themselves, appearing in *The Guardian* newspaper the following day. This is an example of students going beyond their context to experience the world.

The celebration of learning for FTGU began with tableaux depicting the miners' strike of 1984. Every Year 7 student then stood in front of an audience of 200 – including their parents, their peers, members of the mining community and the very people that they had interviewed – beneath miners' banners that they had designed, reading extracts from what they had written for their book, performing music inspired by Gresford (the miners' hymn) and Johann Johannson's *The Cause of Labour is the Hope of the World*. Tears were shed. Important stories were told. Most importantly, for the students, this was the culmination of a learning expedition becoming an important story, an experience beyond their previous experiences, of powerful learning.

It is important to note that while the collective outcomes of expeditions are evident in the final product, we pay careful attention to the assessment of individual students' progress: we test against national learning standards, identifying attainment on a scale from beginning to excellent, and this is cross-referenced across expeditions, both horizontally and vertically.

Almost a year after the expedition's first iteration, the same students have become published authors, launching their book in Doncaster Children's Library. It is now on sale throughout the borough and is the third best-selling local history book, reinforcing the idea of quality work arising from collective endeavour.

<A>Conclusion

As a new school, the world is curious as to whether we are 'traditional' or 'progressive', assuming perhaps the latter. In practice, we reject the 'or' and embrace the genius of the 'and' (Collins and Porras, 2005). The three challenges arising from the trust's partnership with the university have helped us create the curriculum we wanted – one that upholds the epistemic principles of disciplinary organisation and conceptual progression while, at the same time, giving students a

purpose to learn and progress. Whether we are a Future 3 school remains to be seen, but it is a useful heuristic for us to understand and communicate our view of ourselves and our place in the debate. Theorising our curriculum-thinking in conversations with researchers has been a powerful way to both plan a curriculum that makes an effective link between experiences and the knowledge to be learned, and to ensure that students go beyond a purely utilitarian view of knowledge to see knowledge itself as both an entitlement and, more importantly, a fulfilment of their future selves.

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