

The Connected Curriculum

Our brains are wired to make connections. We have, if we are lucky, five senses (or six, if we include our imagination), and our brains piece together what our senses tell us to create our world. Our minds create connections in vividly-recreated maps of impossible complexity, and we all know that we have to work hard to think in straight lines. It doesn't come naturally to us. For as long as there have been writers and artists, they have used artifice to create order from chaos, simulating the work of the mind as it builds order from the jumble of our senses. As they do so, they also acknowledge the connected mind, the connected world, their words and images sliding into each other.

We learn through connections too. We look for patterns, for lines running from one idea, one piece of information to another. Memory experts will explain how they recall long strings of random information: it is by creating a pattern, sometimes called a 'mind-map' for the facts they need to remember. Often this is in the form of a journey, a metaphor that has lasted as long as stories have been told, and a journey is nothing if not a pattern, a way of bringing cohesion from events that would otherwise stand alone.

In our work as teachers, we are always looking for connections. A teacher who uses an analogy to explain a complex abstract concept is searching for the connection that a learner will find useful; an 'authentic' learning experience, tying the outside world to the enclosed classroom environment, is an attempt to make a connection; every time a teacher or a learner reaches for prior knowledge to build a new understanding – that is a connection. We have metaphors for our connections: we group knowledge in blocks, for example, an implicit recognition that some kinds of understanding have more connections than others. We describe spirals of inquiry, an image of learning that has great power, an ascending staircase of skills, knowledge and understanding.

In my own subject, English, connections are everything. I want my students to make connections between the past and the present, the idea and the word. I want them to see patterns of language and apply the possibilities of those patterns in imaginative ways, stretching understanding laterally, and calling upon a shared, and frequently disputed and elastic, imagination. Through these connections they make, I want them to see patterns in the worlds around them, and to open lateral connections to worlds other than their own. I want them to see that the connections they make are themselves connections to possibilities yet unknown. Literature, my subject, relies on the unexpected connection, the pattern that few will necessarily see, the ability to take a leap into the unknown. I teach children to be tentative, to say "perhaps", or "you could even say", to explore.

I rely on their teachers in other disciplines to support their learning of other skills and other disciplines. Although a Literature teacher can explore facts and opinions, it is the History teacher who will solidify a young person's critical faculties in this area: the connection between evidence and interpretation is one that is essential to all areas of the curriculum, but a historian's scepticism is as essential as a doctor's stethoscope. What would make you believe this, asks the historian, wary of too much wide-eyed openness. From the scientist, we learn what empiricism really means and how it can be applied: trial and error, the

impossibility of positive proof, tolerance in its literal sense of limits that can be applied, and which can be argued over. From a mathematician, of course, comes a language to explain the world in pure abstraction, connections between numbers and letters that somehow make a beautiful whole unsullied by the concrete world. And when I learn a language, I learn that the connections I make are both common to and different from the connections made by those from other cultures, speaking other languages, making connections all of their own.

I think differently to a philosopher. He or she is committed to the rigorous expression of logic and consequence. A philosopher may, from time to time, employ my tools of metaphor and association, but these are simple digressions to illustrate concepts that I would not otherwise understand. Likewise, I talk of proving a point with my students, but I don't think my philosopher friend would be very impressed by the standards of proof I am asking for. Nor would the historian.

We all rely on the disciplines of others. And our students have the ability to make connections within our disciplines: a physicist needs to be able to connect an equation with the observable reality proved by an experiment; a linguist needs to be able to apply a rule to a new situation, using new vocabulary; a student artist needs to see the connections between the world their eyes perceive, and the images another artist has created. And our students can also make connections between the different disciplines they learn. They know that, when presented with a poem in English, they have to think differently to the way that they think when they were presented with a description of how human migration has shaped the world in Geography. They will not always be conscious of the disciplines that they employ, but they will learn which way they need to think.

A connected curriculum is an inter-disciplinary curriculum. Just as you cannot – or at least should not – teach a literature course that does not explore how poetry from more than one era and from more than one culture can explore and refine the world, so you cannot do so without teaching students explicitly how to explore in words the cultural connections that are central to such an understanding.

Disciplines develop knowledge and skills alongside each other. They are deeply connected, and students learn these connections. They learn the connections within disciplines, and they learn the connections between disciplines too. Human history of every culture is littered with what we now call “polymaths”, people who explored ideas in different disciplines, making connections in art, literature, science and language. They employed different skills as they did so; they were truly inter-disciplinary.

And so: what does this mean for the modern curriculum? Firstly, it means that the “future-ready” curriculum is one that develops students' abilities in different disciplines, and encourages them to make connections between them, just as they will have to in their future lives. It is a curriculum that also ensures that they have the knowledge and cultural capital to ensure that the skills they have developed are contextualized: skills with no foundation of understanding are, literally, baseless. Disciplines are distinct and rigorous, not blurred into confused cross-curricular courses; and teaching and learning is explicit, shared and pedagogically rigorous too. There's as much danger in simply tripping through the

content of a curriculum as there is in ignoring the disciplinary thinking that underlies that curriculum. Our students need to know what skills they are learning, and what constitutes success in the terms of those disciplinary skills. They need to be explicitly encouraged to make connections of every kind at every turn.

And they need to know that everything they do is connected. Just as we seek connections at every turn in our lives, and our brains connect experience and ideas, making new ideas from new neural connections, so our curriculum, distinct and disciplinary, must also be connected to itself, to ourselves, and to the worlds we inhabit.

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