The Integrated Curriculum at CHC – Reflections and Recommendations for Other Schools.

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Abstract

Chafford Hundred Campus is an oversubscribed comprehensive 11-16 school of 750 students located in Thurrock, Essex. It opened in 2002 in a new building, with a 1:1 laptop program. One of the main features of Chafford Hundred Campus is their approach to curriculum – they have a very heavily integrated model, with many subjects combined into one subject called 'Topic'. These 'topic' lessons are intended to deliver the 21st Century competences, as outlined by the Royal Society of Arts, in their education manifesto, as well as the required national curriculum outcomes. This paper reflects on the theoretical basis for such a model, the nature and development of such a model, and finally finishes with recommendations regarding the efficacy of a model in other schools.

Introduction to the Chafford Hundred Campus Curriculum Model

The Chafford Hundred Campus curriculum model is a technologically rich, integrated approach to curriculum design and delivery. Based on the RSA's 21st Century Competences, a large number of subjects are delivered by a single teacher to a normal sized class, in the guise of Topic lessons. These topic lessons change every week, but are related to a wider theme of a half term. For example, in year 8, one of the half-termly themes is 'The World at Large' and, within this six week block, there are topics such as 'Tibet – from Warriors to Priests' and 'Brazil – Paradise or Hell?'

Encapsulated within these topics are the following subjects:
- English
- Science
- History
- Geography
- Civics and Citizenship
- Art
- ICT
- PSHE
- Religious Education

Therefore, the following subjects are not part of the topic lessons, and are taught as separate, stand alone subjects.
- Mathematics
- Modern Foreign Langauges
- Design and Technology
- Physical Education
- Performing Arts

It should be noted that this model is only applicable to Key Stage 3 (Years 7 – 9), and within these years, there is kind of 'pyramid' approach. Basically, in Year 7, more time is spent in topic (about 20 hours a week) than in Year 8 (about 16 hours a week) and in Year 9 (about 10 hours a week). As the number of topic hours decrease, they are replaced by early entry GCSE courses (which begin in Year 9) or single subject English and Science lessons, in preparation for the SATs exams in May, Year 9.

Within each of these topic lessons, the curriculum outcomes have been mapped, and each week has both a 'fertile question' to guide the learning progress and establish a problem for students to solve, and an assessment task related to a specific 'focus' that allows students to demonstrate that they have solved such a problem. Thus, one week, a student might cover outcomes from all of the possible subjects, but the assessment task might relate specifically to Geography. This allows teachers to keep up to date with students' progress in each of the curriculum areas.

Theoretical Basis for the Curriculum Model

In many respects, the Chafford Hundred Campus Integrated Curriculum model is not a particularly new or innovative model. Indeed, according to educational researchers like Vars (1991), the idea of an integrated curriculum model goes back to the pragmatic humanism of John Dewey himself, who proposed both integrated curricula and flexible learning. Of course, there has been much argument about the precise nature of an integrated curriculum. Loepp (2004) explains this when she writes, 'Those who would consider astronomy, biology, chemistry, geology and physics as distinct disciplines consider a general science course a step in the direction of integration.' However, when this is compared to, for example, a primary school teacher's understanding of integration, there would be a vast gulf between the two ideas.

Pring (1973) argued that integration 'incorporates the idea of unity between forms of knowledge and their respective disciplines.' In order to explain this, one of the most common metaphors used is that of the marble cake versus a layer cake. As I undestand this, the 'layer cake' analogy pertains to a model of integration where each of the subjects included have separate identities within a wider unit. Thus, students might be examining 'The Vikings' for example, and in this case, they would study an English novel about vikings, and look at The Viking historical period, and perhaps create a web site about the Vikings. Thus, there are three separate subjects, all linked thematically.

This idea has been contrasted with the 'marble cake' analogy; in this case, there is no clear division between subjects or disciplines – in this case, students learn what they need to know – regardless of the discipline – to solve the problem at hand. To show how this is different, let us return to the example of the Vikings outline above; in this marble cake analogy, the student might be required to design a piece of Viking jewelry. This would require them to research the Viking way of life (history), learn about their religion and worship (religion), select the correct metal for the purpose , (science) and finally create and develop a design (design and technology, art).

Loepp suggests that there are a number of models derived from the 'layer cake/ marble cake' analogy that are currently in practice in schools around the world. The first model is what Loepp describes as 'the interdisciplinary model.' In this case, 'schools group traditional subjects into blocks of time, assign a given number of students to a team of teachers, and expect the teachers to deliver an interdisciplinary curriculum.' Naturally, there are advantages to this model, including limiting student numbers and collaborative planning between teachers, but it is also very time consuming for the teachers involved.

The second model outlines by Loepp is the 'problem-based model.' In this example, there is a problem at the center of planning (and Loepp is insistent that this should be a technological problem) and disciplines lend their support in helping to solve the problem. This model's main strength is that it lends itself so easily to meaningful, relevant challenges.

Finally, there is the 'theme-based model.' In this case, subjects are still taught quite separately, but there is a common theme or themes that stretches across the whole of the curricula.

However, before any school might consider establishing such a curriculum model, there needs to be a sound theoretical basis for the approach; in short, there is little point establishing an integrated curriculum if it is going to have little or no effect on a student's learning outcomes.

Reassuringly, there have been a number of recent studies that suggest there is a clear educational benefit to employing an integrated curriculum model. Importantly, these studies have not just focused on examination results, but instead have looked at other measures, including self-perception, intellectual curiosity and employability when joining the workforce.

Firstly, it should be obvious that any integrated curriculum model encourages connections between and through learning. Jenson (1998) argues that 'The single best way to grow a better brain is through challenging problem solving. This creates new dendritic connections that allow us to make even more connections.' Therefore, if an intergrated curriculum allows such problem solving, students will learn more effectively. According to Wolf and Brandt (1998), 'one of the best ways to promote problem solving is through an enriched environment that makes connections among several disciplines.

Of course, these results should be visible in improved test scores. At this point, there is little categorical evidence pointing out precisely what effect an integrated curriculum might have on standardised testing scores; I think that this is as much due to the wide variety of different integrated models as it is to the lack of meaningful research in this area.

However, as mentioned above, there are other ways of measuring students' improvement than simply their test scores, and a number of studies have focused on those. Kain (1993) discovered that, in schools where there has been an integrated curriculum established, there is 'greater intellectual curiosity, improved attitude towards schooling, enhanced problem-solving skills, and higher achievement in college.' Furthermore, Kain (1993) also found that many students felt that integrated curricula were more relevant to the real world, due to real world problems being of an interdisciplinary nature, and this increased both their learning and motivation.

Reflections on the Model

Of the models that Loepp has outlined, and I summarised briefly above, it is clear that the Chafford Hundred Campus Integrated Curriculum model falls somewhere between the 'thematic-based model' and the 'problem-solving model', although there are, of course, a number of differences that make it unique.

However, although we are only in the fourth year of The Campus, there are already effects that can be seen, and I think that these effects are due, at least in part, to the integrated curriculum. Firstly, the NEET statistic (the percentage of students not in education, employment and training 1 year after leaving school) is about 1%. This is significantly lower than the Thurrock average, which hovers around 7%. I've no doubt that this significant difference is due to the problem-solving ability encouraged in students by the Integrated Curriculum, as well as the RSA competences.

Secondly, the attendance of students – in all years – is 10 – 12% higher than that of other students at schools in the Thurrock area. In Key Stage 3, where the Integrated Curriculum is located, it is even higher – approaching 97% for all students, which, I'm sure you'll agree, is very high indeed.

Speaking honestly, the Integrated Curriculum at Chafford Hundred Campus is yet to reach it's full potential. In the future, I'm looking forward to the challenges implicit in further personalising the curriculum, and further integrating the way that we develop collaborative learning practice within the school.

Recommendations for Other Schools

Of course, the reason that you have invited me to speak at this conference today is twofold; firstly, you are considering whether an integrated curriculum is appropriate at your school, and secondly, so that you might learn from the Chafford Hundred experience, so that you are as well prepared for the challenges ahead as you can be.

Should you choose to implement an integrated curriculum, there are a significant number of challenges you must overcome.

Firstly, it is essential that you address the professional development needs of your staff very carefully. In particular, teachers might be teaching outside of a subject area that they feel comfortable with, and working collaboratively, which is something they might have done very little of in the past. At Chafford Hundred Campus, we devoted every second staff meeting to planning, preparation and assessment time, where staff members met in teams to work on their planning and preparation. This was only barely enough.

In addition to this, care should be taken when employing staff, and they should be employed with an eye to how they can continue to develop as integrated curriculum facilitators, rather than teachers. One of the key changes implicit in the delivery of an integrated curriculum is the movement from a 'teacher as the font of all knowledge' to a 'fellow learner in a community of thinking.'

Secondly, be clear about the model of integration that you wish to implement. My personal feeling are that the problem based model is the best – as it does have the added advantages as I've outlined above. However, it is also the most time intensive, when one considers the needs for planning and resourcing. In addition, if you choose to base the problems on technology, be prepared for both the infrastructure cost you will need to deliver, as well as the continued training required for staff, so that they are capable of using the technology and delivering such learning to students.

Thirdly, assesment will necessarily change, too. Loepp writes that 'teachers need to learn to use authentic assessment strategies such as portfolios, performance exams, and rubrics to document student progress' – all the while still satisfying the requirements of the national curriculum.

Finally, it is important to remember the other stakeholders in this process. Students and their parents will need to be kept informed both about what these changes mean for them, and why these changes have been implemented. At Chafford Hundred Campus, we implemented regular parental information evenings for parents and students, where we explained both the research background behind the work, and also demonstrated the kind of learning. In this way, we were able to turn our parents, who had originally been hesitant, into our biggest supporters.

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