Approaches to Curriculum Integration in English Primary Schools: through the eyes of an American teacher

Samantha Brant, Fulbright Distinguished Awards in Teaching Research Program and Dr Yuqian (Linda) Wang, School of Education, Durham University, UK

Abstract

The implementation of curriculum integration in primary schools in England benefits from more freedom compared with in the United States. A case study from England is offered to show these curriculum integration approaches from the perspective of an American primary school teacher. This study, which employs grounded theory with reference to models from Fogarty, starts from two broad approaches: thematic and explicit links. After interviewing seven headteachers and deputy headteachers in primary schools, and three academics working on Initial Teacher Training programs in England, three layers of curriculum integration appear: knowledge and skills; broad and balanced curriculum; and student engagement. We suggest that two key lessons can be learnt from English primary schools: concerning school leadership's vision and staff training.

Key words

Curriculum integration, Integrated curriculum, elementary settings

Introduction

Why should schools concern themselves with how different subject curricula are integrated with each other? Simply put, it expands children's understanding of the world (Beane, 1995; Drake & Burns, 2004) and is compatible with the way brains learn (Caine & Caine, 1991; Sousa, 2022; Willingham, 2021). The effective integration of different subject curricula provides children with varying perspectives through which to examine issues and questions that are relevant to them. It helps them understand and retain knowledge, and it has been proven to produce overall positive effects in multiple disciplines (Alghamdi, 2017; Nurlaela et al., 2018; Mard, 2021; McCarthy, 2005; Swanson et al., 2020; Vars & Beane, 2000). Recently, the Disciplinary Core Ideas (DCI) arrangement of the *Next Generation Science Standards* (NGSS, 2017) has been launched in the United States, and this has been viewed

as a major shift in K-12 curriculum policy for integrating STEM subjects (Roehrig et al., 2021).

Academics have been theorizing the challenges involved in developing curricula that are well integrated with each other – from the perspective of resources (Gehrke, 1998) and in subject-specific contexts, such as that of engineering education (Mitchell, et al., 2019). Fogarty (2009) has drawn attention to four forces involved: theorists, practitioners, parents, and students. Theorists bring “data on teaching, learning, and the human brain”; practitioners come with “frustration with an overcrowded standards-based and test-driven curriculum”; parents want their children to be prepared for the real-world, and students currently “see learning as fractured and not very relevant” (p.3). These perspectives are familiar to the first author, Samantha, from her experience over the past decade. She has sensed that some public-funded schools in the United States are hesitant to make the shift from a segmented schedule of subjects to full curriculum integration. Across various visits, she has found that many of England’s primary schools, on the other hand, have actively taken on the challenge of providing an integrated curriculum. And she has convinced the Fulbright Scholar Program to fund a further research project on curriculum integration, one supported by Durham University School of Education.

The study aims to understand how, within a strict timetable and hierarchy of subjects (core versus foundation), primary school teachers can expand their pupils’ understanding beyond the isolated lesson. We explore approaches to curriculum integration in English primary schools, raising discussions on commonalities and complementary approaches.

Contextual information

England and the United States are similar in many aspects of their education systems. Beginning in the 1980s, each country made a shift toward school and teacher accountability through standards-based reform and standardized assessments (Berlak, 2008; Greer, 2018; Isaacs, 2010; Powell et al., 2018; Scoppio 2002; Silvernail, 1996). A notable difference between the countries, however, is the freedom most English primary schools are given to choose how the National Curriculum is implemented in their school. Although private and charter schools have this freedom in the United States, American public-school districts large and small make decisions about curriculum implementation for all the schools in their district, and many districts around the country use similar curriculum approaches and initiatives. As a result, English primary schools vary in their curricular approaches, whereas there are substantial similarities in curriculum approaches among American public-funded

elementary schools. Many primary schools in England have chosen to use forms of integration to deliver knowledge and skills instruction while many American public elementary schools use a separate-subject approach to curriculum.

The typical American public-funded elementary school student spends the majority of instructional time learning reading and math in preparation for yearly standardized testing (OECD, 2021). Classroom schedules separate subjects into individual time blocks, and learning standards are sequenced within each subject to ensure the teacher covers all the learning standards before the end of the school year. Over three quarters of the instructional minutes are spent teaching reading, writing, and math with less than one quarter left for science, social studies, social-emotional learning, foreign languages, etc. (Banilower et al., 2018; Tyner & Kaborek, 2020).

There is no question that the intention of American education systems is to teach a vast amount of learning standards at each grade level, presumably to prepare students for college and various career fields. Yet, spending only 18% of the school day, on average, teaching science and social studies – subjects that support many of our currently crucial careers – is simply not enough for every student to meet all of the expected outcomes. Research has shown that adding time to subjects can increase student performance, although only incrementally (Curran & Kitchin, 2019; Tyner & Kaborek, 2020). The quality of instruction (Wedel, 2021), methods of student engagement (Gunuc, 2014; Lei et al., 2018), and real-world connections (Kingston, 2018; Lago & Cruz, 2021; Lazic et al. 2021) matter even more than the amount of instructional time devoted to a subject.

The lack of wide-spread implementation of curriculum integration strategies could be due to the link that education legislation has created between the assumed quality of schools and students' performance on standardized assessments (Kysilka, 1998). Educators are grappling with questions at the implementation level (Tallman, 2016; Wexler, 2020), and some schools are taking on the challenge by using curriculum integration as a way to balance numerous learning standards, frequent standardized testing, and relevant, meaningful learning experiences. Therefore, summarizing the varying degrees of curriculum integration in a small sample of English primary schools might have a patterning effect on American schools. We start the journey from the literature, first conceptualizing "curriculum integration" for the purposes of this study.

Curriculum integration

Curriculum integration has been moving in and out of education research and discussion since the progressive education movement in the early decades of the twentieth century. Always found alongside Standards Based Reform (SBR), it has been seen as a curriculum approach that engages children in meaningful learning experiences relevant to their lives and the world but not one that is always focused on the standards. As Drake and Burns (2004) say, “in its simplest conception, integration is about making connections.” Lederman and Neiss (1997) explain that “in curriculum/instructional integration, the different subject matters form a seamless whole.” Beane (1995) writes, “Curriculum integration centers the curriculum on life itself rather than on the mastery of fragmented information within the boundaries of subject areas.” In essence, curriculum integration brings knowledge from all disciplines together to infuse learning with meaning. Drake and Burns (2004) establish three categories of integrated curriculum: (1) multi-disciplinary, using themes in common to connect disciplines; (2) inter-disciplinary, emphasising skills in common; and (3) trans-disciplinary, with the curriculum based upon broader questions. However, in the realities of teaching, *integrated* and other comparable terms such as *thematic* and *multidisciplinary* have been confused with *themed*. A unit that is *themed* may integrate curricula, but it may also just include activities, worksheets, and classroom decor focused on a theme (such as, for instance, apples). While a *themed* unit can be very engaging for students and provide relevant learning experiences, it is not necessarily grounded in age-appropriate learning standards. In this study, curriculum integration is defined as any purposeful connection made across or within subjects while teaching grade-level learning standards. This allows for a broad range of school curricula to be observed.

Alongside the multi-, inter- and trans-disciplinary approaches, ten models of curriculum integration have been proposed by Robin Fogarty (2009), and they are worth laying out in full:

- Model 1: Cellular: Disciplines such as language arts, science, and math, are taught in isolation with a deep focus on learning standards in each distinct discipline and no explicit connection made between or within disciplines.
- Model 2: Connected: As with the Cellular model, disciplines are taught in isolation. However, explicit connections are made within each discipline by connecting relevant skills and concepts day to day, topic to topic, or term to term.
- Model 3: Nested: Disciplines are taught in isolation. Relevant life skills or process standards, such as agreeing and disagreeing or comparing and contrasting, are nested within each lesson.

- Model 4: Sequenced: Units of isolated disciplines are sequenced to coincide, so lessons and activities from one discipline can enhance another.
- Model 5: Shared: The Shared approach takes Sequenced units a step further by identifying shared concepts and skills between the units. Lessons in each unit are taught under an umbrella of the overlapping concept or skill.
- Model 6: Webbed: A Webbed approach can also be called a thematic approach; one overarching concept, topic, or problem connects learning standards from various disciplines.
- Model 7: Threaded: Thinking and learning skills are threaded through the content of each discipline, forming a metacurriculum that goes beyond the learning standards for each discipline.
- Model 8: Integrated: The Integrated approach builds on the Shared approach. Shared overarching skills, concepts, and attitudes are taught through the four main disciplines: language arts, science, social studies, and math.
- Model 9: Immersed: This real-world approach is led by the learner who soaks up knowledge from various disciplines, all related to a topic of interest.
- Model 10: Networked: Another learner-driven approach, learners select outside experts to be part of a network that provides information to aid in the understanding of a topic of interest.

Models 1 to 3 take a single-discipline form, while Models 4 to 8 cut across disciplines, and Models 9 and 10 take shape within and across learners. These three form categories have been used to gauge levels of integration between STEAM subjects (Jun-On & Kaya, 2021), primary school English language teaching (Aksoy, 2020), and others. Therefore, in this study, we use the ten models to guide our data analysis of interviews, as we seek to understand how curriculum integration takes shape in English primary schools.

A Case Study on Curriculum Integration

Sample

When selecting participants, a key consideration is combining their insights into school practice with academic experience on the topic of curriculum, through their work in Initial Teacher Training (ITT) programs. For the former, we sought participants in strategic roles enabling them to influence curriculum changes at the school level, meaning that their vision is critical for teaching across the school. For the latter, those working on the academic side of ITT programs have influence over pre-service teachers' views of curriculum integration,

presenting links between theory and practice. In this study, we do not distinguish the views from teacher educators and school leaders (see the second part of the results), but treat them as a whole.

Seven headteachers and deputy headteachers from primary schools in northeast and southwest England, as well as three teacher educators working in Initial Teacher Training programs, participated in semi-structured interviews. Participants were asked permission for the interview to be recorded. The recordings were transcribed and coded to identify themes within participant responses. Ethics approval was gained from the School of Education Durham University in June 2022.

Data collection and Analysis

To carry out the interviews, the first author visited schools for a day consisting of a school tour and a classroom observation, followed by a one-hour interview with the headteacher or deputy headteacher. All interviews were conducted by the first author at the interviewee's workplace. The interviews began with open-ended questions such as, "How do you structure your curriculum?" These questions prompted interviewees to explain the school's approach to curriculum, why it was chosen, how it was designed, and how it continues to be implemented by the teachers.

Data analysis followed a grounded theory approach (Cohen et al., 2013) to code the themes, and then these themes were compared with Fogarty's ten models. Two interview transcripts were chosen by the second author to check the transcription quality and repeat the process of generating the themes. Finally, these agreed themes were used to code the remaining transcripts.

Results

Summary of findings from schools

In each participating primary school, some form of curriculum integration was witnessed. Most of the schools fell into one of the two larger categories, those showing Thematic or Explicit links.

The Thematic Group

After initial analysis of participant interviews, it was determined that the situation in some of the participating schools reflected Fogarty's webbed and integrated models of integration, and thus, the schools were placed in a Thematic group. The webbed and integrated models are similar in that both see the harnessing of multiple disciplines for deeper understanding of a topic. Fogarty describes the webbed approach as deductive and the integrated approach as inductive (2009). Each school in the Thematic group described their curriculum as topic-based or thematic. Headteachers and deputy headteachers in these schools worked with their subject leads and classroom teachers to intentionally research and design units focusing on a particular theme or a shared idea for each year group over each term. Interviewees described unit topics coming from, for instance, a novel the class was reading or from an overarching character-education concept such as perseverance. In these schools, math, phonics, small group reading, and grammar are taught discretely, usually in a morning session. Then, all other learning standards from the other disciplines are taught through the topic in the afternoon.

The Group with Explicit Links

A second cluster of schools was identified as a group with Explicit Links. This group of participating schools reflected a combination of Fogarty's connected, nested, and sequenced forms of integration. Again, headteachers, deputy headteachers, subject leads and classroom teachers worked together to develop the curriculum. In each of these schools, the curriculum was sequenced to link as many subjects as possible without blurring the boundaries of the individual subjects. Where relevant and logical, knowledge and skills were linked between subjects, across terms, and even across age groups. Subjects are taught discretely but concepts are organized to line up in lessons, projects, or trips when knowledge from several subjects is required. School days here always include English and math lessons. Other subjects are spaced out through the week according to the time needed for coverage of the standards and the links being made. Some weeks might lean heavily on science while others on history or computing.

Views of curriculum integration

Following on from the identification of these two groups of schools, each interview was analyzed and coded to identify themes in the participants' answers. Three key themes emerged: Knowledge & Skills (Figure 1), Broad & Balanced curriculum (Figure 2), and

Student Engagement (Figure 3). These figures show the differences and similarities between the curriculum approaches across the groups, as related to these three key areas.

Knowledge and Skills

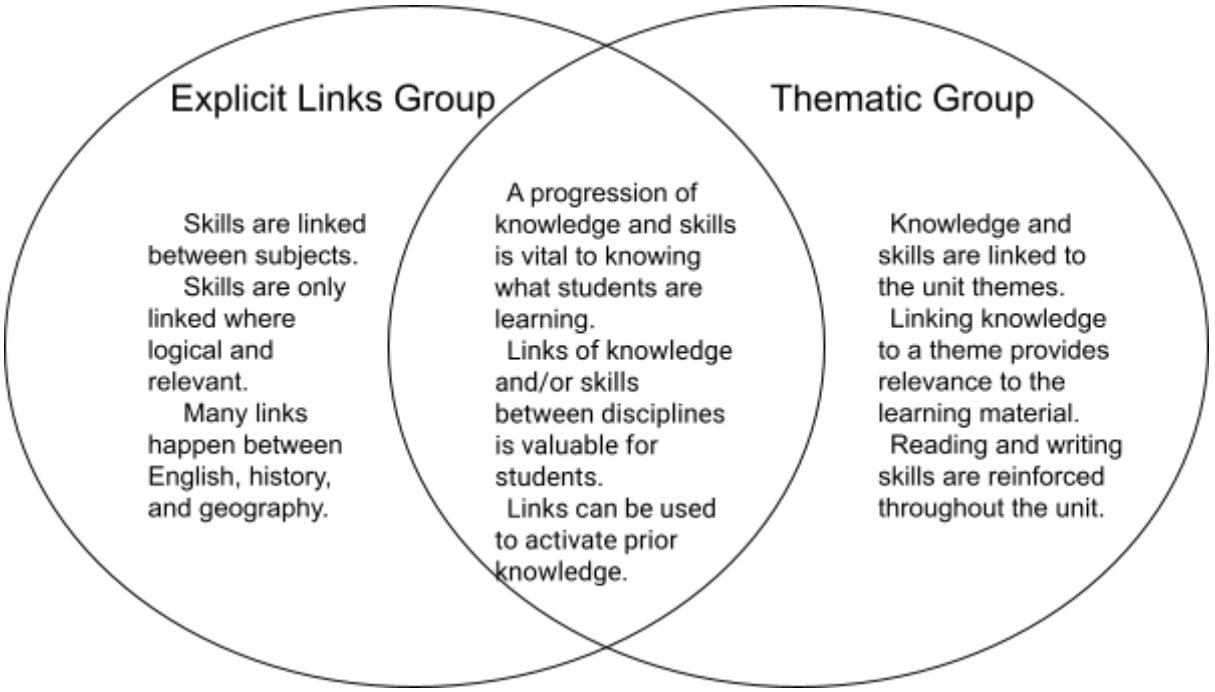

Figure 1 Knowledge & Skills

The main priority of the curriculum for each school was to deliver the knowledge and skills set forth by the National Curriculum. All participants talked about their school's process for developing a “progression of skills and knowledge” to ensure all students receive the necessary knowledge and skills at the right time in their primary education. Participants in the group with Explicit Links focused first on delivering the knowledge and skills and then on linking (mainly) skills from one subject to another. Conversely, participants in the Thematic group considered the required knowledge and skills while simultaneously looking for strong links with the unit topic. The Thematic group tried to link both skills and knowledge between and among subjects when strong, relevant links could be made. Both groups expressed the belief that strong, relevant links help students retain information because they allow students to rehearse the information in different contexts.

Broad & Balanced curriculum

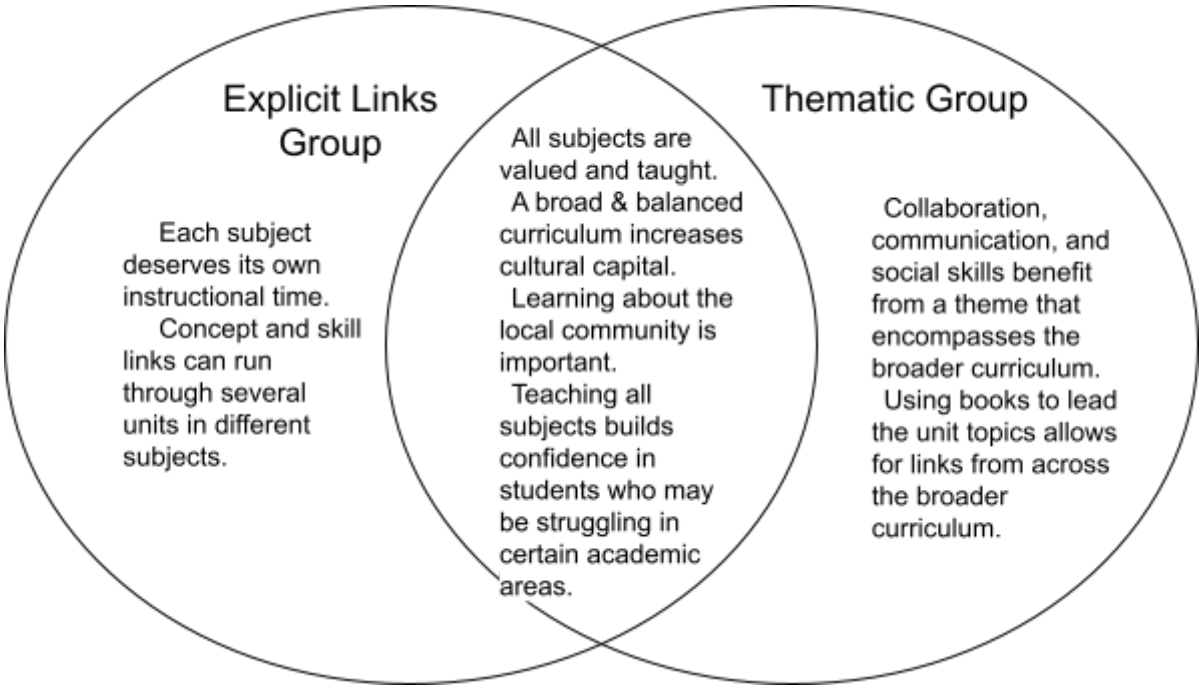

Figure 2 Broad & Balanced

Teaching a broad and balanced curriculum was also a major priority for all participating schools, and there were many similarities in participants' discussion of this. Both groups believed that a broad and balanced curriculum provided cultural capital for students and allowed access to life beyond school for all children. Each participant talked about the importance of exposing students to all subjects for the sake of their confidence and motivation to learn. A student struggling in math or reading can be discouraged if the curriculum is narrow and focuses mainly on these skills. However, that student may find they succeed in science or history, and this might positively impact their attitude toward other subjects. Participants in the Thematic group saw high-quality literature as a source for linking all subjects. Participants in the group with Explicit Links, on the other hand, turned to character traits such as kindness as a source for links across all subjects.

Student Engagement

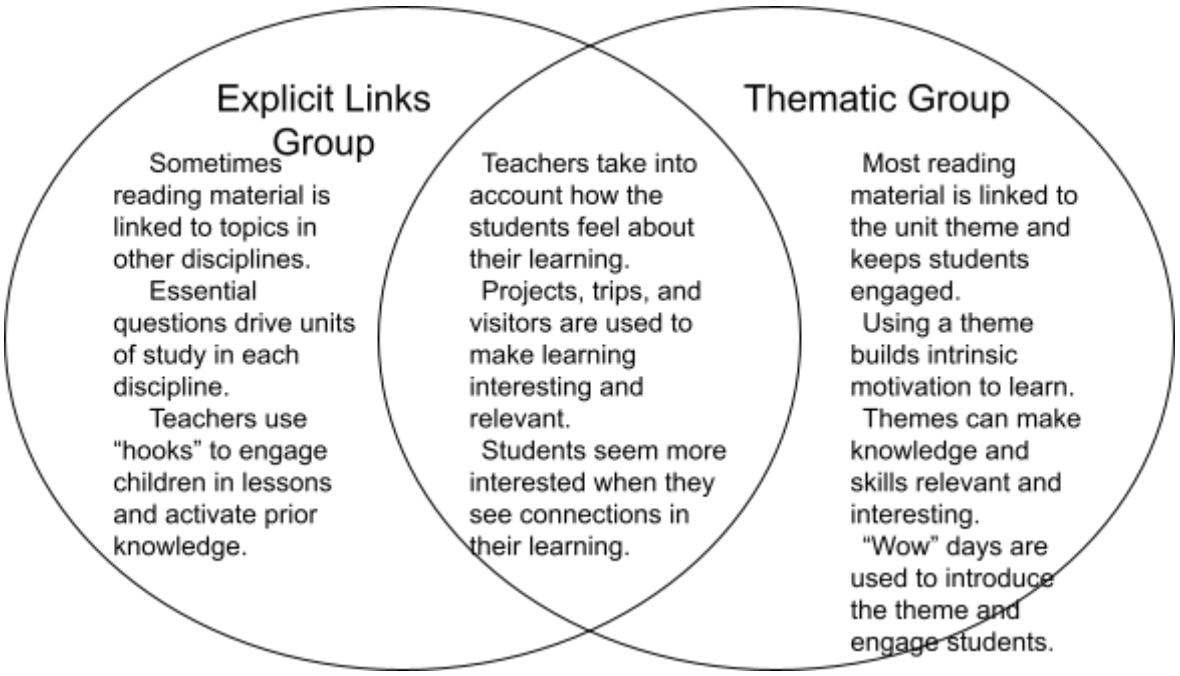

Figure 3 Student Engagement

Finally, many remaining remarks of the participants centered on engaging students with the curriculum. Both groups expressed a belief that students engaged with knowledge and skills more readily and easily if they saw how the learning connected to what they were learning in other subjects, to their lives, or to the world. When explaining the use of an overarching question that connected the unit to the world, one participant said, "[Students] seem to engage much better, and the interest levels are much better, and the discussion levels are better." Student engagement was of high importance to each of the participating schools, and each school takes student engagement into consideration when planning lessons and units. Deep learning of the knowledge and skills could not take place in the classroom if the students were not first engaged in the unit.

Reflection

This study shows that several English primary schools purposefully plan and implement an integrated curriculum approach – something that is not the norm in American public elementary schools. Over a decade ago, Fogarty said it was time for America to take curriculum integration seriously. Now is the time! Teachers are overwhelmed by individual learning standards for each subject. Students want learning to be fun. Parents want relevant learning experiences that prepare their students for the world, and theorists continue to say

that curriculum integration is a worthwhile instructional practice correlating with how the brain learns.

Some may see curriculum integration as a massive shift from the current reality, and in some places, it might be. But even in this time of standards, testing, and accountability, it can be done. As shown in primary schools in England, it takes leadership at the top and commitment on the part of all the teachers to map out the learning standards in all subjects, not just tested ones, and look for links. Using a webbed or integrated approach may be too intense for schools pursuing curriculum integration for the first time, but connecting, nesting, and sequencing knowledge and skills is a good place to start. Many textbook series offer these forms of integration and can provide the foundation for further integration. Books by authors mentioned in this article provide templates and exercises to help the novice integrator begin the process.

Through staff training, flexibility, and collaboration, the curriculum can be integrated to help solve issues educators encounter daily – lack of time to teach each standard, lack of coherence throughout the school day, and disconnected lessons with little real-world meaning. It's time for American public schools to reconsider how they approach their curriculum. With the use of curriculum integration, America may finally be able to stop using the phrase "teaching to the test" and start providing the meaningful learning experiences all students deserve.

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