

Models of Curriculum Integration in New Zealand Secondary Schools

Sabbatical report, Term 2, 2015 Philip Jellyman St Dominic's Catholic College

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Purpose

The aim of my sabbatical was to investigate, through research and visits to identified schools, innovative approaches to junior school (Year 7 to 10) curriculum design, particularly in regards to the development and introduction of integrated curricula.

Recent literature has highlighted the benefits of a more flexible, integrated curriculum with a focus on developing key competencies in addition to subject knowledge and skills. A range of both intermediate and secondary schools, particularly those built in the past decade, have moved toward such a curriculum, using a variety of approaches.

The purpose of the sabbatical was therefore to investigate and research:

- how schools have (re)designed their curriculum to encompass a more integrated approach
- how schools have changed teacher roles to accommodate these curriculum changes
- the effectiveness of curriculum redesign in raising student achievement, engagement and the development of key competencies.

Curriculum Integration – the theory

The concept of curriculum integration has been around for many years dating back to the early 20th century, however what is apparent is that there is a relatively wide range of views as to what curriculum integration could look like. It is not the goal of this report to analyse in-depth the history and various arguments in terms of what is and is not curriculum integration however, in general, curriculum integration can be broadly categorised as fitting into the following:

1. Multidisciplinary integration or Thematic approach

Here a common theme, context or “big question” is established for the various subject areas to use as a focal point to their programme. This could mean that students are taught within each separate subject area where it is up to the separate subject areas to decide how this theme or context will be used, that subject teachers collaborate to maximise the degree of integration occurring in their subject specific courses or that theme-based units are developed collaboratively between subject areas that subsequently share a combined multi-disciplinary activity or project.

Boyd & Hipkins (2012) describe curriculum integration as “any approach that combines two or more subjects or learning areas to produce a course of study that draws on the content and processes of both learning areas...underpinned by the idea that learning is more relevant and meaningful if it is organised around concepts that are relevant to students”. (Boyd & Hipkins, 2012, p. 17)

2. Interdisciplinary integration

Common interdisciplinary skills are emphasised across subjects as central to the process of learning in each subject area but each subject area otherwise determines their own curriculum. Examples could be where there is an on-going focus in each subject on thinking skills/learning to learn or on the research process.

3. Transdisciplinary integration or Democratic approach

The curriculum is developed between students and teachers based on real-life questions and concerns of the students. Negotiation by students is central to this approach. Students learn by applying what they know and research to problem solve, and aim to produce some form of social action or product as a result of their investigation. Teachers assist by providing resources and guidance and may step in to provide specific teaching on areas that are identified as a weakness. Subject area content is incorporated as and when links naturally

occur. This approach is the most “pure” form of curriculum integration (and would argue that a thematic approach is *not* curriculum integration), based on student inquiry and action with curriculum links where appropriate. Fraser (2013) describes curriculum integration as involving “the teacher scaffolding students’ learning rather than directing them...tends to be issue driven rather than topic driven...only draws upon learning areas that relate to the central issues of the inquiry. No attempt is made to cover all curriculum areas.” (Fraser, Aitkin, & Whyte, 2013, p. 21)

While there may be argument as to what the best form of curriculum integration may be, it is apparent that proponents of curriculum integration see these approaches as integral to a move toward a more modern teaching and learning model that reflects what is now known about how students learn best and about what modern teaching should look like in order to prepare students for their future, rapidly changing workplace. Similarly curriculum integration is seen as a means of better meeting the vision of the New Zealand Curriculum by preparing students to be confident, connected, actively involved life-long learners as well as developing key competencies in a more meaningful context.

How are New Zealand secondary schools implementing curriculum integration?

Fifteen different schools offering some form of integrated curriculum were either visited or researched as a part of this investigation. It became apparent that there is no common structural template amongst schools and pedagogical approaches within similar structures vary considerably, particularly in terms of the extent to which the curriculum is pre-planned versus student negotiated. While the structure utilised within different schools was essentially a means to an end it is useful to consider the different structures used as these impact upon the pedagogical approach used.

1. Core subjects based integration

A number of schools based their integrated curriculum around four or five core subject teachers (Science, Maths, English, Social (Global) Studies and PE and Health) with an expectation that these teachers will integrate what they are teaching between subjects. In most cases teachers have scheduled times to meet for planning, sometimes timetabled, sometimes in non-contact time. The effectiveness of this structure appeared to depend on a number of factors including the commitment of the teachers (and their department heads) to the idea of integration and the professional development provided for the teachers in terms of their understanding of what an integrated curriculum should look like.

Integration generally takes the form of a common big topic, question or issue which could be investigated from the various subject points of view with cross-over between subjects as and when logical connections occurred. The types of “topics” utilised tended to be broad thereby providing flexibility for teachers, and intentionally relevant to the students, for example “Who am I?”, “Who are we?”, or based around local events or issues such as a local food festival or environmental issue. Notably this model generally involved programmes that are pre-planned by the teachers with varying degrees of negotiation by the students as to what and how they investigated the subject area, although some level of inquiry was usually incorporated. Other integration occurred through common skills strategies.

The advantage of this approach to integration is that specialist subject teachers are able to continue to focus on their subject area while working collaboratively with the other subject teachers to create a common thread or approach throughout their programmes. However the

downside is that such an approach can lead to minimal integration where teachers are ill-prepared or do not actively engage with the concept.

2. Paired teachers

Effectively a subset of that outlined above, in this structure, teachers or departments are paired to develop integrated programmes where connections can be regularly explored, or one programme is developed that incorporates both subjects. “Logical” pairings were usually seen as English/Social Studies and Science/Maths though one school challenged their teachers to seek integration wherever crossover could be imagined with combinations differing from semester to semester and students opting for the approach or topic that interested them the most.

This approach allows specialist subject teachers to maintain a focus on their subject area as in the example above and, by integrating with just one other subject may allow greater flexibility in how that integration takes place in terms of both pedagogy and collaboration between the teachers involved. However, restricting integration to specific combinations in a school will limit the depth and breadth of integration that might otherwise be possible.

3. Multiple teachers/one programme

In this structure a class or classes have two or three teachers who assist the students in progressing through a pre-prepared integrated programme again usually based around a big topic, question or issue, possibly taking an inquiry approach (particularly as students become comfortable with the structure). Programmes are generally designed to cover particular curriculum achievement objectives from different subjects in an organic way that does not separate the subject areas as the students work. Teachers act as facilitators and usually offer “clinics” or tutorial sessions on areas that need more support for some students. This structure was often supported in schools that had modern learning environments so that the teachers are timetabled together in a shared space allowing teachers to work with any of 50 to 60 students. This allows students to access subject specialists as and when they need or to access those teachers with which they have a good rapport to support their learning.

This approach requires the teachers involved to take on multiple roles including as subject specialists, facilitators and mentors. Schools following this approach reported that the degree of cross-curricular collaboration is enhanced as is the relationship between students and the staff involved.

4. Integrated Curriculum as a subject

In this model “integrated studies” is provided as a separate subject while students also take core subjects elsewhere in their timetable. The subject is run by one or two teachers though may be supported by core subject teachers who are also timetabled to work with the class. The programme is usually designed around a big concept and can be inquiry based. Again pedagogical design varied with one school providing a pre-planned programme designed to allow students to work through a “big concept” through a variety of approaches to suit student preferences.

This approach allows specialist subject teachers to continue to teach in a siloed way while students have the opportunity to develop key competencies and inquiry learning in the integrated programme.

5. Project based

Bearing some similarities to the example above, in this model students may be offered the opportunity to explore a common context within a project which may be either teacher or student designed/negotiated. These tend to be focussed on connecting to the real world possibly developing connections to external organisations and designed to cut across curriculum areas. Alternatively students may be provided time and guidance to work on “passion” or “impact” projects in which they have relative freedom to investigate an area of interest, negotiated and guided by the teacher to ensure that suitable depth of thinking and learning will take place. In either case these projects typically seek to produce actionable outcomes to ensure greater authenticity for the students and subject integration occurs only as and when appropriate.

6. Combinations

One school offers combinations of these structures i.e. students do several differing integrated units, each developed and taught by two teachers from differing subject areas as well as a “big project” offered by individual teachers.

Additional notes

While not central to the concept of integrated curriculum it is worth noting the following in terms of the ways that schools were going about implementation:

- a number of schools have longer period times to facilitate more in-depth focus and learning, typically 100 minute periods. In general the extended time was welcomed by both students and staff though it was noted that staff needed to be fully prepared for the additional demands of the longer time frame.
- several schools intertwined their pastoral care approach into their integrated curriculum programme, including learning or academic coaches. For example, in some cases the students’ integrated curriculum teachers were also their learning coaches, or alternatively time was specifically set aside in the timetable for learning coaches to meet students and discuss their planning and progress (particularly in schools with very inquiry focussed approaches that allowed greater student independence), as well as for the students to reflect on their progress and next steps.

Benefits of an integrated curriculum

The perceived benefits of an integrated curriculum intrinsically depends on the pedagogical approach taken in developing the programme. An integrated curriculum design that is not supported by staff, department heads and/or senior management is unlikely to be an improvement on current subject specialist approaches in secondary schools. However, designed well and supported by staff, schools with integrated curriculum reported that students tended to be more engaged in their learning and developed deeper questioning and independent thinking skills than is typically the case in subject specialist classes. This was credited as occurring because the subject matter being investigated tended to be more authentic and relevant to the students and the greater emphasis on student inquiry enhanced student agency. Students reported that they could better recognise the connections between different subject areas and how differing elements of different subjects impact upon each other.

Schools noted that while subject specific achievement was not notably improved, the development of students as “21st century learners” who meet the vision of the New Zealand Curriculum was more effectively achieved. Staff also commented that working together across curriculum areas enhanced their understanding of what was happening elsewhere in the school, allowing them to better integrate their own subject material as well as improving connections between departments.

In summary reported benefits of an integrated curriculum include:

- providing a learning environment that enables students to make connections within and across subjects
- providing greater engagement and perseverance by enabling students to focus on issues significant to themselves thereby making learning relevant to their world which also encourages greater depth of thinking and questioning
- enabling for authentic learning where the focus is on real world issues and applying ideas to the real world
- fewer attendance concerns, less disruptive behaviour and fewer discipline problems
- improved decision making abilities and the ability to think critically and creatively
- more personalised learning for each student which benefits both high achieving and at risk students
- improved relationships between students and mentors (learning leaders/coaches etc) as more time is available for one on one conversations and
- greater preparedness for the work environment on 2020 and beyond.

Barriers to implementing an integrated curriculum

It was apparent that there are several key barriers that influenced the effectiveness of the implementation of an integrated curriculum in the schools investigated:

1. A confused vision of what an integrated curriculum is - those schools where an integrated curriculum was being introduced but where the vision of what an integrated curriculum looks like was not clear struggled to get staff buy-in as staff were uncertain as to the approach they should be focussed on and wished to avoid investing time and energy going down the “wrong” track.
2. Staff resistance – a number of schools attempting to bring in an integrated curriculum model reported resistance from staff and particularly subject leaders who were concerned that “vital” subject specific knowledge would be lost and that this would therefore impact on NCEA results. Two schools reported moving away from an integrated curriculum precisely because of pressure and reluctance from subject leaders.

Staff also found the just-in-time planning needed to facilitate programmes that are relevant to current issues to be challenging. For example several schools planned their next term or semesters programmes only in the last few weeks of the previous term based on student interest and current issues which is challenging to staff used to following a pre-prepared programme that they are very familiar with. Fraser (2013) notes that “curriculum integration requires a shift in the traditional role of the teacher. It is more dynamic, interactive and finely nuanced...It requires teachers to share decision making and the messy process of inquiry, where the outcomes are unknown” (Fraser, Aitkin, & Whyte, 2013).

3. Parental resistance –in some cases there was strong parental resistance to a move to an integrated curriculum primarily because of the focus on preparing students for NCEA and therefore the perceived need for subject specialised teaching. Parents may have difficulty recognising the value of developing their child’s key competencies as opposed to learning “stuff” as may have been the focus in their own schooling. This view is exacerbated by the media focus on NCEA league tables.

4. Time – teachers reported that preparing integrated programmes took additional time compared to what was traditionally the case due to the need to meet with colleagues on a regular basis to discuss, design and update the programme to meet student needs and interests. Some schools provided timetabled meeting times to facilitate this planning.

Integrated curriculum in Year 11 -13

While not the focus of this investigation it was interesting to note the varied approaches to curriculum integration taken as students move from the junior secondary school to Year 11 - 13. Generally speaking, in most schools implementing an integrated curriculum in the junior school, at Year 11 the curriculum tended to become more siloed with the view that the requirements of NCEA effectively mandated this to be the case, particularly the requirements for subject endorsement. A few schools continue to seek ways to buck the trend in differing ways such as:

- offering courses that combine aspects of different subjects where logical connections exist e.g. Art History & English, Science & Maths
- offering an integrated course combining English and Social Sciences to students who are considered as still working towards Level 1 NCEA
- incorporating a separate non-NCEA based passion or impact project into the timetable.

Conclusion

Implemented well, an integrated curriculum, aligned with modern teaching practices such as inquiry learning based on authentic contexts, has the potential to enhance student learning and competencies beyond what is generally possible in subject specific lessons. Schools considering introducing some form of integrated curriculum should be wary of the barriers identified above and take steps to address them in advance. The most successful schools operating integrated curricula tended to be those new schools that have been built over the past 10 years. The reason for their success is that they were able to integrate solutions to these barriers into their design. For example, a clear vision of what an integrated curriculum looks like was typically established as a part of the founding principles of the school with the

timetable designed to facilitate this from the beginning. Staff were hired with a clear understanding what this vision was and the ramifications for their teaching and parents were inducted into the school's vision without any baggage as to how things were done in the past. In addition, the advent of more open plan modern learning environments contributes to the opportunities to integrate the curricula by allowing multiple teachers to be operating in the same space with several classes.

This latter point may constitute an opportunity for established schools considering an integrated curriculum in that, as new school buildings are built along modern learning environment principles over the coming years, this could provide a catalyst for discussion and integrated curriculum development.

In terms of the best structure for an integrated curriculum, from my observations I would suggest that the structure is less important than the collective vision of what the school wants the students to gain from it. Staff and senior leadership need to be clear as to what a move to an integrated curriculum is designed to achieve for the students and the rationale behind it. If the staff are on board and supported with time and professional development, then any structure can be made to work well and similarly, if staff do not buy into the programme then which structure is followed will not matter either.

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