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A stylized graphic on a purple background. It features a thick yellow path that starts on the left, curves down, and then leads into a series of white and black striped arches that resemble a staircase or a series of steps. The path continues to curve down and then up towards the right.

WAIKATO JOURNAL OF EDUCATION TE HAUTAKA MĀTAURANGA O WAIKATO

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THE CONTEXT OF CONTEMPORARY CURRICULUM CHANGE

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ABSTRACT *The aim of this paper is to provide an introduction to the broad field of curriculum change, with the focus being on school curriculum. The first part of the paper provides a brief overview of curriculum change in New Zealand at the national level. In the early years of a state system of schooling, curriculum revision was highly centralised, giving way in recent decades to a wider involvement of stakeholders. The second part examines how national curriculum implementation in schools involves input from the state and schools; in particular, reference is made to a greater emphasis upon school-based curriculum development. It is argued that to achieve greater teacher involvement in school-level decisions, ongoing professional development of teachers is necessary.*

KEYWORDS

Curriculum, curriculum change, professional development and learning, leadership

NEW ZEALAND CURRICULUM CHANGE

New Zealand was one of the first countries to legislate for compulsory schooling. In the 1870s the new state system began with a national curriculum under which all children were to be provided with broadly similar educational experiences no matter where they lived or what their circumstances were. The principle of educational opportunity for all underpinned the philosophy and policy and has been important ever since. A national curriculum provided a general education and the state provided resources to support curriculum implementation. Standards of teaching and learning could be monitored. Change of schools when families moved was less disruptive. This first curriculum was written by a few men who were inspectors of schools and was heavily influenced by the curriculum of Britain. It contained traditional academic subjects and others that were to broaden the educational experiences in subjects like vocal music and sewing, needlework and domestic economy for girls (Ewing, 1970). For well over a century, then, New Zealand teachers have been accustomed to teaching from a national curriculum produced by the state.

This first curriculum document of 1877 was prescriptive, describing in detail the content to be taught in every subject. Evidence suggests that teachers were expected to follow these prescriptions, and school inspections ensured that there was little deviation from a top-down presentational style of teaching (Ewing, 1970). Students had to pass their academic work to advance to the next standard of the primary school. Few students undertook post-primary schooling.

At reasonably regular intervals the national curriculum was revised. Although still written by just a few people, the revisions gradually came to reflect educational and curriculum changes that were occurring internationally. For example, the 1929 syllabus advocated that teachers should use their own initiative in planning and teaching. Ewing (1970) has argued that only a few teachers were experimental in approach; most kept to their established, formal ways. Even so, textbooks by international educators found their way into pre-service teacher education programmes and influenced student teachers to expand their ideas. The New Education Fellowship Conference of 1937 was a watershed event, when thousands of teachers and parents attended meetings to hear international educators talking about progressive ideas and practices. Inevitably, there was an impact in schools that led – eventually – to substantial change towards local decision-making alongside national curriculum statements (syllabuses) (Ewing, 1970).

The few primary school children who advanced to post primary schooling had to pass the Proficiency Examination at the end of primary schooling. Ewing (1970) has shown that the examination had led to teaching to the exam to the detriment of lower achievers with no prospect of passing who were badly affected through their primary years by the focus upon the higher achievers. After the examination was abolished in 1936 all students in New Zealand who completed Form 2 were awarded a primary school leaving certificate that gave them access to free secondary schooling. Naturally, the number of secondary students grew rapidly and caused major impacts upon a core curriculum for the first two years and prescriptions for examinations in the years beyond. Even so, there was a strong conservative approach in the teaching profession, both primary and secondary, and national curriculum development perpetuated a clear distinction between primary and secondary curriculum.

Gradually, however, the liberal ideas and policies took more hold and were reflected in the work and approach of an increasing number of teachers. By mid-century it could be argued that New Zealand had, by international comparison, signs of a reasonably liberal, progressive curriculum, particularly in the primary school years. Ideas from the writing of international scholars, especially from America, could be seen in shifts in successive syllabuses from the 1920s and in the ways teachers thought and practised (Tanner & Tanner, 1990; McGee, 1997). For many teachers, teaching methods became more flexible and incorporated learning experiences that linked to the interests of students, classroom curriculum was designed to cater for the differences between students, assessment changed from a reliance on formal marking and testing of student work to the inclusion of formative and alternative methods. There was growing awareness that students should enjoy learning and develop self-motivation to learn. Classroom discipline became less severe as teachers experimented with group work, cooperative learning, and student choice in more democratic classrooms. It needs to be said, however, that it is difficult to assess the speed and breadth of these changes.

The mechanism for national curriculum revision changed in the decades from the 1940s to the 1990s. Called ‘rolling revision’, each subject was monitored and revised independently of the others. The curriculum had become considerably more flexible. Backed by resources such as the School Journal and other state resources,

students were exposed to a wider range of learning experiences including more New Zealand content. Syllabuses were regarded as sets of suggestions that teachers could consider in designing class programmes rather than hard and fast prescriptions for schools to follow. State-funded resources included numerous handbooks of suggestions about the teaching of the different subjects.

However, teachers reacted differently to greater autonomy. Our experience suggests that there was considerable variation in the willingness of teachers to utilise autonomy; some wanted a plan to follow and others went to considerable lengths to develop innovative and interesting learning experiences. Regardless of the reaction it was a period of considerable school-based curriculum development. New developments and syllabus revisions involved many teachers in national, regional and school activities such as writing groups, and syllabus and resource trials (McGee, 1997).

Towards the end of this period major political and economic influences were becoming apparent, such as the emergence of the 'new right' and imperatives that schools prepare students to become – as adults – equipped with the knowledge and skills to contribute to New Zealand's economic development. There were concerns that the school curriculum had become somewhat disconnected and unfocused and some argued for greater focus upon student outcomes as a way of organising curriculum and assessing student learning (McGee, 1997).

Major reviews in the 1980s that involved widespread public consultation were followed by a new curriculum design in the 1990s. For the first time, New Zealand had a 'run through' curriculum from year one to year 13, thus removing the distinction between primary and secondary curriculum. Achievement objectives and content were prescribed in eight levels across the 13 years. Subjects were reworked into seven learning areas. Over about seven years a new curriculum statement (syllabus) was written for each learning area, virtually in secret (interestingly, this was close to a return to earlier years). Māori versions of the learning areas were also written by separate groups.

By the end of the 1990s there were concerns in schools about the new curriculum. To take a few examples: it was argued by many teachers that the curriculum was overcrowded because they were expected to teach to too many achievement objectives; some teachers found some achievement objectives difficult to interpret; assessment expectations resulted in a heavy load of record-keeping to the detriment of teaching time; and school programmes had narrowed because achievement objectives in the national curriculum dominated local decisions about what students might study.

In response, the Ministry of Education undertook a curriculum stocktake from 2000 to 2002 to see if there was justification for a review of the curriculum. Taking advice from a think-tank of mainly educators and using evidence from a survey of ten percent of teachers about their experiences in implementing the 1990s curriculum (McGee et al., 2002), the Ministry made proposals in 2002 to the Minister of Education that a review of curriculum should be undertaken. The government gave approval and a Curriculum Reference Group was set up to give advice to Ministry officials. The group included education sector and community representatives and university academics. Beyond this central group there were

numerous associated activities. A group for each curriculum area revised the statement of the rationale, aims, achievement objectives (especially to reduce their number) and content. Special projects groups and individuals worked on aspects of curriculum such as principles, aims, values, competencies and skills, assessment, teaching and learning approaches, and school design of curriculum. A draft curriculum was distributed widely for consultation (Ministry of Education, 2006) followed – after feedback – by a final version in the following year (Ministry of Education, 2007).

At the same time a group worked on the design and development of *Te Marautanga o Aotearoa* (Ministry of Education, 2008), the new curriculum for Māori medium schools and settings which was launched in 2008. Consultation over this development was widespread in communities and schools.

Both of these developments took over three years, which illustrates that contemporary curriculum review and revision at the national level is a complex process. Unlike earlier changes in the 1990s, these recent changes involved many teachers and community groups in sharing views about what was thought to be best for New Zealand children's education. As already indicated, the processes to arrive at a coordinated and well-designed curriculum are complex, problematic and often politically charged. Government policy on curriculum has to be reconciled with proposals; for example, in the latest development the government policy on the importance of numeracy and literacy had to be part of the revised curriculum. There was competition – at times fierce – between factions to gain inclusion for new subjects; and within subjects competition over content and learning activities. Clearly, not all suggestions can be included because curriculum time in schools cannot accommodate the many legitimate demands let alone the marginal ones.

In summary, New Zealand national curriculum development over the years represents many changing ideas about the aims and content of learning experiences. What are the purposes of schools? What should students learn? How do different students learn? How is learning assessed and how does the information affect further learning plans? What are the most effective ways of teaching students? The answers to these questions are complex and at times, controversial. They change over time. In effect, a revised national curriculum is an attempt to provide answers across a nation at a particular point in time. The challenging task of the schools is to best fit the curriculum to particular students. In doing so, schools have the difficult challenge of reconciling their own level of desire to exercise autonomy and the state's requirements through legislated curriculum.

IMPLEMENTATION OF NATIONAL CURRICULUM

It has been indicated that New Zealand has revised the national primary curriculum at fairly regular intervals over the years since the 1870s. From the 1940s to the 1980s the primary curriculum was revised by individual subject, except for changes to some individual subject syllabuses in the 1920s. The secondary curriculum was tied to examination prescriptions with little revision until the 1940s when a core set of subjects was devised for the first two years of secondary school, leading to School Certificate in the third year.

Regular revision since the 1870s meant that teachers who taught for any length of time during those years would have faced new curriculum. It can be assumed that a revised curriculum meant that a teacher would need to make adjustments to his or her teaching; presumably, this has never meant ‘throwing the baby out with the bath water’. Rather, it would have meant making adaptations to current views, understandings and practices. And it has long been recognised that teachers vary – sometimes greatly – as practitioners with their own individual personality and beliefs and approaches to teaching and learning (Eisner, 1994). Therefore, it cannot be assumed by curriculum designers that all teachers will react to a revised curriculum in the same way. Some might embrace some or most of the changes and resist other aspects, some might be generally resistant for reasons they believe to be justified. Thus teachers’ reactions to national curriculum revision are likely to be complex and to a degree, idiosyncratic.

LINKING CURRICULUM, ASSESSMENT, LEARNING AND TEACHING

A change to the mandated curriculum will not, by itself, ensure subsequent change in teachers and schools. A proposition of this paper is that deep-seated changes need to be based on an alignment between the formal, documented curriculum, assessment policies and practices, teaching and learning approaches, teachers’ professional learning and student participation. Some would argue that the alignment should also include the community in which students live. The ultimate goal of curriculum change is the improvement of student learning. A major New Zealand review of the literature on this relationship (Carr et al., 2002) showed that while the impact of the connections are difficult to measure and quantify, it is possible to obtain indicative evidence about causal relationships such as the impact of a mandated curriculum on student achievement.

New Zealand is in line with many other countries by having a mandated national curriculum. Evidence from the Third International Mathematics and Science Study (TIMSS) is that about the same number of countries with national curriculum were in the top performance group as were in the lowest group; thus mandated curriculum had no direct link to better student achievement (Black & Atkin, 1997). Of interest to New Zealand policy is that many countries have been revising standards to broaden their curriculum and include more practical work related to the real world of students and integration of content. A connected issue is whether different groups of students should be provided with different learning experiences. Carr et al. (2002) found that there are concerns in many countries over the school performance of some boys, ethnic groups and the gifted and talented.

Although little is known about the classroom impacts of different forms of curriculum in relation to different groups, a promising development in New Zealand is a programme of professional learning for teachers to help them to make adjustments to their teaching approach with Māori students. The programme *Te Kotahitanga* (Bishop et al., 2003) includes changing the way the curriculum is organised, linking learning to the wider experiences of students, and setting high expectations for students. There is evidence that persuading teachers to alter their approach to Māori students has resulted in improved commitment to school, interest

in learning and academic achievement. This indicates the importance of alignment between students, curriculum, teaching approach and assessment of learning. However, there remains the challenge of resolving power sharing between teachers and students, with the goal of greater empowerment of students by bringing their voices into interactions with teachers over decisions about teaching, learning (including curriculum) and assessment (R. Bishop, 2008, personal communication).

One of the alignment factors, assessment, seems to have a major effect upon curriculum and teaching approaches, both positive and negative, depending on the educational goals (Carr et al., 2002). Of concern is evidence that high stakes summative testing can narrow curriculum content and alter the pedagogical approach to one of mainly content coverage. There are benefits of such a focussed approach, for it can improve student learning of clearly specified objectives and content. However, there is international evidence that national testing leads to teaching to the test, resulting in teaching approaches that focus mainly on students' memorising information, less integration of content and more subject-based teaching, more whole-class teaching, and content that relates directly to the tests. Paradoxically, while there are benefits in such a focussed approach, there are drawbacks if the educational intention is to design curriculum to cover a wider range of objectives such as problem solving, creativity and imagination, and student choice.

Evidence suggests that these wider objectives are best achieved through formative assessment that provides regular feedback, 'feedforward' and interaction and negotiation with students over both content and methods of learning (James & Gipps, 1998). Two New Zealand studies show links between assessment and learning. Cowie and Bell (1997) worked with teachers to help them learn formative techniques, resulting in better planning and closer monitoring of students' ongoing work on tasks. Jones and Moreland (2005) built teachers' content knowledge in technology and taught the use of formative assessment, resulting in higher student achievement. They helped teachers advance their pedagogical content knowledge.

An ongoing challenge for teachers is how to achieve consistency between achievement objectives in the national curriculum and the methods used to assess associated learning activities. That is, different types of objectives require different teaching and assessment approaches. Learning a poem to recite at a school concert is quite different from the creation of an imaginative artistic work for display in a school foyer. An overview of assessment techniques that can align with curriculum intentions is provided by Hill (2008).

Another alignment consideration is how particular teaching approaches are linked to curriculum, assessment, students and their lived contexts. A considerable international research effort has gone into identifying factors that are connected with teaching effectiveness. There is renewed interest in the factors that are linked to improving student achievement, especially with concerns in New Zealand that while every child should have the maximum chances to succeed, not all do so. A review by Carr et al. (2002) summarised a lot of the recent research and found a complex and subjective picture. Nevertheless, they found that there is evidence that certain factors do, indeed, link to achievement.

Pre-service teacher education programmes have taken note of these. The review showed that a lot of international emphasis is given to Shulman's well-known typology of the knowledge base teachers should possess, especially content, pedagogical and curriculum knowledge, and knowledge of learners. Connected or within these knowledge fields are numerous skills and attributes that teachers ought to know and be able to practice, which will not be detailed any further here. Inservice teachers face the challenge of continuing education to refresh previous learning and learn new aspects of teaching, for example, learn to understand a new or revised national curriculum, learn new ICT skills to use in the classroom, or learn new assessment techniques such as portfolios and self assessment by students.

In recent decades the state has committed substantial resources to the professional learning of teachers. There is some evidence that state provisions following the release of successive curriculum statements in the 1990s resulted in better alignment between the new curriculum and assessment and teaching approaches. The National Schools Sampling Study was a large research project that surveyed ten percent of New Zealand primary and secondary teachers to collect self report information about their experiences in implementing the new curriculum statements (McGee et al., 2002). Most teachers had been involved in state-funded professional learning and most reported that they rated their teaching more effective than it had been; in particular, programme and lesson planning, use of resources, assessment skills and processes and reporting student progress. Overall, then, it seemed that there was a positive outcome for the investment in teacher development. There were concerns, too. For example, some teachers thought too much of their teaching time was becoming devoted to assessment record keeping rather than what they termed 'teaching' (by which they meant time with students on learning activities). This evidence is related to the general issue in this section: what is the best alignment between curriculum, assessment and teaching and learning approaches? In recent years new scholarship is emerging in the field of learning sciences, an interdisciplinary field that investigates learning and teaching (for example, papers in Sawyer, 2006).

PROFESSIONAL DEVELOPMENT AND LEARNING

It goes without saying that change to curriculum documents means little unless there are subsequent changes in teachers and schools. In particular, teachers need to first understand document changes and second, learn how to alter their professional practice on the basis of their understanding. This is no simple task and there is now widespread recognition that teacher change needs to be brought about through programmes of organised development rather than left to chance (Fullan, 1993). Teachers cannot be expected to make all of the changes on their own alongside an existing workload. In New Zealand little professional development was available to teachers before the 1950s so it was no wonder that change was slow and spasmodic (Ewing, 1970). From the 1960s state assistance to teachers became more systematic, helped by the government's establishment of a curriculum unit in the Department of Education (now Ministry). Each subject had a national curriculum committee, made up of teachers, inspectors of schools, teachers college and

university lecturers, and curriculum officers from the new unit. More state resources were given to a system of ongoing curriculum development and teachers' professional development. Greater emphasis upon school-based initiatives emerged (McGee, 1997). Classroom teachers were more involved in curriculum change through trials of revised curriculum, ideas and resources at national, regional and school levels, and teacher associations were prominent in the decision-making about provisions for professional development experiences (Bolstad, 2004).

It has been pointed out that the national curriculum in New Zealand has been revised reasonably regularly; at least to the extent that long-term teachers would experience several of the curricular as well as more specific changes between major ones, for example, recent fitness programmes in primary schools. To learn about changes and how to implement them, teachers need to engage in professional learning. For a number of decades the state has provided resources to support major curriculum change reflecting what might be termed a contract between state and schools. The extent of the provision is, perhaps not surprisingly, usually the subject of dispute between teachers and the state about its adequacy.

The new 2007 curriculum reinforces this contract approach to curriculum: the government (a central national curriculum) and a school (a national curriculum that is modified by schools and communities for local needs and preferences). In the new curriculum the 'front end' of the statement is substantially changed, containing a new set of aims, principles, values and key competencies; revised statements on each learning area and associated achievement objectives; a statement on effective pedagogy; policy and suggestions on the design of school-level curriculum, which emphasises the need for schools to make decisions based upon the national curriculum that best suited particular students and local contexts; clear learning outcomes; effective assessment suggestions; recognition of a 'run through' curriculum (years 1-13) and links between sectors of early childhood, schooling and beyond. Together, these will require a lot of work at the school level.

The government has indicated that the new curriculum should be implemented in schools by 2010. There is a substantial amount of research that has indicated that certain policy and process factors are related to effective professional learning and their complexity is recognised (Dreaver, 2008; Hall & Langton, 2006; Timperley, Wilson, Barrar, & Fung, 2007).

As schools come to grips with approaches to teachers' professional learning regarding the new curriculum, it is important to consider the factors that are related to the effectiveness of professional learning. Clearly, a good deal of professional learning by individual teachers can be brought about by themselves. However, it seems that some learning results from external influences in organised, systematic programmes and experiences. Thus school leaders are faced with the challenge of choosing learning experiences that have a high chance of success. They must, therefore, engage in teacher education by utilising suitable expertise from within the school and employing in-service teacher educators from outside the school. An important but relatively unexplored issue in inservice teacher education is the need for a better match or alignment between the *purposes* of particular programmes and the methods used to reach those purposes. There is increasing evidence that if teachers are to learn how to effectively implement national curriculum reform,

those providing the education must do better than traditional workshops that lack depth and extended study (Penuel et al., 2007). Putnam and Borko (2000) advocate reform-oriented professional learning that is in-depth and sustained over a long period and lead by a combination of colleagues and external experts.

COMMUNITIES OF PRACTICE

The above claims are borne out by a comprehensive review of in-service teacher education (*Ki Te Aotūroa*, Ministry of Education, 2008). This report also discussed the benefits of teachers learning through *communities of practice*, either as a whole-school staff or across schools. Advocacy for communities of practice has gained renewed prominence in recent years and the report lists several factors that can improve community of practice effectiveness and what teacher educators need to do to make effective use of communities. It is claimed that teacher educators, whether in-school or external to a school, need to

- *adopt an inquiry approach* – the most powerful professional development for teachers involves an inquiry and knowledge-building cycle using multiple sources of evidence for decision making;
- *work methodically* – start with the identification of students' needs, then move on to develop the skills and knowledge teachers require to meet those needs, and finally, check to see if changes in teaching practice have achieved the desired outcomes;
- *build collaborative relationships* – challenge thinking by sharing and discussing research in a spirit of understanding, confidence, and competence as professionals, fostering the development of professional learning communities so that teachers can make meaning from their experience;
- *be responsible for integrating the processes of learning and change* within and across organisations, whether major systemic change in the implementation of a new curriculum or the introduction of a single innovation such as a new assessment tool;
- *help schools build coherence* between national and school-wide policies;
- *be influenced by and responsive to context and culture* – teacher educators recognise multiple perspectives within diverse contexts and have an ability to work in different ways and at multiple levels such as at the level of the classroom, school, the institutional, the regional, and at the national level; teacher educators recognise values, beliefs and theories that underpin teachers' everyday practice;
- *provide and build leadership in a range of contexts* – teacher educators support school leaders to establish and maintain cultures of inquiry;
- *be active agents in their own learning* – teacher educators use their knowledge to make the best use of resources available; they make sense of and build coherence between the principles and resources;

- *self-regulate* and monitor the impact of their learning and practice on teachers and students and adjust their practice accordingly;
- *be mindful of the main criterion of improving student outcomes* – teacher educators have high expectations for improvements in teacher practice and student outcomes.

These factors appear to operate most frequently at two levels: either within a school with all teachers forming a community or across several schools in various forms in what are termed school clusters. Fullan (1993) saw communities as a way to generate teacher learning which would enhance school capacity. Proudford (2003) and Hickey and Thompson (2003) found that Queensland teachers who worked across schools in a cluster to develop syllabus implementation gained support from working with colleagues. They found value in co-planning, sharing resources and ideas, and affirming existing effective practices.

Those engaged in the leadership of school-wide change – such as principals, external experts and teachers themselves – need to understand the benefits and drawbacks of communities of practice. More widely, they also need a deep knowledge of pedagogical approaches that support effective learning in particular contexts. If the main measure of the effectiveness of professional learning in communities is the impact on teaching practice and student outcomes, the following truisms apply to successful professional learning communities of practice. They

- break down cultures of isolation through collaborative professional relationships and provide opportunities for educators to learn from one another;
- foster reflection and inquiry around shared problems of practice and contribute to the establishment of a school-wide culture that makes collaboration expected and inclusive and focused on critically examining practice to improve student outcomes;
- are based on mutual trust and respect;
- are based on a distributed model of leadership and expertise where collective decision-making results in increased morale, ownership, understanding about the direction and processes of change, a sense of professionalism, and shared responsibility for student learning;
- foster dynamic professional exchanges and learning conversations that help people to critically examine their beliefs and assumptions.

Finding clear evidence of success in the achievement of these goals through teachers working in communities is difficult. Of major concern is whether evidence of connections can be established between the learning of teachers and students' achievement. From a government investment point of view, there is interest in being able to assess a causal connection. To date, the evidence is that while it is not possible to accurately quantify change impacts upon students, it *is* possible to identify indicative causal factors. In a best-evidence synthesis, Timperley et al. (2007) identified a number of international factors that need to be considered, including: sufficient *time* for teachers to learn, especially contacts with providers

over an extended period and the use of *external expertise*. These approaches can increase the level of *teacher engagement*; can challenge *erroneous prevailing discourses* about particular groups of students; and encourage teachers to *challenge their existing views* and practices regarding teaching and learning. Teachers need to *develop ways of identifying students' interests and needs* and negotiate with students over classroom learning experiences.

It is clear, however, that all of the above are difficult to achieve. Teaching is a complex weaving of professional knowledge, relationships, values and practices. It is not known how much time teachers need to engage in appraising and challenging their own fundamental and often long-held views and practices. These factors take into account the social context in which teachers work and the wider policy and school environments, together with the specifics of the professional learning context. The authors (Timperley et al.) used a 'black box' as their metaphor for the relationship between teacher learning and student learning. The complexity of the accumulated information about learning (the black box) needs to be understood by teachers, and systematic professional learning can help teachers know and understand their own learning as well as the learning of their students. Success is linked to the content and form of the professional learning experiences of the teachers.

These findings are supported by an Australian study (Ewing, 2002) that reported on a project in a primary school with a history of preparedness to be flexible in school organisation and early up-takers in curriculum. Ewing described how the school implemented a new English curriculum and reported substantial changes in both the teachers' approaches and student achievement. An independent international educator observed the following school culture factors as key contributors to this success: flexible, continuous communication along established pathways; a principal with clear aims and an articulated vision; a record of school involvement in curriculum developments over several years; a high level of teacher professional development and inter-colleague support; and enthusiasm by the teachers for change and improvement.

In spite of these success factors, there were challenges and barriers to wholesale change. Barriers included difficulties for teachers in working in a coordinated way when dealing with an open-ended syllabus and how to achieve direction from it and understand the outcomes-based content. How to deal with the extra demands on their time to work in a cluster, and sustaining a high level of enthusiasm were two other barriers (Proudford, 2003). Thus any analysis of the effectiveness of communities of learners must interrogate the context to assess impacts, both positive and negative. Furthermore, there are schoolwide factors that can inhibit change. Hood (1998) has argued that secondary schools have been too slow to change the way they operate and the learning experiences they offer students.

CONCLUSION

This paper has focussed upon curriculum change and briefly outlined how New Zealand's national curriculum for schools has changed at reasonably regular

intervals over the years since the first national curriculum in the 1870s. During those years, global and national influences have changed answers to fundamental curriculum questions about what students should learn at school, how they learn best and how they might be most effectively taught. It has been argued that school success is related to the alignment between key spheres of schooling, namely, the mandated curriculum, the assessment policies and practices, and the teaching and learning approaches. It is pointed out that while national curriculum change is largely outside the control of teachers, it is teachers who are pivotal in bringing about curriculum change in schools.

Teachers' professional lives are busy and it is beyond doubt that professional development and learning is necessary to help teachers reflect on their beliefs and practices, commit to worthwhile change and learn what they need to know and do. Some of the issues relating to professional development were discussed and the possibilities of teachers working in communities of practice outlined. There is now compelling evidence from reviews of research on professional development that certain conditions and practices contribute to successful change, such as a sense of ownership of change and positive working relations with colleagues and affected groups.

The 2007 national curriculum makes it clear that a school has the autonomy to design educational programmes that are best suited to the particular student population and community. This puts the spotlight on school leaders to exercise forms of leadership that will achieve the goal of effective local decision-making. It is now recognised that principals play a key role in school leadership to effect school-wide change in curriculum, teaching and learning. Leaders cannot make changes on their own. School-level autonomy carries with it a responsibility for all school personnel. More freedom to choose the direction and content of school and classroom learning approaches means that school leaders will need robust methods of justifying decisions and demonstrating links between teachers' professional practice and the resulting benefits for students.

A reminder is needed, however, that renewed policy encouragement to schools to innovate is not new. At the school level, there is plenty of evidence that over many years there has been a spirit of experimentation and innovation with programmes and learning experiences. A study of *Tuketuku Kōrero/New Zealand Education Gazette* shows numerous examples in recent years. The Ministry of Education's recent curriculum website (<http://nzcurriculum.tki.org.nz>) has evidence of how particular schools are coming to grips with the revised curriculum and testing out its possibilities through locally inspired programmes. It seems that the traditional transmission model of curriculum is under renewed challenge in numerous schools that are innovating and experimenting with approaches that view knowledge and learning more flexibly. In this endeavour schools need connections with out-of-school repositories of knowledge such as libraries, websites, museums, clubs and students' homes. They also need 'buy in' from the wider community.

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