

Key messages about change in schools

A literature scan for Sport New Zealand

Sally Boyd



NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

TE RŪNANGA O AOTEAROA MŌ TE RANGAHAU I TE MĀTAURANGA

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PO Box 2251

Wellington 6140

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1. Introduction

Introduction to the literature scan

At the heart of all new programmes, initiatives, policies or curriculum documents designed for school settings is an attempt to change some aspect of school practice. Therefore, an understanding of the key messages and lessons learnt about effectively managing change in schools is important background for anyone trying to implement new approaches in school settings.

This document summarises some of the key messages and lessons learnt from the school change literature and considers how these could be applied to the implementation process of the Sport in Education initiative developed by Sport New Zealand.

Focus of the literature scan

Many different bodies of literature have relevance to those attempting to manage change in schools. Some of this literature is focused on changing specific aspects of school practice. One example is school reform or “**school improvement**” literature which explores the preconditions, structures and change processes that are needed to successfully reform schools. School improvement can be broadly described as “a distinct approach to educational change that aims to enhance student learning outcomes as well as strengthening the school’s capacity for managing change” (Hopkins 2001, p. 13, cited in Stoll, 2009).

The focus of school-improvement reforms is usually on increasing students’ achievement in core areas such as literacy and numeracy – these are areas of interest to the Sport in Education project. Reforms in schools are not easily achieved. As Stoll (2009) notes, “school improvement is immensely complicated”. Following on from the well-documented challenges of attempting large scale “top-down” reforms, educational literature is increasingly focusing on the **processes by which change is designed and managed** (Thomson, 2010; Timperley & Robinson, 2000),

and what it means to **re-culture rather than re-structure** (Hargreaves & Shirley, 2009; Stoll, 2000). This literature seeks to identify generic messages and lessons that can be learnt **about the change process**. It explores areas such as:

- what systems-thinking concepts tell us about change
- what studies tell us about effective leadership for change in school settings
- what effective teacher learning might look like.

To best support the Sport in Education project, we have attempted to focus on some of the key messages and lessons that can be learnt from the systemic school change literature. The main implications are given in a series of reflection questions that are located at the end of each main chapter and included in summary form in the final section. **We have also included text boxes that make links between this literature and core elements of the Sport in Education programme logic.** These text boxes look like this:

Logic link

Search strategy

Given the large body of potentially relevant literature that exists, rather than search for individual studies, we built on the substantial work that has already occurred in this area. We looked for recent overview documents from overseas (that is, edited books, literature reviews, meta-analyses and syntheses) written between 2000 and 2012. We also prioritised some of the literature from New Zealand so we could blend the lessons learnt and messages from the international literature with key findings from New Zealand.

We developed a list of key international and New Zealand authors in this broad field of school change. We ensured that we had up-to-date literature from each of the following:

- Michael Fullan
- Andy Hargreaves
- Alma Harris
- David Hopkins
- Ben Levin
- Karen Louis
- John MacBeath
- Peter Senge
- Louise Stoll.

To include a New Zealand perspective, we sourced literature from a number of key New Zealand authors including:

- Russell Bishop
- Rose Hipkins
- Viviane Robinson
- Helen Timperley
- Cathy Wylie.

Given the short timeframe for this scan, the synthesis was mostly completed with literature available in NZCER's specialised education library.

Structure of the report

This literature scan is structured in three sections. Each section explores the lessons that can be learnt and key messages in relation to a key phase in the process of implementing an initiative, namely:

- preparing for change
- implementing change
- sustaining and spreading change.

2. Preparing for change: Planning, designing and leading

Introduction to preparing for change

The educational environment is increasingly being characterised by rapid change and complexity (Fullan, 2007; Stoll, 2010). To be effective in this environment, **initiatives need to consider how to design and plan for change in ways that use the strengths of the system.**

Led by thinkers such as Peter Senge and Michael Fullan, school leaders, researchers and the designers of new initiatives are increasingly considering what systems-thinking concepts might add to the way we think about schools and consequently how we plan new approaches.

From a review of the literature about whole school change, Thomson (2010) suggested that there are a number of important aspects to consider when thinking about change in schools. This chapter will use systems-thinking concepts to consider some of these aspects, namely:

- understanding the centrality of the process used to manage change
- understanding that both the change process and school systems are multilayered
- thinking about schools as networked organisations with networked leaders.

Using systems thinking to design and plan for change

The centrality of the change process

In summarising the last 30 years of implementation research, Supovitz and Weinbaum (2008) comment that programme implementation used to be viewed as a straightforward and technical task which involved implementing planned procedures. Over time, however, studies showed that what became enacted in schools did not appear to match the initial aim of a

programme. Variability appears to be the rule rather than the exception. As a result researchers have turned their attention to exploring the dynamics of what happens during the implementation process (Supovitz & Weinbaum, 2008).

The last decade of school change research has shown that the processes by which change is managed are at least as important as the content of the change. Thus the “**centrality of process**” has emerged as an important concept in its own right (Louis, 2010). School change is increasingly being described as a **design process** that involves a careful consideration of the **process** as well as the **product** or desired outcome (Thomson, 2010).

One design challenge is to **find ways to balance factors that at first glance do not appear to go together** (Fullan, 2007). These include ways to balance bottom-up and top-down implementation and leadership processes. A balance also needs to be found between implementing a new approach with fidelity while considering local adaptability. Since change is not a linear process, Fullan suggests that plans need to be flexible and respond to context.

An understanding of the systemic nature of change, and of schools themselves, is important when planning and designing a change process (Fullan, 2007; Thomson, 2010). Thomson (2010) notes there are two key aspects to consider. One is that **change is a multilayered activity that is impacted on by a range of inter-related variables**. Therefore, to be effective, a change process needs to consider all these inter-related variables. The other aspect is that **schools themselves are multilayered systems**. Therefore, to be effective, a change process needs to plan to engage with, and work to align, different levels of the school system. These two ideas are discussed below.

Schools in New Zealand have recently been through a whole school change process as they implemented *The New Zealand Curriculum* (Ministry of Education, 2007). A number of studies that charted schools’ experiences of this process found that schools were more successful in **managing change if they explicitly planned how to manage the change process**. To illustrate this, case study examples are provided at the end of this chapter. Some of these examples are drawn from the Curriculum Implementation Exploratory Studies (CIES) (Hipkins, Cowie, Boyd, Keown, & McGee, 2011), and others from the evaluation of the Curriculum Innovation Projects (CIPs) (Boyd et al., 2005). Schools in the CIES study spanned the primary and secondary sector. These schools were all early adopters of the revised curriculum. CIP schools were all located in the secondary sector. The short examples and case studies from these research projects make links to some of the ideas discussed in this report.

Thinking about change as a multilayered activity

Logic link=
Sport NZ develops and sets
up the programme well

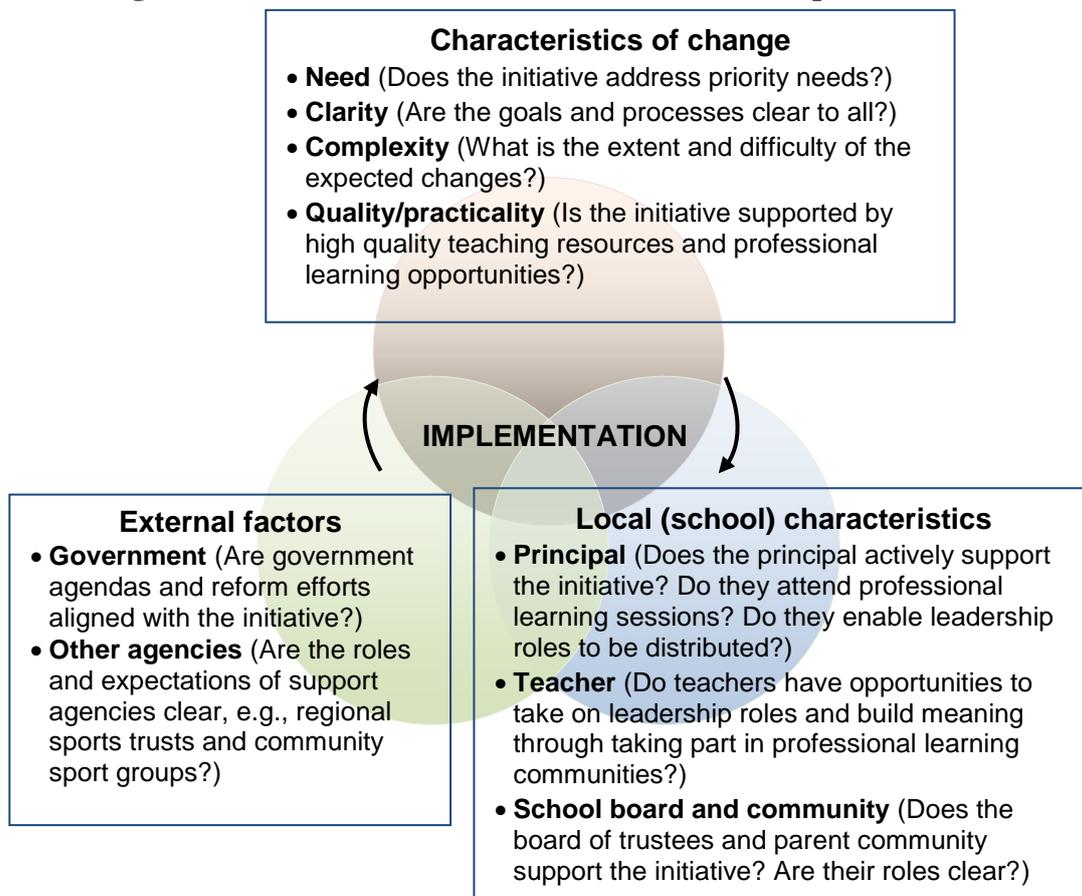
Factors that influence change and successful implementation

Schools are nested within a wider system that influences practice and change. To ensure that change is sustainable, Fullan (2005) notes that the whole system needs to change. Therefore, when planning for change there is a need to plan for alignments within schools. There is also a need to consider how the wider policy environment and current pressures on schools might act to support or constrain an initiative. **Developers of initiatives may need to consider which aspects of the wider system, as well as the system within schools, they can realistically support or influence in ways that are likely to promote change.**

Research on the variability of programme implementation in schools suggests that a complex combination of individual, social and organisational characteristics that exist in the wider system interact to influence the pace and nature of the implementation process (Fullan, 2007; Supovitz & Weinbaum, 2008). This literature suggests that several key variables affect the extent of change (Fullan, 2007). Some of these variables are concerned with the **external system around schools**; others are concerned with the **local system within schools**. Others are concerned with the nature and **characteristics of the expected change**.

Key variables identified by Fullan (2007) are shown in Figure 1, along with an example of what each variable might mean in practice. These examples have been selected and elaborated in ways that ensure they are relevant to the Sport in Education initiative. Fullan considers all the variables in this diagram to be inter-related. He states that, if **more of these variables are aligned in the direction of the change, the more likely change is**. The developers of initiatives can use these variables as a guide to explore the extent to which the plan for change includes each relevant variable, and also includes processes that are likely to support their alignment.

Figure 1. The interactive factors which influence implementation*



*(Diagram adapted from Fullan, 2007, p. 87)

Next, this chapter discusses some of the variables in Figure 1, including the role of the principal and other school leaders in planning and managing a change process. Following this, chapter 3 discusses some of the other variables in Figure 1, including opportunities offered for teacher learning and partnership formation.

Thinking about schools as ecological systems

Logic link=
Sport NZ develops and sets
up the programme well

Fullan (2007) notes that the uniqueness of each school's local context makes change a complex and subtle process. Systems-thinking ideas can help us to think about the different layers of school life that work together to shape this context, and how these layers might influence one another.

Schools are increasingly being conceptualised as ecological systems with interconnected layers (Senge, 2000; Thomson, 2010). **Each school system has different layers and types of interactions. These systems can learn, change, and adapt**, but this can happen in different ways depending on the nature of each system.

The extent to which an initiative is attempting to change some or all layers of the system can impact on processes and timeframes. Thomson (2010) notes that “whole school change” can mean many different things and there are different orders of change. Is an initiative attempting to:

- add a new dimension or structures to a school (add an aspect to the system)?
- change one or two departments (make change to a subset of the wider system)?
- make school-wide changes that involve all staff using new approaches or strategies (change the whole system)?

It is generally agreed that that the latter, i.e., school-wide change to the whole system is more difficult to achieve, takes longer, and requires the commitment of all staff and the board of trustees.

Logic link=
The school culture changes to actively embrace sport as a tool for achieving wider educational outcomes

The tangible and intangible aspects of the school system

Thinking about schools as a system implies a need to consider and **plan strategies to work within and across the different layers**. Some of the layers of a school system are more visible or tangible, and others are less tangible. More tangible aspects of the school system include:

- school policies
- structures such as leadership and management roles
- the opportunities that are provided for teacher professional learning as well as administration
- the timetable, and the way courses are structured
- curriculum and assessment policies and practices
- the connections that are made between the school and external providers, the local community, and parents and whānau.

The less visible or intangible aspects of a school can also impact on the change process.

One example is the unique culture of a school. “School culture” refers to the beliefs and expectations that members of the school community share about how the school operates (Tableman, 2004), or “what we value around here” (Ministry of Education, 2008). School culture varies depending on the context of each school, and the prevailing culture can act to support or impede change in schools (Stoll, 2000). The leadership culture of the school and how teachers translate the curriculum into classroom practice are other less tangible aspects of the wider system.

Stoll (2000) suggests that metaphors can be used to draw together the more tangible and intangible aspects of school life. One is the iceberg metaphor, and the idea that what goes on underneath the surface is likely to impact on change. On top are new structures, roles and responsibilities. Underneath the surface are people’s beliefs, values, and norms.

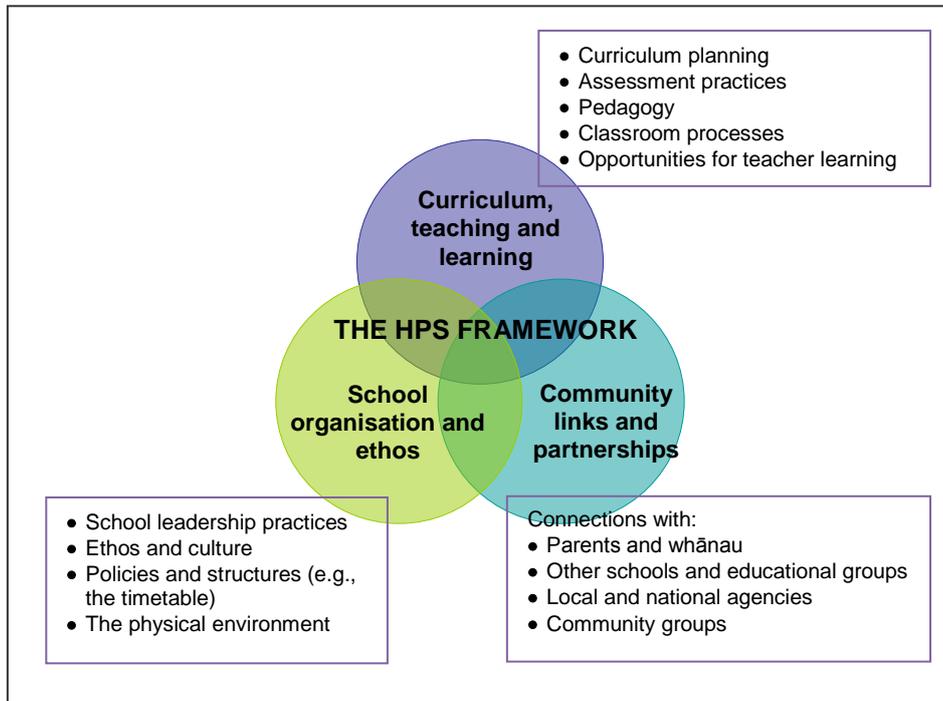
There are two implications for those attempting change. First, **tapping into what is happening beneath the surface of a school is an important part of a change process.** Secondly, the plan for change needs to consider **the interconnections between the different layers of school life and that change to any aspect of the system can impact on other layers.**

Logic link=
Sport NZ develops and sets
up the programme well

Systems models of schools

Systems-based models of schools can be helpful in assisting us to see the different layers of school life that an initiative might need to address or influence when planning for change. One model of these different layers is the Health Promoting Schools (HPS) framework shown in Figure 2. Underpinning this framework is the view that a school is a system with interconnected parts. This model can be viewed as a more in-depth representation of the local school characteristics noted by Fullan (2007) and shown in Figure 1. Figure 2 considers both the tangible and intangible aspects of a school system.

Figure 2. The Health Promoting Schools Framework*



* Diagram adapted from *Fruit in Schools: A 'How to' guide* (Ministry of Health, 2006, p.9).

In a school system, a **change in one part of the system can have intended or unintended impacts on other parts of the system.** Change is more likely if these impacts are considered and the plan for change considers ways of aligning the wider system (Boyd, et al., 2005; Newmann, Smith, Allensworth, & Bryk, 2001). **Change is more difficult if aspects of the system are not aligned or are sending contradictory messages.**

An implication of a systems model of schools is that **a plan for change needs to include different activities and strategies for working within and across these different layers** to ensure that they are all aligned and promoting similar messages and practices. Useful design questions for initiatives could include the following:

- What strategies are targeted at leaders and at a school-wide level?
- What approaches are planned at the classroom or teacher level?
- What strategies or activities make use of community connections?

Newmann, Smith, Allensworth, and Bryk’s (2001) research found that alignment and **coherence between different aspects** of the school system (such as approaches to curriculum and teaching practice) was related to improvements in learning outcomes for students. An example of this coherence can be seen in the approach taken by the developers of the *New Basics* initiative in Australia (Queensland State Education, 2000). At the start of this reform the developers carefully planned how they would work to ensure that curriculum, assessment and pedagogical practices all supported one another. They designed new resources and forms of assessment that had a close fit with the pedagogical practices they were promoting. They also created new ways for teachers from different learning areas to meet together to moderate assessments. This approach was based on their view that:

Improved student outcomes require a systematic, principled and practical coordination of the message systems of curriculum, pedagogy, and assessment (Queensland State Education, 2000, p.26).

These three inter-related message systems are key factors to consider in any plan for change. In the New Zealand secondary sector, NCEA is a strong driving focus which shapes the curriculum and assessment practices in secondary schools. In addition, increasing the number of students who leave school with NCEA Level 2 or above, and improving retention and attendance are key priority areas for the Government (Ministry of Education, 2012a). **Therefore, new initiatives in the secondary sector need to find ways to align with NCEA-driven practices or actively plan ways to enhance and improve these. Likewise, the effectiveness of new initiatives is likely to be enhanced if it can be clearly demonstrated to schools and the wider sector that the goals of the initiative support government priorities.**

Logic link=
Quality teaching and assessment resources
produced by teachers and others

Using systems-thinking to lead change

Logic link=
Good knowledge management and
dissemination

Thinking about schools as networked learning organisations

A number of systems-thinking ideas are informing current thinking about creating change through the deliberate spread of knowledge in school settings. Bentley (2010) reports that the “top-down” bureaucratic models of educational change, such as standards-based reforms, are still very common internationally although they have not necessarily produced the desired results. These models emphasise the authority of expertise and require schools to adopt relatively set initiatives and targets in ways that do not enable local adaptation. However, bottom-up models, which aim to improve schools solely from within, have also not necessarily been successful. These models emphasise the need for knowledge to emerge primarily through the experience of those who practice. Fullan (2007) calls this the “too tight/too loose” dichotomy. He suggests that, for change to be successful, reformers need to find a balance between these positions. Plans and processes for change cannot be **too tight** (e.g., strictly mandated reforms which do not create a sense of ownership) nor **too loose**

(bottom-up change where teachers are left to shape an initiative to their own design). Fullan considers a balance can be found between these two positions by creating a **continuous improvement culture** which values innovation while also having measures of accountability.

A recent OECD report identified that New Zealand has one of the most devolved school systems in the world, and could benefit from having **more structured professional development systems that enable networking across the system in ways that support best practice to become common practice** (Nusche, Laveault, MacBeath, & Santiago, 2012). Thus finding a better balance between “too tight” and “too loose” is important for the New Zealand education system.

To enable knowledge about good practice to spread, Ben Levin (2010a) considers that better **knowledge mobilisation systems** are needed in school settings. These systems need to enable practitioners to find, share and use research. In designing these systems, policy makers and school leaders need to build on understandings that ideas change more through discussion than individual cognition. Thus effective processes provide space for teachers to discuss research findings and translate them into practice.

Bentley (2010) and Fullan (2007) propose that new theories of change, which explore how innovation actually occurs, can provide a space to address the too tight/too loose dichotomy by **creating knowledge-spreading networks**. They suggest that, for innovation and change to become systemic in way that harnesses both top-down and bottom-up processes, we need to learn from recent profound shifts in the organisation of work and approaches to organisational leadership. Many workplaces have moved from “expert” top-down leadership models to approaches that create space for development through open, collaborative processes. From this viewpoint, schools are not sites for reform and the implementation of initiatives. Rather, schools are seen as complex adaptive systems which can shape reform, and which can be flexible in how they respond to the needs of different students and communities. Bentley (2010) suggests that those who desire to create change in schools can learn from studies about networks that create successful innovation. These networks share characteristics. They are:

- **open** (they make their processes and structures transparent, and allow access to users with few restrictions)
- **highly networked** (their structures enable rapid transfer of new materials across networks of users)
- **user driven** (they empower participants who might have previously been positioned as passive consumers or non-experts) (Bentley, 2010, adapted from p. 31).

In combination the characteristics above allow groups to be **self-organising** and **highly differentiated** (respond to varying needs of users).

Bentley also suggests that the most influential strategies for change are carefully crafted and tend to be most successful when they integrate with or replace existing systems. He suggests **innovation can be made systemic by using strategies, based on how people learn and change in groups and organisations, to manage the flow or diffusion of information**. The strategies include:

- **imitation** (people take up new practices when they see them modelled in action)
- **iteration** (new practices are developed, improved, accepted, and embedded through repetition not through one-off interventions)
- **improvisation** (when facing unfamiliar circumstances, people often try things they have not done before)
- **inspiration** (stories that are compelling are more likely to create positive responses than instructions, or more abstract descriptions of why change is needed)
- **immigration** (moving people into new settings can be effective in supporting change, rather than trying to move ideas separately from the people who enact them)
- **interpretation** (the ability to recognise patterns and draw conclusions from complex sets of information in uncertain conditions is crucial to whether innovations are successfully evaluated and adopted over time) (Adapted from Lester and Piore (2004), cited in Bentley, 2010, p.42).

For these strategies to become a reality, initiatives need to consider how to provide space for staff in schools to network and work together in a sustained manner. Many of those who write about school change suggest that a 21st-century learning society requires schools to connect with and learn from people within their own setting as well as learn in collaboration with other schools (Fullan, 2007; Hargreaves, Lieberman, Fullan, & Hopkins, 2010a). Thus in education settings there is an increased focus on raising capacity across the system (Levin, 2010b), and creating and spreading knowledge through networked communities of school leaders and teachers (Fullan, 2007; Louis, 2010).

It is important to note that using these ideas about diffusion through networks to manage change may lead to some dead ends or some ideas that take hold and others that do not. Louis (2010) suggests that managing change requires managing the flow of knowledge, but how knowledge will be used is difficult to predict. She suggests that policy makers need to be open to the messy uncertainties of change, such as the idea that some things will “stick” and spread, whereas others will not. Recent New Zealand studies illustrate the applicability of this idea at the school level (Hipkins, et al., 2011).

Logic link=
Principals embrace the approach and provide leadership and resourcing
School management identifies the most strategic pathway for introducing the new approach

Using systems-based leadership processes

A common theme of the school change and improvement literature is that effective leadership is central to developing, nurturing and sustaining change. There is a substantial body of international literature on this topic (Fullan, 2005; Hargreaves, Earl, & Ryan, 1996; Hargreaves & Fink, 2004; Harris, 2002; Leithwood et al., 2004; MacBeath & Townsend, 2011), as well as recent New Zealand-based literature overviews (Robinson, Hohepa, & Lloyd, 2009) and commentaries (Wylie, 2011). But what does the literature tell us about the types of leadership styles and behaviours that create change?

As in many workplaces, schools are moving away from “expert” top-down leadership models (Bentley, 2010). School leadership practice in New Zealand has expanded beyond models such as the charismatic or heroic leader – where the leader of an organisation aims to inspire or motivate others (Timperley & Robertson, 2011). In this model, the vision and responsibility for the success of an initiative may often be held or driven by this leader. If this person leaves, then the change process can fall over.

The understanding that knowledge is created and spread through networks has focused more attention on the **role that school leaders play in the creation of learning organisations**. School principals and other leaders are the key learners who set the directions for others, and they are the main people who design change processes within schools. Levin (2010b) suggests that **capacity building needs to be a central focus** for anyone attempting to make improvements in schools. Senge (2000) and Fullan (2001, 2005, 2007) draw on systems thinking to outline how school leaders can **build a school's capacity to self-improve**. They suggest **a school needs to operate as a learning organisation which harnesses the expertise of its community** through developing a range of staff as leaders. Fullan (2007) notes that effective change requires schools to navigate through the seemingly contradictory positions of strong versus collaborative leadership and ideas about top-down versus bottom-up change. To do this, Leithwood et al. (2004) suggest that a mix of leadership strategies are needed to create change.

The New Zealand literature suggests that a mix of distributed, collaborative and pedagogical leadership styles support change. **A distributed view of leadership takes into consideration how leadership roles are distributed among the wider system of the school such as through middle and senior management, as well as teachers and members of the school community** (Robinson, et al., 2009). Leithwood et al. (2004) consider that distributed leadership styles support change and sustainability, because having a range of leaders who are sharing and acting on the same vision is a form of succession planning.

Robinson et al. (2009), the authors of the New Zealand commissioned best evidence synthesis *School leadership and student outcomes: Identifying what works and why*, comment that most of the leadership literature focuses on the role of the principal. This reflects a rather traditional and limited view of leadership as mostly the concern and role of the person who heads an organisation. They explored the role of the principal as well as distributed leadership roles and concluded that the evidence suggests that **distributed leadership practices are effective in supporting change**. They also found that **pedagogical leadership practices** (where leaders are more involved in teaching and learning, planning the curriculum, setting clear goals, and evaluating teaching and learning) were more likely to be associated with change in student outcomes than transformative leadership approaches (where leaders focus on empowering others and relationships within the school community, but not necessarily directly on the improvement of teaching (Timperley & Robertson, 2011)).

Another key finding from Robinson et al.'s meta-analysis was that **leadership practices which involved leaders participating in, and promoting, formal and informal opportunities for teacher learning and development were associated with greater levels of change in student outcomes**. Similarly, the best evidence synthesis, *Teacher professional learning and development* (Timperley, Wilson, Barrar, & Fung, 2007), found that effective leaders engaged in behaviours such as: actively organising a supportive environment and learning alongside teachers; developing a learning culture in the school; creating distributed leadership networks in the school; providing alternative visions and targets for student outcomes and monitoring these.

Studies suggest that the devolved New Zealand system creates high expectations of school leaders who are faced with an increasingly complex and demanding role (Nusche, et al., 2012). In this context, it is hardly surprising that there is support for distributed leadership practices as a favoured approach in New Zealand schools (Burgon, Hipkins, & Hodgen, 2012). Studies show that distributed approaches are increasingly being used to manage change in schools (Hipkins, et al., 2011; Wylie, 2011). Aligned with the ideas about

diffusion, collaboration and openness discussed above by Bentley (2010), school change in New Zealand is a group endeavour. In secondary schools the senior leadership team and departmental teams are both sites of change. In primary schools, a range of leadership positions allow staff to manage different aspects of school life. Thus rather than being the responsibility of one person, **leadership roles are distributed across a school**. Many school leaders are also strongly networked with their peers.

Logic link=
Principal/senior leadership
team/teacher champions
identified and promoted

Networked leaders: New Zealand models of leadership

The learnings from the best evidence syntheses are all brought together in the New Zealand leadership model outlined in *Kiwi Leadership for Principals* (Ministry of Education, 2008) and *Leading from the Middle* (Ministry of Education, 2012b).

These documents suggest that, in the 21st century, effective leadership of schools requires widely shared leadership roles for senior staff and teachers. Senior staff also need to prioritise “walking the talk”, building trusting relationships with others and nurturing other teachers’ leadership abilities. The New Zealand educational leadership model also prioritises a systems view of schools. This view (shown in Figure 3) considers the interplay between school culture, systems, pedagogy and networks.

Figure 3. New Zealand’s educational leadership model*



*(Diagram from Ministry of Education, 2008, p. 12)

These findings about leadership have implications for those wishing to make change in school settings. They suggest that the leaders of initiatives need to consider how the **leadership of an initiative will be positioned in each school so that the change process is able to make use of existing networks of leaders, and their relationships and connections**. Rather than a single strategy, effective change processes make use of the system and existing networks to share ideas and build new approaches.

These findings also suggest that **initiatives need to include a plan for how key school leaders will be involved in an ongoing way in shaping the form the initiative takes in their school.** They also suggest that **new initiatives are likely to be more successful if they draw on teachers' expertise and act to build distributed networks and leadership capabilities within and between schools.**

New Zealand case studies of change

The case study examples below show how some of the ideas above were displayed in recent New Zealand studies of school change.

Case study example 1: Change in Curriculum Implementation Exploratory Studies (CIES) Schools

Many of the systems concepts described above were demonstrated by schools in the CIES study (Hipkins, et al., 2011). In these schools, school leaders were attempting to manage a change process which had the ultimate goal of supporting staff and the community to understand and adopt the revised New Zealand curriculum. Although the implementation of the curriculum was primarily a school-led initiative, the findings have applicability to externally developed initiatives in that they give insights into some of the processes that create change in school settings.

These early adopter schools had some characteristics in common. One was that school leaders were **highly networked**. Their networking gave them access to new ideas and supported change to spread between schools. Most of the leaders understood the **"centrality of process"** as noted by Louis (2010). A number worked with their colleagues at other schools, or used ideas from other schools to carefully plan their school's change process. These change processes were then adapted over time to suit the staff at each school.

School leaders also used a range of processes that utilised the expertise within their school. They set aside time and involved all school staff in **collective sense-making** about the intent of the curriculum. They enabled staff to work **collaboratively** to co-create a vision for how the new curriculum might look in their setting. They also sought input from the parent community. **Leadership responsibilities were distributed** beyond the principal, usually to hubs or teams with some leadership responsibilities (Hipkins, et al., 2011).

The CIES findings suggested that the idea of decentralised control was important in initiating and sustaining change. Principals developed new teams which included people who had enough similarity to be able to work together, but also had a diversity of knowledge. These teacher teams explored what their new vision looked like in practice by working together to develop, trial and refine new processes and approaches. The teams were also interconnected, which ensured the different groups aligned with one another and also built on one another's work. This networked structure allowed for a level of central control and direction, along with flexibility for different team members to shape new approaches. These processes also enabled ideas to spread within each school. These teacher teams used many of the strategies discussed by Bentley (2010) to build new practices, including: **imitation, iteration, improvisation and inspiration.**

Many of the CIES schools embraced complexity and the **messiness of change**. They saw change as an **ongoing process rather than a one-off experience**. They were very comfortable with an evolving process and the idea that some ideas would "stick" and become part of school practice while

others might not. These schools worked through **iterative cycles** of change as they developed and trialled new approaches. Once change in one area had been explored, staff engaged in new cycles of change as they aligned other school practices with the new approaches in an effort to create **coherence in the system** (Hipkins & Boyd, 2011).

Once they had developed approaches within their school, some school leaders and teachers then started to look outwards again and started a programme of visiting one another's schools to learn from others' experiences (thus building on the skills and expertise of the wider network).

Case study example 2: Change in CIP Schools

Other lessons about managing change in schools can be gained from the evaluation of the Curriculum Innovation Projects (CIPs) (Boyd, et al., 2005). This evaluation provides some New Zealand-focused insights into the types of conditions necessary to support and sustain effective change in the secondary school environment.

The schools and school clusters in the CIP were offered two years of extra funding by the Ministry of Education to assist them to implement local solutions that supported students to develop the attitudes and skills needed for lifelong learning, and provided relevant and authentic learning contexts within learning areas.

Again, although these were school-led initiatives, the findings have applicability to externally developed initiatives. The table below summarises the conditions that support change in the CIP schools. These conditions show the need to **plan and design a change process**, and the importance of **collaborative and distributed leadership**, and the formation of **teacher learning communities**.

They also show how an expected change in practice involves many different layers of the school system. Effective planning for change considers how **coherence between different aspects of the system** will be achieved.

Conditions that supported change in CIP schools*

A shared vision is developed

- A clear need is identified which is learner-centred and based on school data.
- A clear vision of the desired change is developed for both students and teachers.
- The vision aligns with wider school goals.
- The initiative aligns with wider changes in New Zealand education and society.
- More than one or two key staff members hold the vision.
- Teachers have time to examine their beliefs about teaching.
- Teachers have time to debate and develop ownership of the vision.

There is strong leadership

- The school culture values innovation and teacher learning.
- The principal provides initial pedagogical leadership, supports innovators to develop new visions, and resources initiatives.
- The leaders are senior staff or staff who have the ability to influence departmental or school activities.
- New leaders and lead teachers with specialist skills are identified and nurtured.

Change is planned for

- The change process is considered and planned for in terms of short- and longer-term plans.
- An adequate timeframe is allowed (from 2 to 5 years).
- The initiative builds on existing approaches or past school innovations.
- Lessons are learnt from the experiences of other schools.
- There are mechanisms in place for addressing and resolving issues and adapting plans.
- Sustainability is embedded in the plan.

The plan is multifaceted

- The plan for change considers three elements:
 - (1) It is underpinned by understandings about managing the change process.
 - (2) It is underpinned by knowledge about good practice pedagogy.
 - (3) Connections between curriculum, pedagogy and assessment are discussed and deliberate.
- The leverage point used to effect change is based around either curriculum, pedagogy or assessment.

Good practice pedagogy is used to support students to become lifelong learners

- Good practice learner-centred pedagogy is used to support students to become lifelong learners (for example, formative assessment, student-directed learning).
- Curriculum authenticity is a priority and students are supported to make practical connections with the world outside the classroom.

New forms of teacher communities are developed

- The initiative involves a whole school, department, or a team of teachers rather than one or two teachers operating in isolation.
- The school or departments are developed as learning communities which value lifelong learning for teachers.
- These learning communities focus on ways to enhance student achievement through improving teacher practice.
- The communities provide a range of supports for teachers to further develop lifelong learning behaviours and change their practice (for example, opportunities to: engage in professional reading, reflection, and collaborations with others; and to deprivatise their practice or observe others).
- Time is set aside for these teams to meet or work together.

Varied types of professional development are offered

- A professional development programme is planned in relation to both student and staff needs.
- The programme is both school and individually driven, and enables team learning to occur.
- The programme incorporates both in-house and external professional development.

New external collaborations are developed

- School leaders have critical friends or mentors in the education community.
- Connections are made with other communities outside the school. Teachers are not the only people in the classrooms or whom students learn from or with (for example, connections are made with people in tertiary environments, scientists, employers, and parents).

Students are involved

- Students are active participants: their needs drive the initiative and their feedback is used to improve it.

Goals are monitored

- A picture (indicators) of what the desired outcomes look like for both students and teachers is developed.
- School data is used to give evidence of change and inform further change.

Alignment with school structures is considered

- Resources are aligned with the vision (for example, buildings or use of spaces).
- Other school systems such as timetabling are aligned, or teachers are able to operate outside usual timetable systems.

Extra funding and resourcing are provided to seed the initiative

- Teachers are provided with extra release (not relief) time or are released from some of their other responsibilities.
- Small class sizes are organised if necessary.
- Students have access to the tools they find motivating (for example, new ICT or equipment).

* Table from pages XIV-XV (Boyd, et al., 2005).

Reflection questions for chapter 2

Using systems-thinking concepts to plan for change

How will the new initiative ensure ...

- *the change process and plan for change addresses the factors known to influence successful implementation of initiatives?*
- *the plan for change considers the different layers of school life and includes strategies that work to align layers?*
- *the change process supports the diffusion of ideas through school and other networks? (Policy networks include Sport New Zealand and Ministry of Education connections. Practice networks include school leader, teacher, and Regional Sports Trust networks such as principal and teacher unions and associations, teacher subject associations such as PENZ, and community sports groups.)*

Taking into account recent views about leadership for change

How will the new initiative ...

- *use processes that align with current New Zealand leadership approaches that promote schools as learning organisations?*
- *work to ensure school leadership of the initiative is distributed across a range of staff members and other stakeholders?*
- *ensure that principals and other senior leaders are as involved as possible in designing the change process at their school and in any new professional learning opportunities with teachers?*

3. Implementing change

Introduction to implementing change

This chapter explores some of the key success factors known to be related to effective implementation processes. Some of the relevant topics include:

- readiness for change
- professional learning that supports change
- partnerships that support change
- structures that support change

Logic link=
Partner schools selected where
there is sufficient leadership
buy-in for the idea

School context and “readiness” for change

Early school improvement studies focused on applying universal principles of change to all schools (Thomson, 2010). Since these initial studies, awareness has grown about **the importance of school context**, and how this might impact on the success of reforms.

Stoll (2000) states that, because school cultures can impede change, **it is important to assess whether a school is ready for change and the school context will support change**. In considering ways to assess schools, some researchers have identified different “growth states” of schools and attempted to describe the different types and levels of support, and strategies, that are needed to move schools from one level to the next (Hopkins, 2005). Others have developed models which offer different ways of categorising a school culture (Stoll, 2000; Stoll & Fink, 1996). These models can be helpful when considering which schools are more likely to be ready for change and which might need more support. Stoll and Fink (1996) identify five types of school culture. Each type has a different capacity for change and need for support. The types are as follows:

- **Moving schools** are improving and effective. They know where they are going and have the will and skills to manage change themselves.

- **Cruising schools** appear to be effective. They are usually in areas which serve high socio-economic communities and have a student population that achieves despite teacher quality. These schools can have powerful norms that inhibit change.
- **Strolling schools** are neither effective nor ineffective. They are moving at a pace that is too slow to cope with change. They can have ill-defined and conflicting aims that inhibit change.
- **Struggling schools** are ineffective and aware of this. They are expending energy trying to improve. They will ultimately succeed in making changes as they have the will, but not necessarily the skill. Therefore they could benefit from some support.
- **Sinking schools** are ineffective and staff have a loss of faith and are unable to change. These schools are often in deprived communities and staff tend to blame the community for the school's problems. These schools need dramatic action and significant support to change (adapted from Stoll, 2000, p. 11)

These ideas about “readiness” can assist in developing a set of selection criteria to use when identifying schools for an initiative. A blend of these ideas as well as the information about networked leadership from the previous chapter suggests that, for the Sport in Education initiative, some criteria could be:

- Is there evidence that the school culture is likely to welcome change (e.g., is the school **moving** or **struggling**)?
- How many other whole school professional learning initiatives are currently underway at the school? (If the school has too many other focuses this could impede staff from concentrating on the new initiative and create teacher overload. New Zealand studies suggest that schools that could be called “struggling” or “sinking” often have many non-aligned professional learning activities and programmes on the go at the same time (Robinson & Timperley, 2004).
- Are the principal, leadership team and board of trustees onboard? Does the school have a collaborative and distributed approach to leadership?
- Does the school have processes in place that suggest it is functioning as a learning organisation (e.g., the school has distributed leadership networks and professional learning communities in place?)
- Does the school have an existing team of teachers who are likely to be interested in the initiative?
- Will the initiative be able to build on the school's existing networks and relationships with local primary schools, community sports agencies, and community groups?

Logic link=
Professional development
planned which supports the
uptake of resources

Professional learning that supports change

Senge (2000) and Fullan (2001, 2005, 2007) state that effective learning organisations use community strengths to build a shared vision and a plan for change. Both Senge and Fullan consider teachers to be underutilised as potential community resource people who can actively contribute to this change process.

It is now recognised that middle and senior management, as well as teachers, take on leadership roles in schools (Fullan, 2005; Robinson, et al., 2009). Teachers can support

change through taking part in what Timperley and Robinson (2000) call **organisational learning or “problem-solving”**. For this to happen, school leaders need to create an organisational learning culture in their school (Fullan, 2005; Senge, 2000; Timperley, et al., 2007).

Most literature about changing school practices suggests that one key way of creating an organisational learning culture is through the provision of adequate opportunities for teachers to engage in professional learning. Given the importance teachers place on time (Burgon, et al., 2012), **resourcing which includes extra time for teachers to meet together and adopt and adapt new approaches is a key lever for starting a change process**. However, studies also suggest that some forms of professional learning are likely to be more effective than others. The authors of the New Zealand commissioned best evidence synthesis, *Teacher professional learning and development* (Timperley, et al., 2007), note that **changing practice is difficult and providing teachers with time and resources is not necessarily effective in promoting change, as the conditions that promote learning for teachers are complex**.

In their synthesis, Timperley et al. identified a number of conditions for professional learning associated with positive changes to student outcomes. These conditions pertained to the **context of professional learning experiences** as well as the **content and activities** that were promoted. Findings about these three areas are shown in the box below.

The context for professional development
<p>Effective professional learning experiences tended to:</p> <ul style="list-style-type: none"> • be actively supported by school leaders (Leaders engaged in behaviours such as: actively organising a supportive environment and learning alongside teachers; developing a learning culture in the school; creating distributed leadership networks in the school; providing alternative visions and targets for student outcomes and monitoring these.) • offer extended time for opportunities to learn (Extended time was necessary but not sufficient for change. How the time was used was more important. If the change was related to narrow curriculum goals less time was required.) • give access to external expertise (This expertise was typically necessary but not sufficient.) • engage all teachers in the learning process at some point (Some form of engagement was more important than whether the experience was voluntary or compulsory for teachers.) • give opportunities to challenge prevailing discourses • give teachers opportunities to participate in a professional community of practice (The community could be located within the school or external to the school.) • promote practices that are consistent with wider trends in policy and research. (E.g., practices were consistent with pedagogies promoted by national subject associations.)
The content of professional learning and development
<p>Effective professional learning experiences tended to:</p> <ul style="list-style-type: none"> • integrate different aspects (E.g., teachers were supported to translate theory into classroom practice. Teacher learning experiences showed connections between pedagogical content knowledge, assessment information, and how students learn different subject areas.) • make clear links between teaching and learning, or help to establish student–teacher relationships, or both (All experiences were underpinned by the idea that what teachers did in classrooms strongly influenced learning.) • use assessment to focus teaching and enhance self-regulation (E.g., assessment could be used to provide a catalyst for initial engagement, identify teacher or student learning needs, or to inquire into the effectiveness of practices for particular groups of students.)

- **promote sustainability.** (This was dependent on teachers' acquiring both an in-depth understanding of theory to assist in instructional decisions and the skills of inquiry to judge the impact of teaching on learning and identify next steps.)

Activities that promoted professional learning

Effective professional learning tended to include:

- **activities that clearly aligned with the intended learning goals**
- **a variety of different activities** (Teachers were provided with a range of ways to understand the content. Listening to experts was not sufficient to change practice. The way the content was portrayed through the activity was more important than the actual activity.)
- **opportunities for teachers to discuss and negotiate understandings** (Teachers discussed and negotiated the meaning of the concepts that were focused on. Understanding of new theories was sometimes developed through engaging with teachers' existing theories.)
- **an ongoing focus on student learning.** (The activities offered in the professional learning sessions developed teachers' understanding of the relationship between their teaching and student learning.)

(Conditions adapted from Timperley, et al., 2007, pp. xxvii–xxxvi)

The range of conditions shown in the box above clearly demonstrates that **organising effective professional learning is a complex endeavour which requires the developers to have a sound understanding of how a change process might be managed in a school.**

Timperley et al. (2007) suggest that the content of teacher professional development sessions is not always well-grounded in research evidence. **Therefore, the developers of professional learning sessions also require a sound knowledge of the theoretical perspectives underpinning a new approach, and how these are connected to pedagogy.**

Overall, effective professional learning relies on schools developing effective organisational learning cultures. These findings have substantial implications in terms of how opportunities for teacher professional learning are planned and designed.

The findings appear to hold whether the outcomes desired are improved literacy and numeracy or improved approaches to curricula and co-curricula physical education and activity. From a study of professional learning in relation to the Physical Activity–Physical Education initiative in primary schools, Petrie, Jones, and McKim (2007), noted that professional learning experiences are particularly important in primary schools as teachers may not have specialist skills. They recommended that:

longer-term in-depth professional development is required for the development of teacher knowledge. This is best supported by the allocation of adequate time and appropriate change management strategies;

... the development of teacher knowledge, including pedagogical content subject, content knowledge and curriculum knowledge, is needed in addition to general pedagogical knowledge, in professional development programmes relating to curricular and co-curricular physical activity. (Petrie, et al., 2007, p.7)

Some of the key ways an organisational learning culture can be created through teacher communities of practice are discussed below.

Logic link=
Community of practice developed
Professional development planned
which supports the uptake of
resources

Teacher professional learning communities

One way of creating an environment that meets many of the conditions for effective professional learning as outlined by Timperley et al. (2007), is to offer learning experiences within the frame of teacher **professional learning communities (PLC)**. A PLC is

an inclusive group of people, motivated by a shared learning vision, who support and work with each other, finding ways, inside and outside their immediate community, to enquire on their practice and together learn new and better approaches that will enhance all pupil's learning. (Stoll et al., 2006, p. 1)

Most researchers seem to be in agreement that the development of PLC is a way of changing teachers' beliefs, understandings and practices (Fullan, 2007; Louis, 2010; Stoll, 2011; Timperley, et al., 2007). These communities also harness staff's leadership capabilities and expertise and therefore are generally recognised as a form of distributed leadership (Stoll, 2011). Over the last decade the school change research has increasingly focused on how and why **creating teacher PLC is a more effective mechanism for supporting change than expecting teachers to "implement" new practices as intended by others** (Louis, 2010). PLC offer a vehicle for providing professional learning in way that contrasts with transmission-focused professional development sessions where teachers were given information about new approaches and expected to adopt them. The synthesis conducted by Timperley et al. (2007) suggests that these types of one-off, transmission-focused learning experiences are not likely to result in changes in practice.

Fullan (2007) states that changing what people **do and think** are fundamentals of educational change. However, changing teachers' beliefs, understandings, and practices in a way that improves student outcomes is a complex task (Timperley, et al., 2007). Fullan (2007) and Guskey (2002) note that teachers' beliefs often change after they have trialled new practices, not at the start of a change process or at the point when they have been provided with information about why a change might be needed. Thus their behaviour can change before their attitudes and beliefs.

What are the characteristics of effective PLC that support teachers to change practice as well as attitudes and beliefs? Stoll notes these communities share several intertwined characteristics. They promote:

- shared values and vision (that are jointly developed)
- collective responsibility
- collaboration which is focused on learning
- group as well as individual professional learning (through a range of professional learning activities)
- reflective personal inquiry (through inquiry into teaching via means such as action research, peer observation, analysis of data)
- trusting relationships (adapted from Stoll et al., 2006 & Stoll, 2011, pp. 105–106)

In general, PLC tend to use the strategies discussed earlier by Bentley (2010) for spreading innovation: imitation, iteration, improvisation, inspiration, immigration and interpretation. One important role of PLC is to provide teachers with space to **bring together outside and inside knowledge** (Louis, 2010). Research and new theory can be seen as one set of "outsider" knowledge, and teacher experience or practice-based knowledge as one set of

“insider” knowledge. Louis (2010) suggests that for change to be sustained these two sets need to be blended. This is one way of integrating theory with practice noted by Timperley et al. (2007).

However Hargreaves and Shirley (2009) caution that PLC are not a panacea. They can become either too tight or too loose. If mandated for teachers in high-stakes areas such as literacy, Hargreaves and Shirley suggest there is a danger they can become “performance training sects” that channel teachers along prescribed paths. Alternatively, they can also become “too loose” by creating a supportive environment in which existing practice is not sufficiently challenged. The balance of top-down direction, expert input, and accountability versus teacher autonomy is important in shaping the form of PLC. Thus initiatives need to consider **how to enable teachers to work together in PLC in a way that is sufficiently challenging to further the goals of an initiative**. Teachers need time to bring together insider and outsider knowledge and trial new approaches.

Logic link=
The school culture changes to actively embrace sport as a tool for achieving wider educational outcomes

Re-culturing and creating a new shared vision

Overall, Timperley et al. (2007) conclude that effective PLC are characterised by two conditions. One is that they support participants to process new understandings and their implications for teaching. This can involve challenging problematic beliefs or bringing external expertise and new perspectives to the group in ways which challenge prevailing norms. A second core function of PLC is that they support teachers to replace individualism with norms of collective responsibility for students’ learning.

One important benefit of PLC processes is that they can support school staff to work together to create a **shared vision for what change might look like in their context**. The existence of a common vision or mission is a characteristic that supports change (Leithwood, et al., 2004; Russell, 2003; Stoll, 2000; Stoll & Fink, 1996; Timperley & Robinson, 2000). Stoll (2000) suggests that a shared vision is a key pre-requisite to school change. A shared vision usually includes common beliefs and understandings, and clear goals.

Creating a new vision and values is not something that is achieved quickly. Research suggests that teachers need time and space to **engage in collective sense making** related to new initiatives (Louis, 2010). This can support the development of coherent and shared views of “how we do things around here”. The experience from studies such as the CIPs (Boyd, et al., 2005) and CIES (Hipkins, et al., 2011) suggests that teachers need time and processes that enable them to contribute their experiences, discuss their concerns, and create a new vision or adapt ones provided by others, if necessary, to reflect their reality.

However, Hargreaves and Shirley (2009) consider that “presentism” or short-term thinking often acts against change in schools, as the conditions that surround teachers tend to pull them back into dealing with short-term or immediate concerns. One example is the pressure to adopt standards-based reforms. To counter such short term thinking, those who are attempting to engage schools and teachers in longer-term transformation need to support teachers to **create a longer-term vision and processes**. These processes need to support school staff to move beyond immediate challenges, and offer teachers space to resolve issues and differences to create a shared vision and values (Timperley & Robinson, 2000).

Logic link=
Teachers understand that the new approach does not necessarily involve much additional work

Connecting with the known

One factor that can influence the speed of change and the adoption of an initiative is the extent to which the approaches, pedagogies and values that the initiative is promoting are aligned with existing practices, values and priorities in the school sector (Fullan, 2007; Timperley, et al., 2007). If there appears to be substantial alignment then it is more likely that the new approach will be adopted or used by schools. This sense of alignment was one reason the revised curriculum was quickly adopted by many of the staff at CIES schools when they could “see themselves” in the document (Hipkins, et al., 2011). The CIES school leaders also understood the need to explore the alignment between existing school practices and the curriculum, and so they structured initial professional learning sessions to give staff time to “unpack” the document and explore the similarities and differences with existing practice. For a new initiative, these findings **signal a need to provide time for staff to examine inter-relationships and promote key connections between the initiative and each school’s priorities, practices, and values.**

Partnerships that support change

The information presented above about PLC shows how partnerships with teachers can support change. This section now considers how other forms of partnership can support change in schools.

Logic link=
Parents and whānau understand and support the approach

Partnerships with parents and whānau

Chapter 2 discussed how one characteristic of learning organisations is their ability to use community strengths (Fullan, 2007). Parents and whānau are key members of the wider school community. Much of the school-change literature suggests that initiatives are more successful when they are supportive and involved with new approaches (Bishop, O’Sullivan, & Berryman, 2010; Fullan, 2007; Thomson, 2010). Fullan (2007) notes that schools which engage in successful change processes have usually worked over time to build effective relationships with parents. These schools also have governing boards that actively support the school to work towards change.

In a synthesis of findings from recent New Zealand research projects that explored community engagement, Bull (2010) noted that some schools appeared to find it a challenge to engage with their parent community. One reason for this appeared to be that schools were unclear about the **purposes and goals** of this engagement. Bull also identified a continuum of possibilities for working with parents. These ranged from approaches and actions that essentially **informed** parents about school practices, to those that create space for more **participatory interactions**. Bull concluded that many schools appeared to operate at the “inform” end of the continuum. However, other schools saw parents and other community members as resource people whose expertise could be used to support student learning.

To fully use the strengths of their community, it is likely that schools will need to move to the **participatory** end of the continuum. Bull (2010) suggests that, for **participatory interactions** to happen, **schools needed to create processes to work with families and give these community members the information, authority and resources they need to work with the school.**

In the CIES study, some of the early adopter schools were “**crisis turnaround**”¹ schools. These schools appeared more willing to engage with their communities to support change as they had a strong sense of needing to change (Hipkins, et al., 2011). They positioned parents and whānau as active partners in the school’s change process. One common characteristic they had was culturally competent leaders who had a strong vision for the school and used collaborative leadership practices to support staff to come onboard with this vision. These leaders also enabled and resourced other school staff to lead processes that formed partnerships with local whānau and iwi.

Overall, these studies suggest that parents and whānau can be involved in meaningful partnerships that support school initiatives. However, it is important to **be clear about the purposes and processes for involving parents and whānau, what their role will be, and how these partnerships will be supported.**

Logic link=
Wider community organisations
effectively involved in school sport

Partnerships with community agencies

In the context of school sports, schools form partnerships with local sports organisations, community groups and regional sports trusts (Petrie, et al., 2007). Fullan (2007) suggests that for these wider partnerships to support change, the roles of groups and agencies need to be clear and they need to be working in ways that align with the goals of the new initiative. The evaluation of the Fruit in Schools initiative showed that support from a range of agency partners was one of the key enablers of change for schools (Boyd, Dingle, Hodgen, King, & Moss, 2009). However, these agency partners sometimes had different goals and priorities and therefore needed a forum to work through these differences.

Logic link=
Students buy-into the concept that
sport is important for them

Partnerships with students

Senge (2010, 2000), Fullan (2007) and Flutter and Rudduck (2004) all consider students to be underutilised as potential community resource people who can actively contribute to change processes in schools. Fullan suggests that schools and teachers tend to see students as the possible beneficiaries of change and “rarely think of students as participants in a process of change and organisational life” (Fullan, 2007, p. 170).

Senge (2010) considers the overall goal of education needs to be concerned with the creation of “systems citizens” who, rather than being passive recipients of a curriculum that is designed for them, learn to develop a sense of responsibility and efficacy in shaping their world. One way Senge considers this can be achieved is through offering students increased opportunities to shape the school environment and curriculum.

New Zealand studies show that including opportunities for enhanced student involvement and leadership can support change in school settings and also can have a wider range of benefits for students that include an enhanced sense of connection to school and community and opportunities to develop a wide range of competencies needed for lifelong learning (Boyd, 2011; Boyd & Watson, 2006; Hipkins, et al., 2011).

¹Using Stoll’s (2000) categorisation of school culture these schools could also be called “**struggling**”.

Much of the literature suggests that initiatives are more successful when students are actively engaged in the process. However, it is important to be cautious in ensuring that the participation of young people is framed as a meaningful partnership and not as a tokenistic “student voice” consultation about experiences or processes that have already been predetermined. Bolstad (2011) suggests that the forging of genuine and productive youth–adult partnerships is likely to require the transformation of aspects of school culture that act against partnerships. Such aspects include the power structures in schools which frame teachers and school leaders as the experts. **Bolstad’s work suggests that, for new initiatives, a careful consideration of the nature and purpose of these partnerships is required.**

Case study examples of student involvement in change

Student leadership in schools that were early adopters of the revised curriculum

As they explored the revised curriculum, many of the early adopter schools in the CIES (Hipkins, et al., 2011) and *Shifting the Frame* (Boyd & Watson, 2006) study increased their focus on involving students in school decision-making. A number offered students opportunities to provide input to the design of the “big picture” of the school curriculum and to make decisions about the classroom curriculum. Student leaders were able to assist in shaping conversations with their peers, and in some cases with parents, about this “big picture”. These conversations helped the school to make sure that learning was seen as relevant and engaging, and they also supported students and parents to understand the new directions the school was taking.

Student leadership in schools from the Fruit in Schools initiative

Supported by health promoters from organisations such as district health boards, regional sports trusts and the Heart Foundation, schools in the first three phases of the Fruit in Schools initiative set up a wide range of leadership opportunities for students (Boyd, 2009, 2011). Most of these approaches were related to three of the four focus areas of the initiative: healthy eating; physical activity; and sunsmart behaviours.

With support from school staff and health promoters, students designed new ways of promoting healthy lifestyles within the school environment. Offering leadership opportunities to students was one of the success factors that supported the implementation of Fruit in Schools and assisted in creating change in schools, and in students’ health-related knowledge, attitudes and behaviours. Observing how engaged students were in these leadership experiences assisted staff to reframe their views about students’ ability to self-manage, work collaboratively and develop innovative ways to engage their peers. However, these student–adult partnership activities were often run outside the classroom curriculum, and therefore could require extra resourcing. The findings of the evaluation suggested that activities which enabled student leadership were more sustainable if they were integrated within the usual classroom programme and with school-wide focuses (Boyd, et al., 2009).

Structures that support change

The school-change literature is clear that resourcing, changes to school structures and adequate timeframes are key supports for change.

Logic link=
School policies and practices are
sports friendly

Structuring the timetable to support change

If an initiative requires teachers to meet together in PLC, or time to develop new resources, this may require a change to school meeting structures. In secondary schools, this can also mean changes to timetabling. Many of the schools in the CIES study created new staff professional learning structures to support their goals (Hipkins, et al., 2011). They replaced administration-focused staff meetings with professional learning sessions. They also created new team structures that enabled staff to work across teams and within learning areas. These structures enabled new learning to be shared between teams. However, to do this they also needed to create time for these teams to meet.

In secondary schools, the timetable constrains teachers' opportunities to meet. It can also be a hindrance to innovative school programmes, particularly those which might involve students in extended study or off-site visits (Boyd, et al., 2005; Boyd, McDowall, & Cooper, 2002; Hipkins, et al., 2011). A number of the secondary schools in the *Innovative Pathways* study had developed senior sports academies or sports studies programmes tailored for students who were at risk of being unprepared for the transition from school (Boyd, et al., 2002). As part of these programmes secondary students coached younger students at their own school and at local primary schools. The secondary schools found they needed to timetable classes in blocks so that students had time to attend off-site training or coaching sessions. For this to occur, they had to have support from school leaders and the staff who constructed the timetable. Schools in the CIES (Hipkins, et al., 2011) and CIP study (Boyd, et al., 2005) made similar timetabling changes to support students to engage in in-depth study.

Thus the leaders of initiatives need to consider how they can work within, or change, existing school structures, such as meeting times and timetabling options, to ensure these structures support the development of teacher PLC and enable students to engage in extended learning experiences.

Logic link=
Professional development planned which
supports the uptake of resources

Adequate resourcing

Time for teachers to explore new practices

The allocation of extra time for teacher professional learning is often cited as a core aspect of successful implementation of an initiative. Timperley et al.'s (2007) meta-analysis noted that effective professional learning opportunities "typically occurred over an extended period of time and involved frequent contact with a provider" (p. xxvii). However, providing extra time in the form of teacher release days did not necessarily support change. **How the time was used was more important than how it was structured** (Timperley, et al., 2007). As discussed earlier, successful professional learning experiences create opportunities for teachers to participate in a variety of learning communities in which teachers are able to support one another, and ideas, experiences and challenges are shared.

Logic link=
Quality teaching and assessment resources
produced by teachers and others

Curriculum resources

Fullan (2007) suggests that high quality instructional (curriculum and assessment) resources are an important aspect of any change process. Instructional resources can include materials

such as lesson plans, suggested classroom activities and worksheets, assessment activities, and guidelines for how to implement these within a classroom programme. However, Timperley et al.'s (2007) meta-analysis about the characteristics of effective professional learning found that **instructional materials are not sufficient in themselves to bring about changes in teaching practice**. To be effectively used, materials need to be provided in a context which gives teachers opportunities to explore the interaction between the activities in the resources, the conceptual understandings that underpin the resources, the pedagogies promoted and the teachers' existing beliefs. **Providing teachers with curriculum and assessment materials and guidelines about how to use them needs to be framed as more than a "how to" guide.**

Logic link=
Sport NZ develops and sets up the
programme well

Realistic timeframes for change

Many reform efforts are characterised by a short burst of activity followed by a return to previous practice (Thomson, 2010). One reason for this is that **the design of most programmes underestimates the length of time that is necessary for change to become embedded** in school practice. However, Timperley et al. (2007) note that some studies show it is possible to create changes over a relatively short time (if the focus is on relatively narrow curriculum goals). Thomson (2010) also suggests that the order of change influences timeframes. If the change process only aims to add a course, or alter practice in one or two departments, this may be easily to effect and will take less time. **However, if whole school change is desired then longer timeframes are required.** Fullan (2007) considers extended time is necessary because teachers need time to come to grips with three things:

- 1) new materials
- 2) new teaching approaches
- 3) the possible alteration of beliefs and underpinning pedagogical assumptions.

Both the education and the health literature is in general agreement about the length of time an initiative must be in place before impacts are clearly evident in student outcome data (International Union for Health Promotion and Education, 2008; Russell, 2003; Timperley, 2003; Timperley, et al., 2007). Timperley et al. (2007) note that **in most circumstances, an extended timeframe of two to five years is needed**. In a study of the development of learning communities which aimed to improve literacy practices in a group of South Auckland primary schools, Timperley (2003) reported that gains were evident in students' literacy achievement data only after three years. In a secondary school context, where the challenges are more complex, Russell (2003) states that about five years may be needed before changes in pedagogy result in changes to student outcomes. In relation to the health literature, the International Union for Health Promotion and Education (2008) guidelines note that specific actions in schools take approximately three to four years to implement. Longer-term change can require ongoing action and support over a period of five to seven years.

An extended timeframe is often needed because the first year of an initiative is often a "bedding in" or preparation period as schools develop new ways of working, put in place new structures and offer professional learning opportunities for teachers (Ma, Stewin, & Mah, 2001; Plog, Epstein, Jens, & Porter, 2010). It is likely that only modest, if any, changes to student outcomes will be achieved in this time.

These findings suggest there is a need to be realistic both about the time needed for change, and about expectations of the time it takes to show change in student outcomes. For example, there is often pressure to produce annual reports of evaluation data which can act to demotivate teachers if they see no changes occurring in the first one or two years.

Logic link=
Sport NZ develops and sets up the
programme well

Accountability and feedback loops

The school-change literature suggests that some forms of accountability and assessment can support change by providing feedback into the system (Fullan, 2010; Timperley, et al., 2007). Feedback is important to the success of initiatives as teachers and school leaders tend to find successes motivating. Fullan (2010) considers that both pressure and support mechanisms can be framed in ways that provide motivation for schools and teachers – he calls this positive pressure. These mechanisms include the following:

- **Peer partnerships** (e.g., learning communities which support members to learn from one another in an on-going way while also providing group accountability and peer pressure to change).
- **Non-punitive accountability** (where the focus is on honest discussion and capacity raising rather than blame).
- **Transparency of data and practice** (a transparent approach to data offers schools information about the effectiveness of approaches. Transparency of practice enables staff to learn from observing others whose work is effective.)

Leithwood et al. (2004) suggest that extensive use of shared formative evidence is a powerful mechanism which supports school change. For example, if staff in the CIP study (Boyd, et al., 2005), collected or received feedback that clearly showed evidence of a project's success, they were more committed to it.

In general, Timperley et al. (2007) suggest that, to support change, **professional learning opportunities need to support teachers to become skilled in inquiring into their own teaching.** To this end, Timperley et al. (2007) offer a model of teacher inquiry that is similar to the model suggested in the revised curriculum (Ministry of Education, 2007). Use of these models is now common in most current New Zealand whole school change initiatives such as ICT and literacy professional development. These initiatives support teachers to self-generate formative feedback as they engage in reflective inquiry and action research projects to explore teaching and learning practices related to professional learning goals.

The growth in New Zealand schools in the use of teacher inquiry approaches to build practice and provide formative evidence has implications for the processes that are prioritised when designing initiatives. As noted earlier, initiatives are likely to be more successful if they align with existing approaches in the school sector. This suggests that **exploring ways to use models of teacher-inquiry to build practice and provide formative evidence is likely to support an initiative to become more embedded in schools.**

Reflection questions for chapter 3

Planning for professional learning and building PLC

How will the initiative ...

- *build effective professional learning experiences for teachers* into the process?
- ensure these professional learning experiences offer *space for teachers to work together in professional learning communities* to engage in *collective sense-making* and blend *inside and outside* knowledge?

Building active partnerships with students, community agencies, and parents and whānau

How will the initiative ...

- support the *formation of genuine partnerships* with students, parents and whānau, and community agencies in ways that support the partners to be agents of change?
- give clear information about the likely roles of students, parents and whānau, and community agencies in the initiative?

Using feedback and data

How will the initiative ...

- use *teacher inquiry models* which provide teachers and schools with *formative feedback and support capacity raising*?

4. Sustaining and spreading change

Introduction to sustaining and spreading change

Considering how to plan initiatives so that they are sustained in the longer-term, as well as spread to new sites, is increasingly becoming an area of interest for school change researchers (Bishop, et al., 2010; Fullan, 2004, 2005, 2007; Hargreaves & Goodson, 2006; Hargreaves, Lieberman, Fullan, & Hopkins, 2010b; Hargreaves & Shirley, 2009; Mitchell, Cameron, & Wylie, 2002; Stoll & Fink, 1996). Three areas of relevance to the Sport in Education project in relation to sustaining and spreading change are discussed in this chapter. They are:

- anticipating implementation dips
- sustaining change over time
- spreading or “scaling up” change.

Anticipating implementation dips

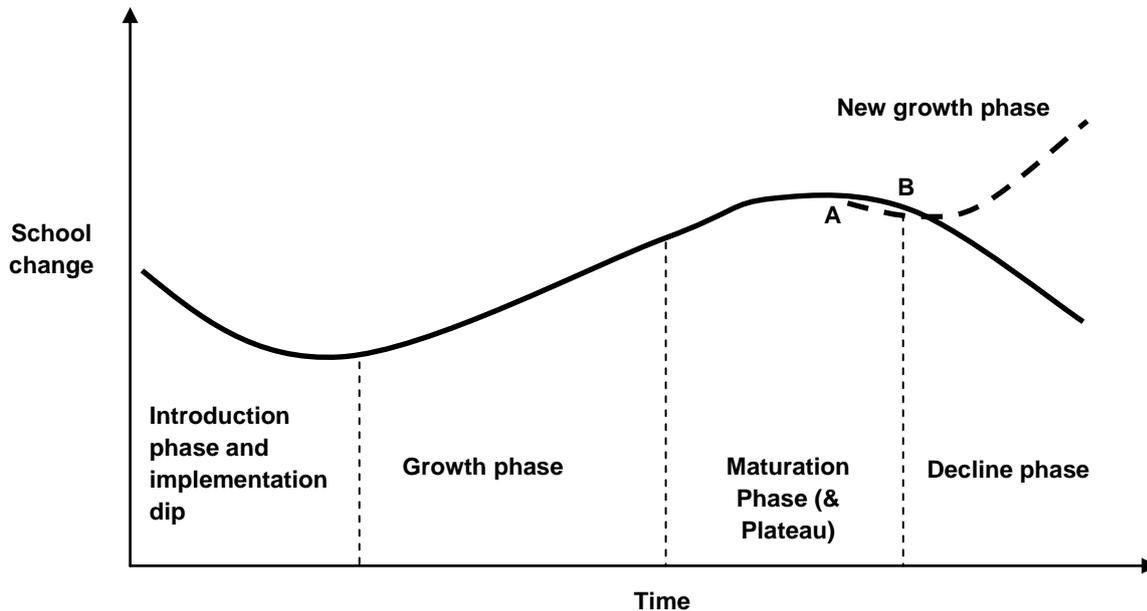
Logic link=
Sport NZ develops and sets up
the programme well

The implementation of initiatives has often been described as a linear process which goes through the stages of **initiation and implementation**, to reach an **institutionalisation** or “diffusion” phase where change becomes embedded throughout school practice (Fullan, 2007; Stoll, 2000; Stoll & Fink, 1996). Fullan (2004) challenges this idea by suggesting that the **change process in schools is not linear** and instead often conforms to an **ongoing cycle of plateaus** (which could be seen as a series of examples of diffusion). A sigmoid or s-shaped growth curve² is increasingly being used to represent this cycle. As shown in Figure 4, the s-shaped curve has an introduction phase that is often followed by an implementation dip. After

² Charles Handy is credited with introducing the use of the s-shaped growth curve to talk about change in the book *The Empty Raincoat: Making Sense of the Future*. UK: Random House, 1995.

this is a growth and maturation phase (the first plateau), and then either a decline or a regrowth phase (which then leads to another plateau).

Figure 4. Diagram of s-shaped growth curve*



* Model adapted from Cowie et al. (2011, p. 2)

Resources and support are needed during the initial introduction phase and during the implementation dip. During the maturation phase at point A, there is the potential for either a new cycle of change to occur, or alternatively, a return to old practices (as shown at point B on the diagram). To encourage constant growth, the time to start planning for the next cycle is at point A rather than waiting till the decline has already started at point B. At point B, schools may need some form of new resources, or action that supports a new growth phase. Fullan (2004) suggests that, in order to get past a plateau, we need to harness the resources of the system to innovate and create the next “**adaptive break through**”. This requires reformers to address the challenges posed in the system.

For educational initiatives, studies show that schools reach the implementation “plateau” (point A) in terms of **ideas** and **energy levels**. For example, teachers’ attention can start to move to the next idea or focus, or they can get “stuck” on particular challenges that occur as a result of the new approach. One example of this is provided by Stoll (2000) who suggests that, in a secondary school context, there is a need to resolve interdepartment issues that might impede new approaches moving forward.

Fullan (2004) suggests that one way of moving past an implementation plateau is through programme leadership which enables a diverse range of stakeholders to exchange ideas and share best practice to develop new practices. An example of this was demonstrated by Ministry of Education actions which followed the CIES study, which aimed to address the implementation plateau that was clearly evident in some of the schools (Cowie, et al., 2011). The Ministry of Education responded to this finding by attempting to engage schools in a new growth phase by funding new research projects which enabled researchers and school practitioners to work together to develop new resources for schools. These resources

specifically aimed to address some of the key challenges that arose during the maturation phase.

Overall, what we can learn from the s-curve model is that different **forms of resources and support are needed at each step of the journey**, and **some forms of support or structures are needed for on-going sustainability and to support schools to engage in new growth phases**. This recommendation also applies to leadership practices. The CIES findings suggest that **“transformational change requires different forms and types of change management and leadership at different times”** (Hipkins, et al., 2011, p. 94). Such strategic differentiation of support enables the system to learn what works in different situations and switch approaches when necessary to build capacity.

Is it important to note that the process evaluations that accompany many educational initiatives often identify the challenges which result in an implementation plateau. However, funding, support, and implementation processes tend to be set at the start of new initiatives and therefore no extra resources are available to address these challenges. Therefore it can be helpful to **position the change process as an iterative cycle** rather than working towards an end-point. At the start, some resourcing could be unallocated to ensure the programme is able to find ways to address challenges that arise. The building of a professional community around a new initiative will also ensure that there are a number of resource people whose ideas can be used to find solutions to unanticipated challenges.

Logic link=
Partner schools implement
the initiative well

Sustaining change over time

Fullan (2007) considers successful implementation of a new approach is one hurdle, and successful continuation of a programme or reform effort (whether internal or external to a school) is another. The ultimate goal of a change process is that new approaches become so embedded in practice that a “project” ceases to be viewed as a separate initiative and new practices become an everyday part of school life. Talking about the New Zealand context, Bishop, O’Sullivan, and Berryman (2010) suggests that **issues of continuation and scale-up need to be built into the design of new approaches rather than considered at the end of the implementation process**.

Most writers consider longer-term sustainability to be **dependent on the interaction of many variables** (Fullan, 2007; Hargreaves & Goodson, 2006; Savaya & Spiro, 2012; Scheirer, 2005). Both the general and the educational sustainability literature note that funding and leadership are key. Some of the findings from these two sets of literature are discussed below.

Most of the education literature about longer term sustainability suggests that **school improvement successes can be fragile** (Fullan, 2007; Goldenberg, 2004; Hargreaves & Goodson, 2006). Talking about a secondary school context, Hargreaves and Goodson (2006) report that studies show change initiatives rarely last or spread. One reason for this is the “reform fatigue” which can occur when funding for an initiative ends or when key staff leave (Goldenberg, 2004). Another reason is that, in an effort to find something that “works” some schools go through a “cycle of reforms” as they move from one school reform fad to another (Borman, Hewes, Overman, & Brown, 2003). Fullan (2007) calls this “initiative-itis”, which describes a situation where schools are advised to use many different programmes which do not have sufficient long-term funding.

This suggests that programme developers and schools need to be prepared for the length of time a change process requires, have supports in place to assist schools and staff through this process, and ensure that timeframes take into account the time needed for changes to become embedded.

Savaya and Spiro (2012) used the results from studies that explored the sustainability of social programmes to identify a number of different mechanisms that supported the continuation of programmes in the longer term. They then used these findings to develop and test a model of the factors that were likely to predict longer-term sustainability. **They found that the good quality of a programme did not predict sustainability over time. The factors that were most likely to predict sustainability were funding, leadership (by the initial developers as well as the host organisations) and community support.** From their analysis, Savaya and Spiro suggested that programmes were more likely to be sustained over time if they:

Funding

- made use of a range of different avenues and sources to attract funds as well as non-financial resources and support
- had a lower rather than higher proportion of costs provided by the initial funder

Programme funder leadership

- had an initial funder who had a high level of involvement in the programme and a “strong future orientation” (i.e., they planned for sustainability and took actions to make this happen from the inception of the programme)

Local leadership

- had buy-in from the host organisation’s management and the involvement of a wide range of staff (beyond those who were actually a core part of the programme)
- had a programme champion, and positioned the programme as a flagship for their organisation

Community support

- had community support and a range of community patrons, as well as community involvement that was perceived as helpful.

Another review of the literature about sustainability of health-related programmes by Scheirer (2005) identified a number of sustainability factors similar to those suggested by Savaya and Spiro (2012). The main factors identified by Scheirer (2005) were:

- the existence of a programme champion who had access to decision-makers and who could secure resources
- the ability to secure new forms of funding
- that key staff members perceived the programme to have benefits
- support from external stakeholders
- there was a good fit between the goals of the programme and the existing mission of the organisation
- and the programme was flexible and able to be modified to suit local conditions.

Many of these factors are also mentioned in the literature which explores sustainability of programmes in school settings. Fullan (2007) cites research which suggests that the successful continuation of new approaches in schools rests on three conditions:

- 1) The new approach becomes embedded into the structure of the school (e.g., through policy or timetabling.)
- 2) By the time initial funding finishes the new approach has developed a critical mass of staff who are skilled in the new approaches and committed to its continuation.
- 3) The new approach has established processes for continuation (such as trained personnel to support new teachers or has sourced extra support) (Huberman & Miles (1984) cited in Fullan, 2007).

Overall the school-based literature suggests that **change is more likely to be sustained over time if mechanisms to embed the change have been established at multiple levels of the system** (Coburn, 2003). Coburn suggests these mechanisms are both surface and deep (conceptual). However, she considers that **deep change is necessary for sustainability**. Deep or conceptual mechanisms include the embedding of the core principles, beliefs, or norms of an initiative within schools' and teachers' ways of working. Surface mechanisms include the spread and use of practical tools for teachers, and well as the provision of ongoing funding.

In combination, the findings from these overview studies suggest that there is a need to **plan for sustainability from the inception of an initiative**, and that these plans need to consider the specific actions to support sustainability that will be taken by programme developers as well as at a local level (e.g., in schools and community agencies). Initiatives need to be designed to support deep change, as well take into account more surface mechanisms such as how different forms of funding and a range of different forms of resources can be used to support the programme in the longer-term.

Spreading change by “scaling-up”

Logic link=
The toolkit and approach
findings are progressively
implemented in NZ schools

There is a growing body of literature which discusses the challenges and successes inherent in scaling-up initiatives beyond the first group of schools that take part (e.g., Bishop, et al., 2010; Bobis, 2011; Coburn, 2003). Thomson (2010) suggests there is a need to move past the “islands of innovation” that can be created by pilot or beacon school projects. However, this is not a simple task.

Coburn (2003) challenges the idea that scale-up is only about expansion to extra sites. She suggests that **if a reform cannot be sustained over time, then it cannot become large-scale**. She offers a more multidimensional view of scale-up, as follows:

- **Depth**. First, attention needs to be paid to ensuring that the reform promoted deep change, that is, changes to school and teacher norms, principles and beliefs, and thus the underlying pedagogical principles by which teachers operate.
- **Sustainability**. Teachers are better able to sustain change when the system around them offers multiple support mechanisms. Some of these mechanisms include supportive professional communities, and alignment of school and national policies.

- **Spread.** Reforms need to spread more than teaching activities. Spread can be thought of within classrooms, within schools, and within districts or nationally. Within classroom reform involves teachers spreading practices to additional subjects. Within schools reform involves spreading practice across more classrooms or teachers. Within districts reform involves spreading norms, principles and beliefs, as well as teaching resources and ideas to additional schools. Spread at a regional or national level also involves the institutionalisation of reform principles in government policy or through other related initiatives.
- **A shift in reform ownership.** For reforms to be sustained, ownership needs to shift from the developers to the implementers (teachers, schools and regions). In this way the reform is no longer “external” to a school – schools and teachers have the authority to engage in strategic decision-making about the reform as well as sustain and spread the initiative.

Coburn notes that the literature tends to focus on gaining school and teacher “buy-in” to reforms and is mostly silent about how to shift reform ownership to teachers and schools. Both Coburn and Bishop et al. (2010) suggest that one way of doing this is through developing communities of practice with “brokers” or knowledgeable teachers who, over time, take on the role of professional development for teachers new to the programme. Another strategy is to ensure that teachers who have opportunities to develop extensive knowledge about the reform are used as resource people in strategic decision-making about the reform as it develops. This will place them in a better position to increase their leadership role in decision making in the future. Similarly, at the whole-school level, expert schools can become resources for other schools.

Coburn (2003) comments that her view of scale-up has implications for programme developers who need to consider the trade-off between breadth and depth in their planning process. To ensure a reform impacts at a deep level and that reform ownership can be shifted, it is likely that capacity building will be needed at multiple levels. **This has cost and time implications as it may involve sustained professional learning experiences for school staff as well as time for programme developers to build networks across the system that promote coherence and thus sustainability across the wider system.**

New Zealand perspectives on scale up (e.g., Bishop, et al., 2010), suggest that systems level support is needed for long-term sustainability of programmes and reforms. Bishop et al. consider that, like the implementation process, the **scale-up process is iterative** and requires schools, programme developers and policy makers to work together to align goals. Thus, the developers of new initiatives need to ensure the practices they promote are aligned with those suggested by subject associations, as well as work to align systems level policy with the goals of the initiative.

Reflection questions for chapter 4

Anticipating implementation dips and supporting new growth phases

How will the initiative ...

- *take into account the likely different phases of the initiative* and the different forms of support and leadership that are needed at each (that is, each phase of the s-shaped growth curve)?

Planning to sustain change over time

How will the initiative ...

- plan from the start to *build processes and structures that support sustainability?*
- plan from the start to *make use of a diverse range of funding sources and resources* to support the initiative in the longer-term?
- ensure *other key mechanisms that support sustainability are in place* (e.g., leadership processes that support change at the programme developer and local level and community support)?

Planning to spread change by “scaling up”

How will the initiative ...

- *balance the tensions between deep and surface change* in ways that support spread and *shift in ownership of the initiative to schools* and the wider community?

5. Concluding comments

Change in schools is a fragile endeavour that is influenced by many variables that exist within the individual system of each school as well as in the wider system which surrounds schools. It is clear that an understanding of the systemic and non-linear nature of change is necessary to effectively plan for change.

To effectively manage change in schools an understanding of local and national systems is required, as well as knowledge of how to work within and between these systems to seek alignments, create knowledge flows and build capacity for change across the system.

It is important to note that many of the factors that support the effective implementation of an initiative are also likely to support its longer-term sustainability. An effective change process carefully considers the process as well as the product and starts to build in processes that will support sustainability and scale-up from the inception of the initiative. This process is also cognisant of the time necessary to support change in schools and the need to assist schools to find creative solutions to any conceptual or structural challenges that may present themselves (e.g., timetabling, NCEA requirements, and funding for new approaches).

Leadership on multiple levels is necessary for change, as are processes that build leadership capability across the system. Effective leadership necessitates the building of a network of effective relationships and collaborations within and between schools, as well as between schools, programme developers, parents, students, community agencies and policy makers. In this way an initiative can work to bring all stakeholders onboard, using their skills and strengths to assist in building new approaches, while also building capacity in the system through networks of distributed leadership. In this way a community of practice is built around an initiative which is likely to support its longer-term sustainability.

It is also clear that, to be effective, the designers of new initiatives need to move past the idea that change is a technical process and that teachers will adopt new approaches and ideas when they are informed about them and if they are provided with teaching resources. Any change process in schools needs to pay close attention to the types of professional learning experiences that are planned for teachers and how these might support teachers to:

- clearly understand the principles underpinning the change
- work together to create new ways of working that honour these principles while also fitting their local context
- engage in deep change which challenges prevailing beliefs and creates new practices
- work together in an ongoing way in a community of practice.

To assist Sport New Zealand to review the design of the Sport in Education initiative against the findings and key messages in this literature scan, the main messages from the three sections are summarised in the table below. Each main message is connected with a relevant link from the Sport in Education programme logic.

Key message from the literature	Programme logic links
Section 1: Preparing for change	
Does the plan for change ...	
<p>... make use of knowledge about effective change processes? Does the plan include:</p> <ul style="list-style-type: none"> • processes that encourage stakeholder ownership over the initiative? • processes that balance top-down and bottom-up leadership? • processes that balance implementing a new approach as it is intended while also enabling adaptability to local conditions? • approaches that will support schools to increase their capacity to manage change and self-improve? (e.g., approaches that strengthen school professional learning communities and networks)? • a realistic timeframe for change (3–5 years)? 	<p>PLANNING & DESIGNING BUILDING CAPACITY</p> <p style="text-align: center;">Sport NZ develops and sets up the programme well</p>
<p>... take into consideration the range of factors that influence the successful implementation of new approaches?</p> <ul style="list-style-type: none"> • Does the initiative address priority needs and include clear goals? • Are the expected changes realistic and supported by high-quality teaching resources and professional learning and development (PLD) opportunities? • Does the plan for change identify the different aspects of the wider system around schools that might impact on the initiative? <p>(The extent to which these factors are in place could be assessed by conducting a self-review against the factors identified by Fullan (2007). See the diagram on page 8.)</p>	<p>PLANNING & DESIGNING</p> <p style="text-align: center;">Sport NZ develops and sets up the programme well</p>
<p>... include different strategies for working to align the different aspects of the wider system in the direction of the desired change?</p>	<p>ALIGNING</p> <p style="text-align: center;">Sport NZ develops and sets up the programme well</p>
<p>... include strategies for identifying and considering the different aspects of the system within schools that might impact on the change process and which could be aligned to support the initiative. These aspects are both:</p> <ul style="list-style-type: none"> • tangible (key aspects are NCEA assessment practices and the timetable) • intangible or beneath the surface (key aspects include the school culture and leadership practices) 	<p>ALIGNING</p> <p style="text-align: center;">The school culture changes to actively embrace sport as a tool for achieving wider educational outcomes</p>

<p>... identify knowledge-sharing networks that might be useful to tap into, and work to create new knowledge sharing networks for school leaders and teachers?</p>	<p>BUILDING CAPACITY</p> <p>Good knowledge management and dissemination</p>
<p>...make use of effective knowledge sharing strategies (e.g., using ideas from Bentley (2010) on page 13 such as imitation, iteration, inspiration and the like)? These strategies can be used to support knowledge sharing about the initiative as well as to design PLD for teachers.</p>	<p>BUILDING CAPACITY</p> <p>Good knowledge management and dissemination</p>
<p>... consider the key role of school leaders in developing schools as learning organisations?</p> <ul style="list-style-type: none"> • Has the initiative been positioned in each school to make use of existing leadership structures and distributed leadership networks? • Have school leaders been supported to see how the processes used in the initiative make connections with existing NZ leadership approaches or models? • Have processes been designed to ensure that school leaders are as involved as possible in planning the implementation process in their school and in supporting, promoting and/or taking part in teacher PLD? 	<p>BUILDING CAPACITY</p> <p>Principals embrace the approach and provide leadership and resourcing</p> <p>School management identifies the most strategic pathway for introducing the new approach</p>
<p>Section 2: Implementing change</p>	
<p>Does the plan for change ...</p>	
<p>... include the development of effective strategies and criteria to select partner schools that are ready for change, e.g., using Stoll and Fink's (1996) approaches to categorising schools (see pages 21–22), and/or considered ways of assessing whether each school:</p> <ul style="list-style-type: none"> • is operating as a learning organisation with effective PLD systems • has a leadership team that is prepared to actively support and resource the initiative • has a distributed leadership structure • has at least one key champion who is in a position to influence school structures • gives priority to developing students as leaders • have strong existing relationships with regional sports trusts, community sports organisations, and parents and whānau 	<p>PLANNING & DESIGNING</p> <p>Partner schools selected where there is sufficient leadership buy-in for the idea</p> <p>Principal/senior leadership team/teacher champions identified and promoted</p>
<p>... prioritise school leader and teacher PLD, and include PLD that:</p> <ul style="list-style-type: none"> • uses effective processes and activities (see the findings on pages 23–24 from Timperley et al. (2007) about the characteristics of effective PLD) • offers effective teaching and learning resources to teachers and supports them to unpack these resources to suit their context (e.g., PLD is not in the form of a “how to” guide). 	<p>BUILDING CAPACITY</p> <p>Professional development planned which supports the uptake of resources</p> <p>Quality teaching and assessment resources produced by teachers & others</p>
<p>... offer PLD in a form that creates professional learning communities which provide space for teachers to:</p> <ul style="list-style-type: none"> • debate ideas • create a shared vision • bring together inside and outside knowledge • build new practices • inquire into their own practice and provide formative evidence of the effectiveness of new approaches 	<p>BUILDING CAPACITY</p> <p>Community of practice developed</p> <p>Professional development planned which supports the uptake of resources</p>

<p>... include effective strategies for using the skills and expertise of key partners? Key partners include:</p> <ul style="list-style-type: none"> • parents and whānau • students • community agencies such as regional sports trusts and regional sports groups <p>Key activities for working with partners include:</p> <ul style="list-style-type: none"> • sharing the main focus and messages about the initiative with partners • gaining support from partners • clarifying roles • working with partners to consider how the initiative might contribute to a range of student outcomes • supporting partners to lead or contribute to aspects of the initiative 	<p>BUILDING CAPACITY</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>Parents and whānau understand and support the approach</p> <p>Students buy-into the concept that sport is important for them</p> <p>Wider community organisations effectively involved in school sport</p> </div>
<p>... identify key school structures that might impact on the initiative and include ways of aligning these and sharing good practice? E.g.:</p> <ul style="list-style-type: none"> • school timetabling practices and meeting structures (has information been shared about sports-friendly approaches to timetabling or different ways of using school time for PLD?) • resourcing (are schools supported to consider the different ways they might provide financial and non-financial resources to support the initiative?) • assessment practices (has information been provided to schools about related NCEA standards from ITOs and NZQA?) 	<p>ALIGNING</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>School policies and practices are sports friendly</p> <p>Quality teaching and assessment resources produced by teachers & others</p> </div>

Section 3: Maintaining and scaling-up change	
Does the plan for change ...	
<p>... take into consideration that change is a cycle of growth phases rather than a linear process? E.g.:</p> <ul style="list-style-type: none"> • Are different forms of resources, support and leadership planned to fit with the initial introduction, implementation and growth phase of the initiative? • Are structures starting to be put in place that provide a space for stakeholders to problem-solve any issues that might arise as the initiative develops, and consider ways to support new growth phases? 	<p>PLANNING & DESIGNING</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>Sport NZ develops and sets up the programme well</p> </div>
<p>... consider the four key mechanisms that are likely to support sustainability? See the findings from Savaya and Spiro (2012) on page 38, e.g.:</p> <ul style="list-style-type: none"> • Funding (are a range of different avenues for funding and non-financial resources being sought?) • Programme funder leadership (is Sport New Zealand highly involved in planning and focused on planning for longer-term sustainability?) • Local leadership (do planned processes encourage buy-in from schools, involvement of as many staff as possible, and identification and support of school champions?) • Community support (how will support be sought from the community and how will community champions be identified?) 	<p>PLANNING & DESIGNING</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>Sport NZ develops and sets up the programme well</p> <p>Principal/senior leadership team/teacher champions identified and promoted</p> <p>Wider community organisations effectively involved in school sport</p> </div>

<p>... build in processes that are likely to support longer-term sustainability and scale-up? See the ideas from Coburn (2003) on pages 39–40, e.g.:</p> <ul style="list-style-type: none"> • building multiple supports for sustainability, such as professional networks and communities of practice • planning how both ideas and teaching practices developed with the partner schools might be spread to other teachers and schools • planning ways to support a shift in ownership of the initiative from the developers to the stakeholders (e.g., including processes that create teacher and school champions who can act as future PLD brokers; developing a strategic planning group of school and local and government stakeholders who can progressively take over management of the initiative) 	<p>PLANNING & DESIGNING</p> <div style="border: 1px solid black; background-color: #d9ead3; padding: 5px; margin: 5px;"> <p>Sport NZ develops and sets up the programme well</p> <p>Partner schools implement the initiative well</p> <p>The toolkit and approach findings are progressively implemented in NZ schools</p> </div>
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