Rethinking teacher education: teacher education in the knowledge age

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Other Books by the Authors

Learning Management: Transitioning Teachers for National and International Change (2007)

Education systems are increasingly under pressure as a result of social change. These pressures arise from the challenges presented by our movement to a knowledge-based society and globalisation. This text argues that pre-service education is one area of education uniquely positioned to respond effectively to the dynamics of change through the creation of a new kind of teacher – the Learning Manager. The Learning Manager will be attuned to the changing nature of the economy and contemporary issues in Australia and will be best positioned to achieve learning outcomes in this environment.

Learning Management provides teachers with a structured series of professional readings and a coordinated course of action designed to produce pedagogical strategies to achieve learning outcomes. This text reflects a transition from the teacher construct of the 1990s to the education practitioner that is appropriate for an emerging knowledge and creativity-based economy in the 21st century.


This text is about the creation of a different kind of teacher rather than a 'better' teacher. It details the rise of the Learning Manager: the teacher construct for a knowledge and creativity-based economy. It provides an exploration and explanation of the core ideas and practices that underpin the preparation of the Learning Manager by chronicling the development and implementation of a new teacher preparation program: the Bachelor of Learning Management (BLM).
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Introduction:

A Rethink on Teaching and the Challenges that Lie Ahead for Teacher Educators

“Nothing is so difficult as trying to change the nature of things. You have as sworn enemies all those who benefit from the status quo and as lukewarm defenders those who might benefit from the new” (Machiavelli 1500).

Let’s look forward a decade or two and ask ourselves what the future of schooling and teaching looks like. Look forward a decade or so and ask yourself: how will schools be organised and managed and how will teaching be done? What will mark off the old from the new? What will teachers in the most ‘out-there’ schools, if there are any be doing or not doing that would stun today’s teachers and administrators? What will be different in the way teachers are recruited, prepared, managed and perform?

In short, can you imagine astonishing changes in the way human learning is designed and accomplished in the coming decades? Is it possible there could be fundamental shifts in the way teachers ‘teach’? Most of you will probably say “No” because teaching has not shifted much over the last decade or so and it is no surprise that it is difficult to imagine how it might be different.

Look at it this way. Compared to all the developments in space travel, genetics, the Internet, communications and medical science, to name but a few, the practice of teaching seems to have fossilised. If we brought back a principal or a Director General of Education from the 1960s for example, he, and it would be a ‘he’, would be anxious about shifts in the order system of schools, the expansion of social expectations on teachers, the varying status of teachers and the demise of the ‘content’ driven curriculum. However, he would find much that was familiar in the ways schools operate today and how classroom teaching is conducted. Teaching might be more child-centred, but
teaching dismembered ‘content’ continues. Teachers might be better trained if ‘doing time’ in university is a criterion, but they still ‘do’ whatever their subjective preferences dictate and this preference is always built on the ‘broadcast principle’: conveying information through oral and written mediums. It appears that the more creative one is in ‘broadcasting’ the more effective one is as a teacher. Strategy is still set at the department level and teachers remain as cogs in a bureaucratic system that values seniority, keeping a ‘quiet ship’, union membership and risk aversion.

The question is: why is teaching seemingly caught in a cultural lag? Perhaps it is because the school as we know it and teaching itself have come to the end of a two hundred year plus epoch and are exhausted. Maybe all the tough issues in the current formats of schools and teaching have been resolved within that particular model?

But consider the opposite. Maybe teaching has not reached the zenith of its potential and, given the present historical circumstances characterised by rapid social change of a global nature, perhaps it isn’t even in the right ballpark. Maybe the existing model of how we do schooling and teaching —developmental psychology, constructivism and all the other fads of contemporary schools — has reached its limits? Rather than being at a pinnacle of achievement, maybe schools and teaching have a long way to go.

We do not wish to suggest that there have not been any advances and achievements in schooling and teaching. The concern with the individual, the advent of specialised schools, the expansion of the curriculum to account for all rather than a social class-defined segment of students, the focus on ‘learning’ are all enlightened moves. Further, over several decades now, the value of education has moved to centre stage for individuals, communities and nations. As John Naisbitt, author of ‘Megatrends’ observes, education is now the number one economic priority in today's global economy and is in the same family as economics, social class and international sport as a core concept of the 2000s. It is there on the backs of great educators like John Dewey, Pestalozzi, Piaget, Gagne and Jerry Bruner to name but a few, along with the countless teachers and administrators who have toiled to make a contribution for a better society.

Notwithstanding these achievements, schooling and teaching are subject to the S-curve phenomenon. There are periods of rapid development, progress and growth, for example when education entered its ‘mass’ phase in the 1960s, followed by a general levelling
out during a mature era, the rapid innovations in practice and aggregations of knowledge inevitably decelerate as the model reaches its limits and developments slow.

The developments of mass education and ferment in teaching have been ongoing for nearly seventy years. The list of educators above dates back two centuries. But, if we think about the last five to ten years, it is difficult to identify innovations of the same grandeur and impact as that of these people and those like them who laid the foundations of schooling and teaching. Maybe there are not any more things about schools and teaching to be discovered? The idea that the model is perfected relies on whether we or others are really happy with what we have in schooling and teaching. These would need to be fulfilling for parents, teachers, students, employers, commentators and be producing graduates whose capabilities are impeccable so that there would not be any point in seeking some other education alternative.

It would be presumptuous to assume that schools and teaching developed in previous centuries remain adequate for another historical age in their current form. The reality is that there are numerous criticisms of schools and teaching from multiple sources, based on the fact that schools and teaching continue to do what they have always done rather than being bold and taking fresh directions. Also, there are increasing operational problems in the education system as it adjusts to both national social issues and shifts in the geopolitical state of the world. Governments and commentators point to the need to overcome old, well-tried solutions that worked in the past but now reveal the limits of the present models and practices. A mindset that aims to perfect the ‘broadcasting of information’ as the premise for learning is at odds with the explosion in recent times in understandings about how people learn.

There is no doubt that schools and teaching have wrestled with some tough problems, especially since the 1970s. ‘Schooling for all’ in a period of unprecedented change demands not just new pedagogy for ‘new kids’ and for ‘new times’, but different visions, organizational patterns, management and professional preparation. We can observe this as school operational arrangements, developed for a different clientele and different aims, have been progressively altered to accommodate an avalanche of sub cultural and individual ‘problems’ presented by the multicultural society. New generations of students and changing societal conditions challenged expectations that single classrooms, time allocations dictated by timetables, age grading, lock
step progression and smooth transitions between schooling, further study and work would be unproblematic. In response, curriculum agencies and school authorities multiplied the options for students and their parents but at the expense of adaptability.

These modified systems are efficient in processing students but there is little evidence that the outcomes of schooling are more equitable. Moreover, there are now doubts that the preparation of students is appropriate for the conditions that the young will face after school. Perhaps the time has come to rethink the whole offer so that we do not continue to maintain the school and teaching legacy by short-term trade-offs that favour the system and status quo rather than individual students and the national interest.

While this is not the place to review the literature about social change, there are some core ideas that provide the background for this discussion. The speed and pervasiveness of change is a fundamental issue: the environment in which education is embedded today is one in which we have progressed from a solid to a fluid phase of modernity. Nothing keeps its shape for long and social forms are constantly changing at great speed, radically transforming the experience of being human¹.

For an institution such as schooling, with massive investments in infrastructure and a longstanding commitment to traditional ways of doing things, and established relationships with the rest of society in respect to curricula and selection for example, there is a formidable set of implications from such change patterns. Consider the parallel case of companies and corporations in the same situation. Many are being ‘blindsided’ or overwhelmed by the speed of change and pervasiveness of futures-orientated technologies, on an almost daily basis. In recent times, the entire airline industry as well as many motor vehicle manufacturers were affected by an oil crisis. In turn, dire predictions about their future economic viability and a new interest in alternative energy sources followed, each of which is a portent for the radical alteration or even demise of those industries. Similarly, digitization and the Internet are serious challenges for industries that deal in film, video, printed text, music and a host of other associated resources because people now expect these things to be readily available on the desktop at no cost.

It is not difficult to foresee the possibility that on-line packaging and delivery of games, entertainment, training, up-skilling and leisure time learning might threaten to take over from sections of the
traditional classroom and text-based education market. The players in these electronic industries are not traditional ‘education’ providers. They use consumer electronics that are the infrastructure of the economy such as open-source architecture; they specialize by outsourcing, having syndicated, networked arrangements and collaborative enterprises that threaten stand-alone ‘branded’ operations with roots in a past mode of practice. In this environment, the ‘consumer’ (read for example, student and parent) rather than the ‘producer’ (read, for example, ‘the system’) is in control; a stark contrast with let us say, public sector, top-down services. Davis and Botkin describe this method of provision of goods and services to meet people’s learning needs as revolutionary and suggest that institutions that have had a monopoly over learning provision will be overtaken by those providers interested in building knowledge businesses².

To exacerbate these trends, product cycles are short and sharp and often brutal as good ideas boom, are overtaken and disappear with disastrous results for the unwary. And, as Christensen and associates³ have argued, ‘old guard’ products, brands, loyalties and market position are subject to disruptive innovations by newcomers who can enter the market at speed and low cost and satisfy customer needs globally using the Internet and new communications tools. Market leaders in all industries are now vulnerable to these innovators, providing support to Davis’s and Botkin’s predictions.

It seems incontrovertible to us that the education industries, more properly the learning industries (see Chapter Six), can hardly be immune to these large-scale movements. The main implication for us is that if the major learning institutions where ‘teaching’ happens, such as schools, colleges and universities, are in this context, and as knowledge producers and knowledge industries they are, the people managing and working in them need the appropriate knowledge, skill and mindset characteristics to deal with new environments. This is a major challenge to what we blithely refer to as the “school system” and in particular to teacher education where the preparation of ‘teachers’ and the renewal of ‘teaching’ are supposed to be generated.

All of us in education, whether it is a school, a TAFE institute, a university, a religious organisation or a government agency, know that trying to get change underway is like trying to ‘wade through treacle’. All the smart money is on the status quo. The organisational know-how and the way it works to get things done makes doing what organisations normally do easy and everything else near impossible.
The manner in which schools are organised and managed, the patterns by which teaching is arranged with classes and so on are all consistent with the means these organisations employ to do business. It is a mindset, a set of strong beliefs about what to do on Monday, when things ‘muck up’ and when things go just right. What are called ‘problems’ are carefully handled so that those that can be fixed are dealt with while those that lie beyond the scope and experience of the organisation are re-framed or wished away. The difficulty with this approach is that in periods of rapid change and uncertainty, the very problems that are ‘too hard’ or ‘sensitive’ usually turn out to be the ones for which solutions are urgently needed.

While the ‘quiet ship’ mindset persists we all are prisoners of what is called teaching drawn from the past. Control, precision, stability and reliability remain the underlying principles of the bureaucratic operation we call education. It is true that many, maybe most, of us acknowledge that there are new problems out there from the comfort of our professional development days, in the pubs on Fridays and in the certain knowledge that we are part of the bureaucratic class of intelligent, independent, innovative and valuable ‘Gold Collar’ workers. But serious attempts at decisive innovations remain fettered and blinkered by our history and our daily grind. To get out of our predicament we need some revolutionary moves, not more of the same done better.

There is not much at all in the curricula of university-based teacher education or the professional development think tanks of the government and non-government agencies that provide leads for revolutionary thought and action. A good example of this is the 2008 Business Council of Australia report.

The Business Council of Australia recommends that the most talented, capable and committed people should enter the teaching profession and that they should be paid better. Teachers should upgrade their professional knowledge throughout their careers, and excellent teachers should be recognized through a new national certification system. Finally, there should be a national assessment and accreditation system for teacher education courses.

There is much to be excited about here, but the report gives support to more bureaucratic structures—the ‘producer’—and has little to say about changing the factors that affect student learning outcomes. There seems to be a strong reliance on ‘doing more of the same better’ and somehow ‘it will all turn out right in the end’. A national
assessment and accreditation system for teacher education courses for example, could reinforce the culture of teaching and teacher education by encouraging conformity to the standards and theories of the profession, without necessarily making a skerrick of difference to student achievement unless there are clear guidelines about what constitutes ‘success’.

In 2000–2001 the authors undertook the major development and launching of the Bachelor of Learning Management (BLM) program at Central Queensland University (CQU); a teacher education program built on the assumptions that underpinned the then emerging ‘knowledge-based society’ of the late 1990s, historical experience in teacher education and a systematic analysis of the research literature over 30 years. The BLM was founded on the emergent theory of learning management; practices around it were modified from experiences with teachers, administrators, university staff, deans of education, government and other education agencies and accreditation bodies. The BLM journey constituted the first major review and redevelopment of teacher education in Australia in twenty-five years and it signalled a radical change in the logic of teacher education at the time. Now after nearly 10 years of accumulated learning from the BLM experience, we once again seek to reposition teacher education for a better fit with the socioeconomic changes of the 2000s.

In writing this book we draw on two previously published texts on Learning Management and three specific research studies. Our two early texts on Learning Management set out ideas about a deep rethink of teacher education. The books outlined a series of theoretical positions and research dilemmas that were transformed into a journey of organic change in the preparation of teachers through the Bachelor of Learning Management (BLM). The three research studies provide us with insights into what worked in our BLM and what now needs to change.

While the past eight years was a period of ‘business as usual’ for the teacher education industry in Australia, it was for us a time of exploration and discovery that coincided with new interest from business, industry, government, the media and society, in the role education plays in economic and social development and a growing dissatisfaction with the school and teacher education sectors. A number of discussion papers, notably *Queensland State Education 2010*7, and research into the function of the brain witnessed many calls for an urgent and long overdue change to teaching practice and
the quality of teacher education. These papers buoyed the development of BLM principles and gave us the impetus to challenge the orthodoxy of what was offered as teacher education at Central Queensland University (CQU) in 1999.

This now brings us to the purpose of this book. It takes our ideas about teaching and teacher education a step further beyond our previously published ideas about teaching and teacher education⁹. In writing the book we have a specific intent: to rethink teacher education for the benefit of students and their communities and the teaching profession. We aim to help people create new mindsets and build knowledge about what is meant by ‘to teach’ and ‘to learn’ in the 2000s; to encourage teachers and teacher educators to move past what they presently believe pedagogical work to be, and to enable teaching to take its place increasingly within the Sciences, as opposed to its now problematic place within the Humanities and Arts. This is an important point because it underpins movements towards evidence-based teaching practice, the sine qua non of teaching. Teaching as a science also unlocks the potential of ‘the teacher’ role and enables it to engage with the neuro-learning sciences which appear to be set for an explosion in new understandings about how people learn and how learning programs can be designed for individuals irrespective of their supposed circumstances.

We are categorically neither interested in change for change’s sake—a criticism often levelled at innovators in universities—nor are we interested in embroiling ourselves in the politics of teachers and teacher educators. We see these agendas as counterproductive and a serious distraction from what needs to done in those sectors. But we are keen to contribute our insights to both teacher education and to the emergent ‘learning industries’ of the 2000s that now have relevance to large-scale learning and in ways that are radically different to that of the historical roots of teacher education and schooling. In more specific terms our book aims to deal with these issues by arguing the case for four key propositions:

1. The need for a new teacher construct: The learning manager

2. The need for ‘teachers’ to acquire new and different teaching capabilities: The learning management schematic

3. That there is a new teaching context for which the teacher needs to be prepared: The new learning industries
4. That preparing a new teacher construct requires a fresh approach to teacher education: *Syndication*

To achieve these ends we have constructed our book around ten chapters.

In Chapter One, we revisit the BLM program from conceptual and research findings perspectives to establish points of reference. These points provide a basis for the ongoing rethink of teaching and teacher education contained in subsequent chapters. Chapter Two provides insights into the recurring challenges that plague teacher education and the contemporary context, in order to establish what we believe are the core issues in need of reform. Given current social conditions and the structure of Australian society in a global context, we put forward the following simple proposition for consideration: that teacher education is, first and foremost, about graduating teachers who are well prepared for the future in what we term ‘the new learning industries’.

In Chapter Three we bring to bear all we have discussed to provide an update on the theoretical construct of learning management so that it is more relevant to the 2000s. Learning management is explained as the central element of our new approach to the disciplines known by generic terms of ‘teaching’ and in turn, ‘education’ in a post-2009 era. It provides a framework for the remainder of the book.

In Chapter Four we seek to establish the undeniable need for changes in the knowledge and skill sets of teachers, at all levels. In exploring teacher capability we contrast ‘traditional teaching’ with the knowledge, skill and mindset characteristics of a teacher attuned to social and economic changes. This model leads into Chapter Five where we define the new work capabilities required of ‘teachers’ for teaching in the 2000s.

This line of argument is extended in Chapter Five where we explore what it means to be a practitioner of learning management, what it means to be the knowledge age teacher that we refer to as the ‘learning manager’.

The central idea of new teacher capabilities is then linked to a discussion about what we call ‘the new learning industries’ in Chapter Six. In providing this discussion we seek to break the traditional mindset that associates teaching as being concerned with schooling and learning within classrooms. This discussion provides a context for
the new work that is ‘teaching’ and lays the foundation for planning an strategic education revolution.

Chapter Seven describes the kind of curriculum that a learning management program needs. It provides the detailed analysis of the what of teacher education in the 2000s.

In Chapter Eight we present a model for producing tomorrow’s ‘teacher’ in what we’re calling ‘BLM Marque II’. The chapter specifically draws on key points made in previous chapters to inform our theory of syndication. Syndication is at the heart of our rethink on preparing teachers in the 2000 epoch. It pre-figures a major re-structure of university-community and professional relationships as a means for creating an outcomes-directed education system.

Chapter Nine focuses on how one goes about employing the theory of syndication to develop an effective, robust and sustainable model for teacher education.

Chapter Ten concludes the book by providing a series of recommendations to government and key policy agencies for commensurate changes. We outline a set of propositions about where we think teacher education and the governance and management of schooling ought to be headed. We also provide concluding comments on the future of what we are terming the learning industries.

We invite those who want to make a difference to join us on a journey into learning management.
Chapter One:
The Bachelor of Learning Management Program

The 1990s saw an acceleration and convergence of technologies laying the foundations for what was termed the Knowledge and Creativity-based Society. These socio-economic circumstances generated new challenges and opportunities for teachers and teacher education. In 2000, Central Queensland University conducted the first major review of teacher education in Australia in twenty-five years and developed the Bachelor of Learning Management program (BLM). The program and its learning management assumptions signalled a change in the rationale, content and delivery model for preparing teachers and set an agenda for new ways of thinking about and doing teacher education. This chapter presents the core ideas of the BLM, and then tests them against three research studies so that their coherence can be assessed as criteria for later chapters.

In 2000, Richard Smith, then Professor of Education and Innovation at Central Queensland University (CQU), assembled a working party of school teachers, school principals, various teaching industry stakeholders and a select group of academics to rethink and redevelop CQU’s teacher education program. David Lynch joined the working party with credentials an experienced and senior school principal with Education Queensland, an education doctoral candidate and a renowned innovator in teaching and schooling practice.

The emphasis of this initial working party was on the new and certainly not on repair because, as the circumstances described later confirm, the 1990s was a period of fundamental social change. Stakeholder feedback and various publications at the time made it
abundantly clear that teaching and teacher education needed to be at the forefront of such changes as well as reflecting it. To repair the previous Bachelor of Education (BEd) would be to ignore all that the events and trends of the 1990s were signalling.

In this chapter we tell the story of the Bachelor of Learning Management program (BLM). Not so much as a historical recount but as explanation of the premises of the BLM program. We do this primarily to introduce the reader to the BLM concept but also to inform discussions in subsequent chapters. To begin this chapter we recount the need for change in teacher education at CQU in 2000. We then provide an insight into the BLM program by laying out the component pieces and their premises. Next we examine three research studies into the BLM. These studies are important to this book as they provide evidence about the efficacy of the program and provide a licence to once again rethink and redevelop teacher education based on that empirical evidence. This is necessary to meet the challenges of the significant socioeconomic changes since 2001. We begin with an overview of the change from BEd to BLM.

The Pressure for Change

Central Queensland University (CQU) is a regional university in Central Queensland, Australia. The University comprises five campuses and a number of delivery sites around the world. The University was one of the first in Australia to embrace significant international student enrolment and its numerous operational sites reflect this strategic direction. One of the sites, the CQU’s Noosa Delivery Site, had its genesis in the birth of the BLM program, also signalling the University’s capacity to set up shop where student and community demand warranted an initiative. Prior to the establishment of the BLM CQU’s teacher education program, like others in Australia at that time, was the 4-year Bachelor of Education (BEd). It included studies in areas such as sociology, psychology, curriculum planning and had a conventional ‘practicum’ regime. In the most general terms, the program focused on what students know, rather than how they use that knowledge.

The program was Faculty centric in that it was delivered by the Faculty with local schools ‘accepting’ students for a program of practical experience that it had developed. While some consultation with schools did occur especially at the individual school level and
with some individuals, university-school collaboration was largely tokenism in the sense that it was about what had already been decided. Importantly, the Bachelor of Education (BEd) program at CQU had changed little since its 1980s genesis and the occasional revision. The program fitted the 1970-80s social ethos, but given the social movements of the late 1990s, the need for urgent program renewal was highlighted.

Further, the program was not particularly focused on its outcomes. It was subject to the kind of critique made by the Organisation for Economic Cooperation and Development (OECD) in respect to uncertainty about whether education systems maximise the effectiveness of learning and knowledge production in a time of speedy social change. As the authors of the OECD learning science report sum it up, “Maybe traditional education as we know it inevitably offends one in six pupils?” The OECD report concluded that by the 2000s, it was time for new solutions rather than re-runs of tired remedies. For the development of the BLM, that meant a search for new solutions and strategies to replace the existing system of producing teachers.

In 1999, the Queensland Department of Education published a groundbreaking document known as Queensland State Education: 2010 (or QSE2010). The document provided an insight into the changes that were taking place in the Queensland society and economy and by association how Australian society was also changing. It introduced teachers to the term Learning Society. Importantly, QSE2010 signalled policy changes whereby students were to be prepared as competent members of a learning society. In later policy iterations transformation of teaching and curriculum and its infrastructure were made such that pre-school-to-adulthood education and training pathways were made available to all students as a central plank in government policy. Consequently, Education Queensland’s vision includes the recognition that teachers were no longer to serve as gatekeepers of knowledge but instead would be “managers of the learning experiences of children” and further, that “teachers must continually renew their pedagogy and skills” to meet rapidly changing student needs.

The futures-orientated QSE2010 policy states that graduate teachers should be supported “by innovative pre-service training that prepares teachers to teach in the new economic, social and cultural conditions” in order to give children optimal learning experiences that
will prepare them for their respective places as contributors to the
global ‘learning communities’\textsuperscript{16}. This provided the BLM architects
with a fortuitous policy blueprint for change that endorsed already
published papers and, importantly, gave them a mandate for change
that fitted contemporary educational policy; a situation that proved
particularly pertinent when it came to mobilising industry support for
such changes.

**The Bachelor of Learning Management Program (BLM)**

In 2001, after the initial BLM developments were completed,
CQU promulgated in one of its publications that it no longer prepared
teachers but learning managers. This signalled that fundamental
changes had been made in the rationale, content and delivery model of
its new teacher education program, the BLM.

The BLM, in line with the teacher regulatory agency of the time,
is a four year pre-service professional learning degree that can be
completed in three years, anchored in four concepts described later
drawn from the New Economy and its successors, and educational
writing, namely: *Futures; Networks and Partnerships; Pedagogy;* and
*Essential Professional Knowledge*\textsuperscript{17}. Course (subject/unit) titles signal
the purposes of the degree and include Learning Management, Futures,
Networks and Partnerships, e-Learning Manager, Entrepreneurial
Professional, Essential Professional Knowledge (in which the core is
Dimensions of Learning\textsuperscript{18}) and Portal Task, amongst others. The first
BLM graduates entered the workforce in 2003, following a
compulsory internship.

The BLM is a change of balance in teacher preparation between
curriculum and pedagogy, or the what and the how\textsuperscript{19}. The BLM
designers believed that the tendency in the BEd to emphasise
curriculum development encouraged the postponement of the moment
of implementation so that the doing teaching element of the process is
left to the individual teacher, later. In that conception of preparation,
the how to teach element is in danger of being thought of as a matter
of subjective preference. That is, where there is an unwarranted lack of
emphasis on standards of pedagogical practice, each teacher graduate
can, some think intuitively make it up by drawing on a host of
elements such as multiple intelligences, coloured hats, Productive
Pedagogies and New Basics, whole word approaches and so on. This
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common set of practices in the BEd encourages a vast proliferation of teaching approaches amongst teachers and it relegates pedagogy—teaching—to the realms of mystery. If every teacher has a few favourite, unique approaches to their work, the number of pedagogies in use across a school or system reaches astronomical proportions. Locating teaching skill in the creative minds and actions of talented individuals is analogous to the work of poets but is also a mark of an immature profession. Any semblance of professional coherence based around professional standards is an oxymoron in this radical individualistic approach.

The BLM has four elements that make it distinctive and they define what it means to graduate from a BLM program. These elements are: the idea of Learning Management; the new content indicated earlier; a move from knowing a lot about a few theories (‘illumination’) to being able to apply theories and undertake teaching that has definite outcomes (‘performativity’); and significant decision-making and resource-based partnerships with the teaching industry. We now discuss each in turn.

1. Learning Management

The BLM program is underpinned by the concept of Learning Management. The learning management concept was derived from architectural design (an artful arrangement of resources for definite ends) and is best rendered as design with intent. Learning management then means an emphasis on ‘the design and implementation of pedagogical strategies that achieve learning outcomes. That is, in the balance between and emphasis on curriculum development and pedagogy, the emphasis is definitely on pedagogical strategies. Underpinning the learning management premise is a new set of knowledge and skills, collectively referred to as a futures orientation and which attempt to prepare the mindsets and skill sets of graduates for conditions of social change that pervade local and global societies in the 2000s. It is these features that characterize the BLM when compared with its predecessor, the BEd.

2. New content

The BLM syllabus is centred on four knowledge clusters: Futures; Pedagogy; Networks and Partnerships; and Essential Professional Knowledge. These clusters were developed in
collaboration with classroom teachers and various industry stakeholders as well as being scoped by a trans-disciplinary literature. These knowledge clusters provide a strongly futures-orientated, enterprising and entrepreneurial flavour to the degree together with a mandated requirement that graduates achieve learning outcomes in students. The content is heavily influenced by research, so as to avoid promoting yet another good idea and to ensure professional knowledge elements are based on what the research indicates works for all students.

To reiterate, there is a very strong emphasis in the BLM on pedagogic strategies. This emphasis necessarily means that the instructors—the in-school supervisors and the administrators who run the BLM—must have a good knowledge of pedagogical strategies that they share. Every unit must contain specific details of pedagogical strategies and practices, rather than generalized statements such as Productive pedagogies or New Basics etc. The Learning Design Process\textsuperscript{21}, also known as the 8 Learning Management Questions, is a learning design process that draws the learning manager to the essential, research-based elements of a successful learning plan. This, together with the Dimensions of Learning\textsuperscript{22} research, provides a coherent and systematic framework for achieving this expectation in all facets of the BLM.

There are highly significant reasons for this emphasis and the choice of Dimensions of Learning. Dimensions of Learning is based on rigorous meta-analysis of numerous research on instruction studies. The research includes such areas as the effects of specifying learning outcomes, the effectiveness of specific strategies like comprehension, and the effectiveness of learning in groups. Other researchers such as Hattie\textsuperscript{23} have done parallel work that together confirm the existence of relatively straightforward implications about classroom instruction that can be inferred from such work. These include: teachers should identify knowledge and skills that are targets of instruction; teachers should identify and use specific instructional techniques for specific instructional goals; and teachers should regularly use instructional techniques that apply to all types of instructional goals\textsuperscript{24}. Such propositions are the ingredients for a design process.

This body of work suggests that the following instructional techniques should be used by teachers \textit{regardless of the instructional goals} that are the focus of a unit of instruction\textsuperscript{25}. 

(1) When presenting new knowledge or processes to students, provide them with advanced ways of thinking about the new knowledge or processes prior to presenting them.

(2) When presenting students with new knowledge or processes, help them identify what they already know about the topic.

(3) When students have been presented with new knowledge or processes, have them compare and contrast it with other knowledge and processes.

(4) Help students represent new knowledge and processes in non-linguistic ways as well as linguistic ways.

(5) Have students utilize what they have learned by engaging them in tasks that involve experimental inquiry, problem-solving, and (presumably) decision-making and investigation.

(6) Provide students with explicit instructional goals and give them explicit and precise feedback relative to how well those goals were met.

(7) When students have met an instructional goal, praise and reward their accomplishments.

(8) Have students identify their own instructional goals, develop strategies to obtain their goals, and monitor their own progress and thinking relative to those goals.

(9) When presenting new knowledge or processes, help students analyse the beliefs they have that will enhance or inhibit their chances of learning the new knowledge or processes.

The effective teacher then, according to this substantial body of research evidence, is one who has clear instructional goals. These goals are communicated both to students and to parents. Ideally, the instructional goals incorporate the cognitive, metacognitive, and self-system of learners as well as the knowledge domains. Even if the instructional goals focus on the knowledge domains only, as is frequently the case in some areas of education, the teacher still uses instructional techniques that employ the cognitive system, the metacognitive system and the self-system. Recent work in neuroscience confirms this proposition.
Neuro-science also confirms the need for teachers to understand the interrelationships among the knowledge domains, the cognitive system, the metacognitive system and the self-system, and to use that understanding to make the myriad of instructional decisions that occur in a single lesson. This science-based extension of meta-analysis is the emergent technical knowledge base of teachers, learning managers, the new learning industries.

The Dimensions of Learning package presents teachers with a set of pedagogical strategies organized around five types of thinking processes. It provides a platform of what research has shown over time to have a high probability of enhancing student achievement. As a pre-service approach, with pedagogical approaches to achieve learning outcomes as the prime goal, such “high probability” strategies are fundamental. To this end, the package offers a comprehensive treatment of the learner and learner-based requirements for learning (Dimensions 1, 5); dealing with the acquisition of knowledge, both conceptual and procedural (Dimension 2); the elaboration and application of knowledge (Dimensions 3, 4).

We pause here to make some definitive statements about knowledge in respect to our emphasis on pedagogy. Some will read this as meaning that background “knowledge” is not a priority in the preparation of teachers or for students. Such a conclusion is a serious lack of understanding of our position. It is certainly the case that there is a strong relationship between background knowledge and academic achievement. The lack of background knowledge is an enormous impediment to information processing ability and capacity to prosper from instructional and other learning experiences on the part of both teachers and students. For those who doubt that disciplinary knowledge is no longer required, a quick perusal of the engineering, mathematical, design, accounting, physics, business and IT elements that comprise a computer, a mobile phone or an aircraft should be sufficient to cause a re-think.

By incorporating the Dimensions of Learning perspective, we place great priority on knowledge and the teacher’s capacity to make significant curriculum knowledge content decisions at levels beyond which most aspiring teachers would experience in other preparation models. Dimension 2 requires a teacher to identify what learners must know and understand and what processes they must be able to do, declarative and procedural knowledge respectively. Dimensions 3 and 4 assume 2 is in place as knowledge is extended and applied.
Both categories can be further dissected to identify finer distinctions within each. In the declarative category for example, teachers have to be skillful in the use of such things as vocabulary terms, time sequences, contextual features, cause and effect relationships and generalisations and principles in their discipline area in order to make the appropriate content selection decisions.

Such decisions then are the basis of pedagogical decisions about how to teach, how to set up learning situations that are in turn built on strategies that are appropriate for one or the other of these knowledge categories. Teachers then require the technical professional knowledge background of expert levels of content knowledge in areas such as mathematics or language that enable them to make the professional judgements about which concepts and theories and procedures and processes should form their programs. But they also must be able to match these with learning strategies. Teachers must also have a grasp of their discipline and transdisciplinary fields that enable them to ensure that students understand what they are doing as they apply conceptual knowledge to procedures.

Our view is that one of the greatest strengths of Dimensions of Learning is the emphasis on knowledge defined in this way. In the Dimensions framework, no teacher or students can avoid dealing with systematic knowledge content matters as an integral element of their pedagogical practice. It strongly emphasises the nature of the knowledge to be learned rather than the characteristics of the learner. Nevertheless, Dimensions 1 and 5 embed the knowledge process into a concern for the learner and the context of teaching and learning. This is an impressive agenda for preparing teachers and requires teacher education entrants to have sophisticated knowledge bases.

Graduate entry has a stronger appeal here than undergraduate four-year programs because people coming in with a strong knowledge background can concentrate on its translation into practice and on larger policy issues without having to learn the content. An important additional factor is those people in society who seek to enter teaching from a different career history but who nevertheless have a huge store of knowledge that can be utilised. Such potential entrants invite teacher education pathways that do not require lengthy periods of doing time.

As a counter to some criticism of yet another American package, our research indicated that experienced teachers report that they rarely deal with their teaching in such an integrated way as Dimensions
requires and that it offers a convenient point of reference for them. Still others use Dimensions as a kind of refresher course for adding value to their own practice. In the Noosa BLM case, Dimensions of Learning was widely adopted in schools not just to support BLM students but also as a major professional development initiative.

Clearly, these implications apply far beyond school teaching. Thus, the staff at the information desk at David Jones should identify the knowledge and skills about products that are commonly queried and have well formed responses to them, or sailing coaches should identify and use specific instructional techniques for specific sail angle and sheeting options. For all such learning managers, knowledge and skills means conceptual and procedural/skill knowledge relevant to specific areas of endeavour. Instructional techniques refers to the research-based techniques that can be used for conceptual and procedural/skill knowledge acquisition, enrichment and application. In all such cases the attitudes and predispositions of the learner and the learner’s habits of mind are the contextual glue that holds the elements together. The economy of the Dimensions of Learning framework is elegant and effective.

The strong emphasis in Dimensions on pedagogical strategies that incorporate what is normally called curriculum development is an attractive feature of the approach for teacher educators because learning outcomes are always at the forefront of their work. Strategies for achieving learning cannot be deferred in Dimensions planning, as they are in many other teacher education approaches that focus primarily on curriculum or the learner. For these reasons, the BLM adopted the Dimensions of Learning framework as a coherent pedagogical approach to replace the fragmentation and incompleteness of individual lecturers following their own predilections and interests.

3. From ‘illumination’ to ‘performativity’

The BLM utilizes a device known as Portal Tasks. Portal Tasks are not practicums in a conventional sense, but structured experiences with stringent requirements linked to on-campus courses and are structured so that students cannot escape the requirement of demonstrating their understanding and application of really important knowledge, especially pedagogical strategies. Portal Tasks cannot be successful if the classroom teacher mentor (the BLM student’s learning manager) is not fully aware of the agenda and committed to it
professionally\textsuperscript{31}. Without Portal Tasks, the BLM model is radically insufficient.

The BLM consciously and directly attempts to bridge the theory-practice gap so often attributed to teacher education programs. The conceptual and procedural knowledge that is taught on-campus must be demonstrated by students in real-life settings such as schools. For example, if engagement is an issue in on-campus courses, then there must be demonstrated teaching strategies that lead to engagement.

The Portal Task model is illustrated in the algorithm developed for each unit: one piece of assessment for the conceptual issues and the second piece for the demonstration of performance (in what are called the portal tasks). This means that the assessment regime deliberately sets out to ensure that all student teachers get to know the field and be able to demonstrate applications of core concepts and procedures. This is conceptually and practically essential in the BLM model.

4. Partnership

In order to achieve the intentions of the BLM, the approach relies on partnership arrangements with employers and schools. The reason for this is that if the ‘brand’ name is the detailed specification of pedagogical strategies that achieve learning outcomes, then all participants in the production of graduates must know and be able to work with the same agenda. There is no advantage in the on-campus programs championing the design of pedagogical strategies while school-based staff do curriculum development, for example.

Moreover, if it is important to reduce the number of pedagogies teacher educators, teachers and schools use, then the BLM must have a line that it pursues with students and participating teachers both on campus and in schools. If the BLM is to eradicate the well-known theory-practice gap that abounds in accounts of teacher preparation, then it is imperative that all participants follow the same script.

The partnership concept implies that employers and schools are genuinely partners and are jointly involved in the conception of ideas and policies. An important addition to this notion is that partnership in the BLM implies we; that mentors, employing agencies, Faculty staff etc are all participants in learning the theory and practice of learning management, so that ‘we’ are all part of the community of learning that is the BLM program. To reiterate, a partnership with employers, schools and with each teacher mentor, where all are contributing,
participating and learning, is the core of the BLM, and the model will not function without it.

The overall aim of the BLM is captured by an expectation that BLM graduates will be both workplace ready and futures-orientated. This means that graduate Learning Managers are able to perform the role of teaching to a professional standard, guaranteed by: the experiences that they have had in the four knowledge areas; know-how in the workplace; the mentoring they have received from classroom teachers who know the logic and content of the BLM; and from the compulsory internship undertaken in the last year of the degree. The approach contrasts with the idea that schools must, by definition, have ‘induction’ programs for new teachers and that teaching prowess and expertise is developed over a long period of experience.

Futures-orientated is a mindset and a set of capabilities in graduate learning managers. The expectation is that each is enterprising, believing that he or she is contributing to a cause and making a real difference in learning outcomes in clients no matter the level or who they are. They have imagination about what is possible founded in theories of the future, and professional capabilities dedicated to pedagogical strategies and learning outcomes. They are ambitious and anticipate rewards that outstrip the role of teacher. Being futures-orientated implies a new skill set for teachers and teacher educators.

What the BLM Research Says

Having now made introductory comments about the BLM we outline the findings of three studies of the BLM. The findings of these studies illustrate the efficacy of the BLM program concept and, importantly for this book, provide a framework for a further rethink on teacher education in subsequent chapters. The first study was conducted by Ingvarson et al. (2005)32 of the Australian Council for Education Research (ACER) in 2004 (published 2005). The remaining two were doctoral studies. The first by Lynch (2004) compared BLM and BEd program graduate teachers’ perceptions about teacher preparation with those of their practicum mentor. The second by Allen (2008) investigated the capacity of the BLM to bridge the theory-practice gap, a long identified problem between the university and the workplace. We now outline the collective findings.
The Learning Management approach has empirical evidence that it has outcomes in keeping with the rhetoric of the program. Thus:

The brief for the (ACER Study by Ingvarson et al.) evaluation was to focus mainly on the outcomes of teacher education, not methods or procedures. In terms of the outcome measures used in this study, the BLM approach is producing graduates who believe that they are better prepared for the first year of teaching than are graduates from other Queensland universities. This belief is supported by observational evidence that showed a sample of BLM graduates taught at a significantly higher standard than a sample of graduates from other Queensland universities. School principals also believed that BLM graduates were better prepared than other graduates.33

According to what follows, Ingvarson et al. found components underlie the BLM’s success.

1. Emphasis on training in a core model of effective pedagogy

The BLM program requires university staff and teacher mentors to present students with a basic architecture common to effective learning management, no matter what is being taught. This architecture is found in the BLM Learning Design Process (8 Learning Management Questions)34 and in Dimensions of Learning35. It provides students with a common framework for designing pedagogical strategies that achieve learning outcomes. The framework puts high priority on linkages between outcomes, assessment and pedagogical practice. The program that actively promotes a “consistently applied, ‘deep structure’ model of pedagogy, based on standards for effective teaching, appears to have born fruit”.36

2. Active engagement in learning how to use the model

In addition to students learning how to handle the core elements of the learning design process and Dimensions of Learning, they are regularly placed in workplace situations from the beginning of their program. Work placements provide the opportunity and responsibility to apply the principles of effective pedagogy as defined in the
program. This element of the BLM requires that teachers in schools understand the same model and have the capability to mentor and coach students.

3. **Strong linkages between theory and practice**

Each course in the BLM operates according to an algorithm of one piece of assessment for the conceptual issues and a second piece for the demonstration of performance in the workplace (the Portal Task).

This assessment regime ensures that all BLM graduate teachers not only get to ‘know’ the field but are able to demonstrate applications of core concepts and procedures in situ. This *essential* element in the BLM links university subjects to workplace experiences, a gap noted by many educational researchers in the teacher education field. Teacher professional accountability is enhanced in a regime that requires student teachers to demonstrate that they can promote student learning on the basis of expertise.

4. **An authentic partnership between schools, employing authorities and the university**

The partnership concept between stakeholders in which equal but different contributions are recognized and valued lies at the heart of the learning management concept.

5. **Standards-based teacher education**

According to Ingvarson et al., the BLM program is a thoroughgoing example of standards-based teacher education. This means that the criteria for judging the success of the program are external to both the graduate performances and the program itself. As an example, it is instructional theory rather than learning theory orientated. To this list, we would add:

6. **New Knowledge components derived from socioeconomic futures**

Here we refer to such components as networks and partnerships, futures, essential professional knowledge and pedagogy as the fundamental building blocks for knowledge in the learning industries. These knowledge realms, roughly translated as trans-disciplinary
approaches to problem solving in teacher education, change the look and feel of teacher education.

The ACER evaluation of the BLM was primarily focused on two of the six university campuses where the BLM was offered. In his doctoral study, Lynch (2004) found that outcomes across all the campuses varied: some were little different from the BEd offered by the university previously despite lexicon changes in course names etc while others were in transition between the BEd and the BLM\(^{37}\). In general terms, Lynch found strong outcomes in achieving workplace ready graduates across the six campuses and strikingly less evidence of a futures orientation. He argued that unless mentors (teachers in schools) were in fact accomplished in exercising a futures orientation, rather than it being assumed in mentors, that this aspect of the BLM would never be fully realised. Schools and teachers in his study were definitely not attuned to the global social changes taking place around them and consequently saw little reason to account for them.

Allen in her doctoral study compared the logic of the BLM with the effects of university lecturers and school mentors on the teaching practice and beliefs of recent graduates employed in a school system. The study was conducted in the context of one of CQU’s campuses. Her results indicated a number of crucial points. First, where there is a weak partnership between schools and the university, the logic of the BLM breaks down and often becomes non-existent. Examples include such things as failure by BLM in-school learning managers (teachers in schools who act as mentors of BLM students) and university staff to establish and nurture relationships with schools and teachers. Presumably some university staff and in turn principals and teachers do not see partnership as a worthwhile exercise, indicating the resilience of the us and them mentality of schools and universities when it comes to teacher education programs.

Second, as with Lynch’s findings, where the logic of the BLM is unknown to or is not sustained by either lecturers or mentor teachers, the logic is undermined and has little effect on the graduate teacher. Here Allen provided evidence indicating that university staff either ignored the BLM theoretical framework or actively undermined it by substituting idiosyncratic content in their teaching. Similarly, teacher mentors required student teachers and later graduates to conform to school practices. For others there were misunderstandings and often little understanding at all of BLM concepts and practices, in spite of
several years of professional development and learning, especially with university-based staff.

Third, where lecturers and teachers insist on teaching their own knowledge components outside of the BLM curriculum, such as substituting constructivism and learning theory for instructional theory, or requiring student teachers and new graduates to conform to a school practice, the BLM model collapses. Also, Allen’s data show clearly that the school ethos of every teacher doing ‘their own thing’ was shared with university-based staff. There seems to be little appreciation of the BLM’s avowed intention to develop a “consistently applied, ‘deep structure’ model of pedagogy, based on standards for effective teaching” in either university teaching or in the school mentoring.

To be fair, there are few rewards in universities for the conduct of programs like the BLM that are heavily professional and are time-heavy. Similarly, if the BLM model is poorly understood and implemented, it appears to have few upsides for schools as the different demands of the BLM are perceived and interpreted in the old prac model terms, especially when the term prac is constantly reinforced in face-to-face discussions and written communications between the university and schools. Under these conditions, preparing the next generation of teachers is more a chore rather than a core part of the professional work of certified teachers.

In short, the studies by Lynch and Allen show that the very elements lauded by Ingvarson et al. are the ones most likely to generate resistance in university Schools of Education and in schools. This co-production of the status quo by self-generating mindsets and interpretive frameworks remains as a fundamental reason why it is difficult to change the practices of schools and Schools of Education. The preparation of learning managers then must take these contextual conditions into account.

On yet another front eight years have passed since the initial development and inception of the BLM program concepts. There has been an explosion in the science of learning and in the interim period developments in domains such as Web 2.0 have shaken the orthodoxy of traditional schooling by introducing many new potential teaching and learning mediums. While such emergences are discussed in topics in BLM coursework, they are not examined in detail, nor assessed as core knowledge competencies and importantly they are not modelled in program delivery. Further, schools, like the University, are
themselves only just coming to terms what all this means. Put simply, both the university teacher preparation regime and the schools are faced with quite far-reaching effects on teaching practice by these developments that in the BLM model can only be resolved collaboratively in real-time. The 2009 BLM rationale, content and delivery model needs to undergo further change and updating. This book is part of that process.

Having made these introductory comments about the BLM and its efficacy we proceed with a series of chapters that seek to explore program design considerations for yet another version of the BLM.
Chapter Two:
Teacher Education and its Challenges

This chapter is about a very simple proposition\textsuperscript{39}: that teacher education is, first and foremost, about \textit{graduating teachers who are better prepared for the future}. We discuss recurring challenges in teacher education that have today become the accepted and uncontested frontier of preparing teachers. We briefly locate the discussion in a rapidly changing social context that affects both the content of teacher education and its mode of operation. This discussion provides points of reference for subsequent chapters that present our vision for a new teacher preparation program.

The challenges for teacher education are concerned with both the internal operations and teacher education and the wider socio-political implications of it in a time of rapid social change. The overall object of teacher education is to prepare people for a teaching career, but, and it may seem blindingly obvious, teacher education is not the same as teaching. Teacher educators are concerned with both the enterprise of teacher education and with teaching. This double responsibility is itself a challenge. We now discuss particular challenges.

Different Logics – Teacher Education and the Teaching Profession

Initial teacher education programs in Australia tend to be of the front-end loading type. Such programs aim to provide as much up-front information on teaching as possible in the time available so as to ensure graduates know as much as possible in readiness for their career in teaching. It is front-end loading because when student teachers become teachers by graduating from their program and
gaining registration, the formal learning to be a teacher ceases. Commentators have often remarked that once a teacher has gained employment, some may not do any significant professional development for the entirety of their careers.\textsuperscript{40}

Graduate success in the front-end arrangement relies on the university providing a common purpose and a smooth transition from university to the workplace. The former is confounded by the principle of academic freedom that encourages diversity of approaches. The latter has never been a strength of the 4-year BEd program and in recent years employers have often introduced transition programs that in reality re-train graduates for the workplace.

The architecture of the front-end loading model is akin to competition between two different training platforms: the schools --- inclusive of TAFE Colleges and other places where teaching takes place --- and the university. Without going into too much detail, they have different logics or principles that guide their operations\textsuperscript{41}: work in them has different motivations and priorities; the work situations are different; there are different career paths; and they have a different anticipatory and real-time socialising impact on student teachers\textsuperscript{42}.

The logic of the university-school link creates discontinuities of the us and them type and then reinforces them. It generates angst about what happens when the new graduate gets to the employment end of the university-school connection without the work-based skill set or personal characteristics to operate as a professional teacher. To a degree this process, what is known in the internet industries as the ‘end-to-end’ principle, is a spurious ‘problem’ in teacher education because it is an effect of the structure and processes universities and governments use to prepare teachers. In short, it is a self-inflicted condition.

In spite of this apparent discontinuity, there is one common element: most of the many stakeholders, namely teacher education staff and universities, accrediting agencies, school and teacher authorities, government policy agencies, teachers and unions cooperating in both platforms are risk-averse. Despite their differences, they combine to boundary-ride what counts as teacher education. To be innovative and futures-orientated then means that teacher education has to look beyond itself—and certainly beyond universities, schools and teaching—if it wishes to break the co-production deadlock in which teacher education and schooling find themselves. The belief that the university can control the processes is
no longer a viable solution and leaving it to schools reinforces the past. Our point is that seeking solutions to teacher education within the current front-end loading model leads to palliatives that soften the effects of the status quo by re-arranging deckchairs rather than new directions.

The Knowing-doing Gap

The theory-practice gap, or more properly the knowing-doing gap, refers to the challenge of turning knowledge about how to enhance performance into actions consistent with that knowledge\textsuperscript{43}. By the 1970s and 1980s there was a growing awareness by students, researchers, the practitioners and the profession that campus-dominated, front-end programs did not seem to deliver what was required in the teaching jobs for which students were being prepared. Furthermore, it was clear that on-campus theory was having minimal effects on what counted as teacher education in comparison with the domesticating influences of the school.

It is hardly surprising then that a good deal of teacher education research since the 1970s has dealt with the university-school nexus, the ‘first year out’, teacher culture, induction and similar front-end related topics that attempt to neutralise the structure and logic of the teacher education model itself. The cynic might argue that in developing such research, universities were learning to toe the line and to seek alibis about why they were getting it wrong.

A more serious and deep-seated issue concerning the knowing-doing gap in teacher education is the multitude of theories on both sides that need to be bridged. There are always going to be gaps between teacher educators’ theories, teachers’ theories and what teachers actually do, leaving aside matters of veracity and worthwhileness of theories and action. In our view, this is a seemingly intractable problem that the teacher education and more generally the learning industries need to solve with some urgency as the schools, teaching, teachers and teacher education are subjected to increasing scrutiny from a performance and service perspective.

But veracity and worthwhileness are fundamental issues in teacher education theory and practice. Dinham, Ingvarson and Kleinhenz remark that the major challenge in improving teaching lies not in identifying and describing quality teaching\textsuperscript{44} but in developing structures and approaches that make best teaching practices common.
By way of example, the 2004 MACER report on Indigenous education remarks that: “The rhetoric on Indigenous education to date adequately identifies policies and strategies that could, if properly applied, result in improved outcomes for Indigenous education”\(^{45}\). Making best teaching practices common and properly applying policies and strategies to improve outcomes are core tasks for teacher education. They lead towards a greater emphasis on the ‘doing’ in the knowing-doing gap.

The proliferation of theory in teacher education can be read variously. On the one hand, it can be seen as evidence of a vibrant, thriving university community of scholars contributing to the stock of human knowledge. Undoubtedly, there is something to that argument if one values the liberal university. On the other hand, the multiplicity of theories used in teacher education programs can signal the lack of a secure basis of theoretical knowledge for guiding teacher education practice. Teacher educators currently rely on lists of examples and the clarification and sorting of effective practices drawn from a range of disciplines rather than powerful explanatory theory\(^{46}\).

Apart from the implications here for research and development in teacher education and its future, a profession based on shaky theory is hard pressed to make a strong case that it can provide good service to clients, namely students, parents, communities and governments. This is particularly poignant in a historical period when the recipients and users of teacher education would seem to have a greater stake in the way it is structured and its delivery processes than do the schools, accreditation agencies, professional associations, teachers’ unions and teacher education lecturers.

**Effects of Pre-service Programs**

In the 1970s and 80s the overall impact of the pre-service period and its consequences on and for teachers and teaching was of little substantive interest to many teacher educators or indeed the employers. The prevailing ethos was attuned to the rapid changes flowing from the 1960s underway in Western societies. Those teacher educators, many former teachers, teaching in what were then called the social foundational areas, were more interested in matters like social reproduction, social transformation and using authors like Freire and Illich to counter the state than in teaching practice. Bruce Wilson, when reflecting on the 1970s, captures the tenor of the times well:
“University lecturers [like Vice Chancellors] would also have been deposed from their positions of authority if they had been in their offices at the time rather than storming the central administration block”\(^\text{47}\).

However, there are important consequences of this lack of focus. In recent decades when teacher educators have been asked to justify what they do, precious little evidence has been produced to justify the effectiveness of teacher education programs. For example, the teacher education profession has difficulty responding to questions such as “What is the difference between the performances in schools/VET/elsewhere of graduates from 1-, 2-, 3-, 5-year programs or indeed between these and those who have no formal preparation”? About the only solid evidence of the effects of teacher education has been the long-standing research finding that teacher education socialises new teachers into past practices, irrespective of which radical theories are taught on campus or the intentions of teaching staff.

A notable exception of course is the evaluation of our Bachelor of Learning Management program at Central Queensland University, by Ingvarson and his colleagues at ACER\(^\text{48}\). It should be said that it was our experience that these findings produced a completely predictable scepticism and criticism from Education Faculty staff because of the emphasis on pedagogical practice: a stark contrast to the traditional teacher education degree program.

Teacher education is an intense business. Teacher educators and associated school staff can become so engrossed in their own interests that they miss the political and economic demands on education and, in turn, on teacher education programs and processes especially. They band together to resist pressures to justify their activities rather than grasping the opportunity to make a united statement about the impact of teacher performance, teacher retention and student learning on the economy or society. These have become the very issues “uppermost in debates about teacher education policy and practice in keeping with changing notions of educational accountability more generally and with the larger trend toward accountability in higher education”\(^\text{49}\). To reinforce Cochran-Smith’s observation, propositions from Education Revolution\(^\text{50}\) for instance are unmistakable in their intent:

> “…economic dividends to be derived from education are separate from the social dividends which flow from
significant investment in this sector. A significant increase in investment in education will give Australians more fulfilling work, lifting participation rates and contributing to happier, healthier and more secure lives. It will also build a fairer society, providing greater life opportunities for all Australians.

Australia needs nothing less than a revolution in education – a substantial and sustained increase in the quantity of our investment, and the quality of our education. (emphasis added)\textsuperscript{51},\textsuperscript{52}

These concerns now contextualise teacher education into the future and emphasize the importance of dealing with program outcomes as a priority. There has never been a more crucial historical period for stating the purposes of teacher education than now.

**Pedagogical Void**

By pedagogical void we mean several things. First, it seems to us that there has always been an emphasis on curriculum at the expense of pedagogy in teacher education circles and in the schools, at least in Queensland. Perhaps the strong traditions of content and the influence of curriculum agencies have fostered the view that curriculum and curriculum planning are the really important bits in teaching and in teacher education, despite evidence that curriculum is a blunt instrument for school and system reform. It is also the case that neither teachers nor teacher educators are normally discipline experts in the same sense as discipline and research-centred academics or members of the wider community\textsuperscript{52}.

The effect of emphasizing curriculum and curriculum planning ensures that pedagogical practice—teaching—is always already deferred until it is required. It is the lesser element in the curriculum/teaching couplet. We have always thought that the learning industries need to establish authority and authoritative opinion in pedagogical practice beyond that which might be anticipated from the lay community.

Second, there is still a widespread belief that teaching ability is either natural and individuals are born with it or that teaching is a personal talent, and consequently, that there are as many ways of teaching as there are teachers. As experienced teacher educators we
routinely hear this from colleagues in university Schools other than Education; but more disconcerting, we also hear it from teacher educators and teachers who invariably pass this knowledge on to their teaching students.

We can explain this phenomenon in teacher education in two ways. (i) lecturers teach to their own theoretical interests as a matter of right under the academic freedom principle. Over the course of a degree, students are provided with an unsystematic smorgasbord of teaching advice from multiple lecturers. This advice includes such things as survival tips that are the very epitome of non-professional behaviour in a teacher education degree. (ii) The playing out of this kind of approach is seen when student teachers enter ‘prac’ periods to be mentored and supervised by classroom teachers who themselves claim several preferred ways of teaching. With about 300,000 teachers in Australia and 25 or so universities in the teacher education business, the number of potential teaching approach fragments offered to student teachers and practitioners alike is astronomic. In this way, on-campus practices reinforce and valorise the real world of work. The proliferation of teaching approaches that this kind of university teacher education regime engenders encourages the idea that good teaching is based on the subjective criteria of the individual lecturer and teacher so that the ‘good’ teachers, like poets, make it up as they go according to whimsical theory. We cannot imagine the consequences of the same scenario in medicine, the electrical trades or the air transport industry.

In contrast, we subscribe to the position proposed by Bob Marzano that we do know something about effective teaching based in systematic research. In a more accountable world, student learning outcomes may well be close to mandatory rather than being optional and hedged with alibis for student and school failure as they are now. Teachers and their teacher educators who credential them as capable of producing learning outcomes with clients, may well be close to allegations of malpractice, as can happen in medicine when substantive research findings are ignored.

We believe that it would be more politically astute for teachers and teacher educators to make a strength out of the research that places special significance on the ‘teacher’, teaching and in turn the teacher educator. For example, we already know that in standard classroom settings:
exceptional performance on the part of teachers not only compensates for average performance at the school level, but even ineffective performance at the school level. This kind of finding indicates that teachers and what they do matters in very important ways. We also know that:

the unique effects of individual teachers can be thought of as consisting of the effective use of specific instructional strategies, effective curriculum design, and effective classroom management.

The issue here is that there are specialised sets of knowledge and practices based in empirical research that set well-prepared teachers apart from lay people and that these skill sets are learned. Last, the evidence is accumulating about how particular pedagogical practice ought to be implemented. For example, Kirschner, Sweller and Clark summarise their recent research thus:

After a half-century of advocacy associated with instruction using minimal guidance, it appears that there is no body of research supporting the technique. In so far as there is any evidence from controlled studies, it almost uniformly supports direct, strong instructional guidance rather than constructivist-based minimal guidance during the instruction of novice to intermediate learners. Even for students with considerable prior knowledge, strong guidance while learning is most often found to be equally effective as unguided approaches. Not only is unguided instruction normally less effective; there is also evidence that it may have negative results when students acquire misconceptions or incomplete or disorganized knowledge.

Now, one does not need much philosophy of science to understand that such truth claims cannot be countered by lame comments such as “That’s just their opinion.” Empirical findings like these mean that some people in the schools, accreditation agencies, professional associations, teachers’ unions and teacher education establishments who disagree with the research findings of people like Marzano, Kirschner, Sweller and Clark need to either fault the
theoretical or methodological bases of their studies, or reserve judgment, or give up their pet theories.

Contrary to the prevailing value system about diversity of approaches, we maintain that as teacher education moves into the future, it is imperative that there must be a concerted effort to reduce the number of theories being applied to those that can be shown to have verifiable empirical bases and that can be operationalised in instructional settings that matter.

It may well be that systematic research will overcome the current value system. For example, an OECD Report refers to a “new science of learning” and says that it is clear that this transformation is both desirable and inevitable. The report goes on to say that:

There can be few questions more important, for the 21st century to find good answers to, than: how the brain works, how people learn best, and what educational provision can best help them. It will be the business of the science of learning to provide reliable and applicable answers to such questions. There are good reasons to believe that it will do so in the years ahead.

In our view, this kind of research agenda has been with us for decades but for some indefinable reason, has never become active in a systematic focused way in teacher education. Such research and its implications have the potential to transform teaching from a cottage industry into a knowledge-intensive service that provides access to knowledge-intensive qualifications and capabilities for all but a few students.

The Context of Teacher Education

Before proceeding, let us elaborate this claim by making use of a social change explanation. A wide-ranging treatment of vast, contemporary social and economic shifts is provided by Nowotny et al.’s construct of Mode-1 and Mode-2 knowledge which equates to the manufacturing/knowledge couplet. Mode-1 knowledge is generated and disseminated form a traditional university base. It tends to be identified with exclusive ownership by experts who are members of hierarchies concerned with pure theory and science, its value is judged by academic peers and it is created and disseminated in dispassionate scientific modes. Technology, the outcomes of research,
is thought to be transferred and then applied to particular problems by scientific experts and is subsequently managed. In the contrasting, emergent contemporary Mode-2, scientific problems arise, methodologies are developed, outcomes are disseminated, and uses are defined in a wide environment and with the involvement of many stakeholders. This environment is called the “context of application”. Further, Mode-2 knowledge is trans-disciplinary: to solve problems it mobilizes multiple theoretical perspectives and practical methodologies, which are usually, but not necessarily, derived from pre-existing disciplines. Mode-2 knowledge then comes to life in individual expertise and work teams, “as much as, or possibly more than, it is encoded in conventional research products such as journal articles or patents”.

The implication of this claim for teacher education is that the knowledge production base far exceeds the confines of the Mode-1 view of universities and accrediting bodies, academic publications, school authorities, teachers’ unions and governments. The Mode-1/Mode-2 analysis provides a strong theoretical case for re-imagining teacher education knowledge production and practice in the context of application.

In the context of application, participants in the teacher education knowledge production ‘game’ are producers, orchestrators, brokers, disseminators and users. Each of these participants in the context of application brings different value systems to teacher education. The realities of traditional Mode-1 accounts of teacher education research and policy production described earlier bump up against a new set of conditions identified as Mode-2 by Nowotny et al.

Noonan also points to large scale societal shifts that have the effect of moving education and training from the certainties of theoretical, disciplinary, formal, and foundational knowledge to the practical, transdisciplinary, informal, applied and contextual and the growing importance of individual attributes. The ‘new basic skills’ are about how people think and act, not just what they know.

These skills are variously defined but there is a pattern in different sets, represented by those suggested by DEMOS, namely: information management, self-organisation and inter-personal skills, inter-disciplinary capacity, reflection and evaluation including futures thinking, decision-making, stress management, resilience and learning from failure.
These characteristics cannot just be added to existing university curricula and specifications required by accrediting agencies. To do this would be to over-load the curriculum and in any case, the existing logic is inappropriate. The central lesson of successful innovation is that such skills can only be useful when they are applied, with purpose, to a specific context.

We can see immediately that the trans-disciplinary mode of operation is transgressive because it does not respect existing institutional or disciplinary boundaries. It lends itself to looser organisational structures than we are used to in teacher education, flatter hierarchies and more open-ended chains of command. Universities and in turn Schools of teacher education are generally highly hierarchical and fixed in disciplinary and career structures because of their institutional arrangements to which we referred earlier. Taking this analysis and the issues raised earlier together, the logic of the university-dominated teacher education approach is left exposed to the winds of change. Contextualisation is a challenge to the very cognitive and social authority of university-based teacher education and to its appurtenances, the accreditation bodies.

Before we dismiss this kind of theorizing out of hand, let us recall Vice-Chancellor of Melbourne University Glyn Davis’s view that the conditions exist within higher education for ‘radical change’.

“We're moving into very different times and, in a sense, we're going to get there whether we want to or not,” he said. "I don't see this as particularly driven by government and I don't see this as particularly driven by ideology. It's just driven by the fact that the world has changed so dramatically.”

**Discipline Knowledge**

When teacher educators, teachers or even students begin thinking about the knowledge and skill sets required of teachers and that should therefore be in teacher education programs, teacher educators and teachers tend to think of disciplines, subjects and research. They reflect the ways in which universities interpret their social role of generating and disseminating substantive and procedural knowledge. It is a perfectly legitimate and proper role but it creates enormous difficulties for teacher education in our view. A discipline-based view of knowledge and learning is substantially anchored in the
certainties of university department-based, bounded, research-orientated, relatively homogenous, hierarchically managed knowledge that is reviewed by an expert community of scholars. Following Nowotny et al, we can refer to Mode-1 knowledge and the PhD as the *sine qua non* of current knowledge production, possession and dissemination in teacher education.

However, taking the lead of Novins and Armstrong 70, by asking relevant questions it is apparent that there are other ways of classifying knowledge that can guide knowledge classification. These include:

**Recipient:** who is likely to need to use it?

**Applicability:** How broadly does the knowledge apply? Is it local or global in nature?

**Transferability:** How easy is it to impart the knowledge to others, and how difficult is it for them to apply correctly?

**Richness:** How much is the knowledge dependent on its context, and how much meaning would be lost through simplification?

**Currency:** How old is the knowledge, how timeless?

**Trustworthiness:** Is it easy to test? Does it come from a reliable source?

Questions like these change the context in which teacher education can plan and execute programs. They invite participation beyond the closed shop of the Mode-1 world. In fact, the teacher education field is strongly influenced by matters of collective expertise, comprised of overlapping and linking inputs from mixed audiences, many of whom have little direct interest in academic work as such. The authority of a teacher education program often lies in the capacity of the participants to hold it together, and to communicate with further audiences such as classroom teachers, principals, administrators and university staff. Ultimately, teacher education programs speak to people interested in concrete outcomes rather than abstract solutions. This kind of shared, collaborative, multi-perspective, applied interests we can refer to as Mode-2 knowledge.

Our work in the Bachelor of Learning Management at Central Queensland University indicates that thinking about the structure and
processes of teacher education program knowledge from Mode-1 discipline domains alone is not very useful at all in guiding teacher education program developments. Instead, the real insight comes when academics, school and training institution practitioners, and other interested parties create a Mode-2 synthesis that links action and outcomes along *applicability* and *transferability* dimensions. Multiple actors means heterogeneity of skills and expertise in the problem solving and knowledge production process.

Figure 2.1 shows four possible categories of teacher education knowledge\(^7\). We put this schema forward as a cue for thinking about how to constitute a professional content for teacher education that does not simply reiterate the constructs of academic disciplines or yesterday’s practices from schools or TAFE or other educational endeavours. In short, it is deliberately heuristic in respect to content represented by the four quadrants. We explore these ideas further in Chapters Five and Seven.

Notwithstanding, it is also crucial to acknowledge that implementing such a schema immediately raises all of the issues about pedagogical practice that matter. That is, how specifically should one-off knowledge be taught and what about complex knowledge? Clearly, these should be dealt with pedagogically according to research findings and the level of performance we expect from learners in both the university and later in schools or VET\(^2\). In our view, high level, demonstrated, detailed capability in such matters is the marker of the teacher of the future. In turn, this proposition implies a different kind of teacher education with different practices.

**Figure 2.1: Knowledge Categorisation\(^3\)**

Readers may already be interpreting our line of argument as yet another attempt to dismiss ‘knowledge’ and intellectual ‘content’ from
the never-ending teacher education debate\textsuperscript{74}. In our view this is misguided and misses our point altogether. What we advocate requires a greater command over a wider set of knowledge and a more extensive degree of understanding than a conventional model of teacher education demands. It bolsters rather than downgrades the rigour and academic excellence that mark our places of work because it demands that teacher educators have to specify criteria that enable one to judge worthwhileness. In this frame, we question the extent to which the conventional teacher education model, including its accreditation by agencies, can remain unaffected by the rapidly changing contextual circumstances, especially the inputs of multiple clients and users.

In summary then, teacher education is always situated in a complex, changing socio-cultural world and is affected by the context but are only a part of the dynamic\textsuperscript{75}. Despite these tensions, as Nowotny et al. point out, choices about priorities have to be made, urgently. To follow the logic, teacher educators have a responsibility, “to act not only as if they know the answers, but also the conditions under which the answers will fit into an unknown future”\textsuperscript{76}. This is why we have attempted to identify what we think are well-known and longstanding dilemmas in teacher education that are waiting for solutions. They affect both the operation of teacher education itself and the kind of preparation required by new entrants to the teaching profession. Changing them signals radically different prospects for the future in respect to strategy and tactics. For example, teacher education will have to be far more conscious of implementing and transmitting to graduates high-performance work practices that deliver what they promise\textsuperscript{77}.

The kind of teacher education being canvassed here is aimed at increasing the capacity of education authorities and other providers as well as changing what universities do. It is intent on creating a new concept and skill set that links occupational knowledge and skills with general and personal capacities and attitudes essential for an emergent world rather than the past\textsuperscript{78}. It is primarily concerned with developing new capabilities in its own activities and in the forthcoming generations of graduates\textsuperscript{79}.

In the chapter which follows we update the theoretical construct of learning management and show how it defines the what and how of teaching and teacher education.
Chapter Three:
The Learning Management Concept

In this chapter we show that the learning management concept describes pedagogic relationships rather than ‘things’ about particular teachers or curricula. Using this sense, we update the idea from its earlier iterations to the explicit and purposeful intention to create knowledge age change. In doing this, we argue the concept has generality far beyond that of teaching in the school and university sectors. By taking this approach to learning management, we underscore its transgressive nature in the learning industries because the designed learning role incorporates the knowledge and skill sets required by educators in the twenty-first century.

This chapter seeks to expand the learning management concept and extend its usage beyond that of a powerful teacher education device to a pedagogic relation that shapes pedagogic communications and their relevant contexts. To achieve this goal we briefly describe our earlier iteration of the learning management concept in order to show how the concept of learning management has salience beyond its usage as teacher education device. We conclude the chapter with a statement about the learning manager and the capabilities underpinning learning management work.

The Concept of Learning Management

In earlier work, the concept of learning management was defined as the capacity to achieve learning outcomes in all learners and was based on the notion of design with intent. The design with intent notion signalled the belief that every teacher required the personal expert knowledge and skill capacity to achieve what are normally predefined learning outcomes in all learners. This entailed a common
language of instruction. This formulation includes not only the transmission of facts and knowledge components but also how, when and where students use that knowledge in everyday social and practical settings. The Dimensions of Learning approach makes this abundantly clear.81

We are keen to emphasise that what teachers need to learn and, in turn, their students need to learn, is based on a conception of the expert knowledge that underlies knowledge work in today’s economy developed for the BLM. As we note in Chapters One and Four of this book, knowledge workers apply their expertise in social settings, using a repertoire of technologically advanced tools in addition to working with pencils, paper, markers and whiteboards. As Sawyer82 puts it:

In the knowledge economy, memorisation of facts and procedures is not enough for success. Educated graduates need a deep conceptual understanding of complex concepts, and the ability to work with them creatively to generate new ideas, new theories, new products, and new knowledge. They need to be able to critically evaluate what they read, to be able to express themselves clearly both verbally and in writing, and to be able to understand scientific and mathematical thinking. They need to learn integrated and usable knowledge, rather than the sets of compartmentalized and decontextualised facts…

There are two essential elements to the learning management approach. First, there is the technique known as the learning design process (or the 8 Learning Management Questions)83 that organises the curriculum design process required of teachers for successful sequencing and pacing of curriculum material for individual learners. This is a necessary step of professional responsibility irrespective of whether the setting is face-to-face teaching or internet-based. Second, there is the non-negotiable insistence that learning managers (the term given to the practitioner of learning management) have the skill set to implement systematic pedagogical strategies and practices that result in students reaching the learning outcomes required of them. The Dimensions of Learning84 framework was used to provide the mechanism for converting the curriculum design process into research-based pedagogical practice.
The learning management concept represented a rethink of teaching, schooling and teacher education on a number of strategic grounds because of its emphasis on the following three characteristics.

First, it emphasized the need for design principles and a common language of instruction for the knowledge workers called teachers. Second, it espoused as a principle the obligation of teachers, administrators and teacher educators to give up pedagogical strategies justified by personal preferences in favour of research-based techniques that deliver a wider curriculum agenda and the deep understanding that underlies knowledge work. Third, it enunciated a renewed responsibility on the part of teachers, learning institutions and teacher educators for the outcomes of pedagogical practice.

In short, the theory of learning management was aimed at what we saw as filling significant voids in the understanding of pedagogy and pedagogical practice in standard schools and schooling and in university-based teacher education. Of particular interest to our concern with the efficacy of education for all students was the idea that the current dominant pedagogical practices of schooling and teacher education are a major contributor both to the failure of schools to fulfil their promise for many students and their families, and to the knowing-doing gap that policy makers struggle with in their attempts to adjust education for social change in a knowledge economy.

The Context of Pedagogical Talk in Teacher Education

Knowledge, both theoretical and procedural, in a most general sense of the term, is the end product of learning. Knowledge is the, “forms of things that people have in mind, their models for perceiving, relating, and otherwise interpreting them”. In addition, because meaningful knowledge is applied, a knowing person uses tools and relates to other people in the environment as knowledge is realized in actions. It not just a static mental structure inside the learner’s head. This is another way of saying that different cultural systems or models provide ways of understanding and operating on the world; that they create for their performers an order of relevance and social relations.

This is an important way of understanding how occupational groups do what they do. Taking teachers as an example, they come to learn their social roles through the process of cultural communication over many years. We are all socialized into schooling and its folklore as children while we participate in schooling for 12 years or so.
In the formal training sense, teachers undertake a lengthy pre-service preparation that connects them with both teacher educators—predominately former teachers—and teachers in school workplaces. During this process and in the early years of work, they are progressively incorporated into teacher cultures in areas like demeanour, dress, language and social relations. These teacher cultures contain ideals and specific knowledge about how to be a teacher, and how to behave and to present as a teacher to stakeholders such as other teachers, parents and university supervisors.

We can see how the criteria for perceiving, relating and otherwise interpreting teaching regulate the selection and organisation of what counts as proper teacher talk and action. In particular, and of great interest to us, is the translation of these criteria into preferred teaching performances. A deep-seated element of such teaching cultures is the idea that every teacher has their own unique ways of teaching and that teaching prowess as judged by professional colleagues is an individual accomplishment.

We can understand how this process of identity and image building comes about. For a start, a teacher’s own socialising experiences through school as a child have a significant impact on how these future teachers perceive and undertake their work once they are qualified. This is despite the endeavours of the teacher training system to inculcate new ways. Also, when a student teacher interacts with a teacher while on a practicum this form of social relation has a selective effect on what is said, when it is said and how it is said. Allen provides a good example from a pre-service student teacher, Helen, talking about school experience:

You had to make sure you did what the teacher did, not what you were taught at uni. When the teacher was away I could try some things, generally what we’d learned, although a lot of what I did was emulating the teachers. Yes, it is usually what the teacher does.

Helen exemplifies the form that the social relations between student teacher, teacher and teacher educator takes as selective talk and actions are transmitted and reinforced in the standard schooling model. More generally, the experience of teachers is given shape, meaning and relevance by the criteria used in the contexts of teaching. The criteria are a consequence of the ways schooling is structured that,
in turn, have effects on the wider social structure as a corollary of the outcomes of schooling. Of course, it is not difficult to see that some of these elements constitute a formidable barrier to change from the point of view of teacher educators, teachers, employers, students and policy makers seeking to adapt schooling to new social realities.

This is an important point for models that require close university and industry collaboration like the Bachelor of Learning Management (BLM)\(^8^9\). The immediate customers of teacher education are only going to lead in the direction in which they want to go and for which their occupational cultures provide support. For learning management and the BLM, the school teacher and teacher education cultures alone would have delivered the same product as before, despite changes in the accreditation details like re-naming subjects and rearranging their sequence. This in-built resistance to renewal and change would never have led to disruptive innovation if left to its own devices.

It was fortunate for the BLM, as a new teacher education program intent on changing the standard Bachelor of Education (BEd) product, that it attracted a new set of customers. Some were marginalized by the conventional model because it failed to deliver desired outcomes such as workplace readiness. Others were feeling the pressures of change from new students and the economic environment and were concerned about what teaching jobs were becoming. Still others, as administrators, realized that their own policy challenges required a teacher education program that would both prepare different graduate teachers and up-skill the profession. The BLM, rather than the obsolete BEd, was developed around learning management assumptions from the beginning, with strong input from a raft of stakeholders including the university. To survive, the BLM had to prove true for the business models across employers and the university as well as engaging the collaboration of teachers. The Ingvarsen et al. evaluation of the BLM\(^9^0\) was a test of the underlying assumptions of learning management and found that they were robust and delivered an effective program with better outcomes than the BEd programs with which it was in direct competition.

Teaching then can be understood as a performance that is realised as a function of teacher culture acting through social relationships in specific contexts\(^9^1\). It is important to realise though that cultural criteria are not pre-determined in the sense of guaranteeing particular behaviours. They describe the potentiality of a cultural pool, and in this sense teacher performances are the actually realized examples of
what is conceivable within a particular cultural framework. An implication of great consequence is that if the performances of teaching are to change, then there needs to be a different set of cultural tools and resources in place that legitimate new ways of behaving. Changing cultures and behaviours is an especially difficult assignment in education because the institution is so embedded in social structures and expectations.

An example of teacher culture that seems impervious to change but has special significance for teacher education is that of pedagogical approach. It seems that there is widespread acclamation for the idea that there are as many teaching approaches as there are teachers and that it is desirable that every teacher is expected to develop a repertoire of unique pedagogical practices that are anchored in their own subjective preferences. As we pointed out in the previous chapter, an important variation of these ideas is that teachers are ‘born’ to the vocation.

However, this form of heroic individualism is not without its difficulties in the education sector. Education outcomes for most people in the community have far-reaching implications for life-chances and are historically skewed by the class structure. Education has always held out the promise of social mobility but only if the student is successful in their school career. Faced with the evidence that a significant proportion of students fail to reap the benefits of education in every system, individualism on the part of teachers in this context looks more like self-indulgence than professional service.

Pragmatically, the sign of a mature profession is its use of a common and explicit knowledge and practice base. This base defines and organizes professional service. We argue much of what is taught at teacher education faculties today is easily recognized by a layperson because what constitutes the theory and practice of professional teaching is composed of subjective preferences anchored in the traditions of schooling. Everyone has experienced such schooling as a child and consequently to an outsider it all appears to be logical, because the profession is recognizable by what it does. To use the example of medicine and teaching, the contrast is obvious.

In addition, there are grounds for arguing that for a profession seeking to be professional, the individualized, subjective preference approach to pedagogical work runs counter to the best interests of the teacher work force and their clients, especially in a knowledge
dominated world. There are five areas that contribute to this situation and we explore each in specific detail.

First, there is ample evidence that schools are unable to achieve acceptable outcomes in every student and that there is significant variation in academic outcomes amongst schools. This true for the standard curriculum – leaving aside the urgent new knowledge economy agendas faced by schools that now include climate change in all of its manifestations. It has been fashionable to explain away such variation with class, race and gender-based assumptions about educability. Yet contemporary research indicates that effective schools and teachers can have a profound effect on individual student achievement; that differences in schools and teachers contribute to differences in student achievement and that school leadership characteristics have a definite impact on student academic outcomes. The usual alibis that depict teachers as helpless in the face of irretrievable socio-cultural disadvantages ring hollow when faced by these empirical findings, despite the ideological protestations about the home background of students from teachers’ unions and teacher representatives seeking better industrial conditions.

Second, it is difficult to fathom how and why the proliferation of pedagogies is desirable. Taking the Australian Competition and Consumer Commission definition of a profession, teaching seems to fall well short in crucial areas:

“A disciplined group of individuals who adhere to high ethical standards and uphold themselves to, and are accepted by, the public as possessing special knowledge and skills in a widely recognised, organised body of learning derived from education and training at a high level, and who are prepared to exercise this knowledge and these skills in the interest of others.

Inherent in this definition is the concept that the responsibility for the welfare, health and safety of the community shall take precedence over other considerations.”

Clearly, where there are as many approaches to teaching as there are teachers, there is no, “widely recognised, organised body of learning” that anybody much agrees on and in turn, no, “special knowledge and skills” that can be demonstrated to have efficacy in the
sense of, "responsibility for the welfare, health and safety of the community". Taking Indigenous education as a pertinent example, a recent MACER report notes:

…it seems there is an underlying assumption that Indigenous underachievement is somehow ‘normal’ or ‘given’. Disturbingly, there has been little outrage from within the system about dramatic and continuing levels of underachievement.

Third, some argue that such enormous variation in pedagogical approach offers greater chances of progress towards successful practice because of the potential for mutation. The paralleling of a biological variation argument in which variability provides resources for pedagogical adaptation appears attractive, but it contains fallacies. For example, in biological parlance, populations rather than individuals evolve and adapt. This means that adaptation is a consequence of selection amongst populations rather than amongst individuals.

Moreover, individual selection is likely to oppose population-wide increases in variability. That is, the generation of new variation will not be selectively favoured on its own merits within a population. A ‘variability allele’ may well cause more new beneficial variants to arise, but recombination will dissociate it from these variants and keep it from spreading in a population. In this way, it will therefore not be favoured by natural selection. Given the lack of variation in the Bachelor of Education (the standard teacher education program in Australia) ‘genome’ and in pedagogical approaches across formal education settings, Sniegowski and Murphy’s argument has face validity for the education sector when it comes to evaluating the proliferation and fragmentation of pedagogical practice.

Fourth, the claim that individuals, as individuals, have a right to exercise their autonomy as teachers is phantasmagorical. In fact, this kind of claim is an indicator of the loss of status and prestige mirrored in the recruitment of teachers and the status of teacher education. In recent decades, increasing de-professionalisation as decision-making power over curriculum and teaching goals have shifted elsewhere have had an impact on the teaching profession and teacher education.

The fragmentation of the professional teaching knowledge-base and the inability of schooling and teacher education to adapt to rampant social change have undermined the credibility of the
profession itself. Neither the teaching force, their unions nor teacher education have grasped the need for a new set of pedagogical principles in tune with education for all, and the need to provide teachers with an intellectual context for understanding the knowledge/creative society and its workplace implications. There are clear signs that the professional teacher is one who can produce desired learning outcomes using research-based knowledge and skill and who has wide social networking capacities across diverse communities and cultures. The credibility of the profession will depend on these elements.

Fifth, there is a predominant belief in teacher cultures that the individual learner and his or her internal developmental processes are the proper concern of teaching and teachers. Progress is signalled by competence in undertaking appropriate developmental tasks. This approach is in contrast to placing primary emphasis on the knowledge that students can demonstrate by performances judged according to criteria derived beyond the individual student. These competence and performance indicators respectively provide quite different assumptions for a teaching approach. All pedagogical models lie on this competence and performance continuum.

The emphasis on the individual, on the internal processes of the learner, and on the person rather than what is to be learned either formally transmitted or in other modes, confounds the difference between the pedagogic consequences of a teaching episode and a pedagogic relation between the teacher and the taught. The evaluation of performances with external criteria suggests a more active, directive role by a teacher, while fostering internal biological processes suggests an approach that creates an environment in which students can grow and develop.

The learning management approach clearly favours an active role on the part of the teacher and is quite deliberately differentiated from discovery learning, problem-based learning, inquiry learning, experiential learning and constructivist learning. Nevertheless, it contains assumptions about the developmental patterns in learners exemplified by the learning design process and Dimensions 1 and 5 in Dimensions of Learning. The learning management focus is on achieving learning outcomes that matter by putting into play definitive pedagogical strategies that have an empirical basis.

It cannot be expected that all pedagogic experiences have learning outcomes, irrespective of their potential. It is also apparent
that experiences involving a teacher and student always have learning potential and that not all experiences are pedagogically generated. Again, learning may take place by example in contexts where neither the student nor the teacher is aware that communication is occurring.

Similarly, cultural areas such as TV, magazines, the Internet, newspapers and so on transmit communications that have the potential to be educative but there is little control over the context or the motivation of the receivers, and there are minimal social relationships involved in the transaction. All of these variations involve what might be called pedagogic work and learning potential but in the learning management concept, we want to be more explicit about what we mean by learning management, especially when it comes to formal learning settings like schools. We are especially sceptical of approaches that advocate a belief that learners will learn really useful knowledge by being left to their own devices either in traditional classrooms or on the Internet. This is not to deny creativity and serendipitous informal learning or the experiences of experts with already extensive background knowledge, but it does take a stance on the ideas that formal learning carries responsibilities for teachers and that not all experiences are pedagogically efficacious.

The term transgressive, encountered in BLM coursework, has a particular meaning for learning management. Following Nowotny, the presupposition is that in times of fundamental social change, teaching and learning contexts encountered in the knowledge/creative society compel educators to respond to questions that they have not necessarily chosen – in contrast to, for example, the well-ordered research activity of university academics. Consequently, educators in recent years have been and will be into the future constantly forced to transgress the limits of both their own competence and that of colleagues. These processes include the boundaries of traditional disciplines and the constraints of individual and collective professional limits, especially in the teaching and education fields. They need not only to interpret the world in various ways, but to change it.

Expertise in learning management then is transgressive in two senses. First, it needs to account for those issues and practices such as structures and procedures that have new or emerging contexts with new consequences for clients and the learning industries. The links between what goes on in universities and schools, the IT communications industries, institutions such as the school, training and university education providers and very diverse professional, union,
parent, school principal and political networks need to be recognized, analysed and acted on for the teaching profession and the learning industries to prosper and make a contribution.

Second, learning industry expertise is transgressive because it deals with audiences that are never just fellow-experts in the school, the VET provider or the academy. There is a wide range of demands and expectations in the experience of mixed audiences. This inherent transgressiveness of expertise increases its vulnerability to contestation and opposition. Having a higher degree, citing research evidence or theory, or seeking to exclude the non-initiated from decision-making do not guarantee immunity against contestation. Indeed, Nowotny makes the point that the:

“complexities of the social and political world demand the contrary: a widening of scientific–technical expertise, exercises in comparative judgement and the ability to move back and forth, that is, to transgress the boundaries between specialised knowledge and its multiple, many-layered (and often unforeseeable) context of implication”\textsuperscript{101}.

Following Bernstein, and with Nowotny’s advice in mind, learning management can be explained as the explicit, purposeful intention to initiate, modify, develop or change knowledge, conduct or practice by someone or something which already possesses or has access to the necessary resources and the means of evaluating the acquisition\textsuperscript{102}. Learning management makes use of specialised knowledge to package content and devise an effective means of delivery where there is an intention that learners will reach a future state of knowledge, conduct or practice. The learner may not necessarily accept what is to be acquired or indeed see it as legitimate. However, to reiterate, learning management is fundamentally an explicit and purposeful intention to undertake knowledge age change through designed learning and the means of evaluating the acquisitions of such changes.

We draw these threads together in Table 3.1 that shows cultural principles regulating the selection and organization of pedagogic approaches. This Table draws relatively stark comparisons between what we intend by using ‘learning management’ and what we believe is standard practice in today’s schools and teacher education. This depiction certainly does not imply that people’s behaviour in one or
the other category means that they cannot operate in the other. It does suggest however, that where the context is sympathetic with the listed characteristics, where there is cultural support, then the combinational package is likely to operate.

**Table 3.1: Pedagogical Cultures**

<table>
<thead>
<tr>
<th>Learning Management</th>
<th>Extant Pedagogical Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elaborated language of instruction that makes explicit the subjective intent of pedagogical work</td>
<td>Restricted language of instruction that is unable to makes explicit the subjective intent of pedagogical work</td>
</tr>
<tr>
<td>Complex planning of pedagogical strategies that transcends the present, the local, the concrete, and the experience of others</td>
<td>Concentration on ‘how now’ fast, fluid, preparation with limited articulation clues, beyond the particular and local</td>
</tr>
<tr>
<td>Unique meaning of the person verbally explicit</td>
<td>Unique meaning of the person verbally implicit</td>
</tr>
<tr>
<td>Interested in causality for the present and future and how to overcome categorical problems</td>
<td>Less interested in causality or the future in the search for a better present</td>
</tr>
<tr>
<td>Identification with expert capability in using <em>knowledge and skills in a widely recognised, organised body of learning</em></td>
<td>Closely shared identifications, common assumptions and shared expectations about a taken for granted skill-set</td>
</tr>
<tr>
<td>Seeks professional autonomy in professing <em>knowledge and skills in a widely recognised, organised body of learning</em> by emphasizing the ‘I’ over ‘we’</td>
<td>Celebrates ‘we’ above the ‘I’ in resisting transgressive <em>knowledge and skills</em></td>
</tr>
<tr>
<td>Interest in renewing the professional culture</td>
<td>Interested in controlling so that the transmission of teaching culture can be accomplished</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interested in applying individual experience and expertise on different tasks with others to achieve agreed ends irrespective of different values and interests. Seeks reliance on other expert contributors and complementarities to perform specific programs and tasks.</td>
<td>Most comfortable with likeness and similarities among likeness and similarities among work place colleagues, dependence on common rituals and routines of custom and obligation with repressive sanctions, that reaffirm traditional values. The status of the individual is determined by kinship in the group such that autonomous individualism is undeveloped</td>
</tr>
<tr>
<td>Reinforces the need to create speech and action that uniquely fits the intentions of teaching</td>
<td>Reinforces the form of the social relation of teaching</td>
</tr>
<tr>
<td>Person orientated: sharp boundary between self and others</td>
<td>Status or positional orientated: sharp gap between the sharers and non-sharers</td>
</tr>
<tr>
<td>Differentiated other</td>
<td>Generalised other</td>
</tr>
<tr>
<td>Interested in individuals acquiring knowledge evidenced by performance</td>
<td>Interested in growth of the student patterns evidenced by competence in developmental tasks</td>
</tr>
<tr>
<td>Visible pedagogical practices used to generate student academic performances</td>
<td>Invisible pedagogical practices used to stimulate student competence with developmental processes</td>
</tr>
</tbody>
</table>

In summary, the introduction of the learning management concept and the Bachelor of Learning Management program have conceptual antecedents; they were not mere capriciousness as some would claim. Moreover, the Bachelor of Learning Management
program, as outlined in a previous text by the authors, was meant to be stimulatingly disruptive. It set out to be a breakthrough innovation in teacher education by using design thinking and a focus on student learning, socio-cultural change and employer customers for teaching staff. It had an entrepreneurial dimension to it so far as it attempted to develop new business processes and models in the university and in schools in order to create a different kind of customer experience centred around learning management.

A Revision of the Learning Management Concept

To this point we have described the context of pedagogical practice that influenced the development of the learning management concept. Now we show how the concept has salience beyond its usage as a powerful teacher education device, to pedagogic relations that shape pedagogic communications and their relevant contexts more generally.

In times of rapid change there are fluctuating requirements in the labour market, productivity and political targets for the state and federal governments. Included in the reasons for this are politico-economic ambitions to be competitive globally by developing a dynamic knowledge-based economy capable of sustainable economic growth and greater social cohesion. In addition to economic and political ambitions and challenges, there are other individual learning objectives that fit people for the emergent environment. These include an emphasis on humanistic and moral values that express the life experience, and the need for social participation and personal autonomy. They imply learning in areas such as social competence across cultures, critical thinking, knowledge sharing and social networking techniques.

In this respect, Noonan proposes that the knowledge required by the contemporary economy is different from the knowledge that has occupied traditional education and training programs. It is important to grasp that this claim is not just about the details of content such as which mathematics or novels should be included. Noonan points to the need for knowledge to be constructed as practical, interdisciplinary, informal, applied and contextual rather than knowledge constructed as theoretical, disciplinary, formal, foundational and generalisable. This is a major shift in orientation similar to that which we presented in Table 3.1. Noonan also identifies the growing importance of individual
attributes and the importance of work-based learning and proposes that this form of learning is “not organised around pre-specified content and is not determined by qualifications guidelines or training packages”\(^{108}\).

Similarly, Nowotny and Tuomi\(^{109}\) argue that the future learning landscape is driven by the ongoing global socioeconomic transformation. The events of September 2001 have heightened the awareness that, “the future ain’t what it used to be”\(^{110}\) and there is a need for critical appraisal and fresh ideas for the future. In this landscape, the coincidence of information, knowledge, creativity, innovation and entrepreneurship remain the main sources of cultural and economic growth and employment opportunities. Innovation and consequent entrepreneurship are in turn increasingly syndicated, networked, transdisciplinary and solution-orientated. To operate successfully in this environment, managers and workers alike need well-developed social, cultural and communication skills and the capability to tolerate ambiguity and complexity as they move between competing conceptual systems and interpretative schemes.

At the level of the organisation, in an era of knowledge and creativity, the store of technical expertise—knowledge—is often said to be an organisation’s most precious asset. Normally, in the internal knowledge management system of a school or an education system, the goal is to ensure more intelligent and effective operations by using the store of proven technical expertise to improve the operation. However, in times of significant and continuous change, the capable organization:

“engages with external emerging trends, has confidence in its own identity and values, imagines possible futures based on those trends and formulates potential roles for itself within those futures. This notion of a capable organisation embraces but goes beyond that of the learning organization”\(^{111}\).

It should be clear that there are many challenging agendas here that rely on individuals and organizations being able to learn to do different things in different ways. To put it another way, there must be a leadership element and a group of people who quite explicitly set out in a purposeful way to initiate new directions and modify existing operations; to develop or change the stock of knowledge, the behaviours and practices of employees and colleagues in ways that
have measurable outcomes. This is self-evidently a pedagogical-design function in the knowledge society preferable to drawing on the ‘old think’ about line management. We see this kind of occupational role as quintessentially that of the learning manager – the practitioner of learning management. It follows that the term learning manager already contains our vision for a rethink of the teacher construct.

In uncertain times, the learning manager needs to be manager of information and knowledge, realizing that there is no other function in most education-learning reliant organizations that provides this fundamental capability. The learning manager role consists of radically improving existing services and products so that they fit user needs, predicting where entire systems can be developed that supersede obsolete services and products and closing the knowing-doing gap by achieving designed outcomes. The value of the learning manager lies in interpreting social intelligence and having the capacity to undertake strategic communication within and between people and organizations to make things happen. In this sense again, the domain of the learning manager implies significant pedagogical functions as well as technical expertise.

There are two core elements to this role that relate to knowledge production for the purpose of creating knowledge intensive, next generation operations. The futures-orientation element is particularly important for a learning manager with responsibilities to renew such things as curriculum, instruction, assessment and organisational performance. Merrifield argues that the intelligence function and pattern recognition are fundamental processes for monitoring the futures orientation of an organisation and that they presuppose new or changed specialised capabilities. Such capabilities are a means for dealing with trends that affect the global context, such as those depicted in Table 3.2.

**The intelligence function**

In order to keep abreast of the pace of change, exhaustive and continuous searches are required of the technical, patent, commercial, government and social databases in every area that has relevance for an organisation. This is important not only to avoid being blindsided by new developments but also to counter a tendency to ‘re-invent the wheel’ or to reproduce the past in new language. Here we can point to the emergence of flexible, e-learning with different cost structures and
independence from location and plant as a major challenge to classroom-centric, time, location and situation-dependent, survival mode schooling, or indeed universities. These developments aimed at new cohorts and with different operating cost and strategic platforms, threaten conventional education and training services.

**Pattern recognition**

Early recognition of emerging patterns of change lies at the centre of contemporary interest in creativity, innovation and entrepreneurship. At the simplest level, the skill-set around discerning an emergent pattern and its probable S-curve is a requirement of learning managers in today’s organisations. For example, the emergence of technologies such as iTunes and iPhone and their enormous global take-up rate indicates that radical communication channels are already available and that these have multiple implications for the delivery of goods and services including education and training.

On the one hand, both the intelligence function and pattern recognition may seem distant from the operations of many schools or indeed universities today. On the other hand, the rhetoric of lifelong education and ‘just-in-time’ training is made possible by IT devices, as long as there are entrepreneurial-minded people who can develop the programs to design content and delivery mechanisms that meet the needs of users. We are not just talking about curriculum delivery but also communications with local communities, other cultures, groups of experts and so on. Take a moment to consider the impact of MSN, Twitter, FaceBook, LinkedIn, QQ and similar Web 2.0 tools to press home the point that ‘teachers’ and education administrators everywhere need to interpret the environment and act on it as part of the normal day-to-day job now and into the future. To do it successfully though involves both mindsets and background knowledge that enable decision-making.

As an illustration of today’s agendas for educators, Florida says, “We need to think beyond schools”. He goes on to say, “Technology allows for a massive expansion of home-schooling and learning outside of classrooms… Our investments need to be focused on what’s best for learning and creativity, not real estate”113. Similarly, Frey observes that the notion that, “education can take place only in a classroom is similar to the notion that purchasing a product can only
take place when you see it on a store shelf”. He points out that removing “the classroom constraints to learning is similar to removing the shelf space constraints to the marketplace”\textsuperscript{114}.

The techniques for creating a new courseware and delivery matrix are presently undergoing an iterative process of multiple evolutionary stages as new and better tools become available\textsuperscript{115}. The underlying sleeper here is the capacity of the learning industries, especially slow-moving, risk-averse school systems, to keep pace with the potential of IT-driven resources. Figure 3.1 is a weak signal that the time of the learning manager has already arrived for industries that lie beyond the taken for granted boundary of ‘education’ and yet are concerned with teaching and learning as core business. It follows then that the preparation of specialized pedagogues, that is teachers, needs an overhaul both for individuals and for stakeholder organizations if new generations of teachers are to survive.

These are then enormous challenges for the learning industries and underscore our insistence that it is not so much a case of should we prepare learning managers, but when. Learning managers who can think and do design, who can link pedagogical strategies to content in ways that have pedagogical intentions to achieve learning outcomes rather than provide experiences, whatever it might be, in ways that make sense to others and especially to learners, who can re-cast themselves as event planners and experience designers, will have a head start in the race to develop specific topics tied to new courseware and Web-based tools. Thus:

To align with the innovation economy, teachers will require more autonomy, more creativity and more content knowledge.

These teachers should be highly trained professionals, comfortable with technology, with a deep pedagogical understanding of the subject matter, able to respond in an improvised manner to the uniquely emerging flow of each classroom (Sawyer, 2004). To foster collaborative and authentic learning, they will lead teams of students – much like a manager of a business or the master in a workshop – rather than controlling students autocratically, as the factory bosses of old\textsuperscript{116}.

The learning management approach, we maintain, provides a way forward that has a track record to indicate its efficacy.
Table 3.2: Macro-Trends

<table>
<thead>
<tr>
<th>TRENDS</th>
<th>IMPLICATIONS</th>
</tr>
</thead>
</table>
| Ageing, affluent populations in developed countries | Quality of life and health  
Security  
Services  
Generational competition  
Ratio of workers to non-workers and threat to society |
| Millennial generation                               | Distinct needs about moral, knowledge, IT and spirituality                   |
| Post-Western globalization                          | West will become net exporter of talent and net importer of ideas            |
| Increasing middle class populations in developing countries | More disposable income  
More knowledge-based  
Infrastructure needs  
Increasing consumerism  
Travel  
Rising quality of life expectations               |
| Mass urbanization                                   | Infrastructure needs  
Transport demands  
Construction  
Public health  
Education  
Urban drift from rural areas  
City dwellers outnumber rural populations         |
| Global commerce and economics                       | Price competition  
Shorter product cycles  
Erosion of government controls  
Global standards  
Global salary differentials based on knowledge and know-how  
Free trade  
Influence of multinational companies               |
| Increasing cultural diversity and complexity | Mass customization  
Mass production in ‘units of one’  
Changed buying patterns |
|---------------------------------------------|-------------------------------------------------|
| Environmental sustainability               | Quality of life expectations  
Rapid growth of India and China  
Invention of alternative energies  
Global standards  
Domestic antagonisms between rural/city  
Climate change impact on oceans, food and water, health, weather  
Climate change displacement of populations |
| Free flow of information                    | Greater volume and complexity of information  
Global/local networks  
Interactive, personalised communications  
Wireless facilities  
Distributed work and learning sites  
Rising importance of the individual in parallel with the power of knowledge  
Diminished role of the ‘middleman’  
Greater need for collaborative networks  
BANG technologies |
| Benefits flow to more knowledge-intensive segments of society | Two tiered global society  
Competition increases  
Competition more complex and diverse  
More sophisticated markets for all products  
Information substitution for materials  
Cities become future powerhouses |
| Multimedia                                  | Visual, interactive, wireless, optical, digital  
Broadband  
User friendly  
Personalized  
Intelligent |
| Personal                                    | Holistic medicine |
| Responsibility for Wellness | Disease prevention and management  
|                           | Diet, nutrition  
|                           | Exercise  
|                           | Leisure  
|                           | Genetic manipulation  
|                           | Medical information integration  
|                           | Diminished role for physicians  
|                           | Human enhancements via nano- and BANG technologies  
| Families Under Stress     | Mobile, global workforce  
|                           | More diversity in living arrangements and households  
|                           | Need for networking and information access  
|                           | Women assume greater global role  
|                           | Child care  
|                           | Personal uncertainties  
|                           | Personal time becomes a premium  
| Small Conflicts Increase  | Nationalism, especially anti-globalism  
|                           | Ethnic unrest  
|                           | Illegal trade  
|                           | Religious differences  
|                           | Terrorism  
|                           | Regional instability  
| Substantial Global Population Growth | Expanding consumption demands  
|                                   | Demands on rural and agricultural land and populations  
|                                   | Infrastructure needs  
|                                   | Limits on resources  
|                                   | Increased environmental damage  
|                                   | More ‘have nots’  
|                                   | Social and regional instability  
|                                   | Disease patterns change  
|                                   | Radical social change that forces institutional change  

Having said that, the complementary piece is that the ‘education’ workforce also needs to be prepared to do different things in different ways and in turn, to develop a different kind of pedagogic culture and the skills to implement it. Taking MACER’s advice, if teachers are:

“to participate in and serve the burgeoning needs of the future – where creativity, innovation, risk, autonomy and self-management are the secret life that drives economic and social development – then they need a make-over”\(^{117}\).

In turn, the reality is that almost all teachers work in systems, irrespective of the level of education, and a make-over is premised on the host of bureaucratic processes that lie between governmental policy requirements and outcomes. Upskilling for a make-over by definition includes the educational bureaucrats, school leaders, departmental staff and accreditation agencies as well as a host of community interests. The preparation of new recruits and the upskilling of the existing workforce are then complementary and inextricably bound.

**Figure 3.1 The Learning Manager Has Arrived\(^{118}\)**

<table>
<thead>
<tr>
<th>Learning Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading National FMCG Organisation</td>
</tr>
<tr>
<td>Western Suburbs - Career Opportunity</td>
</tr>
</tbody>
</table>

Your new organisation is a high profile identity with a nationwide geographic spread. It is recognised in its marketplaces as a high performance company with outstanding brand recognition and customer service capability.

Reporting to the Head of Talent and Development, the state based role has responsibility for the co-ordination, implementation and evaluation of Management and Leadership Development programs.

**Key Responsibilities**

- Co-ordinate and deliver core Management Development programs as designed by Corporate team
- Develop capability of HR teams and Line managers to deliver quality development programs
- Facilitate transfer of training through engagement of Line Managers and management of projects or experiences linked to development
- Evaluation and feedback on effectiveness of programs
- Play role in assessment of future needs from development perspective

Formal relevant tertiary qualifications will be highly regarded. You will have several years experience including at least one blue chip organisation, along with a strong conceptual ability balanced with good pragmatic business savvy. A solid line management background, enjoys working at a high pace and energy. You will be an individual who utilises flexible learning and development methods and who is adaptable to changing business needs. Critical to your success will be their ability to influence others and an commitment to delivering results.

*To ensure further, please contact Ciaran Martin in our Sydney office on 02 8298 3871. When responding, please quote 35-720133. Confidentiality is assured*
The learning management concept is an attempt to rethink the fundamentals of learning and education in this context. It is an attempt to re-legitimize, rethink and re-position ‘teaching’ as a fundamental building block of learning and knowledge production in a universal sense. In short, there is a distinction between informal and implicit communications about which neither the transmitter nor the receiver are aware but nevertheless have an effect. Similarly, there are requests for information that fulfil the receiver’s immediate needs but are transient in nature. Our concern is rather with communications that have an intentional pedagogic purpose and outcome and how people can be prepared to undertake this central role in a knowledge/creative society.

The Learning Manager Construct

In this section we bring to bear what we have previously discussed and outlined so as to give scope to the practitioner of learning management and in doing such we prefigure subsequent chapters that focus on the capabilities underpinning learning management work.

The practitioner of learning management we term the learning manager. This construct is chiefly concerned with learners and their learning gains, meaning they have capacity to teach and to manage individual learning, but they also have a capacity to work alongside other knowledge workers so as to intentionally intervene in the learning outcomes of the current and future workforce, concepts we elaborate on in Chapters Five and Six.

A learning manager requires a toolkit of essential professional knowledge. In our view, that toolkit is built around pedagogical practice as defined earlier. Put another way, it is the learning manager’s responsibility to design educative programs that achieve the outcomes set for them, whether these outcomes are strictly technical and process-like or conceptually complex. Their job is to make individuals and organizations more effective in whatever they are seeking to do by implementing interesting and relevant pedagogical design that results in the learning required. It is a more intentional role than is usually contemplated under the cloak of the unique, individual teacher.

Notice that the emphasis here is on pedagogic practice and the content itself is not yet a concern. The expectation is that the learning
manager has mastery over a full spectrum of instructional techniques and understands how particular applications and services function in different settings. The expectation is that a learning manager uses a range of Web 2.0 tools (such as messaging, Podcasting, Blogging, social networking), is adept at synchronous learning and can use learning content management systems whether in a school, a training site, in higher education, or in corporate or public service workplaces. We see this convergence of pedagogical capability and web-based resources as fundamental preparation now for people working in any site that involves educative communications.

Learning managers in this perspective also have the pedagogic skills for developing: resilience; social competence; complex reasoning skills such as critical thinking and comparing and contrasting; and habits of mind that underscore personal work ethics, knowledge sharing and cooperation techniques.

A defining feature of the learning manager is a strong commitment to transcending today’s education assumptions about what a teacher does and how they conduct their professional lives. In this respect, Frey\textsuperscript{119} argues that of 12 critical dimensions of the future learning system set out in Table 3, only two need to be in place for an education revolution to begin. They are a standardized architecture for developing a courseware unit, and an organic distribution system that allows anyone around the world access to it. Of course, this model does not apply to education alone and one might generalise it into any sphere. This kind of thinking parallels our belief that the distribution system—the pedagogical practices that convert inert knowledge into pedagogical experiences and learning outcomes—is fundamental for teacher education and the preparation of ‘knowledge age teachers’. This formulation is a playing out of learning management as:

\begin{quote}
the explicit, purposeful intention to initiate, modify, develop or change knowledge, conduct or practice by someone or something which already possesses or has access to the necessary resources and the means of evaluating the acquisition and the means of delivery that is contextualised by intentionality towards a future state of knowledge, conduct or practice.
\end{quote}

Taken together, these defining elements of a ‘knowledge age teacher’ comprise a new curriculum for teacher education and more generally for learning management.
**Table 3.3:** List of Attributes and Features for a Standard Courseware Unit

1. The Courseware Builder – Envisioned as a smooth, ‘fill-in-the-blanks’ templated process, the courseware builder will carefully step courseware producers through the design, build and launch phases of each course.

2. Sixty Minute (Approx) Learning Experience – An hour is an international unit of measurement recognized around the globe. We schedule our time in one-hour units, we plan our days in one-hour units, so building educational modules around one-hour units makes sense. Some learning experiences may involve a grouping of 2, 5 or even 10 units, but the majority will be centred around the basic one-hour unit.

3. Modality Agnostic, Language Agnostic – Learning comes in many forms ranging from reading text, to listening to audio, to watching video, to hands-on experiences and more. The Standard Courseware Unit needs to accommodate all modes of sensory input and learning experiences.

4. Confidence-Based Learning – All units will use some form of testing to validate competency or fluency in the topic, as well as the student’s confidence in their answers. Test scores that are lower than minimum required proficiency levels will force students to repeat portions of the learning experience until students have achieved mastery.

5. Smart Profiler – In addition to the basic name and address type of information found in most profiles, students will be asked to participate in regularly scheduled assessment surveys to determine primary and secondary areas of interest. The smart profiler will continually expand the profile of the student throughout their life, recalibrating topical interest levels, building a comprehensive understanding of the individual student as they evolve over time. The Smart Profiler will feed information directly to the Personal Recommendation Engine for prioritizing course selections.

6. Multi-Dimensional Tagging Engine – Much of the system
usability will be driven by the multi-dimensional nature of the tagging engines. Attributes include:

* Personal rating tags – Upon completion, each student will be asked to rate the courseware. Courses will be graded on accuracy, quality of the learning experience, ease of use, and overall effectiveness.

* Approval and Disapproval Tags – Each courseware unit will be set up to allow various organizations to either put their stamp of approval or disapproval on it. Since every political interest group will want to influence the direction of courseware development, it will be impossible to build courses around the likes and dislikes of all of the various interest groups. For this reason, each course will allow groups to place their stamp of approval or disapproval on it.

* Taxonomy Tags – Folksonomy – Folksonomy is the emerging science of user generated taxonomies. Since each courseware topic will be understood differently by each student, it will be necessary to allow students to place descriptor tags on all completed courses. This self-tagging approach will create the necessary taxonomy for the Personal Recommendation Engine as well as other search engines.

* Prerequisite and Post-Requisite Tags – Knowledge builds on knowledge. As an example, students cannot study literature until they know how to read, and they cannot study computer programming until they know math and algebra. Much of today’s learning needs to happen sequentially. Therefore it becomes imperative to create some system for sequencing courses based on the order of which learning must take place.

* Comment Tags – Comment sections will allow students to voice their thoughts on each course.

7. Personal Recommendation Engine – Each time the student completes a course, the Personal Recommendation Engine will present a number of possible future courses based on personal interests and past courses. This engine should offer an expanded
view of possible directions the student can take, listing a variety of learning options as well as the certification endpoints.

8. Certification Inputs – Every profession, personal skill, or area of learning has logical points where experts in that field would consider the necessary learning to be sufficiently complete. But every profession or skill is different. As an example, the courses necessary to become a master cigar maker are vastly different from the courses needed to become a C+ programmer or airline pilot or registered nurse. Most professions and skills will use a combination of courses completed and a certification exam to validate student proficiency.

9. New Achievement Standards – Descriptors like grade-level, graduate-level, and undergraduate-level will begin to disappear from our vocabulary. Initially, a set of equivalency units will be used to describe achievements (equivalent to sixth grade, or equivalent to a BA degree). Over time, the systems for illustrating achievement will change with the use of charts and graphs to explain the breadth and depth of a person’s understanding.

10. Official Record Keeping System – Building a system with impeccable integrity means that the system for archiving the accomplishments of every participant must be secure, private and managed by an organization with impeccable credentials. While many people will think that a government-run archive is the best solution, the best possible record-keeping system will be one that transcends governmental boundary lines.

11. Participative Wealth Pricing – The revenue stream generated by each courseware unit will be divided between the courseware producer, distribution company, transaction company, system operations company and the official record keeping system. Maybe more. Courseware prices need to be kept low to make courseware accessible to anyone interested in learning.

12. Global Distribution System – Think of the nature and functionality of iTunes with the following features:

* A single online access point
* Content aggregator
* Search/sort capabilities
* Acceptance of user generated content
* Recommendation engine
* Uniform pricing

Conclusions

Our theory of learning management is concerned with an explicit and purposeful intention to undertake knowledge age change from the school and the BEd conceptions of teacher preparation to a mode of operation more akin to the times. The concept has generality far beyond that of the schools and university sector. In addition, it was developed to counter what we see as significant voids in the understanding of pedagogy and pedagogical practice in schools and in university-based teacher education\textsuperscript{120}, and the lack of change in the teaching profession. The latter we believe places that profession in jeopardy as new players enter the learning industries.

In the following chapter we consider the notion of new toolkits by exploring the concept of learning management capabilities and its importance for the future development of the learning industries. These chapters spell out what an education revolution involves and how the traps inherent in traditional teaching can be avoided in the search for learning gains.
Chapter Four: Capability and Learning Management

In this chapter we analyse the concept of ‘capability’ in order to show that teaching and historical conditions are inextricably intertwined. We contrast ‘traditional teaching’ with what capabilities are expected in the work of a ‘futures-orientated’ teacher.

In this chapter we show how the concept of capability is fundamental to learning management work as learning managers have an explicit and purposeful intention to initiate, implement and evaluate change. Such an agenda entails a set of pedagogical capabilities that enable a teacher to devise and implement such an agenda. We now turn to the idea of capability.

The Concept of Capability

Capability’ in its broadest sense can be defined as the general physical or mental power, ability or condition of being able or fit to make things happen; a state of being ready to do something with the mind or the senses. It is an interrelated, interdependent knowledge system. According to Brown and McCartney, capability is, “having intelligence and ability, or being qualified, entitled, gifted, able and/or competent”. Stephenson however, takes the idea further by adding a futures component:

… an all round human quality, an integration of knowledge, skills, personal qualities and understanding used appropriately and effectively - not just in familiar and highly focussed specialist contexts but in response to new and changing circumstances.

Like Stephenson, Brown and McCartney consider capability to be the looking forward to the ‘fulfilment of potential’ in contrast to
‘competence’ which looks back to the demonstration of experience. Capability then is, “more fluid, in a continual state of development, and is compatible with its growth through action and demonstration”. It is concerned with the performance of non-defined tasks, the demonstration of potential future possibilities, one’s future potential.

In the Learning Management context, the aim is to prepare teaching graduates who have, “a strong sense of social and educational vision, responsibility, and change”, to be a different kind of pedagogical practitioner from that of the teacher: what we call a ‘Learning Manager’. To fulfil this vision, a learning manager requires a new set of capabilities that enable an individual or an organisation to implement instructional processes suitable for new curriculum requirements and to design the next generation that will replace them rather than simply modifying what is already there. We elaborate these themes in Chapter Six. This is why learning management is a theoretical set of ideas and a bundle of skills rather than a mere synonym for teaching. Having a ‘futures orientation’ then, means having the capability to replace and modify again and again, consistent with a set of values, ideas and procedures that give shape to the activity. Before proceeding, we briefly show why this capability is essential by describing the work capabilities required of workers in the 21st century.

The Emergence of a Knowledge and Creativity-based Economy

In the past decade or so, there have been major reviews, reports and research papers that identified the likely influence of social changes on the workplace and on the nature of future skills requirements. This body of literature identifies such factors as changes in demography, social values and technology. More broadly, Nowotny, Scott and Gibbons provide an account of social change in which the fundamental categories of the ’nation state’, ‘society’, ‘economy’ and ‘culture’ are being undermined by powerful historical transformations.

These include: new forms of economic rationality; the transformation of time so that it appears to be an eternal present; the elimination of distance by technologies and globalization; the growth of an audit and accountability culture in institutions; and the growth of uncertainty. Similarly, Bauman, describing the same phenomena,
discusses the erosion of social norms by the speed of change; the uncertainty and lack of leverage in politics caused by the tensions between a globalised world and local politics; social division generated by the growing inability of the state to protect its citizens from the vagaries of commodity and labour markets; the collapse of long-term thinking, planning and acting; and the increasing responsibility of individuals to care for themselves.

The effects of these historical changes on economic and cultural production have been well documented. In the 1970-90 period, manufacturing employment in all G7 countries declined. In the 1990s, Western manufacturing capitalism, up until then dominated by physical resources, was transformed into knowledge capitalism dominated by intellectual resources characterised by new management practices aimed at rapid innovation and the growing use of information and telecommunications technology. These developments signalled a shift from mass production to mass customization for a global competitive market that had consequential effects on production, distribution and consumption. The economic downturn in 2008-09 and the subsequent fall-out provides evidence for a considerable re-orientation of world economic and political power from the West to the Asian sphere, especially China and India. Notable examples of this development are the booming mega-regions like Bangalore, New Delhi, Shanghai, Beijing and Guangzhou that are newly connected to the world economy. These regions exemplify the economic divide between high-skilled and low-skilled, between ‘geeks vs. grunts’ and emphasize the importance of education and training. Underpinning all of these elements was the high dependency on the creation and application of new knowledge.

The term ‘Knowledge Economy’ was coined by the Organisation for Economic Cooperation and Development (OECD) in the report *The Knowledge-based Economy* (OECD, 1996) and describes the emergence of economies based on the production, distribution and use of knowledge and information. Twenty years ago the top 100 companies in the Fortune 500 list either dug something out of the ground or turned a natural resource into objects. Today, fewer than 50 do this. In a knowledge economy, “great importance is placed on the diffusion and use of information and knowledge as well as its creation” and the successes, or otherwise, “of enterprises, and of national economies as a whole are reliant upon their effectiveness in gathering and utilising knowledge”. In addition, as Howkins and
Florida have argued, the knowledge economy is based on a new way of working with an individual’s talent or skill. In the “creative economy”\textsuperscript{138}, where a person’s individual talent is crucial, they are especially important. The argument that creativity and idea generation are central to the economies of the 2000s underpins Florida’s New Growth Theory\textsuperscript{139}. The political realisation that climate change demands radical, creative solutions simply underpins the need for creativity and idea generation together with the know-how to make it happen.

The primary inputs in the creative economy are an individual’s talents or skills. Thus, an individual’s creativity transforms an input by either applying unique or novel ways of doing things or providing a means for copying and selling these inputs to large numbers of people\textsuperscript{140}. In a DEMOS paper it is argued that creativity is not just a personal attribute but can be learned. Under this construct, creativity involves, “the ability to apply and generate knowledge in a range of contexts, in order to meet a specific goal in a new way”.

“The creative act lies just as much in the capacity to mobilize and manage these perspectives and methodologies, their ‘external’ orchestration, as in the development of new theories or conceptualisations, or the refinement of research methods, the ‘internal’ dynamics of scientific creativity”\textsuperscript{141}.

This is not to say that the production of goods is a non-issue: a simple count of mobile phones, iPods and other electronic devices and machines in the home or workplace underscores the importance of material goods and their manufacture and distribution. The competencies in technical and production expertise along a value chain required to make these objects are complex. The emphasis on information and later knowledge though does emphasise a shift from manufacturing capitalism, based on the production, distribution and use of goods, to knowledge capitalism, based on the production, distribution and use of knowledge and information\textsuperscript{142}, as a new source of socioeconomic advantage.

Saatchi and Saatchi make this explicit in the company website: “We believe ideas have the power to change the world. Not just philosophically, but practically”\textsuperscript{143}. In the knowledge/creative economy, creative talent is a source of value creation, and almost all
goods and services rely first and foremost on a good idea and design, backed up with resources and management expertise.

Seltzer and Bentley argue that the capacity for creativity and innovation in the education system is as important to it as it is to any other sector. They define creativity as the learned and acquired ability to, “apply and generate knowledge in a range of contexts, in order to meet a specific goal in a new way”\textsuperscript{144}. We can appreciate the similarity of this formulation with Stephenson’s idea of capability. Creativity is a fundamental future work skill requirement.

Furthermore, creativity and innovative capabilities are really the only approach that policy documents such as QSE2010, and more lately Education Revolution, demand\textsuperscript{145}. Propositions such as:

“Our investment in human capital is essential for creating an innovative, productive workforce that can adapt to a rapidly changing world. The successful advanced economies of the future will be those that can add most value, through human effort and ingenuity, to their traditional strengths in every sector…” and,

“This paper argues that with new education policies, Australia’s future workers will be able to work smarter, not just harder. That will allow us to build businesses that can compete in global markets, and win. It will give us the productivity growth that can build our future prosperity. These economic dividends to be derived from education are separate from the social dividends which flow from significant investment in this sector. A significant increase in investment in education will give Australians more fulfilling work, lifting participation rates and contributing to happier, healthier and more secure lives. It will also build a fairer society, providing greater life opportunities for all Australians. Australia needs nothing less than a revolution in education – a substantial and sustained increase in the quantity of our investment, and the quality of our education (emphasis added).”

If such futures-focussed policy imperatives are to be implemented, then it is an easy step to see that the knowledge and skill set labelled “futures orientation” underpins the normal work of a
teacher. The capacity to work with such policy directions implies shifts in: mindset, from relying on past experience to being able to deal with the uncertainties of the future; the skills and knowledge base required to link the past, present and future and to implement strategies; the use of technical and managerial systems that rely on such things as Internet expertise and social networking; and the cultural values and norms of the various teaching professions that make up the learning industries, especially in respect to a different conception of shared pedagogical practice and a more service oriented professional identity. The shift from teaching as it is now to the knowledge set represented by these categories is the shift from teacher graduate now to that envisaged to be the learning manager.

There is an additional reason for this shift that is linked to the changing nature of the economy and the workforce, signalled earlier by terms such as Mode-2 and creativity. Both present and future citizens of industrialised countries like Australia, China and India will need to be prepared differently for work and life. Governments have recognized this by placing resources into agencies such as Government Skills Australia\textsuperscript{146}. There are implications for the curriculum and work practices of teachers who will have a leading responsibility to implement policies.

The Future Workforce Requirements

There have been many attempts to define future work and employability skills necessary to meet the socioeconomic changes of the 21\textsuperscript{st} century. Here we provide some examples of the kinds of requirements that are already present and which will exert pressures on the education system. The Australian Chamber of Commerce and Industry and the Business Council of Australia\textsuperscript{147} have identified skills associated with the shift to a Mode-2 society. They include: high-level communication skills, teamwork, problem-solving capacity, initiative and enterprise, planning and organising, self-management and the ability to use communications technology. They have also identified a series of personal attributes that complement such skills, namely: loyalty, commitment, honesty and integrity, enthusiasm, reliability, personal presentation, commonsense and a balance of work and home life. None of these personal attributes are surprising. Employers will provide their own takes on what is needed in the present circumstances. The important issue is that all of these predictions
about the future emphasize skills and knowledge that are not commonly high priority in today’s school syllabuses and cultural values.

Other institutions have covered similar ground, for example, The Wisconsin Partnership for 21st Century (P21) Skills\textsuperscript{148} includes rigorous coursework to gain the knowledge and skills to be critical thinkers, problem solvers, innovators and effective communicators. The Wisconsin Partnership further argues that employees need to be: technologically proficient, globally aware, civically engaged, and financially and economically literate. To develop a competitive and knowledge-based future, according to the Wisconsin Partnership, requires that students: pursue a rigorous course of study; demonstrate creativity and innovation; apply the skills needed in a 21\textsuperscript{st} century workforce; and build relationships and engage in teamwork. Again, there is a pattern emerging in these statements about what is believed to be necessary to account for social change in the first 12 years of formal education. Again, it is not difficult to see that the teaching would need to take on a different ethos and practice to achieve these quite different outcomes.

In 1996, the OECD succinctly defined the knowledge required in a modern economy as:

- Know-what: knowledge about “facts”;
- Know-why: scientific knowledge of the principles and laws of nature;
- Know-how: skills or the capability to do something; and
- Know-who: information about who knows what and who knows how to do what\textsuperscript{149}.

In 2007, the OECD reiterated that:

Learning one set of skills at school, technical college or university is no longer enough to carry people throughout their working life. But there is one basic skill that is becoming increasingly important in today’s fast-changing technological universe: being able to learn and adapt to the new skills and training that will be required. But learning to learn is not enough; people also need to be sure that they acquire new skills during their careers as efficiently as possible…\textsuperscript{150}
DEMOS\textsuperscript{151} speculates that a curriculum based on the need for creative application of knowledge to fit conditions where personal and employment knowledge and skills needs to adjust to rapid change would contain the following areas:

- Projects, focused on pieces of work, combining disparate resources, people and types of knowledge, to achieve a goal or concrete outcome; repeated practice in identifying and solving problems
- Making use of a range of contexts for doing
- Assessment by field experts, peers, parents and so on aimed at different kinds of skills and knowledge
- The transfer and application of knowledge across different domains
- Revisiting and practicing skills over time
- Depth of understanding in a number of disciplines or domains of knowledge with explicit mentoring on how to combine inter-disciplinary knowledge to complete a project goal.

Moreover, students would develop their skills and competencies across the range of learning activities within a clear and detailed specification of the clusters of skills to be embedded in the structure of every subject discipline, and evaluated through context specific, performance-based assessment, namely: self-organisation, including forming and articulating goals; personal and inter-personal communication; information management; risk management; disciplinary and inter-disciplinary knowledge in a given number of domains; and reflection and evaluation.

In an important contribution to how such elements as problem solving and decision-making can be understood, Marzano and Pickering\textsuperscript{152} (1997) have compiled a set of fourteen complex reasoning skills. These skills, shown in Table 4.1, are essential for each of the skills agendas discussed so far and additionally can be generalised to apply to life. The Dimensions of Learning framework requires these skills to be specifically taught so that they become automatic responses in learners.

The logic is that if the need is for people to engage in creative problem-solving, they must be able to draw on complex bodies of knowledge to solve specific problems using procedures and habits of mind that work. If they are required to regularly think on their own,
they will need the tools and increased responsibility to interpret their work and make decisions. If they channel flows of information, devise and set up new systems, then they must be prepared to, and capable of, making key decisions as they go\textsuperscript{153}.

\textbf{Table 4.1:} High Order Thinking Skills\textsuperscript{154}

<table>
<thead>
<tr>
<th>Number</th>
<th>Thinking Skills</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Comparing</td>
<td>Similarities and differences</td>
</tr>
<tr>
<td>2</td>
<td>Classifying</td>
<td>Groupings based on attributes</td>
</tr>
<tr>
<td>3</td>
<td>Abstracting</td>
<td>Patterning, discerning connections in information and situations</td>
</tr>
<tr>
<td>4</td>
<td>Inductive Reasoning</td>
<td>Making general conclusions from specific information and observations</td>
</tr>
<tr>
<td>5</td>
<td>Deductive Reasoning</td>
<td>Using general statements to come to conclusions about specific information and observations</td>
</tr>
<tr>
<td>6</td>
<td>Constructing Support</td>
<td>Providing support for statements</td>
</tr>
<tr>
<td>7</td>
<td>Analysing Errors</td>
<td>Finding and describing errors in reasoning</td>
</tr>
<tr>
<td>8</td>
<td>Analysing Perspectives</td>
<td>Describing reasons for different points of view</td>
</tr>
<tr>
<td>9</td>
<td>Decision Making</td>
<td>Using criteria to select among seemingly equal alternatives</td>
</tr>
<tr>
<td>10</td>
<td>Problem Solving</td>
<td>Seeking to achieve a goal by overcoming limiting conditions</td>
</tr>
</tbody>
</table>
There is a strong theme in the literature and the new skills list that the kind of learning that is now required in work preparation programs, inclusive of teacher education, is unfamiliar to current systems of education and training because it is not easily organised around pre-specified content or in some cases determined by the conventional qualifications guidelines. Nevertheless, a fundamental requirement of the education sector is that policies and strategies aimed at the capability building of individuals to successfully participate in the creative-knowledge economy to workforce skill development are aligned. If the life prospects for young people are radically different, and continuing education has become inevitable, then so must education be fit for this purpose.

The immediate problem for teacher education programs is the ability to translate the requirements of this new knowledge agenda into graduate performance and student outcomes. This is not unique to teacher education; as Pfeffer and Sutton argue, most organizations face the knowing-doing gap, where knowledge that is universally accepted is nevertheless not implemented. In teacher education and similar university settings, the public service, accreditation agencies and professional organisations, various talking activities like meetings where endless democratic majorities make decisions that change nothing are substituted for action. The reality is that talking about this new knowledge and the new agendas does not solve the problems of implementing programs that embody the new requirements. The knowledge has to be in actual use if it is to become useful, evoking the context of application. This is why Pfeffer and Sutton maintain the
best way to overcome the knowing-doing gap is to have structures and processes that allow people to acquire knowledge by doing rather than studying alone. Similarly, DEMOS argues that creativity is context-reliant and that it is defined and assessed in the context in which it occurs. As Noonan158 rightly points out, the “new basic skills” are about how people think and act, not just what they know. In BLM parlance, this distinction is the ‘illumination’-‘performativity’ couplet.

In this chapter’s final section we make the argument that teachers need to have futures-orientated capabilities. The argument rests on a comparison of competing teaching rationales.

‘Traditional Teaching’ and ‘Futures-orientated’ Learning Management Capability

To set the scene for this discussion, it is important then that we are clear about where we differ with what we call conventional teacher education. In addition, we want to make the case that what we propose aligns competencies, capabilities and resources to new socioeconomic conditions. It is important to grasp these points of difference so that there is an understanding of what is at stake in the theoretical debates that envelop teacher education.

In Chapter Three we redefined learning management as:

the explicit, purposeful intention to initiate, modify, develop or change knowledge, conduct or practice by someone or something which already possesses or has access to the necessary resources and the means of evaluating the acquisition and the means of delivery that is contextualised by intentionality towards a future state of knowledge, conduct or practice.

For the school and the standard preparation BEd conceptions of teacher preparation, learning management means a move to a mode of operation more akin to the times. So, in a teacher education context, learning management159 is an explicit and coordinated course of action for achieving learning outcomes. It is best rendered in our view as, designed learning with intent to achieve specific outcomes.

The design approach in teacher education signals a change in the emphasis given to curriculum development and teaching. It does not mean that an interest in either curriculum and curriculum planning or
teaching is wrong, but it does imply a shift in the approaches towards what we are calling “pedagogical practice” and the science of learning as being the higher priority of the two. The emphasis is definitely on pedagogical strategies that, in turn, are derived from research on teaching as well as practical on-the-job know-how gained under the guidance of expert mentors.

Learning management is therefore a theoretical stance that is underpinned by knowledge and skill derived from the Learning Design Process (8 learning questions) and especially the Dimensions of Learning approach to pedagogical practice, that together provide an overarching, coherent language of instruction. In order to establish the background knowledge and skill for the language of instruction, there are essential underpinning studies, work-related experiences and specialised assessment procedures to determine whether or not the knowing-doing gap has been bridged. These studies are not optional for students in the sense that learning managers do need to know the essential background knowledge and possess the capability to put learning management to work again and again in trying conditions of uncertainty and fluidity. In turn, the presupposition is that learning managers are prepared with a tool-kit of the personal characteristics described earlier, best summed up by the idea of resilience. This brief description identifies a mindset about teacher education that we call “futures-orientated scientific-realism”.

Now, our position is in sharp contrast to that which argues that both the teacher and the learner are unique individuals created by experience and teaching is primarily concerned with the development of the characteristics of unique, individual learners. Basil Bernstein long ago identified such characteristics as “invisible pedagogy” which places emphasis on the internal cognitive, linguistic, affective, motivational mechanisms of the learner and is characterized by several features including:

1. Implicit rather than explicit control over the learner by the teacher, authorized by theories that provide the tools for ‘reading’ the learner according to signs provided in the theory without the learner and other stakeholders knowing what is being read;

2. A reduced emphasis on the transmission and acquisition of specific skills because performance differences between learners are thought to reveal uniqueness rather than
differences between them. It follows that in this perspective, it is logical to talk of “facilitation” rather than domination, and “accommodation” rather than imposition;

(3) The learner is construed as being an active participant in development, and teaching is the arrangement of the child’s environment by the teacher so that there is relatively free learner activity in exploring and rearranging the environment;

(4) Such experiences are evaluated by use of many diffuse criteria displayed by the learner so that learning by the learner is believed to be a tacit, invisible act that cannot be regulated; and

(5) The student’s biography is ignored and excluded so that these theories are asocial in so far as external performances by the learner cannot be compared because they are produced by common, internal, socio-biological procedures\textsuperscript{160}.

Bernstein argues that these characteristics can be compared to “visible pedagogy”, or an emphasis on the overt performances and external products that a learner produces. Visible pedagogy utilises direct instruction and a learner’s performances and external products are judged against standards that lie beyond the personal characteristics of the learner. An individual’s achievement then can be judged against others or externally established criteria according to where each learner lies on that set of criteria.

Our view is that there has been an overwhelming predominance of “invisible pedagogy” in pre- and post-service teacher education under the labels of child-centred, developmental theories of learning, including discovery learning, problem-based learning, inquiry learning, experiential learning and constructivist learning. These theories have had an enormous if unwitting conservative influence on the professional development of teachers and the achievement of policy aspirations, ranging from programs to achieve greater educational equality to taking up the challenge of re-forming the profession\textsuperscript{161}. Put starkly, where radical individualism approaches to good teaching are championed as the pinnacle of the profession, where the intricacies of assessment are shrouded in the invention of mysterious explanatory substances to explain things ‘they’, the non-
professionals do not understand\textsuperscript{162}, and direct teaching approaches are eschewed despite the evidence about their efficacy, the profession is fast becoming impotent in the face of urgent socioeconomic needs. Thus, to reiterate:

After a half-century of advocacy associated with instruction using minimal guidance, it appears that there is no body of research supporting the technique. In so far as there is any evidence from controlled studies, it almost uniformly supports direct, strong instructional guidance rather than constructivist-based minimal guidance during the instruction of novice to intermediate learners. Even for students with considerable prior knowledge, strong guidance while learning is most often found to be equally effective as unguided approaches. Not only is unguided instruction normally less effective; there is also evidence that it may have negative results when students acquire misconceptions or incomplete or disorganized knowledge\textsuperscript{163}

Again, Rowe makes this point when he states:

Despite strong supporting evidence for the superior effects of teacher-directed approaches on student learning (i.e. direct instruction), the philosophy of constructivism (a cognitive theory of learning rather than of teaching) has enduring influences on the content of teacher education courses\textsuperscript{164}

By way of summary, the two types of theoretical approach to teaching are contrasted in Table 4.2. Here we pinpoint what we perceive to be predominant teacher education assumptions about learners and learning with characteristics drawn from the theoretical futures literature and from the more general literature about sociohistorical change\textsuperscript{165}. Our proposition is that if we intend to create a teacher who can work effectively with today’s challenges, including the requirements of educational policy makers, and deliver this service consistently into the future, then it cannot be done in the existing predominant teacher education mode. It requires a different set of principles and practices that we call “learning management”.
Our proposal is that traditional and futures-orientated are different mindsets embodying different principles for and patterns of action. The elements in each column take on a self-validating reality for the groups that recognise them, but the cognitive properties of the set are not predictable from a knowledge of what the individuals in the group say they believe.

This is precisely the sticking point in the endless policy debates and prescriptions set out in good faith by teacher education inquiries and policy makers seeking to find a role for education in the national interest. No matter how strongly policy or reports emphasise for such commendable ideas as the need for education systems to accept social responsibilities for wider socioeconomic and political ends; or professional accountability for learning outcomes; or the need to adapt to changing circumstances, the ‘conventional’ mode filters the messages. The social imperatives for example are washed out by the over-emphasis on finding and describing structures that are somewhere inside the individual so that education is made synonymous with individual growth. In our view, this kind of approach is too narrow for the knowledge/creative economy.

Table 4.2: ‘Traditional Teaching’ vs. ‘Futures-Orientated’ Practice

<table>
<thead>
<tr>
<th></th>
<th>‘Traditional’</th>
<th>‘Futures-Orientated’</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media</strong></td>
<td>Computers in school</td>
<td>Web 2.0 social networks</td>
<td>Computers are a burden vs. software and internet are pedagogical tools</td>
</tr>
<tr>
<td><strong>Teaching</strong></td>
<td>Curriculum</td>
<td>Pedagogical practices that work</td>
<td>Curriculum planning postpones attention on pedagogy vs. details of required outcomes inform pedagogical planning</td>
</tr>
<tr>
<td><strong>Approach</strong></td>
<td>Cover the curriculum content</td>
<td>Learning judged by pre-established standards is the main game</td>
<td>Curriculum content blurs outcomes vs. relevance and specific pedagogical practices</td>
</tr>
<tr>
<td><strong>Change Agent</strong></td>
<td>I/me</td>
<td>We/you</td>
<td>Teachers as ‘island’ vs. professionals working together</td>
</tr>
<tr>
<td>------------------</td>
<td>------</td>
<td>--------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>Message</strong></td>
<td>Experience</td>
<td>Continuous learning</td>
<td>You can’t beat experience vs. need to match skills with changing society</td>
</tr>
<tr>
<td><strong>Teacher Education</strong></td>
<td>‘Them’</td>
<td>Strategic partnership that integrates value in schools</td>
<td>Teachers’ work does not include teacher education vs. there’s something in this for all of the profession</td>
</tr>
<tr>
<td><strong>Main Strength</strong></td>
<td>‘Love children’</td>
<td>Professional responsibility for preferred learning outcomes</td>
<td>Attachment to clients vs. professional interest in outcomes</td>
</tr>
<tr>
<td><strong>Mindset</strong></td>
<td>Individual learner</td>
<td>Individual learning</td>
<td>Individualised, asocial view of students, especially their socio-cognitive development vs. professional interest in what and how the learner learns</td>
</tr>
<tr>
<td><strong>Professional Identity</strong></td>
<td>Teachers are unique individuals</td>
<td>Professional standards and skills are paramount</td>
<td>Every teacher is different vs. working to research-based professional standards</td>
</tr>
<tr>
<td><strong>Workplace</strong></td>
<td>Public service and unions mindset</td>
<td>Creative, innovative and flexible</td>
<td>Public service hierarchy, low trust vs creative class/knowledge worker</td>
</tr>
<tr>
<td><strong>Professional Approach</strong></td>
<td>Learning theory</td>
<td>Instructional design</td>
<td>The growth patterns of the individual learner vs. shaping pedagogical strategies to achieve required outcomes</td>
</tr>
</tbody>
</table>
Teacher education is a strategic area for the policy makers and communities alike because, under regulatory requirements, the universities have a monopoly on the certification of teacher graduates. The already well perceived needs for significant cultural and professional changes in the teaching profession are muted at the university teacher education level by alibis about student social backgrounds and educability and a myriad of counter-claims drawn from the cacophony of theories that are the currency of teacher education. Policy initiatives are always contested somewhere by somebody irrespective of the priority of the needs. The final irreducible datum is that unless the bedrock of teacher education culture, thinking and practice is addressed head-on, then the future of teacher preparation will be more of the same with the usual suspects playing the lead roles.

**Conclusion**

Education (teaching, teachers, learning) in the 2000s requires different knowledge and skill sets, technical and management systems to those of the past. There are numerous lists from varying sources about the requirements for the future as we have seen, but the central ideas are the same. While teachers and teacher educators are not alone in this dilemma, they do have a high priority role in the present historical circumstances to prepare the young and not so young for very challenging global conditions. In the next chapter we specify the components of a curriculum for the preparation of future-orientated learning managers.
Chapter Five:
Learning Management Capabilities

In this chapter we explore in greater detail the capabilities required of a teacher in the 2000s. This chapter outlines the fundamental learning management capabilities including knowledge bases, mindsets and strategic creativity. We provide a framework for the capabilities underpinning learning management work.

As previous chapters have outlined Learning Management is concerned with the future of teaching. With this point in mind, we begin this chapter by outlining what is meant by futures-orientated. This provides an introduction for a detailed examination of our learning management framework, an iteration of the capabilities that underpin learning management work. The chapter explains what it means to be a futures-orientated teacher in the 2000s.

What it Means to be Futures-Orientated

The word future has been used in a commonsensical manner to this point. Broadly defined it refers to that which is about to happen or be or become; relating to a time that is to come. According to Slaughter, the future, “is a general category, like the past and the present. It is a dimension of human existence: a broad generality and an active principle in our everyday lives”. Importantly, as Bell (1999) argues, the future is something that people can shape and design. This implicates the teacher, as the business of education is about the future: that is, preparing young people for a role in tomorrow’s society.

By placing a renewed, conscious emphasis on the future, three possibilities for knowledge age teachers emerge. First, exploration of futures scenarios provides criteria for judging the fit between learners and their future circumstances and between plans and corresponding
implementation strategies. Second, a futures-orientation allows the teacher to imagine and manipulate possible conditions and outcomes. Third, a futures-orientation prompts the teacher to think of futures scenarios and their implications. Here, by way of example, education systems, teachers and teaching may be moving away from a view of teaching based on the subjective preferences of individual teachers to the development of teaching models based on systematic data interpretation. This kind of thinking ahead to alternative solutions is a core element of what we now refer to as expertise. Taken together these three elements underpin the aim of what we term a futures-orientation in education.

In short, a futures-orientation in education can be broadly defined as the configuration of mindset, knowledge and skill required of the knowledge age teacher to do their work in the exponentially changing, technologically driven environment that is the 2000s. The ultimate aim for knowledge age teachers here is for learners to make learning gains that are congruent with anticipated changed economic and social circumstances of uncertainty and novelty.169

By using futures-orientated techniques, the future can be experienced as the extended present; a set of implications, in which decisions can be made and actions taken in the expectation that the future can be shaped. Learning management, design with intended future outcomes, is an example of a futures strategy because it seeks to shape future educational practices and in turn, through the futures-orientated teacher, successfully prepare young people for future activities in their adulthood.

We now locate a futures-orientation in the work of a learning manager. The term future means a capability to disrupt the prevailing teaching and learning system by implementing an alternate teaching and learning paradigm; one that fits the knowledge and creativity-based economy, or Mode-2 society. Smith and Lynch170 (2006) argue that such is the power of change avoidance and risk aversion in the traditional teaching professions that change will only occur if the present systemic arrangements are disrupted.

We now discuss the specific attributes of a futures-orientated teacher that will lead in that direction. While the discussion centres on the implications for the learning manager in a schooling setting, the central tenets can be generalised to inform other realms of the knowledge age workforce. To commence this task we draw on Stephenson’s concepts. Position ‘Y’ in Figure 5.1 represents the
mindset that predominates in the socioeconomic conditions of the Industrial Era where the system of work and production occurred in a familiar context with known regularities and established norms dedicated to the production of reliable products built to last.

**Figure 5.1: A Way of Looking at the World of Actions**

![Diagram showing the relationship between Familiar and Unfamiliar Contexts and Problems](image)

This was an era when workers were trained to deal efficiently with familiar problems where established and readily applied solutions were known. Education and schooling shadowed industry and culture, and schooling was dedicated to conformity and producing expertise in applying standard solutions to standard problems. This type of environment is characterized by traditions in which rituals and routines predominate and where transgressions can be easily detected and remedied. Employers in this context seek those who can reproduce the accepted practices in the workforce. In general terms, this is a risk-averse environment because the aim is to maintain and reproduce the status quo. Curiously, in the education field, it remains the case that all smart bets are on the status quo.

The contrast, Position Z, is a disruptive mindset in that a futures-orientation associated with it aims to create new circumstances that extinguish many of the elements of the past for strategic advantage. It is a realization that exponential changes, witnessed over past decades,
have an impact on the world such that new contexts and situations are radically different from the past. As McWilliam\cite{McWilliam} so vividly puts it:

Our teaching and learning habits are useful but they can also be deadly. They are useful when the conditions in which they work are predictable and stable. But what happens if and when the bottom falls out of the stable social world in and for which we learn?

Position Z then is innovation-focused because there is less familiarity with the context, and in turn, few ready solutions so that problems have to be formulated before they can be solved. This is the environment of the knowledge- and creativity-based economy where speed and connectivity via the Internet and communications technologies, the shrinking of distance and time, shorter production cycles and redundancy of systems constantly create new conditions and markets. In addition, the very nature of authority of experts, especially in the university, is challenged by people in the wider community who have opinions about how the world should operate, irrespective of what experts might think and do. Thus as Nowotny, Gibbons and Scott\cite{Nowotny} argue, the community, what they term the *agora*:

... is the problem-generating and problem solving environment in which the contextualisation of knowledge production takes place. It is populated not only by arrays of competing 'experts' and the organisations and institutions through which knowledge is generated and traded but also variously jostling 'publics'. It is not simply a political or commercial arena in which research priorities are identified and funded, or an arena in which research findings are disseminated, traded and used. The *agora* is in its own right a domain of primary knowledge production - through which people enter the research process and where 'Mode-2' knowledge is embodied in people, processes and projects. The role of controversies in realising scientific potential is also played out in the *agora*.

These circumstances make additional demands on both workers and management and the available human resource is focused on both innovation and justification in a continuous problem-solving mode.
Work is more often unfamiliar in the sense that the expected and taken for granted solutions do not automatically work or even apply and new kinds of problems seem to emerge in quick succession. Here we could illustrate the point with reference to Generation Z, the new kids in school that teachers have encountered over the last decade. Policy makers, professional associations and educational researchers have been caught up in an ever-increasing crescendo of demands for behaviour management, curriculum relevance, for solutions to the impact of technology and so on where tried and tested solutions from even the recent past no longer work. The problems are unprecedented and therefore unfamiliar and new solutions are not easily devised. In large institutions like education, new solutions tend to embody the assumptions of the past whereas what are needed are really new assumptions and really new ways of doing things.

In short, the changing economic and social profile requires new and different knowledge and skill sets from its present and future workforce that policy platforms such as the ‘Education Revolution’ so aptly identify. The lack of fit between what schools do and what policies require for example not only jeopardises the work of these professional groups in the present but it has the potential to have an impact on future generations of such professionals. Moreover, there is a major 21st century social justice issue for many social groups in a system that continues to apply old ways of doing things in teaching and education that patently do not work. The pressing need is to transcend the past and deal with the implications of social change. This can only be realized if the professional teaching workforce is firmly futures-orientated.

We conclude this section by stating categorically that the 2000 period represents a radical departure from the 1970s and 80s when the traditional teacher attributes, as represented by Position Y in Figure 5.1 were honed, yet most of the rewards for staff in teaching and teacher education are for maintaining the Y variety. The 2000s are characterized by ongoing exponential change—Position Z—and the teachers are the people that society is counting on to prepare young people for the emergent world, an unprecedented opportunity for the profession to do a strategic make-over. We now discuss Learning Management capabilities.
The Learning Management Scheme

We now discuss the learning management presupposition from a capabilities perspective. The learning management concept comprises a set of capabilities that we think fit the requirements delivered from an analysis of the knowledge and creativity-based context as outlined previously. These capabilities also outline the attributes of a knowledge age teacher that line up with the approach to pedagogy and social change that we have proposed. We present these capabilities through our Learning Management Scheme, illustrated as Figure 5.2.

The learning management scheme is presented as themes, based on the employment and worker attributes outlined in Chapter Four. We maintain that when applied with a strategic intent, these attributes constitute a set of professional techniques for the work of the knowledge age teacher. For convenience sake, these attributes are organized into three interrelated domains: Knowledge Base, Mindsets and Strategic Creativity. Table 5.1 expands these further to illustrate the interrelated elements

Figure 5.2: The Learning Management Scheme
At the outset it is important to point out that these Learning Management attributes are not a set of competencies. They cannot be just ticked off or neatly categorized. They are an amalgam of elements that, when applied in strategic ways bring forth the new and create the unique; solve emerging problems; and offer up many new and different opportunities.

At the centre of the learning management scheme is the work that provides learning management with a context. Here we include schools or other kinds of workplace learning establishments that undertake teaching and learning as a core activity. We explore this further in Chapter 6. Central also is the learning manager with specific
role and function expectations to achieve given outcomes. We turn now to an examination of each learning management domain.

The Knowledge Base

Any profession, para-profession or trade has at its core a defined knowledge base that constitutes the foundations of the associated work. Such knowledge is routinely defined as foundation, practical, interdisciplinary, formal, applied and contextual. It includes a social networking capability and it can be broadly organised as concepts and procedures. On yet another plane, the knowledge base has characteristics that render it relevant, up-to-date, specialist in nature with goodness-of-fit to the tasks that constitute the work. Taken together these component pieces articulate what has to be known, understood and applied in appropriate ways and situations and through which the purpose of using learning management is established in a given calling. Elements such as a commitment to life-long learning, a set of ethics and personal skill competency, for example, contribute to the development of capabilities associated with this domain.

The key capability of a learning manager is embedded in what we term ‘expert knowledge’ (especially by way of personal knowledge competency in the areas to which they are to teach) and those skills associated with pedagogy and the expert application of this skill set, not only in schools and classrooms but in the broad learning circumstances of the 2000s. It is the discipline specific (or expert) knowledge in this domain that identify the specificity of individual callings, while the broad procedures and concepts are generic and applicable to all work contexts. This is an important distinction within the learning management concept as it serves to highlight an understanding that knowledge work is synchronous, networked and transferable. Put another way, the knowledge base that we envisage enables the learning manager to operate in various learning contexts within and beyond the narrow construct of classrooms: most notably the emerging new learning sectors associated with the knowledge society. We elaborate these themes further in Chapter Six.

Discussions so far have highlighted the universal nature of learning management applications and its fit to other callings. As an example, Dimensions of Learning is a core knowledge component associated with Learning Management. Dimensions of Learning equips learning managers with a set of evidence-based pedagogical
strategies that provides a platform for strategic instructors to focus on learning as the prime goal.

**Mindsets**

We have already highlighted the industrial mindset, shown as position Y on Figure 5.1, that is now a relic of the past for people in the knowledge industries. In this mindset, the world is dealt with as if it is ‘the same’ as it always has been but with more problems to solve. In turn, this mindset attempts to maintain the status quo by using the very solutions that once worked in the past. Consequently, this mindset invariably fails to ‘deliver’ in the workplace because the problems of today are the effects of new contexts and circumstances for which the old solutions do not work.

The contrasting mindset, illustrated by Position Z on Figure 5.1, sees a fundamentally different world and recognizes new problems that need a different kind of approach. Imagination and creativity join with techniques, experience and technology to devise different kinds of solutions. Irrespective of the circumstance, the *futures-orientated mindset* is one focused through an intrinsic, yet cultivated set of capabilities. It sees purpose and opportunity in the apparent uncertainty and dysfunction of the *agora* and seeks solutions in entrepreneurial activity.

Importantly, the learning management mindset has an astute sense of self and encourages personal resilience in the face of change. This mindset thrives in the networks and partnerships which abound in the ‘knowledge era’ and their motivation comes from the end product and the inherent processes, which in themselves mean yet another series of problems requiring more innovative solutions. Looked at as a whole, a futures-orientated mindset is the realization that a different set of worldly conditions to those of the past requires a different approach.

Paraphrasing Nowotny et al., it is a radical experience to take teaching, learning, schooling and education which are apparently well understood, and look at them from entirely different perspectives, because this activity has to be re-thought in ways that are foreign, even incomprehensible, in the old perspective\textsuperscript{175}. It is the rethinking into the future, and the making foreign and seeing old formulas as incomprehensible in the new context that refer fundamentally to a futures-orientated mindset in our model.
We are not suggesting that new graduates can merely think away the impediments to change that abound in large modernist institutions such as schools and the system of schooling. Bernstein for example has shown that there are intrinsic rules that underlie educational practices in such institutions. Different forms of knowledge are distributed to different social groups. Official knowledge and lines, what counts as the ‘what’ and ‘how’ of teaching for instance are regulated so that what is ‘thinkable’ is already there and entrenched when new graduates enter the learning professions. What is to be transmitted and acquired in places like schools are laid out in criteria about assessment and so on. These discursive and structural elements constrain the movement from Position Y to Z. Their existence and the need to transgress them add weight to the general argument towards a different mode of preparing new entrants into the learning professions and for up-skilling incumbents. We elaborate this theme in Chapter Seven but the point is that unless the teacher education profession is prepared to re-work its ways of operating, it will become increasingly irrelevant.

As Graham states:

The mindset that is required for the new (teacher) is that of doing rather than theorizing. It follows that a program constructed to produce learning managers would show students not only how to think about the big issues of the learning field with complex reasoning skills but also how to behave in ways that are creative, innovative and entrepreneurial. By entrepreneurial we are not just referring to running a business or ‘making money’. Being entrepreneurial involves seeing future opportunities where ‘the future’ is barely discernable, taking risks, and the tenacity to push an idea through to reality. It relies on working with passion and having a capacity to deal with a constant array of options.

**Strategic Creativity**

This creativity-based domain is an encapsulation of purpose and a sense of what’s required and is tied to the context of work in the 2000s. While ‘creativity’ has many connotations, most commonly those of the arts, the addition of the term ‘strategic’ is important for
our perspective. We define strategic creativity as the embodiment of that set of capabilities that make the knowledge worker, in this case the learning manager, able to achieve new and complex things, to see the world differently and to act on this bigger view. It is all about ‘working outside the box’, bringing to bear all that is known and understood or investigating the unknown, so as to achieve a specific outcome.

Strategic creativity has its genesis in elements such as ‘dreaming’ and ‘imagining’, asking ‘what if…?’ and ‘solving problems’. It is based also on an acute sense of role and function especially the drive to accomplish required outcomes as a responsibility of holding the position of teacher (or educational administrator). It is the product of experience; past successes and failures in the work context and beyond; but most notably an expert knowledge base as outlined earlier.

The capability to create the new, to solve emerging problems in unexpected ways and to generate new and different opportunities is the implication of combining strategic creativity with a robust knowledge base and a corresponding mindset. While the knowledge base informs the task at hand and the mindset encourages change and the removal of impediments, it is strategic creativity that sets new directions and takes the world forward.

There are five elements associated with the strategic creativity domain that sets it apart from other ‘fields of creative endeavour’, such as the Arts, and which articulate the fundamental techniques of the learning manager. These elements are: diagnostics, design, innovation, entrepreneurship and execution capacity.

The diagnostic construct is a set of understandings that enable one to ascertain the nuances of a circumstance, trouble shoot for faults, check outcomes and remedy situations in a crisis. The capacity to generate and interpret data and to communicate trends is a baseline attribute, but the capacity to put in place a remedial strategy is paramount in this domain. It is through an expert knowledge base and insights gleaned through working in a given expert field that this element is fully realized.

Design is related to the idea of strategy in the sense of a plan or tactic. It signals the need to create an approach, to build on the previous, but always transcend the taken for granted. It is axiomatic that this capability requires complex reasoning skills that can be called on as a matter of course. In Learning Management the Learning Design Process plays an important role as we outline in a later section.
Innovation and entrepreneurship refer to the application of a creative concept to the professional field in a way that provides advantage. In this sense innovation requires an application that others want, that solves an important problem, or that makes a difference that is realised as a product. This way of defining innovation underscores the idea that a creative idea in itself has little value until it has an impact. “A bell is no bell at all till you ring it, a song is no song till you sing it.”\textsuperscript{179} The implications of this approach are that people preparing for the learning industries need opportunities to learn how to keep their eyes open, to be networked, and to be resilient in the face of failure. Learning survival skills for yesterday’s time-, location-, content- and practice-bound classrooms is anathema to the development of this futures-orientated perspective.

Entrepreneurship is identifying where the product fits and how such can be brought into existence be it in the commercial or operational sense, or both. Enmeshed in entrepreneurship is the capacity to do the execution that brings an innovation or an idea to fruition in a relevant context. Without such capacity, the new idea, the new product, the new way of doing, remains just an idea waiting for someone to action it.

Execution capacity is the comprehensive ability to transition designs, through the harnessing of resources, knowledge, talents, skills and processes, into a product or strategy that achieves a predefined outcome. The component has a direct association with the elements design, innovation and entrepreneurship, meaning execution capacity is not a self-contained or independent element: its purpose is to facilitate the intended outcome. Without execution capacity, the planned outcome or overall goal is not achievable. The mindset is one of determination, adaptability and a commitment to achieving the desired outcome, and the strategy is a collective made up of knowledge associated with: leadership, negotiating, networking and partnering, establishing teams, lobbying, creating efficiencies, decision making and prioritizing, and investigating alternatives. Ultimately the extent of execution capacity determines the likelihood of the outcomes being achieved.

Learning Management builds on the diagnostic, design, innovation, entrepreneurial and execution capacity elements by having at its core a design technique known colloquially as the ‘8 Learning Management Questions’ (the Learning Design Process\textsuperscript{180}). These questions enable learning managers to: focus their work on learner
progress and future learning objectives (diagnostics); to assemble the required ‘ingredients’ for a successful learning program (design); and to then implement the plan using appropriate pedagogical strategies (innovation, entrepreneurship and execution capacity). The process is cyclic, returning to the diagnostic construct, and so triggering the next cycle of learning programming. The Dimensions of Learning provide the mechanism for converting the planning cycle into pedagogical strategies.

It is the learning management knowledge base and the learning manager mindset, focused on pedagogical strategies that achieve learning outcomes, that inform and sustain the overall program intent. This commitment to achieving learning outcomes makes learning management transgressive and disruptive in the conventional teaching and learning context of schools, training operations and indeed, universities.

Developing Learning Management Capabilities

Having now outlined the component pieces of the Learning Management schematic, we briefly describe how such capabilities can be developed in students of learning management. We expand on this commentary in Chapter Eight where we examine in greater detail our revised model for teacher education.

Central to the notion of developing learning management capabilities is a device we term the Portal Task. Portal tasks are the embodiment of the Learning Management Scheme because they are the fusion of the knowledge learned ‘on-campus’, as it were (the theoretical component), with its respective applications to work (the practical component). The learning management scheme defines the scope of what is to be learned and in turn the range of the preparation program, while the idea of a New Learning Industry outlines the scope of work settings for practice. We elaborate this idea in Chapter Six. Importantly, the structure of a portal task requires the student of learning management to understand and then demonstrate in a workplace setting what they have learned theoretically.

The portal task idea is supported by Stephensons work\textsuperscript{181} in the United Kingdom where a community of practice, known as a “learner-mediated partnership”, increases both the learner’s and the organisation’s capability. In this arrangement a university provides program leadership, specialist learning modules and associated
program supervision, and access to accreditation. The employer provides opportunities to learn through work with access to resources, mentors, contextualising programs and help. The 2-part process is clearly dependent on effective coordination of effort and a unity of purpose, particularly the sharing of a language of instruction.

In such a model, learning tasks are based on the pursuit of real-time projects formulated collaboratively by the employer and the university. In this arrangement there is an immediate benefit to the ‘workplace’ organisation through the completion of current and futures-related tasks, and in the longer term the student develops his/her capability by learning in the domain of a potential employer. The involvement of both a workplace and a university encourages an alignment between industry needs and university study and can be a major change strategy for both parties.

We wish to stress two key points re portal tasks. First, the notion of a ‘workplace’ is not solely about classrooms and schools but also about those other places in which learning now occurs and which are now fundamental in a knowledge society circumstance. Second, portal tasking means there is an agreement by all parties to Learning Management. Put simply, Learning Management is the scope of what the preparation program aims to achieve in graduates and in turn the expertise required of workplace mentors and University staff. We hasten to add that it is our experience that portal tasking arrangements actually engage both mentor and student to learn the content of the portal task. They therefore have the dual capacity to engage mentors to Learning Management as well as their student. We elaborate these ideas further in subsequent chapters.

Summary and Conclusion

In previous discussions we have outlined a schooling system that is rooted in the past. It is a system is dominated by the historical traditions of schooling. Culturally and politically the education system is defended by those who want to continue doing what they have always done. It remains rife with alibis about student performance and purpose embedded in self-seeking propositions about the complexity of contexts, the need to understand, the value of more educational research and support for teachers rather than offering problem-solving directions that benefit students, their families and communities and the state.
Yet, what we are arguing for is not some sudden and jarring paradigm shift from conventional schooling to futures-orientated practices. Rather we are proposing that the rethinking of the learning industries along the lines we have discussed is the latest stage in an evolutionary process of adjusting to an increasingly complex context\(^{187}\). Many teachers and teacher educators have embarked on this journey individually but and orchestrated system change is what is needed.

This chapter examined the concept of capability and introduced the broad domains of what we consider are the central tenets of learning management. We argue that when applied in unison these futures-orientated domains and their associated elements lead to a system of teaching and learning that is: flexible; attuned and adaptable to individual student needs; in balance with the profile of the economy and technological innovation; built around serving various life and career pathways of students and their families; and connected to and embedded in a strong and productive relationship with the local and broader community. These represent a new set of teacher capabilities.

In short, we suggest that this kind of shift in teaching and learning would reinforce the following:

- New content and models of curriculum organisation
- Evidence-based approaches to teaching and learning strategies
- Student-centred approaches to teaching and assessment
- Teaching and learning partnerships that link the place of learning, the community and the workplace
- Technology-based approaches to learning that emphasise self-directed and independent learning
- An invigorated and resilient teaching workforce.

In the next chapter we outline a curriculum for the preparation of the futures-orientated learning manager.
Chapter Six:

Learning Management and the New Learning Industries

Previous chapters outlined Learning Management as the harbinger of a new set of capabilities. These capabilities were sketched in Chapter 5. In this chapter we chart the current work context of the learning manager. We show that the requirements for teaching and learning in a Knowledge Society outstrip the capacity of a schooling and classrooms model. This Chapter forms the background for dealing with the curriculum for preparing tomorrow’s teachers in Chapter Seven.

As previous chapters indicate, the term learning industries is really a euphemism for a new frontier in teaching and learning that the knowledge economy of the 2000s has generated. The term ‘learning industries’ transcends the limitations of a 20th century schooling paradigm, signalling a variety of emerging understandings and technologies associated with learning and which together force a rethink on the what, where, when and how of learning. The implication is that preparing teachers in the 21st Century is no longer just about the context of classrooms and schools.

The term Learning Industries underpins the importance placed on knowledge and the learning required of workers to function in the Knowledge Society, but ultimately indicates new ‘opportunities’ for the learning manager. Overall the learning industry concept contains the foundations of what we think is the basis of an education revolution and the context for a refocusing of the curriculum for preparing tomorrow’s learning manager.

If we were to use the term ‘learning industries’ in the 1970s and 80s we would invariably have been asked “what do you mean?”, primarily because ‘schooling” was the prevailing mindset of the time
and it drew universal associations between teachers and classrooms: the full extent of how people perceived learning. The industrial society had no cause to be concerned with learning beyond these parameters because a ‘jobs for life’ attitude and a work objective based on maintaining production processes (i.e. avoiding changes) left little scope for any learning settings to develop beyond initial schooling.

This chapter expands the idea that learning happens beyond the walls of classrooms and traditional teaching practices. It is an important idea because learning management, by virtue of its rationale and intent, is a disruptive innovation. By this we mean that learning management challenges people to rethink what is meant by teaching and learning in the 2000s. Such a challenge by definition lies at the heart of an education revolution and implies new capabilities for teachers.

In this chapter we briefly survey the components of learning management work by discussing what we think are six interrelated learning domains of the learning industry concept. This discussion leads into the preparation of learning managers in Chapter Seven.

Schooling: The Learning Industry of the Past

Schooling is synonymous with growing up and is replicated throughout the world. In the current schooling model students attend a state funded or privately operated school for 180-200 days per year from the age of around six. The main learning tools are pencil and paper, and especially in secondary schools allocated textbooks to cover content. Schools are recognizable by their activities based on established traditions, models and rituals. Ritual performances such as parades, marching, lining-up, uniforms, and referring to adults by title or formal salutation are drawn from sources such as the military. In more recent times computers have been incorporated into classrooms but, unlike the workplace, are peripheral to the core process of teaching and learning, despite the endeavours of policy writers to encourage their pedagogical use. Teachers are primarily concerned with a state mandated curriculum which informs the content to be taught.

There are discernible features of this schooling model. First, there is the research conducted by an industrial era management expert named Frederick Winslow Taylor which was designed to fit the industrial society paradigm of the 19th century. According to Taylor,
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basic skills, uniformity and conformity fitted a society in which mass production was the dominant motif of the times and it followed that the form of education should resemble it.\textsuperscript{192} Taylor observed that, "the antithesis of our scheme, is asking the initiative (of the workers)----their workmanship, their best brains and their best work---our scheme does not ask any initiative in a man."\textsuperscript{193}

Taylor’s words provide an insight into the relationships between schooling as an institution and the political and economic structures of the society. There is a long tradition in educational research premised on the supposition that such structures determine amongst other things what schooling can achieve. An illustrative example is the enduring concern in public schooling especially with equality issues. Despite the best efforts of policy makers and school personnel, educational inequalities persist. Nevertheless, the conduct of schooling is always shaped by programs and mindsets about schooling functioning as social mobility for individuals and sub-cultures. In recent decades, government has intervened in schooling in the interests of equity with programs such as “Gifted and Talented”, “Special Educational Needs”, “Behaviour Management”, “Multiple Intelligences”, and “Learning Styles” aimed at alleviating some of the socially unacceptable outcomes of schooling.

A second influence is represented by the Child Saving Movement, with its genesis again in the 19\textsuperscript{th} century. The child-savers helped to create special judicial and correctional institutions for the labelling, processing and management of what were called troublesome youth. This conservative and romantic movement was heavily influenced by middle-class women who extended their housewifely roles into public service and emphasized the dependence of the social order on the proper socialization of children. In De Voss’s terms, later manifestations of this concern about socialising children can be seen in the shift from vicar-from-cradle-to-grave metaphor to the ‘psych’ from pre-maternal to palliative care\textsuperscript{194}. He goes on to say:

\begin{quote}
In the discourse of efficiency and quality, the school has been redesigned to provide a total package of schooling, education and therapy. The attainment targets, the pupils’ objectives, are in fact, often literally, based on neo-normative models of the human sciences.
\end{quote}

In this scenario, social skills or social competencies become central objectives of the school and teachers, increasingly trained to
act as proto-psychologists, are part of a vast detection network of children’s psychological, affective and behavioural disorders. Developments such as these have had an impact on the preparation of teachers aimed at cultivating the aptitudes of children and the ways in which schools operate. Teaching retreated from a knowledge transmission process to that of facilitating the child’s developmental processes.

The current schooling model is predominantly based on an organisational model based on age-related cohorts, systemically developed syllabli and associated curriculum guidelines that provide teachers with defined content, school year progress, and a teaching model of a teacher conveying information --- broadcasting ---to groups of students through oral and written media. In some parts of the schooling system those students who do not excel in a literary and examination regime drop-out and begin work\textsuperscript{195}. A dominant belief is that all teachers can teach, but not all learners can learn but that the latter is not tied to the former.

A significant number of students fail or become bored with and disinterested in the schooling process. Indeed, de Voss speculates that the alleged increase of disorders like ADHD, anorexia, automutilation problems, toxicomania and depression etc., are effects of such disillusionment as the:

“…so-called \textit{contemporary symptoms} are to be understood paradoxically as symptoms of being fed up, being made ill by a psychologised and medicalised society which is supposed to offer us ultimate happiness and well-being, if not by neurological drugs, then by psycho-education”\textsuperscript{196}.

Similarly,

"Most of the time, what keeps students going in school is not intrinsic motivation - motivation derived from the process of learning itself - but extrinsic motivation - motivation that comes from the real or perceived consequences associated with success or failure...over the course of their educational careers, students are increasingly exposed to extrinsic rewards for schoolwork”\textsuperscript{197}.\"
It is hardly surprising for example, that the Queensland Government school system, for example, reports increasing effects from social change including increased levels of anxiety, depression, lack of discipline, aggression, inadequate literacy skills and a greater need for adult role models\textsuperscript{198}. The government system is in this sense a canary for all systems; the “falling away of the psychologised veils of current discontents in culture”\textsuperscript{199}.

Increasingly, there is concern that relatively uniform system of schooling with by and large traditional teaching methods modified to fit contemporary social ideologies, will not meet the needs of students and their families or the state in a knowledge society.\textsuperscript{200} \textsuperscript{201} For example, the structure and character of families have changed so that there is less fit between the social reality and the nurturing family assumed in much curriculum development. There are new patterns of employment and underemployment, greater mobility and new concentrations of poverty in both rural and urban settings that have an impact on families and schools\textsuperscript{202}. Consequently, there are now expectations on schools and teachers to provide much of what was traditionally delivered by parents through family life\textsuperscript{203}, a situation that reinforces history rather than creating a different kind of system attuned to the times, irrespective of the enormous efforts made by individuals and the marvellous outcomes many of the initiatives achieve.

Also, the explosion in mobile/online/Web 2.0-based communications media have created social interaction possibilities for community building that for many individuals, have changed the idea of community, while there are also grassroots movements and government initiatives seeking to coordinate whole-of-government, semi-government and community-based organizations to forge partnerships with initiatives such as One Stop Schools\textsuperscript{204} to provide support services in communities.

There are two main points here. First, schooling, and by association current teaching practices, had their genesis in past social history and in the various reincarnations of the state in different historical periods. Second, in this historical era there is a mismatch between teaching and learning and the patterns of work and life in the knowledge society. Moreover, knowledge about teaching and learning indicates that much of what is known in that historical model is both not being implemented and remains valid for different kinds of pedagogical work and learning\textsuperscript{205} \textsuperscript{206}. There are parallels here to
teacher work in places such as TAFE colleges, universities and training centres.

The Learning Industries: The Scope of the Learning Manager’s Work.

In the commentary which follows we show how new learning potential and new work contexts have implications for the learning manager. As previous chapters have highlighted, a knowledge economy and society is built on the production and dissemination of knowledge: one’s capacity to use knowledge in unique and networked ways is a valued asset. In this sense, both theoretical and procedural knowledge are the end products of learning. Thus learning is the important strategic ingredient in the knowledge society and the term learning industry is used to capture the means by which current and future workers undertake and engage in learning.

This discussion elaborates components of a knowledge society that reinforce the need for learning on the part of almost everyone and in turn for having people who can provide learners with systematic knowledge and skills, so that they can build a basic framework of knowledge for vocational and other purposes. The discussion builds a roadmap for a broadly based learning industry.

Our learning industry model is based on a set of new capabilities and the systems and processes that support these. Learning Management is the over-arching term for these capabilities and their associated systems and processes. This focus on capabilities is an important consideration in our model as research into teaching and learning indicates that it is the capabilities of the teacher in conjunction with issues such as leadership and resources that makes a fundamental difference to the achievement of learning outcomes in learners. In addition to learning management the model involves the analytic use of six interrelated learning domains for explanation purposes. Each domain represents learning resources available to the learning manager in 2009 and by association becomes an articulation of broad capabilities required of the learning manager. Figure 6.1, depicts our learning industry model.
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Figure 6.1 A Learning Industry Model

Figure 6.1 shows the context and scope of work for our learning manager, a theme we expand in a later section. We now discuss each section of the model beginning with the community and Mode-2 society.

The Community and Mode-2 Society

Our model is located in the context of Mode-2 Society and the emergence of the knowledge- and creativity-based society. The Community is embedded in the Mode-2 society and represents a specific location and the idiosyncrasies of real people. It is important to point out that the community does not necessarily infer a suburb, town or nation. It can infer a work site, such as a specific knowledge-based industry, a large commercial precinct or a small industrial complex. It is generically a place in society in which people gather for a specific purpose for which learning is required.

The community embodies the values, beliefs and aspirations of the people who are interested in and serviced by the education industry. On another plane it represents the extent of particular services that are required for the community to function and to achieve its goals.
Learning Management and the Central Role of the Learning Manager

In Chapter Two we defined Learning Management as:

the explicit, purposeful intention to initiate, modify, develop or change knowledge, conduct or practice by someone or something which already possesses or has access to the necessary resources and the means of evaluating the acquisition\(^{208}\).

Put simply, the concept is an attempt to think through the universalistic qualities of teaching and learning in a Mode-2 social context.

In Chapter Five we described the specialised practitioner capabilities of Learning Management. Its potency lies in the practitioner’s capacity to apply these capabilities to the resources of a rapidly changing society in order to achieve learning gains with clientele. In this sense, the learning manager provides an asset and a specialised service to a community.

In the most straight-forward case, the learning manager has the skills and knowledge to achieve the pre-determined learning outcomes required by the present school, VET or business establishment or university class in well designed pedagogical, diagnosis and evaluation strategies. They are able to work with and coordinate other professionals and para-professionals to reach the desired outcomes.

Put another way, it is the learning manager’s professional responsibility to design education and training programs that achieve the outcomes set for them, whether the outcomes are strictly technical and process-like or conceptually complex. Their job is to make individuals and organizations more effective in whatever they are seeking to do by implementing interesting and relevant pedagogical designs that result in the learning required.

Learning managers take on responsibility for their client’s learning outcomes. It is necessary then to design learning programs for individual learners and to monitor and report progress towards agreed outcomes. Each learner will have a personal learning management plan and their designated learning manager will use the principles of learning management to design, deliver and review the learning program. Importantly, the learning manager works to defined standards rather than their subjective opinions. A robust knowledge
base is at the heart of this notion. We outlined this premise in Chapter Five.

To illustrate the scope and range of the learning manager, the learning manager must be able to work across six interdependent, analytic learning domains, namely: formal, informal, virtual, vocational, diagnostics and knowledge innovation. The formal learning domain represents certified award learning, whereas informal learning is predominantly beyond the formal institutions of award learning.

Learning managers of course might specialise in any one of these domains but our view is that all learning managers must have the requisite capability to connect to appropriate knowledge and skills at a moment’s notice in any of the domains and to see the potential for working across them in a transdisciplinary manner. This requirement prefigures Chapter Seven where we explore the associated curriculum for preparing the learning manager.

6.1 The Formal Learning Domain

The formal learning domain represents formalized learning as mandated by the state or regulatory bodies. Formal learning is the responsibility of a formally qualified and appointed teacher at all levels in an education system. Qualifications and credentials are identified with formal learning. Classrooms are the core denominator of this domain.

We foresee that Learning manager work in formal learning environments will be increasingly profile based rather than being tied to age or grade cohorts alone. Our expectation is that curriculum content will continue to be determined beyond the learning manager by a combination of regulatory body and local learning authority structures. The main task of the learning manager then is to interpret the policy environment and bring to bear a cache of expert knowledge that can be customized to meet the needs of respective learners according to a learning management plan. They will be adept at leading teams of para-professionals.

It is not hard to envisage the formal learning domain evolving from the traditional school setting, university or TAFE college to some form of specialist learning precinct. Formal learning is already evolving from the physical space of the classroom to one that is more virtual. Learning management capabilities are specifically designed to
enable learning managers to stay abreast of developments in times of constant change as a matter of course. Learning managers will need to be prepared for a different type of formal learning domain because the context of work within them is set for major changes.

### 6.2 The Informal Learning Domain

By definition informal learning takes place beyond formal institutions such as schools, training institutions and universities and it has always fulfilled this function. Informal learning occurs in contexts such as sports training and coaching, first aid courses conducted by community organizations and interest groups such as Toastmasters and the coaching and skills training conducted by sailing clubs, to name but a few. While not associated with a teacher or a school learning, this environment does have an association with some form of defined course or body of knowledge that has to be learnt and demonstrated. In some cases the learning is not certified, but delivers intrinsic outcomes for the learner and increasingly for an organisation.

Increasingly, informal learning delivered via devices such as mobile phones (known as 'm-learning') has made an impact on the work setting. Workplace learning can be far more autonomous than what we understand as student education and training with the advent of easily used powerful Internet browsing possibilities represented by the iPhone. Some commentators predict that by 2010 Gen Y will outnumber Baby Boomers and observe that 96% of them have joined a social network. Informal learning is bound to increase in these new circumstances and the role of the learning manager will change with it.

Learning managers require the capability to form closer links between the un-commonsense knowledge of formal learning and commonsense everyday knowledge. In the history of schooling, children have been socialized into knowledge frames that discourage connections with everyday realities. Importantly, learning managers will need to have expert capacity in both formal and informal domain pedagogical strategies.

### 6.3 The Virtual Learning Domain

E-tools together with a host of multimedia presentation media and formats exemplify this enormously influential world of the Internet. Social networking especially has changed the way post-Baby Boomer generations interact globally. It is reported that 80% of
Twitter usage is on mobile devices. It has become apparent that Generations Y and Z consider e-mail passé and in 2009, Boston College ceased distributing e-mail addresses to incoming first year students. Moreover, the Internet has altered the ways in which businesses relate to clients with 25% of search results for the World’s Top 20 largest brands linked to user-generated content.

While e-learning programs have been largely text-based, the potential to conduct learning in this domain today is enormously varied. The portable anywhere, anytime nature of such technologies, coupled with the capacity of young people to easily adapt to and adopt such technologies underscores the importance of this domain today as a major site for formal and informal learning.

Our vision for this learning domain is one that enables access, responsiveness and resourcefulness for both the learning manager and the learner. The virtual world mirrors the conditions about knowledge production and distribution described by Novotny et al as ‘socially robust’. Like the new skills required to network and collaborate in the agora, the teaching and learning knowledge-bases and skill sets for these conditions include what was known and done in the past but far transcends them. As Pierce explains:

>We've all experienced how death by PowerPoint gets converted to those boring, rapid elearning courses, covertly designed as sleep aids… If you're honest, you have to admit that most of these rapid elearning courses are e-reading, not elearning. And narration makes it even worse, since it interrupts visual learning and is an open invitation for a learner to multi-task by reading emails. Now, throw a Concentration- or Jeopardy-style game in there, and you've completed the insult to the learner.212

The new eLearning promises more intensive customized learning experiences with greater outcomes in shorter timeframes amongst other things that have enormous implications for the kinds of time and location bound modes that exist in schooling and most other formal learning settings.

6.4 The Vocational Learning Domain

The fourth learning environment we term vocational learning. In the preparation of workers and for the continuing and changing work
within and beyond workplaces it makes little sense to think that it can be done with knowledge that is decontextualized, abstract or general. Learning in the vocational domain is workplace centred, and learning is a process of social participation in today’s world, in communities formed by people who engage in a process of collective learning in a shared domain of human endeavour. Learning to be a carpenter, accountant, manager or computer games animator for example, requires more than academic learning and must encompass participation in real-life contexts that fit the workplace. In professional settings, there are cognitive properties that are not predictable from a knowledge of the properties of the individuals in the group. As Wenger explains participation, it refers not just to

“local events of engagement in certain activities with certain people, but to a more encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities.”

This approach contrasts to some extent with the front-end loading secondary school and university models that concentrate on the acquisition of knowledge by individuals and rely on what students can say or write about what they know. Our approach puts strong emphasis on the socially mediated activity of people workers in a Mode-2 cultural context. To work in a Mode-2 society learning managers need to have a well-honed capacity to work across formal, informal and virtual learning domains so that these conditions are taken into account. It is a prerequisite then to ensure that the potential of communities of practice are already part of the structures and processes established for a learning management preparation program so that people can become fully-fledged participants in a specific vocationally based community of practice.

6.5 The Knowledge Innovation Domain

Mode-2 society is built, “… on the diffusion and use of information and knowledge as well as its creation” and the successes, or otherwise, “of enterprises, and of national economies as a whole are reliant upon their effectiveness in gathering and utilising knowledge.” These conditions place considerable weight on an individual’s talent or skill and how they might be developed. The
capacity to interpret one set of knowledge to others in order to create yet further knowledge is a core competency today. Knowledge industries such as Nokia, Microsoft, Google, Apple and Samsung use ‘skunk works’ and ‘knowledge incubators’ to provide workers with opportunities to design, experiment, investigate and trial creative ideas and products. This type of learning is synonymous with workplaces where teamwork and ‘kicking around ideas’ is central and the catalyst for much of these endeavours is continuous learning. For example, 50% of the Danish Ministry for Science, Technology and Innovation R & D funds, formerly offered to universities, are now subject to open competition for public-private partnerships, small and medium-sized enterprises. In addition, there are publicly funded ‘outposts’ in Silicon Valley, Shanghai, and Munich. This ability to apply and generate knowledge in a range of contexts in order to meet specific goals in a new ways we call ‘strategic creativity’.

Strategic creativity assists individuals and organizations to be more effective in whatever they are seeking to do by devising and implementing interesting, relevant pedagogical designs that, through learning processes, achieve desired outcomes. Learning managers have intentional roles of a more strategic and accountable value than usually contemplated in teacher preparation and professional development for practicing education and training professionals. They are an important part of the organisational strategy with strong imperatives to achieve planned outcomes. Learning managers bring to the organisation the capacity to deliver designed learning programs strategically focussed on knowledge innovation. Such programs are customised to align the personal attributes required of workers and the knowledge associated with the industry in which they are embedded. Clearly, the preparation of learning managers has to contain new components to achieve this aspiration.

6.6. The Diagnostic Domain

In the traditional teaching and learning context the notion of assessment predominates the learning process where the teacher asks ‘what has the learner achieved?’ While this process seeks to ascertain learner progress and informs subsequent reports, the assessment concept does not engage the teacher in thoughts and strategies that locate and eliminate learning blockages. Our view is that learning
management places importance on the question ‘Why hasn’t the learner achieved the learning goals expected?’

The diagnostic question engages the learning manager and student or client with forecasting future learning needs and in turn, services to achieve the learning outcomes required. Identifying blockages in knowledge innovation techniques and processes and being able to design strategies that resolve these problems requires a scientific understanding of learning, learning systems and the various syndromes that have an impact on learning. A capacity to generate and interpret data and communicate findings and act on same is core in such a domain.

Of course, learning managers are trained to engage with other professionals and para-professionals such as medical clinicians and therapists, as an equal player. The underlying ethos is that, in a given context, all learners are able to achieve the defined learning outcomes. Again, this comprehensive yet focused role description for a learning manager requires a different kind of preparation compared to the conventional teacher model, one more akin to the professional services firm model seen in knowledge industries than bureaucratic schooling. Performance and development according to standards as industry expectations in this sense are in stark contrast to front-end loading and a personal preference-based occupation.

Summary and Conclusions

In this chapter we have described a new work context for a learning manager in the learning industry model. In our view, the discussion takes the idea of a ‘teacher’ far beyond the conventional view moulded by its historical association with schooling. While we acknowledge that many traditional schools today are embracing some of issues we raised, the core message of our model is that new teacher capabilities are needed for the kinds of teachers’ work that will achieve an education revolution.
Chapter Seven: Laying the Foundations for a Curriculum for Producing The Knowledge Age Teacher.

Chapter Six presented the case that when the outside world changes, it has an impact on teaching and teachers. Under contemporary conditions, teaching can no longer be associated exclusively with schooling and learning in other kinds of classrooms. In this chapter we identify what a learning management based program needs to put in place if it is to avoid the pitfalls in current teacher education models. Chapter Eight builds on this chapter by discussing a new model for teacher education.

Current teaching and learning research indicates that achieving learning outcomes in learners is contingent on the capability of the teacher to implement effective teaching strategies in conjunction with leadership and resources. Discoveries from neuro-science and cognitive research are bound to add to the profile of what constitutes these teacher capabilities.

As we outlined in previous chapters, Learning Management is the term given to the implementation of particular capabilities and associated processes. It is the learning manager’s (the practitioner of learning management) responsibility to make the learning of individuals and organizations more effective in whatever they are seeking to do by designing and implementing pedagogical strategies that result in the desired learning. The question is ‘How?’ To answer this question we re-examine the research findings presented earlier to lay a foundation for preparing tomorrow’s teacher investigated in Chapter 8.
Research to Guide Innovative Practice

The research evidence about the Bachelor of Learning Management program reported in Chapter 1 is both parallel to other findings in the teacher education literature and provides pointers for what needs to be put in place in Australia if graduates are to be better prepared for work in the Mode-2 world. It is important because it identifies areas of constraint and restraint in teacher education carried out in the conventional model.

There is now strong evidence that a working partnership between the university and the schools or other teaching organisation is required for the preparation of student teachers. It is clear in the ACER evaluation\(^2\), in Lynch’s work\(^2\) and especially in Allen’s study\(^3\) that unless there is an agreed agenda across the university teaching staff, the school-based mentors and the students, there will be significant break downs in understanding and purpose across participants in teacher education. It confirms research findings in other fields where merely fostering customer orientations in order to guide innovation and research is insufficient to guarantee quality outcomes\(^4\).

Allen’s work provides insights into why breakdowns occur. The socio-structural and cultural reasons include: the unequal contributions made to successful graduate outcomes by the workplace and university and the need to coordinate them; the need to manage real or potential fragmentation in the on-campus teaching, workplace performance and mentoring that supports the performance stands of the program; and the effects of hierarchy where the responsibility for program design and development lies with the university but the workplace has greater responsibility for implementation than ever before.

It follows that the relationships between the university and schools and other organisations need to be such that significant input into the conceptualisation, planning and implementation of a teacher preparation program must originate from stakeholders. The university-school nexus needs to be seamless so that teaching staff and students do not experience discontinuities in curriculum, procedures, desired outcomes or purposes. As Wagner suggests, these challenges open up new domains for teacher education and the other learning industries because in the present model not all collaborators are treated equally\(^5\).
In the case of the BLM, the effective partners are those schools and organisations that can be described as innovation suppliers, or those that orchestrate what happens in the workplace in ways that are usable for the BLM’s assumptions and underpinning knowledge sets to produce teaching graduates. The workplace organisation should understand for example the positioning of the ‘student teacher’ and ‘graduate teacher’ in the emergent education market and the social trends that shape the capabilities required by graduates. These attributes in turn demand a different mode of relationship management compared to what we consider to be the now obsolete hit-and-miss ‘prac’ model. We can see this clearly in respect to the following four elements identified in our research and experience that lead to successful collaborative teacher education programs.

1. Agreement on the curriculum, especially in the pedagogical and other teaching elements of the program, across the university staff and the mentors in the schools.

This first element means that the approach based on university staff and school (or workplace) mentors adopting whatever models and principles they individually desire is eschewed in favour of a unified, team approach to pedagogical practice. In this latter model, university staff and school mentors agree to teach and mentor to a comprehensive, coherent, research-based pedagogical model rather than pursuing private interests. Following the development and implementation of an integrated approach, the predominant attitude must be that of ‘can do’ accompanied by optimism about success and innovative solutions rather than asking “why” and attempting to deconstruct the initiative.

In short, where there is an erstwhile collaborative agreement between a university and a service supplier organisation that is marked by uncertainty about graduate outcomes, disbelief in the feasibility of the model or a bloody-minded commitment to ignore the technical requirements necessary to achieve the outcomes, there will be inter-organisational difficulties and program failures. The ideal situation is where the university wants a platform for innovative work in and transfer of knowledge to the workplace while the teaching specialists in the workplace want to leverage the teacher education experience of the university for professional development and achievement of
professional aims. Where there are community organisations involved such as the Noosa Council (as was the case of the BLM) these bodies are bound to expect that education will contribute to their policy objectives such as developing a knowledge-driven economic infrastructure. These requirement open enormous opportunities for a university to make real contributions to social and cultural capital in their localities.

At the level of intra-program operation, the theory-practice gap has to be taken head-on. It follows that significant, meaningful and required student workplace performance outcomes must be tied to the integrated model agreed by the main stakeholders. Certain implications for learning management preparation flow directly from this principle.

The core of teachers’ work is teaching and teacher education programs have an important responsibility to ensure that, on graduation, teacher graduates have the requisite knowledge, skill and experience sets that demonstrate capability to achieve preferred learning outcomes in their students. The ACER evaluation particularly commented on the preparation of BLM graduates in this respect, in comparison with those of other Queensland universities. It appears important then, that in the preparatory stage, student teachers need to be introduced to and shown how to implement the comprehensive research-based literature on pedagogical practice that in any other profession would constitute the core studies and professional training of candidates for the profession. It follows too that where teachers are being prepared to implement set syllabuses such as in schools, they require more than a passing familiarity with them.

In addition, all of the current and recent educational policies that encompass teacher education require schools, teachers and teaching to be prepared for a future state of affairs. Being futures-oriented is not just a catchcry but a mindset activated by concrete capabilities. In the integrated model, knowledge and skill capability requirements are by necessity co-produced in practice rather than bolted on in an additive way.

The central new element in teacher preparation and in the provision of expertise to the learning industries more generally is the importance of managing the collaborative arrangement stressed in this book. In principle, without such arrangements in place in the 2000s, not much of importance will happen in teacher education or the rest of
the learning industries. Let us now consider the building blocks of such an arrangement.

2. Partnership and the implication of partnering in a knowledge society circumstance

In the standard model of teacher education and schooling, collaboration between the university, schools and other organizations normally means helping schoolteachers and entire schools to more effectively transmit the teacher education curriculum to student teachers. In the knowledge society, this goal is no longer valid or indeed possible in a strong sense because of the dynamics described earlier under Mode-2 society. The society, in this case constituents with interests in the outcomes of the schools and training organizations, “speak back”. That is, in the Mode-2 model of socioeconomic conditions there are additional, competing claims on schooling and in turn teacher education that arise in the agora. As this book has been at pains to explain, the challenge for schools and teacher education is to get their respective practices synchronised with social conditions and new expectations for schooling, and in turn teacher education. Moreover, learning and teaching no longer refer exclusively to the work of traditional teachers or university lecturers. Learning, and in turn people who can manage learning, are demanded by Mode-2 operations more generally.

Dealing with this shift in practical programs and actions is not just a matter of presenting lecturers and schoolteachers with a different curriculum, an approach that seems to hold the attention of educators and politicians today in the debates about school ranks and a national curriculum. In reality, curriculum alone does not lead to educational reform unless it is accompanied by changed structural configurations in leadership mindsets and especially pedagogical practices. Our Learning Management Scheme and the outlining of the new learning industries serves to illustrate the constituent parts associated with such ideas. What teachers and administrators actually do when they have responsibility for learners and their futures is what has impact.

It follows then that the rhetorical reliance on partnership and collaboration in teacher education needs re-assessment. The core issue of partnership is “Collaboration for what?” If university staff and schoolteachers are “symbolic analysts” who take professional pride in their capability to achieve outcomes, and who network widely in
order to ensure that the appropriate learning service is enjoyed by clients, then they are knowledge workers. In the knowledge-creative society, the corollary is that, compared to the teaching/teacher mindset of conventional teacher education, knowledge workers celebrate the capability to reach mutually agreed goals in a collaborative context rather than prizing unique approaches and individual preferences.

This change of mind and skill set we have repeatedly referred to as learning management conducted by learning managers. The fundamental problem though is that merely tweaking conventional teacher education programs will not deliver learning management goals or learning managers---an articulation of a futures approach to teaching and learning--because of the need to integrate theory and practice.

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Bauman, like Nowotny et al., indicates that learning occurs in an increasingly unpredictable and irregular social world in which supply and demand is neither linear nor stable, and labour is shaped by complex patterns of anticipations, time and space. The implications of Bauman’s observations are that there is a need to shift from content delivery to capacity building, from supplying curriculum to co-creating curriculum, from supplying education to navigating learning networks.

Taking these implications one by one, it is apparent that: (1) capacity building has intent – the capacity is what we refer to as capabilities to operate in a knowledge-creative society; (2) co-creation clearly implies more than mere collaboration with people and things beyond the classroom and the school as we have argued earlier in this chapter. Strategic alliance is a more appropriate term; and (3) navigating learning networks refers to the extensive use of face-to-face and the Internet with the implications that shift has for teachers, schools, schooling and teacher education.

In our view, the preferred arrangement for strategic alliances with producers, orchestrators, brokers, disseminators and users – what used to be called collaboration or even partnerships – is ‘syndication’.
Syndication goes beyond partnership and alliance to agreement about making available relevant services, resources and content to other players in the game to use for agreed ends and mutual benefit. But most fundamentally a syndicate is disruptive to the status quo in that it aims to reposition ‘syndicated members’ to deal with the new frontier that is the knowledge society. The syndicated partnership concept implies that employers, schools, councils, businesses and teacher educators are jointly involved in the conception of ideas and policies and are productive partners, measured by performance benchmarks. Syndication has value-added benefits for both the parties providing such resources and those receiving them. It adds depth and immediacy for users across agencies and organisations.

Traditionally, syndication is a means of risk sharing by portfolio diversification. In addition, from the perspective of resources, syndication is a response to the need to share or access information in the selection and management of projects in which an investment is made. Finally, having access to future deal flow is a motivation for syndicating out a particular set of activities. The underlying premise of syndication is the notion of co-creating value in what might loosely be called a maturing of the community of practice concept in the newer Mode-2 agora in which teacher education now must exist and prosper.

A central mindset element of such an arrangement in a teacher education program is that of ‘some rights reserved’. By this we mean that intellectual property and resources for instance are shared widely but inevitably there will be some elements that are kept as proprietary rights. This contrasts with the normal relationships in so-called partnerships where all parties operate under the Realpolitik of ‘all rights reserved’ thus making the co-creation of capacity building almost impossible, despite the best will in the world on the part of individuals.

We see this conundrum in comments such as, “That is university work”, or “That’s the schools prerogative” and in Allen’s (2009) careful analysis of the learning-doing gap between teacher education principles and execution. Our challenge to the profession is to replace the attachment to critical theory in teacher education with a the ‘can do’ attitude discussed earlier so that preparing teachers is undertaken on behalf of client interests rather than those of academics.

Syndication has additional benefits for shifting school, schooling, teachers, teaching and teacher education into the 21st Century. It
depends for its success on real-time social collaboration that in today’s world is only possible by using the Internet. Web 2.0 tools enhance collaboration amongst users. According to O’Reilly, the move to the Internet as a platform for communication, creativity and information sharing using Web 2.0 tools has revolutionized business practices. These concepts have led to the development and evolution of web-based communities and hosted services such as social-networking sites, wikis, blogs and folksonomies.

In short, Web 2.0 amounts to interlocked services that a user can utilise for interaction purposes. This user interaction is usually based around uploading information through the web and by this means encouraging use, comment and relationship forming. The essential points of this are: interaction is through the web as a platform; continuing and regular uploads of information of some sort; use of content for comment; participation; and trust. For the purposes of capacity building and co-production, Web 2.0 tools are then a means to make syndication dynamic.

Web 2.0 tools are also strategies for instruction because they are readily available resources through which student experiences can be developed, sequenced, managed and evaluated. In this sense the syndication network arrangements can also provide the springboard and support for a changed set of learning environments for students, if the teaching staff have the skill repertoire to exploit it.

It follows that syndication of school work – under conditions where there are agreed performance outcomes for curriculum content, and individual and social characteristics for graduates, for graduate further learning and workplace readiness, for leadership and management practices and so on – provides the learning manager and learning management with a perspective that is quite different to that which prevails today in the education system. The syndicated agreement places responsibilities on all of the players to reach agreed outcomes. It forms the glue that holds the structure together and as such it is the core element in a teacher education program compared to the more traditional matters such as the fleeting moments of ‘prac’ teaching arrangements, school visits and so on.

A final note on the syndicated model is an appreciation that the membership of a syndicate to prepare tomorrows teacher will not universally come from nor comprise just schools as workplaces. A realisation that the new learning industries have new members.
3. Using partnership and partnering to generate change

To date university teacher education initiatives to form agreements between teacher educators, participating schools, colleges, RTOs, learning businesses, professional associations and trade unions, accrediting agencies and relevant government departments, have been patchy. When agreements are made they tend to be of short duration because each party’s good will and interest fades, especially when key personnel leave or move on. In most cases it is a one sided affair, because teacher education is viewed as being owned by ‘the university’, with teacher educators correspondingly seeking agreements that suit their agendas. Conversely, education agencies in the early stages view teacher education as a professional obligation, but this commitment tends to wane as the realities of the one-sided agreements characteristic of the BEd model kick in.

From our experience agreements should focus on the purposes of the program, the mode of delivery, resource and legal responsibilities of participants and shared leadership. An agreed minimal committee structure and the level of participants need to be finalised. One committee should have decision-making powers vested in it and comprise decision and policy makers from the university, agencies and schools. Another should be focused on implementation across the program so that slippages and gaps are minimised. Committee roles and membership ought to be known across the program and their deliberations should reach into the operations of university and schoolteacher staff.

The program curriculum and its mode of delivery ought to be agreed. In practice, this means that the ideal program has unit outlines written to settled overarching principles that are binding on teacher educators, participating mentors and all others involved in implementing the program. To manage this kind of arrangement, there needs to be jointly developed instruments to formalise the agreement on such matters given the current prevalence of the do-whatever-you-like model in teacher education that authorises lecturers and teachers to follow idiosyncratic directions without being accountable to an over-arching program vision. Accrediting agencies have a role to play in this respect rather than being observers seeking formal compliance to abstract ideological principles.
A critical factor in such agreed operating conditions is the provision of professional development opportunities for all participants along the lines of what constitutes learning management work. Apart from the equity issues in contributions of who will do what, there are wide-ranging opportunities for employers, professional associations and institutions to target their professional interests by building them into agreed operations.

4. **A focus on Evidence-based practice**

For teacher education and the learning industries more broadly to prosper, there needs to be a clear rationale about pedagogical practice and its underpinnings that is agreed at the syndication level. This is highly controversial, but we reiterate, there is a significant research-based literature about effective pedagogical practices that ought to be core content in a teacher education and learning industry preparation. We find the absence in teacher education of instructional theory and instructional design and their implications for such things as e- and m-learning to be astonishing. Teacher education programs ought in our view to have a preferred pedagogical model that encompasses content matters, with robust evidence that students can implement it on graduation. It is assumed that as graduates grow and develop professionally, they will add to their repertoire. The pedagogical model, following the syndication model, must have agreement across the program so that mentoring sustains and enriches the model rather than adding confusion and fragmentary disorder in the name of diversity and academic freedom.

A mandatory requirement for teacher education candidates is a sophisticated knowledge about the use of the Internet and Web 2.0 tools for both social networking and resource gathering and as pedagogical strategies. Here we suggest a level of proficiency far beyond the norm in teacher education or indeed in agencies where students might receive mentoring. The escalated ability to use the Internet is a new element in capacity building and is a prerequisite logic for co-creating pedagogical strategies based on learning networks. It follows that the content and delivery of teacher education faces enormous challenges flowing from this imperative. The challenges lie not just in the universities but also in some of the outmoded requirements of accreditation agencies such as restrictions on e-learning. Accordingly, there are important and far-reaching
implications for teacher education and school operations based around elementary and rudimentary computer and Internet skills.

The idea of futures-orientation being co-produced in teacher graduates requires a watershed leap for programs. The changes hang on new content about the learning industries that include the teacher education component. There is a need for specific learning and experience in futures trends, in creativity, entrepreneurship and enterprise as they are applied to new opportunities in the learning industry generally.

Further, futures-orientated graduates will have a mindset of abundance rather than scarcity in their approach to education and learning and a predilection for optimism rather than despair. These attitudes will be based on thorough preparation in instructional theory and design and underpinning work in learning research, including contemporary neuro-science and other brain research. They will have personal skill sets that enable them to present, to network globally, and to operate in syndicated structures with ease and insight. They will have strong ethical standards about their responsibilities to achieve the learning outcomes in students for which they are remunerated.

In turn, this part of their professional profile will depend on high-level theoretical and applied abilities to diagnose learning blockages and to call in parallel professionals and para-professionals from appropriate fields. Such a learning manager will see their future and that of the learning industry as based on scientific principles of learning that serve the interests of clients rather than on romantic notions about ‘loving’ students. Again, there are many new elements here that displace a good deal of the content in present teacher education programs.

Summary and Conclusion

In this chapter we have used research from three key studies into the BLM to identify four key elements that provide insight into the foundations required for knowledge society change to take place in teacher education. Chief among them is the notion of a partnership between teacher education providers and the teaching/learning industry and an agreement to embrace and embed an evidence base into practices.

In the chapter that follows we utilise these findings to generate a model for producing the next generation of learning manager.
Chapter Eight:

A Model for Producing Tomorrow’s Teacher

This chapter lays out a model for a revised Bachelor of Learning Management (BLM) type program. The chapter shows how an effective Bachelor of Learning Management preparation program based on syndication and learning management principles can provide a roadmap for developing the kinds of teachers required for the present and future of Australia.

In Chapter Seven we argued that syndication, a concern with achieving tangible ends and mutual benefit by interested parties, provides a viable alternative to the present university-school model of teacher education and the learning industries more generally. The BLM experience over a decade underscored the strategic importance of alliances and collaborative action with employers, local councils, unions, teacher associations, schools, teachers and principals, curriculum authorities and other interested parties. The Noosa example is a particularly pertinent demonstration that collaborative action leads to successful programs[^233].

Syndication is in keeping with the Novotny et al.'s[^234] observation that in contemporary life it makes less and less sense to divide up society into segments such as university-based teacher education and the schools or employers etc. Our studies in teacher education programming discussed in Chapter One, Novotny et al’s theoretical work confirm that highly bureaucratic and rule-bound entities fit uneasily into a society that is now increasingly pluralist, diverse, volatile and transgressive. Local and regional loyalties, and what counts as good teacher education outcomes are largely negotiated in a more public way than they were in the past in conventional programs. The old watertight distinctions between producer, supplier, distributor and user breaks down when the previously
autonomous spaces for teacher education in the university and the employers’ work in the schools are no longer guaranteed, no matter how much individuals or groups may have wished differently. It was apparent that the minimal discussion with people beyond the university about teacher education programs and policies model quickly gave way to collaborative and engaged strategic and operational decision-making and taking responsibility for outcomes once stakeholder realised that they had a place at the table.

Syndication then represents a quite fundamental disruption to the traditional school and workplace/teacher education faculty relationship. It is seriously transgressive because its implementation leads to the realisation that in a syndicated model the program is not owned by the traditional teacher education provider in the conventional manner that reinforces boundaries between the university and the schools, lecturers and teachers. Decision-making processes and preferred outcome, undertaken and known by all players from the outset, becomes a collective, self-adjusting guarantee that the program will be implemented as planned and that responsibility for cultural and physical resources and outcomes is shared. In simple terms, the syndicated model is there to solve problems experienced by all participants in the pursuit of common goals.

Neither side of the university-school divide can denigrate the other because of its assumed lack of theory, practicality or relevance as all perspectives are incorporated into the agreed program to be implemented by all. In its best operational form then, syndication has high potential for avoiding the proliferation of approaches, duplication of effort and misunderstanding about program goals, processes and purposes. We interpret syndication then as the core theoretical principle and set of presuppositions for practice in a reformed teacher education model.

There are three mainstay syndication elements that seem strongly related to a successful teacher education program. They are: an agreed outcome and pact; a commitment to achieving learning management principles; and co-creation of a program to achieve these outcomes. It will be recalled that these issues featured in the research findings.
1. An agreed outcome and pact

In a syndicated model, teacher education is viewed by stakeholders as a void needing to be filled, a desire to do teacher education differently, rather than an opportunity to help a teacher education faculty to do teacher education better. In this sense, stakeholders can be thought of as investors in a valued project and participants become joint owners of the strategy and outcomes. One can view this metaphor as an effect of Novotny et al’s analysis of social change. In the push by stakeholders for valued socially robust knowledge and practices, they are intent on disrupting the conventional mindsets and practices of teacher education because they have strong beliefs that the present model is inadequate. While the traditional sense of duty or goodwill towards the preparation of teachers still prevails, the intention to disrupt is a quite different approach because it has energy, power and will for change.

If we are correct in this surmise, it is necessary for leaders of change in teacher education to seek from all sectors of the stakeholder pool a greater than normal sprinkling of entrepreneurs in their networks rather than being content with representatives of employers, unions, professional associations etc. The reason for this is not difficult to fathom: syndicated operations draw their energy from those who seek change rather than from those whose brief is to secure and maintain the status quo.

The syndication model thrives on entrepreneurs who see change as opportunity while recognising that it is fraught with risks. Such people are more likely to ask for forgiveness than permission when working in a syndicated framework once they are committed to the overarching goals. The syndication model then provides an antidote to the more usual teacher education game of shifting deckchairs and placating established powerbrokers when it comes to reform. From our perspective, this is the rub of school (Vet/university) reform: the focus has to be on doing stuff that moves the game on in the desired policy direction or it is shameful waste of public and private resources and an immoral exploitation of both workers and managers as they are offered false promises.
2 A commitment to learning management

As we have outlined in previous chapters, learning management is an umbrella term that suggests changes that are required for the learning industries to better fit their historical circumstances. Learning management is, on the one hand, a set of capabilities to assist others to learn and change and, on the other hand, a strategic intent to make learning outcomes a reality. Taken together, these elements of learning management are a strategy for reform that in our view has to be shared by participants in a syndicated framework. Learning management implies a syndicated arrangement to get the job done rather than, for example, reliance on solitary teachers in single classrooms, doing their own thing anchored in past experience. This is why we propose that a syndicated organisational arrangement and the learning management vision have promise for significant changes in the learning industries.

3. Co-creation and a blurring of boundaries

In earlier iterations of the BLM, the partnership that developed around the BLM program was described by the phrase, “an equal yet different contribution”. In this arrangement, each participating party had a defined role to play. In most cases, with the very best of intentions, the participants faithfully reproduced the university-school split in which ‘they’ did this and ‘we’ did something else, despite the enthusiasm for partnership. In this way, the rhetoric did not fit the practice as our research has shown.

This outcome can be explained as discordant role definition. For example, the teacher education faculty, because it has traditionally owned the program, interpreted the university role as one of custodian and at times critic and antagonist as critical approaches were brought to bear on the employers, schools and teachers. Rather than focusing on mutual capability building by initiating and sustaining innovation, the Faculty relied on conventional beliefs and ideals about one-on-one relationships with schools and individual teachers to effect change and to solve practical scheduling and other procedural problems.

Moreover, committing to the partnership model had few substantive rewards for either the academics or schoolteachers in their respective systems in sites where the partnership arrangements had not been properly understood or implemented.
The foil to this depressing scenario in our view is co-creation of the program by entrepreneurially inclined organisations and individuals. In such settings, as we witnessed at Noosa, Darwin and in some other instances, expertise and a capacity to contribute towards the reaching of mutually agreed program outcomes matter more than rank and status. There are few matters that are out-of-bounds for co-creation across the domains of conceptualisation, planning, execution and evaluation. The boundaries between employers, the schools, the community and the university are blurred so that distinctions between what is constituted in the Faculty and what happens in the field merge rather than being add-ons.

A major driver of this kind of mindset is that there are definite benefits for all parties. The university in this arrangement gets an energised and focused regime in which to prepare its students and to initiate spin-off activities such as professional degrees, joint research and recruitment of higher degree students. Employers get the kinds of teaching and learning interaction in schools that contribute to their own professional development and strategic plan outcomes as well as teacher recruits who are deemed to know and do at a professionally acceptable standard. Students of the program enjoy a conducive learning environment and experience in which all of the players know what is going on and support a single approach rather than multiple partial approaches including the well-documented antagonism to university studies. Society as a whole gets the education revolution its politicians promise, but ultimately society gets a responsive and quality education environment.

As a deployment strategy in teacher education, there are concrete benefits for all participating parties at each stage of their collaboration in a syndicated arrangement. As a staff and program development strategy, syndication assists in the analysis of capabilities and relationships of competing and overlapping conceptions and ideological positions that, under normal circumstances, would have role discrepancy consequences. Moreover, by applying diverse talents to the solution of specific challenges, the process identifies those interface issues for which there is a need to develop what might be called custom plug-ins in order to achieve program outcomes.

As a business strategy, syndicated collaboration on common imperatives clarifies what the whole exercise can do for teachers,
schools, the system, the university and of course, student teachers and school students both present and future. This moving of the focus away from the emotional appeal of partnership towards real-time benefits for clients, partners and employees is a tactic for augmenting the entire team’s breadth, depth and speed, or what we have called capability. Creating good, outcomes-intent relationships in expertise-driven businesses such as teacher education and the learning industries, is the edge in an overloaded knowledge economy.

**BLM Marque II**

Having underscored important principles of syndication for developing a teacher preparation program, we now concentrate on the structure of a Bachelor of Learning Management program model. To achieve this task we discuss a rationale, a set of BLM graduate standards, and the program delivery model. Figure 8.1 illustrates these elements and we use it to frame subsequent discussions. We start with the rationale.

**The Rationale for a BLM Marque II**

In previous iterations of the BLM the rationale focused on the phrase, “workplace ready, yet with a futures orientation”. The phrase captured our thinking at the time that the BLM prepared learning managers for work in schools where the research literature called for changes and major reforms based on social change pressures were being introduced by government. We recognised, from the findings on research about teacher socialisation, that preparing workplace ready graduates alone was insufficient if the overall aim is school system reform. Our argument was that learning managers required different knowledge and skill sets so that they could achieve policy initiative outcomes by creating new teaching and learning structures and processes. To do this, the underpinning curriculum was founded on a systematic analysis of teacher education literature over 30 years\textsuperscript{237}, developments in social theory\textsuperscript{238}, and the coincidental launching of Education Queensland’s QSE2010 policy document, which recognised that the future of teaching and learning required different knowledge, skills and leadership\textsuperscript{239}.
A decade of experience with the BLM and the research associated with it indicates that workplace readiness dominated
practice in the BLM. This was not surprising as the most successful schoolteacher and academic operators were practitioners famed for their expertise honed in both systems, and the massive cultural change needed across the schools and university was not easily achieved. For example, the futures orientation to complement workplace readiness was barely perceived as relevant amongst university and school staff let alone operationalised. This gap was the consequence not just of the majority of people preparing learning managers lacking understanding of what future oriented meant, but because neither teachers nor university staff were equipped by training or experience to imagine the future in their day-to-day work. In itself, this is an indictment of the intellectual space and command economies in which the schools and university operated.

Consequently, the BLM future orientation never became a priority for teachers and teacher educators. In some cases, it was actively opposed and talked down as a red herring and a waste of time. In retrospect, this was an implementation failure rather than a fatal weakness in the rationale of industry-university partnership. It is ironic that this neglected and under-developed feature of the BLM is now an imperative as the learning industry signals the relevance of teaching and learning beyond traditional schooling and educative institutions.

This broadening of learning into the wider society creates new demands on educative work. The teacher is thus transformed into a learning manager with new and more complex requirements, responsibilities and therefore knowledge and skill sets for work across sectors. School teaching is but one such sector. Given the importance of knowledge and learning in economic and social life, having the capacity to encourage and create learning outcomes in others, appropriate in a networked, global environment, are core qualities in learning management work.

We can then propose then that a revised BLM Marque II rationale is concerned with preparing a learning manager who can:

- Build capacity in others through research-based instructional strategies that generate learning outcomes for clients
- Co-create learning environments with community resources and
- Make skilled use of personal and electronic networks to maximise resources that contribute to learning gains for clients
- Has expert knowledge in the area to which they are going to teach. For teachers in the formal primary education learning domain, the primary target is literacy and numeracy, without judging others, while in secondary schooling, expertise in given discipline areas remains a priority.

This rationale is multi-dimensional. In one sense, it describes the essential capabilities of graduates wishing to enter the learning industries including those from teacher education programs. In another sense, it specifies the profile criteria for a renewed teaching and learning profession, across teachers, principals, instructors and lecturers. The rationale of course also guides development of the latest version of the BLM so that those participating in the program from students to teaching and mentoring staff will know what the program stands for and what they must strive to achieve.

A Set of Learning Management Graduate Standards

The 2000-01 standards were unique in their day but teacher education standards are now common in 2009 because of the requirements of accreditation agencies in each of the Australian states and territories. The existence of professional standards that outline the attributes of the qualified and capable professional in many occupations is uncontroversial. Apart from anything else, they provide quality assurance to the public and other stakeholders and establish a benchmark against which career practitioners can be assessed, evaluated and judged by their peers and by others. But, and for all the reasons we outlined in preceding chapters, they are not sufficient for the preparation of a futures-orientated learning manager.

In this book we have deliberately not outlined a set of specific standards because our experience tells us, and which is reflected in our theory of syndication, that the collaborative development of an agreed series of standards is an essential part of the syndication process. By this we mean that the definition of syndicated members is that they know and can apply program, rather than unique individual and personalised, standards. To provide some guidance we suggest a simple standards framework that rests on the reported research findings and discussion of this book.

First, standards are based on:

1. Building **capacity** in others through learning processes
2. **Co-creating** learning environments

3. Skilled use of *personal and electronic networks* to maximise resources and the gains for learners

4. **Personal expert knowledge competency** in the area in which they teach.

Using these four broad criteria as guidelines, specific standards that unlock the detail of these criteria can then be specified. The critical issue here is that the standards must sort into economic sets, the core attributes of a capable learning manager. These standard sets ensure that the goals for on-the-ground programs are beyond doubt. In turn, the standards provide benchmarks for describing and reporting both BLM student and BLM staff performance for development purposes.

It is important to pause and ponder why so many teacher educators have difficulties with the idea of standards that apply to their corporate and individual program and teaching efforts. Perhaps it is the symmetry that teacher education has with the schools sector such that proliferation of teaching approaches is valued over standardised forms.

While teacher education registration agencies require compliance with imposed standards, our insistence on syndication implies that such requirements are more often than not wide of the mark for what is necessary. It can be appreciated that socially robust knowledge is arrived at by collaborative processes rather than by producer captive groups. The matter is important because in at least some cases where a futures orientation for example is either not appreciated or is unpalatable to registration bodies, their standards are already obsolete. In practice, some priority must be given to compliance and accountability but pre-digested standards can be recast and transformed where necessary to achieve the intent of the outlined program rationale and, by association, move the teacher education reform agenda forward.

Second, a series of specific learning outcomes should also be located within each standard set. These define the inherent learning goals that in turn provide criteria for deciding if the outcomes required by the standard have been accomplished. In this way, each learning outcome is supported by a defined knowledge, skill and attitudinal base with suggested evidence tasks and explicit guidance on the kind of evidence required to indicate accomplishment of the standard.
A fundamental requirement is to keep the standards and outcomes simple while maintaining integrity so as to guard against the excessive detail and process involved in much so-called standards-based assessment.

Third, having developed the standards the program content is then selected. For all the reasons we have argued previously, the content of a BLM program must comprise a defined learning management-based knowledge and skill base, a particular set of professional mindsets and those specific components that are aimed at developing strategic creativity. These three organisers were described in Chapter 5. Taken together, these components are aimed at developing and honing particular capabilities that fit our analysis of an emerging learning industry. In addition, the specific content required by a learning manager for specific settings needs attention.

The Delivery Model

Drawing on the structure of our original BLM and the outcomes of research associated with it, the BLM Marque II delivery model is organised around the New Faculty, the Portal Task and the Teaching School. Figure 8.2 illustrates the association between each element in an arrangement where the syndicate determines what happens in each of the settings. Thus, the pact, rationale, graduate standards and content define the scope of the syndicated arrangement. They govern how the three functions, represented by circles, operate and how they respond to the pluralist, diverse, volatile and transgressive environment described earlier.

The second characteristic is that participants are not specifically labelled in the diagram because the boundaries are blurred. The circles represent an articulation of functions to be fulfilled by the syndicate. It goes without saying that some syndicate member rights will be reserved in the arrangement, but these are deemed outside the model and so are not considered. For example schools have business that falls outside the scope of preparing teachers, such as various school and community fundraising activities.

The Teaching School is a learning management work environment that is used to embed the BLM student in real-life learning management work. Its conceptual characteristics were
defined in Chapter Six as underlying principles for the learning industry. Importantly, in teacher education, Teaching Schools are a professional investment by employers and academics. Teaching Schools of course are full members of the proposed syndicate and new recruits are admitted according to criteria that reflect and embody the strategic outcomes of the overall program and their individual capacity to model and embed the program’s standards. In this way, political agendas are filtered to the base of the organisational pyramid and incorporated into the planning and execution processes of the teacher education program.

**Figure 8.2: The Delivery Model: Portal Tasks, Teaching School and Faculty**

The second role we term the New Faculty. In this arrangement the expertise of the syndicate is pooled in order to devise and teach agreed content and to administer and manage the program. Academics and university administrators bring special expertise to this process as equal but different participants in the construction and delivery of the teacher education program. We need to stress that the New Faculty is *not* a rebadged traditional University Faculty. As we elaborate in Chapter Nine, the New Faculty is comprised of:
1. Pooled resources, both human and physical, to deliver program content and administer the program

2. Members with expert competency in learning management and

3. A focus on the development of Portal Tasks as the key vehicle for developing learning management capabilities in students of learning management.

In effect the concept of a New Faculty is a green field site, relatively free of traditional Faculty constraints, brought together to strengthen the learning capacity of all syndicate participants.

To summarise then, in a traditional program the university owns a teacher education program with charitable assistance from schools. In the syndicate, functions are identified by the syndicate and appropriate staff, and physical resources from syndicate members are dedicated to achieving the desired outcomes. The necessary roles and functions are played out in a Teaching School and a New Faculty environment.

The third element in our model is the Portal Task. A portal task represents the part of the preparation program where student learning managers learn to do the work that is typical of the learning manager. The portal task is carefully specified in a series of pre-defined graduate learning management standards by the New Faculty in collaboration with syndicate members. It will be recalled that the BLM Portal Tasks are the core theoretical and practical mechanisms that make a conceptual and practical break from the conventional 4-year teacher education programs of the past. That is, the Portal Tasks require BLM students to demonstrate in a workplace setting what they have learned theoretically.

We emphasise that portal tasks are based on Learning Management principles and thus their staging is the demonstration of new capabilities. Portal tasks do not provide just a better practice regime. They create an arena in which the student of learning management and their expert in-school (or in-work situation) mentors enact tasks that enable the student to engage with, practice and thereby demonstrate learning management capabilities. The achievement of learning outcomes in learners is the paramount performance criterion.

Of interest to the portal task concept is our research \(^{245}\) that reveals in-school mentors indicated personal benefit from the staging
of portal tasks in their classrooms. First, there is the student who provides a professionally useful helper in the classroom, especially as the student’s work is strategically aligned to the goals of the mentor’s learning programs. Second, the portal tasks represents and engenders the new knowledge and skills of the BLM, that has the effect of encouraging the in-school mentor to learn more about learning management, thus generating a professional learning experience.

The idea of portal tasks represents the intersection of on-campus learning and work site learning focused on converting knowing stuff into doing things according to specified standards. It follows that to accomplish this complex task successfully day after day has stringent presuppositions including: commitment to the program logic; agreed tasks; agreed outcomes; skilful management of the overall program delivery model and budgets, time, staff resources; complete knowledge and understanding of the content knowledge and requirements of the task; high-level understanding and capacity to use assessment and reporting protocols and so on. The portal task is where the need to share or access information in the selection and management of projects in which an investment is made comes to life for universities, employers and the profession.

It follows then that these kinds of requirements are directly dependent on a professional collaboration that guarantees minimum technical errors on the part of the New Faculty and those in a Teaching School, and ultimately each having competency with the learning management theory and practice that underpins each task. To these ends, a Teaching School is conceptually far from the conventional ideas of a ‘prac’ school with supervising teachers. That conception of workplace preparation for teaching will not deliver BLM-like outcomes, as our own research has clearly demonstrated.

To sum up, a portal task is a syndicate designed theory-embedded learn-by-doing task that is the embodiment of BLM content to be taught and learnt. It is used by the BLM student to practise components of the learning management program and by the syndicate to determine graduate readiness. This means in early years of a BLM program a portal task may capture pieces of an overall learning manager’s work profile, while a final year student would have a portal task internship where the incumbent demonstrates global readiness to graduate. In either state the portal task becomes key to the development, delivery and assessment of BLM program content and capabilities required of a learning manager.
We stress however that the portal task must be constituted as real work that actually supports and delivers on the day-to-day business of the host Teaching School. Portal tasks are therefore not add-ons but part of the overall strategic intent of each teaching school and as such should be viewed by the teaching school as a resource to its core business. This is about increasing/enhancing global member capacities, but also about pandering to self-interest as we elaborate in Chapter Nine.

Having now elaborated the major components of a syndicated BLM framework, we briefly deal with some questions that inevitably arise. The most common is, “What are the respective roles of a university faculty and a participating school in such an arrangement?” There are several responses to this question. First, the idea of separate domains implied in the question needs to be resolved. Here we reiterate the idea of blurred boundaries; not to deny the core business of teaching children and preparation of teachers in schools and universities respectively, but to signal that schools and universities can achieve these purposes differently in a syndication strategy. Different sets of aspirations are fulfilled more effectively in this arrangement: the school wants energised and capable staff; the university a preparation program that is effective and deals with the demands of industry and social change; the education system wants a futures-orientated, problem-solving strategic schools sector.

Again, the issue of where teacher education students do their program work is important. BLM students attend a university while attaching themselves to a Teaching School and teacher within the organisation arranged by the syndicate. The program rationale and graduate standards define what the syndicate aims to achieve and the delivery model articulates how it is done. The university is probably best placed to do the work around the knowledge content of the BLM, and the school is probably the most appropriate place for practice and assessment purposes, keeping in mind that the syndicate has overarching authority and responsibility for *both*.

However, a learning industry approach now requires learning experiences beyond the capacities of current schools and universities. To do this entails a concerted effort to acculturate the student learning manager into a learning industry practice, otherwise nothing will change. This is the path to a new paradigm in teaching and learning and brings greater attention to the merging of academic work with training, a task more possible in a syndicated arrangement.
In Chapter Nine, we provide a series of insights into how one goes about developing and delivering a BLM program. To achieve this task we outline the elements that need to be attended to if the goals of preparing a learning manager post-2009 are to be achieved. Also, we provide recommendations for changes to the higher education and teaching and learning policy environment for the reform of teacher education.
Chapter Nine:

Developing the Syndicated Teacher Education Program

In this chapter we provide a series of insights into how one goes about delivering a syndicated BLM program. To achieve this goal we sequentially outline the important elements that need to be attended to, if the goals of preparing a learning manager post-2009 are to be achieved.

In education policy settings, a good idea is only as good as the organisation’s ability to implement it. In this chapter we detail the insights from our experiences in developing, delivering and reviewing a BLM program as the basis for specifying the key requirements for organizing, establishing and delivering a syndicated learning management program. We identify five main program development requirements, namely leadership, manager buy-in, self-interest, resource allocations and strategic professional learning.

Leadership of the Syndicate

As with any new initiative, leadership is a fundamental component: someone plays the lead role of initiating change. Usually this person is respected by syndicate members as someone who has compelling ideas. These ideas appeal to a wider constituency than a university faculty or department and can if implemented, make a difference across the teacher education field. It has been our experience that leadership of this kind is the critical element in establishing a BLM program. Leadership in this sense is not about reaching a spurious or lowest common denominator consensus around operational issues but a strategy to disrupt the status quo for client, system and professional gains. Leadership capability then must
encompass a thorough understanding of the principles of what is needed and the ability to communicate them, a visionary commitment and a track record in delivering professional outcomes in organisational settings.

For our purposes, the leader must first understand and have proven capacity with the theories and aspirations of learning management. We are not arguing that leaders must universally come from within the existing learning management family, but we do maintain that the leader must understand the rationale, scope and sequence of what learning management means. Here we refer to the emphasis on pedagogical practice, instructional theory, and working with widely representative interests in the agora, as well the capacity to mobilise resources to apply the theory with a systematic change strategy.

Second, the leader needs to be able to deal with the various interest groups and in turn, generate on-the-ground support by projecting the vision of what can be achieved so that it resonates with what others want. An important aspect of this is identifying the team membership both organisational and individual that will develop and implement the new program. To do this successfully, it is essential that the leader is able to communicate effectively with and influence top managers in participating organisations by generating a sense of urgency so that they authorise staff commitment and resource allocation.

**Top Manager Buy-in**

The top managers of each of the participating organisation must, as a prerequisite, agree to collaborate according to the principles we have espoused. This process can take time as managers need to understand the model in their own circumstances in order to comprehend the implications of what is required from them and their organisation. The issue of sharing resources such as databases and budget lines makes it imperative that they fully understand the notion of ‘some rights reserved’. These matters are difficult and protracted in public sector dealing but without resolution of them the syndicate will not achieve its aims.

By way of example, in the Noosa BLM case, the university Faculty Dean, university facilities heads, the local Executive Directors of government and Catholic schools, and several people in higher
departmental positions were approached to canvas the idea of a partnership arrangement before BLM development work began. In the initial development of the BLM program concept, government and non-government school systems, the teachers’ unions, the accreditation authority and specific academic and school staff were engaged in a three day workshop to thrash out the structure and content of the degree. The leader’s responsibility in these initiatives is to achieve a firm buy-in so that there are on-going prospects for a collaborative project. It has been our experience, and the research findings confirm it, that the powerful ideas of learning management and new emergent partnerships released general feelings of frustration and suppressed aspirations with the BEd amongst participating parties in the schools sector about how to do teacher education better. The BLM initiative provided the opportunity for them to review their own strategic imperatives and this in turn generated a strong motivation for collaborative work that would not have occurred had the possibilities not been presented to those interested parties.

We found the theory of learning management was viewed as a succinct and convenient way of communicating a vision for a changed teaching and learning paradigm. Coincidentally, the goals and policy rhetoric of education providers generally overlap with the aspirations of the learning management concept, but they lack the specificity that the collaborative project provides. Everybody it seems can diagnose problems but few can arrive at the means to solve them as we explained earlier in the book.

At this later stage of a collaborative model, the invitation to form a syndicate requires not just that potential members have a clear vision of what is proposed from their own perspectives but a commitment to develop the potential in a far more collaborative way. As we learned in the original BLM initiative, whatever is proposed and agreed must support the real aspirations of each participating member or there is little reason for them to sign up. Put simply, the investment in the process by all parties right at the beginning is very important in establishing the work that a syndicate will undertake. The early phase is about building trust and ambition and exploring what, together, could be within a clear agenda in which everyone has a stake. This sometimes tortuous journey reinforces the key role played by the leader.
Self-interest

At its core a syndicate is driven by self-interest the ends of which are best accomplished collaboratively. This is a fundamental insight because much of what occurs under the name of partnership in conventional teacher education programming is underpinned by ideas of responsibility to the profession and professional/community minded service. In these arrangements there is a constant need to placate and enthuse participants within and outside the Faculty to fulfil the required roles. This kind of arrangement is time consuming, personally draining, fraught with risk of non-performance, out of step with networking principles and offers little in the way of long-term project sustainability. We hasten to add that professional/community-minded service and responsibility are not unworthy aspirations, but alone they are insufficient if the goal is to move both teacher education and the teaching profession on from their present malaise.

There are two points here. First, syndication is about harnessing existing resources, generating mutual benefit spin-offs and moving the profession forward. Second, in order to garner the level of support and commitment required the answer to, “What it will mean for me personally and then for my organisation?” must be built into the set-up process. Many worthy education initiatives fail because in reality they can only ever succeed if people are compensated and sustained for work beyond their own spheres of interest. The syndicated model attempts to coalesce organisational and personal interests so that syndicate work is normal work rather than a burdensome extra.

Having now elaborated leadership, top manager buy-in and encouraging self-interest, certain operational conditions follow. For example, no issues are off-limits in discussions during and following the establishment of the syndicate. Participants should be encouraged to raise both theoretical and operational matters and to be visionary in what they want to achieve. Such discussions, guided by the overall purpose of the syndicate being established—the transformation of teaching and of teacher education—become the basis for what the syndicate commits to as an outcome and how and who will do what.

From this point on in the development of a syndicated model, the sum of these outlined processes then leads to the creation of a rationale, graduate standards, content development and operational procedures in Teaching Schools and the New Faculty. In undertaking
these tasks, rethinking resource allocations and exploring strategic professional learning strategies become key considerations.

**Rethinking Resource Allocations**

In undertaking the initial groundwork for a syndicated model, the implications of co-creation and co-ownership are that resources earmarked for the syndicated model need to be identified in each syndicate organisation. We have learned two important lessons about this process. The first is that it is important to discover how money flows within the participating organisations and the second is how funding for innovations and initiatives such as teacher education is set in train and delivered by such organisations.

In a previous section we identified what we considered were the typical members for a syndicated approach to teacher education in today’s world. The reality is that state education authorities and other employing agencies such as the Catholic and independent providers are first to spring to mind. Each of these entities has allocations for teacher professional development and special projects development. These funds, together with the base Federal Government allocation to universities for teacher education, represent the extent of resources typically available to operate and sustain a syndicated teacher education model. We have learnt however, that in bureaucratic systems such as these, available funds are very often diluted by internal political exigencies and for the sustenance of bureaucracy. But when funds are liberated through the exercise of strategic will on the part of the top managers, the return on investment is considerable. Here we cite real examples of how mutually beneficial and strategic directions can be achieved: professional learning opportunities for school staff for a better prepared and futures-orientated employee can be planned into learning management and pedagogical workshops; professional development for university staff can be arranged in schools or regional offices where staff undertake tasks that contribute to the syndicate and the education authority; student teachers can attend some forms of professional development where they and school staff resolve syndicate issues and so on. The dovetailing and planning involved are made far more simple in a syndicated model.

The second learning experience is how to improve the acquisition of resources for these kinds of projects. Experience in operating in such environments and arrangements tell us that money is always the
stumbling block for potential syndicated members not least of all for the teacher education faculty. But we contend there is enough money in the system, the challenge is to divert it, from the tried and disproved projects and activities of the past, to syndicated models that subscribe, through clear goals and strategies, to the key points outlined in this book.

Put simply, each system typically cries poor and very often prefers to divert available funds to politically expedient outcomes rather than longer-term projects such as future teachers. This has to do with how systems sustain themselves and how they appease the competing factions within their ranks. We make some observations on this phenomenon in Chapter Ten. But to conclude this section the key point we want to make is that if the syndicate aims to solve the problems of its benefactor, albeit differently, and has the weight of a syndicate in agreement, where the modus operandi meets the collective goals of the organisation, funding becomes less of an issue.

**Strategic Professional Learning**

The theory of syndication requires a considerable effort in professional development through the ranks, once the top managers have chosen to sanction the syndicated arrangement. In addition, the theory of learning management and the new identity that is the learning manager performing theory through portal tasking, the use of advanced technology for pedagogical and networking purposes, implementing innovative behaviours, not least of all developing personal competence with the learning management schematic and so on, also require systematic professional learning leading to personal competence and capability\(^{247}\). Having said that, there is a host of research reports on teacher professional learning that indicates the lack of success that traditional ad hoc, chalk and talk and out of context professional developments represent\(^{248}\). Our experience has been that properly organised and resourced strategic initiatives such as the Dimensions of Learning professional development program at Noosa for schools working with BLM students have enormous appeal because of the strong support at the top, immediate relevance, novelty effect concentrated effort on improving student outcomes and student teacher performance.

More generally, searching for an economic professional development lever for the BLM, we found that the development and
implementation of portal tasks, as we outlined in Chapter Eight, is an effective professional development emphasis for motivating behaviour change with experienced school teachers as well as learning management students. The portal task captures much of the theory of learning management in a practical setting and also forms a core element of the student teacher’s assessment program. Moreover, in dealing with the tasks, classroom teachers (as examples of teaching school adjuncts) are incorporated into the learning management approach, including the Dimensions of Learning, and graduate standards. Importantly, the mentor has to embed the portal task in real-life work and in planning for it, investigate and learn the portal task theory, content and skills and ultimately, what the new graduate standards mean for them and their professional standing.

In this way, portal tasks represent the intersection of new theory and content and work site learning, focused on converting knowing stuff into doing things according to specified standards. The portal tasks then are an ideal vehicle for professional learning for both the in-teaching school mentor and the student teacher. The Teaching School concept of course provides the envelope for both information sessions for teachers, students and faculty as well as motivating and sustaining people to learn new things and achieve professional goals.

The portal tasks are good examples of how agreements at the syndication level carry with them a set of responsibilities and accountabilities throughout the participating organisations. We found in our studies that people who engage with portal tasks in the manner we have described:

1. Have a clear understanding of the theoretical role of the Portal Task in the BLM and how it is played in out in practice in workplace settings.

2. Ensure that faculty and school staff involved in the Portal Tasks that run parallel to the courses conducted on campus in the academic term identify and operationalize the core concepts in those parallel courses. Teaching School staff develop expertise in the nuances of the teacher education program which then translates into school outcomes.

3. Seek out and demand from the syndicate, focused, program content-based professional learning experiences in their work site.
4. Want to work in the parallel theory courses for that academic term as part of the New Faculty arrangement to ensure that:
   a. The assessment rubrics for the Portal Task coincide with the core concepts in those parallel courses;
   b. The required demonstrations for the portal tasks can and have been made.

5. Ensure that there is agreement, or at least a settlement, about the core concepts and their performance.

6. Identify and embrace the need for a consistent language and approach to their teaching and learning work.

7. Develop a heightened sensitivity to performance and outcomes.

**Summary and Conclusions**

Because the syndication approach to teacher education practice is so starkly different to conventional thinking, it is important to anticipate the criticism that our view of a syndicated structure will generate as being a managerial approach that will stifle academic and professional freedom. The counter proposal to this old thinking is that the principles of syndication in the contemporary world take precedence over received wisdom because social networking and intended performance outcomes override personal preferences in situations where there are high stakes agreed outcomes for the many. Let us be more specific.

First, the procedures enumerated above as findings 1 through 7 in dealing with portal tasks, help eliminate multiple messages and approaches by having one standard for capturing all of them in published material. Second, participants, like subscribers, can easily filter their communications and practices by referring to the rules of participation, which reduces proliferation of versions and in turn, misunderstanding. Third, by insisting that the New Faculty and the Teaching School adjuncts collaborate for specified outcomes, there is a wide range of possibilities about how this might occur, including electronic means like email, SMS, FaceBook, Twitter, LinkedIn etc, face-to-face and so on that in turn comprise the program distribution system. It will depend on the participants how this plays out. What this means is that our syndication approach is actually a way of
strengthening the professionalism of teacher educators and teachers and assisting them to transition to new spaces.

Further the personalization of the collaborative participation across institutional boundaries ensures that each recipient really knows what is required now. Collaboration reinforces the ‘Wisdom of Crowds’ and the learning from groups about how to achieve agreed outcomes. Collaboration becomes a core problem-solving mechanism for a reduced number of problems generated by standards and the aspirations of participating organisations.

In conclusion then, syndicated arrangements seek transformation through aggregating expertise and focusing it on agreed outcomes. By establishing agreed modes of doing things there is organisational and individual security and compliance to the external accountability constraints now required by government and accreditation agencies. The work is personalized and actions are filtered against standards so that knowledge gaps, procedural and practice failures are minimised. Excessive overload on individuals and groups brought about by trying to devise solutions on the run in vaguely defined programs with indecisive cross-institutional boundaries are eliminated. Finally our theory of learning management articulates a vision for the new work that is required by the teacher post-2009 and provides a comprehensive set of concepts for professional learning and the new learning industry.

To reiterate one of the core messages of this book, such an approach is diametrically opposed to the conventional wisdom in teaching and teacher education that teachers and university staff ought to have a make-it-up-as-you-go approach to their core work. To illustrate the pervasiveness of this view, a recent example of the illusion that teachers know how to teach and that teacher education programs teach people how to teach is found in the draft National Curriculum document, thus:

> While the national curriculum will make clear to teachers what has to be taught and to students what they should learn and what achievement standards are expected of them it is *classroom teachers who will decide how to best organise learning for students. They will make decisions about the pedagogical approach to take to maximise the learning outcomes for the students in their class.*  

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Our view is that this kind of approach, if there is real concern about improvement and reform, is about as far away from where we ought to be as one can conceive. It is little more than a repetition of past, failed practice masquerading as a solution the myriad problems that the cited report documents. It is educational reaction rather than revolution.
Chapter Ten:

Issues for the Transformation of Teacher Education, Schooling and Societal Learning

"If the creator had a purpose in equipping us with a neck, he surely meant us to stick it out." Arthur Koestler

In this chapter we pull together disparate elements of the discussion in the preceding parts of the book. While we endeavour to link our prior discussion to key sections in this chapter, it is more properly a speculative discussion aimed at challenging mindsets and providing a different future for teaching and learning. The chapter concludes with a set of propositions about where we think teacher education and the governance and management of schooling ought to be headed. We also comment on the learning industries more widely.

The key issues identified in this book are:

1. Challenging conventional teacher education (BEd) and related mindsets that favour theoretical analysis over expert practice

2. Emphasis on the realities of research-based teaching practice that works rather than before the event curriculum development that lacks a definite pedagogical practice

3. Teacher education learning and development that is aimed at renewal and transformation rather than editing present theories and practice

4. Teacher education as a leading sector in the reform of education agenda, where teacher refers to anybody engaged in the learning industries
5. Using teaching capability as the main authority and accountability metric to improve individual, school and system learning outcomes

6. Superceding doing-time as the basis of teacher qualifications

7. Strengthening school and other educational organization leadership so that it is focused on 1-5 above in a context of change

8. Abandoning partnerships and other us and them arrangements in favour of syndicated linkages as the new platform for the delivery of pre- and in-service teacher preparation and development.

Challenging Mindsets

We have argued that the tendency in teacher education is to maintain the conventional model. Yet, there is ample evidence that there is complacency about the present preparation of teachers across all levels of the education system despite the recognition that it is exceptionally uneven. The conventional model has become normal and there has been little outrage from within the system about dramatic and continuing levels of student and client underachievement, especially in Indigenous setting, as a critical example of system failure.

In respect to teacher education, the normalisation of mediocrity has occurred throughout the universities, the schools and school leadership, the various departments and in the teacher accreditation agencies. There is less than rigorous interrogation of teacher education graduate performance data or of the performance of participants in the conventional teacher education process compared to front-end compliance when programs are accredited. Of course, this is not a criticism of the many teacher education academics with hard-won and commendable research and publication records, but a commentary on policy priorities that reward Mode-1 outcomes while specifying Mode-2 aspirations.

It is easy for pundits, editorial writers and education authorities interested in world-class education to hold university entry scores culpable for failure to engage with the fundamentals of teacher education processes. It is effortless for an insider to teacher education to describe teacher education as a complex social phenomenon and to attribute slippages, miscommunication, lack of performance and
ultimately school and student failure to the effects of social context or even the fault of some categories of students and their communities. There are few, if any, real policy efforts to deal with the professional challenge of evaluating the effectiveness of teacher education programs and in turn of teaching practice, and questions about what it is that teacher education is doing or not doing that contributes to school student failure. This position, of course, does not deny the commitment and hard work of many teachers and principals; it is a commentary on the system logic as we have reiterated in this book.

**Research-based Teaching Practice that Works**

Put simply, quality teachers create quality outcomes. At worst, quality teachers are not inconsequential for quality teaching and learning experiences and it has long been known, “that some schools and principals, some teachers and approaches to teaching can make a significant difference in the quality of student learning outcomes”. Moreover, “… teacher and classroom variables account for more of the variance in pupil achievement than school variables”. Yet, education discussion and the weight of resources continue to be placed on curriculum, a rather blunt instrument for educational reform at the level of engagement with students.

This book has maintained that teacher education needs to shift the balance to a focus on pedagogical practice in order to generate world-class educational experiences for students. The core of an education revolution is the achievement of significant and meaningful learning gains across all students, schools and systems and this category of outcome is a function of pedagogical practice and all that goes with it. In the simplest of terms, an education revolution is dependent on teachers and their leadership. It is not at all clear that proliferation of teaching approaches fed by a myriad of fads is the best platform for revolution.

If this argument is sustainable, it implies that the provision of learning and development opportunities for new and practising teachers needs attention. This book has argued that teaching should be about intentional engagement with learners and a professional, expert commitment to apply research-based pedagogical strategies in an algorithmic approach that maximizes learning outcomes. Such an approach further entails a thorough revision and restructure of a fractured, fragmented approach to teacher education, anchored in the
professional academic interests of diverse staff. This one-to-one correspondence with a deep ideological belief in the schoolteacher profession that every teacher is unique and has his or her own approaches lies at the very root of the malaise in professional identity experienced in the teaching profession.

Need for Renewal and Transformation Rather than Maintenance

We have repeatedly argued that teacher education first has to improve pedagogical capacity so that teachers have systematic teacher-centred strategies and techniques that deliver student-centred learning outcomes. This we see as essential if the well-meaning pedagogy with few worthwhile educational outcomes taught in universities and sustained in schools is to be countered. We need to transcend the idea that student activities and colourful classrooms ipso facto lead to serious, systematic and sustained learning of knowledge and complex reasoning processes of the kinds required in today’s world. The implications of this approach spill into the learning industries more widely.

A second, related, issue is that of teacher education and school leadership and the kinds of knowledge, skills, strategies, mindsets and tools that provide expert capability. We have made a strong case for different skills and mindsets in these cohorts in order to achieve different kinds of outcomes into the future. Without such an orientation in teacher education programs and schools, we anticipate massive failures in educational reform as the system inertia bogs down progress towards policy and social change-driven reforms. As we explained in the capability sections of the book, effective leaders know when, how, and why to do something rather than simply knowing what to do. In short, we strongly advocate that teacher education should move towards systematic and strategic professional learning and development programs aimed at graduating teachers with strong instructional capacity as we have described in this book. The vehicle for doing this we submit is a syndicated model in which relevant stakeholders collaborate with the intention of providing some guarantees to the community that schooling adds value to students and in turn to the community and the nation.
Leading the Reform Agenda

Our argument since the early 2000s has been that the teacher education ought to be a major lever for educational reform, but if and only if it can be adequately connected to the structures, content, resources and policies of school systems, community agencies and government policies. These linkages are needed to overcome fragmentation of effort between and across agencies with interests in teacher education.

The responsibilities and accountabilities of education, the ability to provide leadership and strategic direction that delivers local, organizational and national aspirations and policy outcomes do not reside in the schools, in education departments, in community and political groups and certainly not in universities. In reality, they reside everywhere; between, behind and in all of these, thus challenging someone, somewhere to make the effort to fuse them into concentrated effort. Our solution to this ultra-challenging set of circumstances is the syndicated model discussed earlier in the book. Moving into syndicated arrangements would constitute a far-reaching teacher education revolution because it would change the fundamental tenets of governance, responsibility and accountability, the sources of authority and the procedures for determining the purposes and procedural aspects of teacher preparation.

Using Teaching Capability as the Main Authority and Accountability Metric

The rhetoric of university and government teacher education policies could result in improved learning outcomes for teachers and school students as an effect of the preparation process. However, there is little coordinated effort to articulate or affirm the responsibilities and accountabilities of either teacher education as an industry or of the organizational personnel that participate in it, ranging over university staff, principals and teachers and officers at various levels of the education system from the school or Central Office levels or the accreditation agencies. This book has provided some reasons for this pre-professional state of the teaching profession and suggested that it is time for responsibility and accountability in the production, management and governance structures of teacher education. We have articulated frustration with a system for preparing teachers that accepts
a situation of no consequence for ‘ordinary’ outcomes in teacher education. We see little value in believing that the present structures and players can do anything but what they are doing.

Finally, there is little or no consequence where all of these institutional and human resources together preside over a teacher education system that is patently out of date and incapable of producing the policy outcomes contained in government policy and in the futures literature.

A case in point are the present structures of postgraduate entry and undergraduate programs as the optimum way to prepare teachers. In this book we have not elaborated on the confidence the teaching industry apparently has in these time periods for the preparation of future teachers. Suffice it to say and in keeping with our general argument about capability, our view is that pre-employment preparation should be tightly linked to the learner successfully demonstrating the pre-defined standards of performance for graduation. With this point in mind we can imagine a system which is not based on doing time but that facilitates people with diverse backgrounds who wish to enter teaching to graduate once they can demonstrate the capabilities required in standards-based programs. Such a system would end the on-going speculation about the effectiveness of 1 and 4-year programs in the absence of hard evidence.

To reiterate, this book argues the case for making pedagogical practice and demonstrated capacity to achieve learning outcomes in students the touchstone for determining the worth of teacher education. It makes the further claim that in taking this metric as the core point of comparison, learning management links teacher education to contemporary developments in neuro-science and to wider fields of learning than ‘school teaching’. Our view is that if ‘teaching’ is to become a recognized profession in the ACCC sense, it needs a systematic dose of science-based capability and an approach to learning that is more algorithmic.

**Strengthening Educational Leadership**

Educational research and the demands of the global situation in respect to educational and know-how capital indicate that Australia and many other countries need better education system outputs. Given the importance of teachers and teaching in the accumulated
educational research and the growing evidence that not all teaching approaches are equal in respect to learning outcomes, teachers wherever they work and education leadership are change levers of the utmost importance.

The reality, however, is paradoxical. There is no systematic attention given to corporate leadership based around authority and accountability to reach defined learning outcomes. In large institutional departments, ministers and senior bureaucrats run departments rather than providing solutions to problems that lead to better learning outcomes and the attainment of policy goals. In turn, the system as we have explained earlier in the book is bogged down in ideological squabbling around teaching, teachers and the purposes of education so that everything changes but nothing moves. There are of course some enlightened government and non-government schools where school leaders work with boards and councils, and some sections of the non-government higher education and training sectors are moving forward. But these are exceptional cases and they are not seen as ‘trailblazers’ so much as ‘mavericks’ who need to be reigned in.

Part of the problem in the schools sector, but also in the formal education sector generally, is that from the top down there is the predominance of the industrial organisation of workforces with strong unionisation that leads to standardisation of work experience. We are not alone in thinking that, “When the employer is a command bureaucracy, then control, predictability and due process will always prevail over innovation, risk and customization”256.

To this extent, when political parties espouse an education revolution as the goal for the current political term, the starting point for renewal, especially in the public sector, must be a change in the relationship with the society that education serves. The conventional model of teacher education – with its look-alike university programs subject to regulation from accrediting agencies that are heavily influenced by teacher union politics, the universities and the profession – is not necessarily the best way to respond to local social issues and the challenge of the global socioeconomic condition. The need for creative, innovative, entrepreneurial, adaptive and curious consumer-citizens to lead a prosperous life at personal and national levels257 presents a quite different set of challenges that, taking history as a guide, this conventional model is incapable of conceptualizing, let alone dealing with258. If we are wrong in this conclusion, we are still searching for the evidence either in practice or in the voluminous
literature of teaching and learning that would cause us to change our minds.

As we have argued in this book, the conventional University-Profession couplet reinforces a deeply conservative approach to teacher education and in turn, education itself. It divides the resources of the higher education institution, the state and the society they jointly serve. As Leadbeater\textsuperscript{259} has noticed, two traditions are reflected in this culture:

“the monasteries, which were closed repositories for knowledge in the form of precious manuscripts, and Taylor’s factory, which encouraged standardized, easily replicated knowledge. The result is a system that is a curious hybrid of factory, sanctuary, library and prison”.

The conventional model itself is the starting point for any education revolution that aspires to be more than hopeful rhetoric.

Our concern then with transforming teacher education and education more generally through an education revolution is not just a matter of fixing up the existing formal education system\textsuperscript{260}. Taking the arguments of this book drawn from people such as Novotny et al., we need to look to the breakdown of boundaries, to more hybrid public and private institutional arrangements and funding structures. In the teacher education case, if faculties and departments of education are to continue, they should be thought about, organized and funded as a part of hubs of learning that incorporate multiple players and are capable of expressing definite needs and achieving them. In our language, spelled out earlier, we see the future of teacher education and many other learning services as being in syndicated arrangements in which the syndicate itself is the conception, execution and funding epicentre rather than the split responsibility model that is the conventional system.

This is one of the core reasons for talking about the learning industries rather than about teacher education or school or university teaching singly as if they fill the entire space constituted by teaching. Talking about a learning industry at least has the potential to redirect public institutions towards purposes that are determined by the personal, social and national needs of learners and the society rather than formal accreditation and certification that legitimises historical forms of educational provision and conception.
Again, this is one of the main reasons why we have now argued in two books about learning management that the production of capability to deal with the emergent world is the point of teacher education and in turn the learning industries and why we become frustrated with endless discussions about ‘Week 8 prac’ or how many days school practice a student teacher requires to be registered or the hoary chestnut of ‘first year out work experience’.

These highly persistent minutiae that comprise so much teacher education discussion and energy have no contribution to make for a distributed system of learning in which expert learning managers, embedded in syndicated arrangements, design learning programs, and assist people, communities, organizations and governments to produce the knowledge, skills and mindsets needed to deal with novelty and high stake challenges and responsibilities. We are arguing for a change in practice and culture. The research findings about the BLM discussed earlier in this book show a depressing lack of capacity in both the university and the schools to deal with emergent social conditions. Even more worrying is that these findings simply reinforce what has been known for 30 years or so in the research literature.

Based on this summary of the book discussion, there are two policy directions required of government and the teaching industries more widely if transformational change is to occur; they are: changing the environment of teacher preparation and reconstituting teacher preparation. We itemise these changes in the form of recommendations which we hope will find their way into Cabinet Submissions.

A. In order to **change the environment of teacher preparation** for schooling and the learning industries more widely, policy should:

1. Change the resource allocation channels for the preparation of teachers. Resources presently provided to universities and other post-secondary organisations, employers, unions and accreditation agencies for teacher preparation should be redirected to syndicated structures for the express purpose of preparing 21st century learning managers.

2. Re-badge teacher qualifications so that they:
   a. Place high priority on learning management capability at the point of exit from the preparation
process, especially the demonstrated capacity to achieve learning outcomes in students and clients. This imperative in no way alters the fact that teachers, like every other professional, develop maturity on the basis of experience and further training.

b. Have systematic fit to the purposes of the learning industries so that strategic policy aspirations can be achieved.

c. Provide multiple pathways into the learning management role in contrast to the requirement to do time in the present 4-year BEd degree, subject to a. and b.

d. Have the flexibility for customised preparation so that individuals and organisations can make use of what might be called add-ons that complement already existing knowledge and skill sets. Syndicated arrangements are ideally placed to do such customising.

3. Ensure and motivate the Learning Management/teacher preparation culture to:

a. Migrate from the social sciences and humanities to a more science-based ‘teaching science’ so that the knowledge and research-based values developments in areas of research such as neuro-science, using systematic empirical evidence and a concern with objectivity.

4. Strengthen teaching leadership across the formal and informal education sectors so that it focuses on teaching, learning and a futures orientation. The Learning Management approach should be widely disseminated as a means for tuning an education system in sync with 21st century needs.

5. The reward systems associated with teaching of universities, VET institutions, schools and private sector organisations should be re-vamped to reward demonstrated capability in achieving learning outcomes.
in students and clients, rather than emphasising compliance requirements.

B. In order to **reconstitute preparation for teaching**, the recommendations are that:

1. Policy should require the use of learning management approaches in the preparation of teaching staff at all levels and that the approach be evaluated on a regular rolling schedule.

2. The Syndication model be adopted as best practice for teaching preparation.

   a. Teacher education programs should be reconstituted under an appropriate Commonwealth Act so that it is a requirement that universities engage in syndicated arrangements with employers, interested community organizations, local government and professional education bodies including those concerned with schooling.

   b. The role of universities under the Act should be one of contribution to the preparation of teachers/learning managers rather than being the central agency in the process. Funding for teacher education should be extracted from university grants and administered through syndicated arrangements.

We began the book with an invitation to make a difference by joining us on the journey into learning management. We end with an invitation to teacher educators and policy-makers to face up to the challenges presented in this book so that we can all get on with real education reform.

Readers who wish to engage further with the theory and practice of learning management and key aspects of this book should visit <www.aaclm.com>
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5 Business Council of Australia (2008)
7 Education Queensland (2000).
8 OECD (2007)
10 OECD (2002)
11 Ibid. p. 11
12 Education Queensland (2000)
13 Ibid. p. 11
14 Ibid. p. 8
15 Ibid. p. 9
16 Ibid. p. 10
18 See McREL at http://www.mcrel.com/
See Fletcher, A. (2001)

The 8 LMQs were developed by David Lynch at CQU Noosa.

See McREL at http://www.mcrel.com/

Hattie, J. (2005)


For further information readers should review: http://www.mcrel.org/dimensions/whathow.asp


Notice the wording: ‘committed to it professionally’. Having a ‘business-to-business’ partnership is not necessarily the same as teachers and university staff liking it or believing in it. The message is that CQU pays its permanent casual staff and school-based mentors and supervisors to teach and support the BLM rather than personal views of what comprises teacher education.


Ibid. p. 78.

The learning design process was developed by David Lynch and is built around 8 learning management questions. In both its mechanical and creative phases, the process is a matter of marshalling ‘data’ and ‘resources’ to achieve an outcome and is therefore a management issue: hence the term Learning Management. The design process entails quite specific technical knowledge, a set of sequential steps and results in the organisation and ‘processing’ of data into a learning
strategy that uses target learning outcomes that mesh with a target learning cohort.

35 The DoL framework is presented through five ‘dimensions of learning’ and was developed by Mid-continent Research for Education and Learning (McREL). These ‘dimensions’ are the results of a comprehensive body of education research that organises what researchers and theorists know about learning to define the learning process.


37 Lynch, D. (2004),


42 Most of the professions that prepare new entrants by this method have the synchrony problem. Jeremy Grimshaw holds the Research Chair in Knowledge Transfer and Uptake at the University of Ottawa’s Department of Medicine. He has shown that getting medical practitioners to implement research-based procedures and techniques by conventional front-end ways does not work well.


46 See the discussion about the pre-scientific nature of learning theory in OECD (2002) pp. 9-10.
Wilson, B. (1997)


For example, 50% of the Danish Ministry for Science, Technology and Innovation R & D funds, formerly offered to universities, are now subject to open competition for public-private partnerships, small and medium-sized enterprises. In addition, there are publicly funded ‘outposts’ in Silicon Valley, Shanghai, Munich. Wolff, M. F. (2008) Silicon Valley Outpost Among 350 Initiatives To Boost Denmark’s Tech Competitiveness. Research-Technology-Management, 51: 3 p. 2.

Gary Adams (1995-6)

Audio from ASCD 2003 conference.


Ibid


63 Ibid. p. 7.
64 OECD (1996) and Australian Chamber of Commerce and Industry (2004),
66 See Koizumi, p. 9. “The maturity of science and technology...has made it increasingly difficult to obtain new findings and breakthroughs only within one’s specialised discipline. New findings and technical breakthroughs are often accomplished only by bridging the gap between completely different disciplines, and this has been true for many years.”
68 California dreaming or tertiary futures? 29 November 2004, emphasis added.
69 The notion that teacher education knowledge can only be developed in universities and disciplines is similar to the notion that purchasing a product can only take place when you see it on a store shelf. Removing the university constraints to teacher education is similar to removing the shelf space constraints in the marketplace. Amazon.com is an example.
70 Armstrong and Novins Choosing Your Sports for Knowledge Management.
57 Drawn from Armstrong and Novins.
73 Drawn from Armstrong and Novins.

74 See “Qld Teachers’ Union attacks CQU Noosa education degree”. The Noosa Journal Thursday, 14 July 2005, p. 5, where this uninformed line was adopted by an influential member of the Queensland Teachers’ Union in criticism of the BLM as “mere apprenticeship”. In reality, the last 30 years of research into the effects of conventional teacher education has documented its domesticating, reproductive tendencies.


http://www.demos.co.uk/files/theCreativeage.pdf


81 See McREL at http://www.mcrel.com/


84 Marzano, R. J. (1992)

Goodenough, W. H. p. 27.


In 2001 Central Queensland University launched a new teacher education program, the Bachelor of Learning Management, built on the premise of learning management. The outcomes of this program are contained in Ingvarson, L., Beavis, A., Danielson, C., Ellis, L. and Elliott, A. (2005).


http://www.accc.gov.au/content/index.phtml/itemId/277772


This point was argued for at the 2008 Australian Teacher Education Association conference.


See Johnson, R. (1979). The idea of “really useful knowledge” refers to forms of critical understanding of self and society that are of direct relevance to the struggle for social justice. It includes knowledge that enables people to escape poverty, oppression, force of custom and circumstance.


Ibid. pp165-192.

The term ‘transgressive’ has a particular meaning for us. Following Nowotny, we define teacher education and the learning contexts of the knowledge/creative society as a situation in which we are compelled to respond to questions that we have not necessarily chosen, in contrast to for example, research activity. Consequently, in such fields, we are constantly forced to transgress the limits of both own competence and that of colleagues, the boundaries of our disciplines and the constraints of our own limits, especially our shared histories in education. Expertise in learning management then is transgressive in two senses. First, it confronts issues, practices with consequences that have to be analysed and assessed and special local matters like teacher education structures and procedures that have a societal context have to be accounted for. We have to understand the links between what goes on in universities and schools, the IT communications industries, institutions such as the school, training and university education providers and very diverse professional, union, parent, school principal and political networks. Second, learning industry expertise is transgressive because it deals with audiences that are never just fellow-experts in the academy. There is a wide range of demands and expectations in the experience of mixed audiences. This inherent transgressiveness of expertise increases its vulnerability to contestation and opposition. Having a higher degree, citing research evidence or theory or seeking to exclude the non-initiated from decision-making do not guarantee immunity against contestation. Indeed, Nowotny makes the point that the “complexities of the social and political world demand the contrary: a widening of scientific–technical expertise, exercises in comparative judgement and the ability to move back and
forth, that is, to transgress the boundaries between specialised knowledge and its multiple, many-layered (and often unforeseeable) context of implication”. Nowotny, H. (2003) p. 152.


The Teaching School model, for example, requires a shift in management priorities in the host school.

Noonan, P. (2005)


Berra, Yogi. Famous Yogi Berra Quotes.

http://www.yogiberraclassic.org/quotes.htm

Stephenson, J. (1999)


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See

dation-jobs&s=705&jobid=6541827

See Forum: 21st Learning with Professor Barry McGaw Head of the National Curriculum Board and Director of the Melbourne Education Research Institute; Valerie Hannon Director of Strategy for the UK Innovation Uni; Chris Wardlaw Former Deputy Secretary of Education in Hong Kong; and Michael Stevenson Vice President of Global Education at Cisco Systems. This discussion repeated the assumption that teachers will find their own pedagogies to teach the specified National Curriculum thus reinforcing the belief that teachers ‘know’ how to teach. This to us flies in the face of the empirical evidence.


122 Stephenson (1999), emphasis added

123 Brown and McCartney (2003), emphasis added

124 Smith and Lynch (2006)


130 Bauman, Z. (2007)

131 G7 countries comprises France, Germany, Italy, Japan, United Kingdom, and United States

132 Castells and Aoyama (1994)


135 Hershey, J. (2000)
137 Howkins, J. (2001)
139 Cortright, J. (2001)
142 OECD (1996(b)), p. 7.
143 http://www.saatchi.com/worldwide/What_We_Believe.asp

146 Government Skills Australia is the industry skills council for government and community safety. Government Skills Australia is committed to providing high quality training resources and services to support the recognition of skills and professionalism in government administration, services and operations.

149 Cited in Noonan p. 4.

In professional programs where ‘standards’ are prescribed, we predict a growing tension between what is needed and what is prescribed by accrediting authorities. By definition, accrediting authorities draw on the past to develop standards frameworks. See Skidmore, P. Beyond Measure why educational assessment is failing the test. DEMOS, p. 9ff. http://www.demos.co.uk/publications/beyondmeasure

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OECD, 1996, p. 14)


Lynch, D. (2004),

Allen (2008)


ibid

Ingvarson et al (2005)

Reich, R.B. (1991)

McWilliam & Haukka, 2008, p. 663

In 2001 Central Queensland University signed a memorandum of understanding with Education Queensland to co-exist with their Cooroora Secondary College. This site became known as CQU’s Noosa Campus where the BLM program was delivered.


Ibid. p. 29.

Disruptive innovations introduce new value propositions. They create new markets or reshape existing markets. In the education context, ‘markets’ refers to anywhere where ‘education, teaching/learning’ takes place. See Christensen et al. 2004, p. xvii.


For example, see Professional Teaching Standards http://www.nswteachers.nsw.edu.au/IgnitionSuite/uploads/docs/Professional%20Teaching%20Standards.pdf
A prime example of this process is the BLM standards around ‘futures orientation’. When the original BLM was first presented for accreditation there was no mention of “the future” in the then Board of Teacher Registration requirements. By 2009, “the future” is strongly represented in the now College of Teachers standards. It is undoubted y the case that the BLM had a profound effect on the way Queensland’s teacher education requirements were framed, although it is not acknowledged anywhere as far as we can ascertain.

This is a highly skilled exercise and should not be taken lightly. The twin challenges of capturing what really matters in knowledge and application (portal task) outcomes across the three areas we specify, and then designing interesting and worthwhile experiences that provide evidence for them is a complex task. See, for example, Marzano, R. J., Kendall, J. S. (2008) Designing and Assessing Educational Objectives. Thousand Oaks, CA: Corwin Press.


We can cite the evidence for this awakening and stirring in both CQU during 1999-2001 and at CDU in 2006.

The use of ‘systematic’ is deliberate. This is what is missing in the registration requirements of the Queensland Council of Teachers.


Khare, R.

National Curriculum Board (2009) The Shape of the National Curriculum DRAFT, p. 11, emphasis added.


An apt example is contained in the Queensland College of Teachers Renewal of Teacher Registration in Queensland Fact Sheet accompanying a letter to all Queensland registered teachers on 2 March 2009. Under the “Continuing professional development” requirements for all teachers in recent legislative changes, “the teacher” decides what constitutes “professional development” and “monitors and retains evidence” of it for the purposes of registration. In Table 1 p. 2 of the document, the discourse is about “contributing” to system initiatives; taking courses and attending workshops run by the employer, the Queensland Studies Authority, schools, providers etc; training for participation in national test marking, and curriculum agency school-based assessment; giving presentations to colleagues; leading school curriculum and policy development; “preparation for and development through” “collegial activities”; educational research; teacher exchange participation; academic study leading to a qualification. As the document points out, this shopping list is not complete!

Apart from the fact that the list reads like a box-ticking exercise for the membership of the state and national curriculum and registration agencies and major employers, it contains no system outcome capability requirements or judgements about the worthwhileness of the Table 1 contents. In short, it lacks authority and accountability for what teachers, principals, educational leaders and bureaucrats actually need to do in order to deal with pressing, seemingly intractable problems such as Indigenous school achievement, literacy, numeracy, science, “Smart State”, “education revolutions” and so on. It is nowhere near an exaggeration to speculate that this “professional development” requirement for Queensland teachers will have no impact on the overall learning outcomes of the system because nothing needs to change, while creating a new wave of public service employment. Everything changes but nothing moves.

Lots of individuals in the ‘system’ see the problems of ‘slippage’ and what is commonly called ‘communication breakdown’. However, the conventional solution to these known problems is to revert to
known solutions: more earnest meetings between university and school staff about ‘slippage’ and ‘communication’ and well-meaning resolutions to do it better, again.

Teacher, or should we say ‘teaching’ education has always been ambiguously conceived. In our view, it is time to disengage it from the ideological connection with rampant possessive individualism and suspicion of ‘knowledge’ and ‘instruction’ that underpin the therapeutic society or it will become intellectually trivial. The future of teaching and preparation for it, its credibility, depends on developing and sustaining a systematic dialectic between knowledge, experience and professional skill. Learning managers must be willing to ‘teach’ and ‘instruct’ on behalf of students and clients according to research-based approaches, including those who have been historically ignored and theorized into invisibility.

Objectivity then is a peculiar attitude in which no question is exempt from scientific investigation, and objectivity is the *sine qua non* of truth. Roy D’Andrade captures our position: “Science works not because it produces unbiased accounts but because its accounts are objective enough to be proved or disproved no matter what anyone wants to be true.” (D’Andrade, R. 1995 Moral Models in Anthropology. *Current Anthropology*. 36(3): 404).

The criticisms of theory and methodology characteristic of ‘critical theory’ and postmodern approaches have substituted feelings and personal experience for the scientific method in many teacher preparation mindsets and cultures. The negative critical capacities encouraged by critical theory and deconstruction are legitimate academic pursuits. This is not our concern. However, they do not *resolve* inconsistencies, but rather lead to the *fragmentation of perspectives* and the proposition that we can never really know anything. We contend that this anti-theoretical position is irrational in applied professions where the outcomes are high stakes for students, clients and communities. We claim that there are valid criteria for judgments about the effectiveness of pedagogical strategies and associated matters in teaching and that the teaching industries should be held to norms of consistency for them. Relinquishing truth claims in writings for academic purposes is one thing, but working accountably for the interests of students, clients and communities using research-based resources that provide guidance is another.