

The International Alliance of Leading Institutes (IALEI) is a consortium of nine education institutes that seeks to enhance the quality of education in their own countries and to provide leadership for educational development internationally.



# Transforming Teacher Education

## Redefined Professionals for 21st Century Schools

A REPORT COMMISSIONED BY  
THE INTERNATIONAL ALLIANCE OF LEADING EDUCATION INSTITUTES

# Contents

- 3 Message from the Director, National Institute of Education, Singapore
- 4 A Note on the International Alliance and this Report
- 6 Acknowledgements

## 7 **Executive Summary**

## 13 **Introduction**

- ▶ Trends and Issues in Teacher Education:  
*A Perspective from The Alliance*
- ▶ The Challenges
- ▶ Impact on Teaching

## 19 **1. Redefined Professionalism**

- ▶ Redefined Professionalism is Essential
- ▶ Characterizing Redefined Professionalism

## 37 **2. Pathways Into and Preparation For Teaching**

- ▶ Addressing Diversity and Representativeness
- ▶ Continual Response to Changing Needs
- ▶ Reinvigorating University-based Programmes
- ▶ Addressing the Theory-Practice Gap
- ▶ Preparing Teachers for Diverse Learners
- ▶ Developing ICT Literacy in Teachers

## 61 **3. Induction and Professional Development**

- ▶ Newer Conceptions of Teacher Induction
- ▶ Strengthening Professional Development for Teachers

## 77 **4. Partnerships for Teacher Education**

- ▶ Collaborative Partnerships for Higher Quality Teachers and Teaching
- ▶ Successful Partnerships in Teacher Education
- ▶ Partnerships as Win-win Relationships
- ▶ Governments as Key Facilitators of Partnerships

## 95 ▶ Conclusion

## 98 ▶ References



# Transforming Teacher Education

## Redefined Professionals for 21st Century Schools

Prepared on behalf of the International Alliance of Leading Education Institutes  
by S. Gopinathan, Steven Tan, Fang Yanping, Letchmi Devi, Catherine Ramos,  
and Edlyn Chao (National Institute of Education, Singapore, Nanyang  
Technological University)

Copyright © National Institute of Education 2008

National Institute of Education, Singapore

Nanyang Technological University

1 Nanyang Walk

Singapore 637616

[www.nie.edu.sg](http://www.nie.edu.sg)

ISBN: 978-981-08-2015-2

# Message from the Director, National Institute of Education, Singapore

The genesis for an International Alliance of Leading Education Institutes is rooted in the shared optimism that the pooling of common experiences and achievements amongst a community of educators can bring about advances in education internationally.

The members of the International Alliance are leading the charge to enhance the quality of education in their respective countries. Each institute represented in the Alliance has its own strengths and international reputation for their teaching and research programmes. Collectively, however, their combined resources provide a more far-reaching and powerful catalyst for change in the field of education. More significantly, the breadth and depth of such vast expertise, rooted in evidence-based research, represents the most credible, authoritative voice available to influence government policies on key education issues.

The Alliance's collective wisdom is founded on strong educational research capability that exists within each member institute. Benchmarking of research findings from local experience then takes on a truly international perspective, which in turn provides relevant and invaluable reference points for governments and international organizations when making policy decisions.

In its role as a global think-tank deliberating upon, generating ideas and anticipating trends and future scenarios, the International Alliance brings a new dimension of international cooperation. The breadth of the Alliance membership allows for an appreciation of the diverse contexts within which teaching takes place. The Alliance is well on its way to realizing its vision of sharing collective insights that can influence and impact future policy and practices. This report on teacher education was presented in August 2008, when member institutions gathered in Denmark to mark the Alliance's first anniversary.

**Professor Lee Sing Kong**

*Director*

*National Institute of Education, Singapore*



An Institute of



# A Note on the International Alliance and this Report

## The Alliance Members and its Goals

The International Alliance of Leading Education Institutes was founded at a meeting in Singapore on 21st August 2007. Made up of nine leading institutions in the field of teacher education and education research (São Paulo joined in 2008), the Alliance acts as a think-tank which draws together existing expertise and research in education to generate ideas and identify trends, to serve as a collective voice on important educational issues and thus influence policy and practice in education. It aims to inform governments, international agencies, funding bodies and the public at large, to influence policy and practice in education and thus to enhance the profile and quality of education internationally.

The Alliance comprises representatives from the following member institutes:

- ▶ Graduate School of Education, The University of Melbourne **AUSTRALIA**
- ▶ Faculty of Education, University of São Paulo **BRAZIL**
- ▶ Ontario Institute for Studies in Education, University of Toronto **CANADA**
- ▶ School of Education, Beijing Normal University **PEOPLE'S REPUBLIC OF CHINA**
- ▶ Danish School of Education, University of Aarhus **DENMARK**
- ▶ College of Education, Seoul National University **SOUTH KOREA**
- ▶ National Institute of Education, Nanyang Technological University **SINGAPORE**
- ▶ Institute of Education, University of London **UNITED KINGDOM**
- ▶ Faculty of Education, University of Wisconsin-Madison **UNITED STATES OF AMERICA**

The core reason for the founding of the International Alliance of Leading Education Institutes was the recognition that education needed a “voice”, a group that would seek to offer well-considered and balanced advice on important educational issues. The group would be mindful of the views of academic researchers, of what evidence and practice had to say, as well as the needs for action on the policy front. Teacher education was chosen as the first topic to be reviewed. While there has been considerable research and discussion on teacher education policy and practice over the past two decades, the publication of the 2007 McKinsey report on the world’s best-performing school systems (Barber & Mourshed, 2007) has prompted new attention to these issues. The National Institute of Education (NIE), Singapore was chosen to lead this project.

## A Note on the International Alliance and this Report

### Framing the Report

Given the spread of countries and resources available, it was decided that the report would be prepared using available published sources and submissions prepared by member institutes. We chose to focus on teacher education rather than the issues related to teaching and instruction and issues related to the teaching profession, important as they are. We developed a list of topics and questions as a framework around which, over a period of several months, we worked to gather the views of Alliance representatives on the key issues while simultaneously examining the extensive literature available in English. This report is a result of these efforts.

International comparisons between countries that share broadly similar cultural and educational traditions are already a difficult task; scholars recognize that within-country variations are both extensive and significant. This does not depend upon size alone; for example, both China and the US have very large education systems but there is much greater diversity in teacher education provision in the US. The Alliance represents nine countries at different stages of socio-economic and educational development and with distinct cultural traditions. It is therefore inevitable that some of the generalizations we advance may be both true and untrue, depending on context and culture.

We see diversity in educational contexts as a valuable feature, as a unique challenge. In an era of greater globalization and educational standardization, of policy borrowing and of international comparisons of achievement, we see a need to respect context and to appreciate how countries with different traditions and resources deal with the challenges of teacher education. This is not simply a matter of ensuring representation. We believe there are unique and distinct traditions within which education and pedagogic systems are embedded that can provide valuable insights. For example, Chinese cultural traditions have much to say about the virtues needed of teachers and the roles teachers play; Singapore seeks to draw upon its links to Asian traditions while it simultaneously appropriates ideas from Anglo-Saxon and continental traditions.

Both researchers and policy makers want the same thing – high quality teachers. Both want evidence of what is likely to work best. While we have relied on the best available evidence and scholarship, we have also sought to clearly set out some propositions to guide policy choices. The balance has been difficult to achieve but we hope we have achieved it to a reasonable extent.

## Acknowledgements

The authors gratefully acknowledge the contributions of the following scholars and their institutions who participated in this collaborative effort:

► **AUSTRALIA**

Field Rickards and Fletcher Farrington of the Graduate School of Education,  
The University of Melbourne

► **BRAZIL**

Sonia Penin of the Faculty of Education, University of São Paulo

► **CANADA**

Jane Gaskell, Kathy Broad, Mark Evans and Mira Gambhir of the Ontario  
Institute for Studies in Education, University of Toronto

► **PEOPLE'S REPUBLIC OF CHINA**

Zhang Binxian of the School of Education, Beijing Normal University

► **DENMARK**

Lars Qvortrup, Jens Rasmussen, Martin Bayer and Arne Carlsen of the  
Danish School of Education, University of Aarhus

► **KOREA**

Cho Young Dal of the College of Education, Seoul National University

► **UNITED KINGDOM**

Geoff Whitty and Chris Husbands of the Institute of Education,  
University of London

► **UNITED STATES OF AMERICA**

Julie Underwood and Ken Zeichner of the Faculty of Education,  
University of Wisconsin-Madison

*The authors offer their thanks to Lin Ai-Leen, Ng Hui Hoon, May, and Chan Guet Har for their invaluable assistance in editing and proof-reading this report.*



# Executive Summary



# Executive Summary

With the growing recognition that teacher quality is critical in preparing students for a society undergoing far-reaching economic and social changes, the need for policies and strategies to strengthen teacher preparation, and as a consequence, teaching, is even greater.

## Introduction: Trends and Issues in Teacher Education A Perspective from The Alliance

1. Building a high-quality education system relevant to 21st century social and economic realities has become a top priority for most governments and nations. Reforming education systems within a context of ever-deepening globalization without first understanding its present challenges is not judicious. These challenges include:
  - ▶ the marketization of education as a commodity, which has a marked impact on educational consequences and standards;
  - ▶ the rapid but uneven influence of information and communication technologies across nations that will redefine the traditional nature of learning, teaching and schooling;
  - ▶ shifts in the learning needs of students from literacy, numeracy and content mastery to include soft skills like communication, curiosity, resilience, cooperation, and problem-solving abilities; and
  - ▶ the concomitant expectations surrounding the goals of education and schooling by a larger number of stakeholders.
2. Central to the idea of a quality education system is the quality of the teaching provided by teachers to students. As education systems have to cope with the impact of the new economy, so does the profession. In these “new times”, high quality teaching will be characterized by:
  - ▶ greater emphasis on teachers’ values, skills and knowledge that are fundamental to good teaching;
  - ▶ expanded teachers’ roles and responsibilities of teachers that are shared collaboratively with other professionals;
  - ▶ different career expectations and aspirations resulting from changing teacher demographics and new job opportunities; and
  - ▶ “personalizing” learning for individual students to accommodate greater diversity in learning contexts.

### Redefined Professionalism

3. There is an urgent need to recognize teachers' work as complex and demanding, and improvement in teacher quality requires a re-conceptualization of how we prepare a new generation of teachers. Simultaneously, a change in the form and function of teacher preparation is best based on a strengthened or redefined professionalism. The concept of a redefined professionalism:
  - ▶ recognizes teacher's work as being based on specialized knowledge and skills, expecting all teachers to have the ability to use them appropriately in a variety of institutional contexts and with diverse student demographics;
  - ▶ necessitates that teachers adopt an inquiry orientation to investigate pedagogical issues, and critically utilize evidence-based knowledge to inform professional practice;
  - ▶ requires teachers to accept responsibility for the academic and emotional outcomes of their students by setting realistic goals, structuring empowering learning environments, and facilitating and guiding learners;
  - ▶ accepts the involvement of education stakeholders and non-education communities to work in collaboration to ensure that educational reforms and efforts remain pertinent to society; and
  - ▶ expects teachers' self-directed commitment to continuous learning related to the individual's own expertise and experiences and is directed towards enhancing student outcomes and strengthening professional identity.

### Pathways into and Preparation for Teaching

4. Innovative pathways in recruitment are required to meet the demands of a high-quality and a representative teaching force. To support the needs of a diversifying student population, teacher preparation programmes should:
  - ▶ broaden their entry requirements to diversify the teaching corps and better represent minority ethnic and cultural groups, and support students who use a different language from the language of instruction, or who come from low socio-economic backgrounds;
  - ▶ adjust traditional requirements of academic performance and results on standardized testing to include other relevant personal and experiential characteristics; and
  - ▶ encourage entry of a “non-traditional” pool of applicants.
5. Teacher preparation programmes require continual innovation to develop a new generation of teachers who have the ability to promote “complex learning” in students. Reinvigorating university-based programmes will:
  - ▶ require more evidence-based instruction and greater responsiveness to school and practitioner needs in terms of relevance and importance;
  - ▶ allow for closer integration of academic knowledge, pedagogical skills and praxis;
  - ▶ develop capacity for reflective practice, critical inquiry, information literacy and professional engagement in learning communities; and
  - ▶ prepare teachers for both the intellectual and relational demands of teaching to better address issues of equity, inclusion, diversity and social justice.

### Induction and Professional Development

6. Teacher education is enhanced by comprehensive teacher induction that lays a foundation for lifelong career learning. Induction is best conceived as a phase in learning to teach, a process of enculturation into the school's organization, and a formal programme for beginning teachers. Therefore, a comprehensive system of induction activities for the formation of teacher professionalism and identity must:
  - ▶ establish clearly articulated goals that go beyond mere support and assistance and to promote career development and enhance teaching quality;
  - ▶ go beyond the first year of the beginning teacher and need to last for an extended period of time;
  - ▶ take into consideration school and teaching conditions, assigned subjects, students and non-teaching responsibilities; and
  - ▶ involve multiple partners working closely, with well-articulated roles for each partner.
  
7. Teachers' continued learning and professional development are key avenues for developing the knowledge, skills and dispositions required to teach all students to reach higher standards. Effective professional development strategies must:
  - ▶ lead to changes in knowledge and skills of teachers to more effectively respond to the problem of practice;
  - ▶ seek the active involvement of teachers, be largely school-based, developmental in nature and ongoing;
  - ▶ acknowledge that schools are valuable sites for learning;
  - ▶ create opportunities for teachers to learn together with others in the school and in more extended networks of teachers; and
  - ▶ provide enough time and ensure a supportive school environment that will allow teachers to integrate their learning from daily practice into a comprehensive change process.

### Partnerships for Teacher Education

8. New designs for teacher education will need to rest on strong partnerships in the context of meaningful involvement by key stakeholders in the education process. Broad-based partnerships designed to facilitate better engagement of the community in teacher education must:
  - ▶ extend beyond the practicum phase of teacher education to include the lifelong learning and development of teachers;
  - ▶ engage experts from different university faculties, partner schools, education boards, diverse business communities, social, health and civic organizations, and parents in the design, development, delivery and evaluation of teacher development programmes;
  - ▶ address needs and issues that are indigenous to schools, school districts and communities taking into consideration the diversity in socio-economic backgrounds of the student population;
  - ▶ provide opportunities for teachers to not only acquire content mastery and pedagogical skills but also develop interpersonal and communication skills and enhance empathy for the views and perspectives of others in the community; and
  - ▶ result in improved teacher quality and higher student achievements and educational outcomes.
9. Successful partnerships not only start with sufficient government support and resources but also attract resources from the private sector to continue and deepen the partnership among university faculties, schools and teachers and relevant stakeholders outside education. More importantly, successful partnerships must:
  - ▶ have shared goals and purpose developed collaboratively, taking into account the different stakeholders interests;
  - ▶ establish clear objectives and a flexible strategy to accomplish those objectives;
  - ▶ respect each stakeholder's beliefs, perspectives, experiences, expertise and knowledge;
  - ▶ structure regular, clear and responsive communication to foster respect and trust to help raise the levels of understanding, productivity and collegiality among stakeholders; and
  - ▶ allow for creative ways of adequately resourcing all partners.



# Introduction

- ▶ Trends and Issues in Teacher Education:  
*A Perspective from The Alliance*
  - ▶ The Challenges
  - ▶ Impact on Teaching



# Introduction

## **Trends and Issues in Teacher Education:** *A Perspective from The Alliance*

Across the globe, in small as well as big countries, in developed, developing and underdeveloped countries, among policy makers, researchers, education managers and teachers, one overriding concern has been to improve the quality of the schooling experience their young citizens are exposed to. Future citizens face a challenging and uncertain future. All children require access to high quality education. Building a high-quality education system relevant to 21st century social and economic realities has therefore become a top policy issue. This in turn has focused attention on a range of issues related to the recruitment, selection, preparation and deployment of teachers. Notwithstanding the considerable differences in education contexts of the nine countries represented in this study, and by extension the different ways of scoping the problems and building responses, all Alliance members are agreed that a high-quality teaching force is indispensable to improving education quality.

The systematic preparation of teachers only began in Western Europe with the rise of mass education systems in the 19th century. Broadly speaking, a Western model of teacher preparation spread to the periphery; the United Kingdom's model of undergraduate (B.Ed.) and postgraduate (PGCE) teacher education is the dominant model in Canada, Australia and Singapore, all former colonies in the British Empire. Chinese intellectual and educational traditions, on the other hand, owe much to Confucius. In the modern period, however, the first formal teacher training institution in China was opened in 1879 with the founding of Nanyang Gongxue (Higher Public School). This was modeled after Japanese educational modernization, which, in turn, was based in part on the French model.

Notwithstanding their origins, commonalities and differences, all systems of teacher preparation have to rethink their core assumptions and processes in the new global context. The urgency for doing so has been reported in a critical survey of the U.S. situation. A four-year study, *Educating School Teachers* authored by Arthur Levine (2006), former president of Teachers College, concluded that a majority of U.S. institutions preparing teachers “have clung to an outdated, historically flawed vision...at odds with a society remade by economic demographics, technology, change” (p. 27). Furthermore, many programmes have low admission and graduation standards, especially among elementary teacher



## Introduction

education programmes. It also points to the wide variability in programme requirements, such as fieldwork ranging from 30 to 300 hours.

### The Challenges

#### The Education Market

The new contexts in which education systems have to operate can be quite succinctly stated. An older geo-political framework of internationalism has given way to an ever-deepening globalization process, primarily but not exclusively in the economic sphere. Trade barriers have come down and capital, labour and technology flows have increased dramatically and changed financial and industrial production and consumption patterns. Fuelled by a still dominant neo-liberal agenda, education processes have entered the marketplace as a commodity, to be priced, marketed and sold to willing buyers. The increasing rate of corporatization of universities, the import and export of academic programmes, the increasing presence of the private sector in education, the rise of private and international schools are examples of this trend. For example, more Indian and Chinese students than ever before are travelling abroad to study; at the same time, the number of students from the West studying in China and India is increasing. Singapore wants to position itself as an education hub and attract 150,000 international students by 2015. Already, 4,000 Korean students are studying in government schools in Singapore, more than double the figure of 1,500 in 2005 (Lee, 2007). One educational consequence is the issue of standards and their equivalence.

#### Influence of Technology

The rate of technological change, especially in information and communications technologies (ICT), has also increased. This change provides new platforms for enhancing teaching and learning, an opportunity poorly used so far despite the rise of several online universities. The technology is also giving rise to new forms of social networking which in time will challenge the notion of a brick-and-mortar school as a necessary site for teaching and learning to occur. Already, young people today are learning a great deal in non-formal contexts, and it is possible to put the contents of a year's worth of textbooks into a tablet PC.

## Introduction

### **Needs of Students**

The confluence of the two processes of globalization and technological change is having a tremendous impact on the students who go to school today. On one hand, global economic opportunities and the necessity to learn 21st century skills have raised the academic bar. The new human capital paradigm is no longer just about having extended years of schooling to prepare students for industrial jobs; it is about content mastery, deep disciplinary understanding as well as acquiring the soft skills of communication, initiative, resilience, group dynamics and problem-solving abilities, among others. The increasing mobility available to many young people, privately funded opportunities to study abroad, and a weakening attachment to state and nation in some countries, even a “civic deficit”, is alarming policy makers. The new distractions offered by new technologies and entertainment platforms are putting pressure on educators and teachers to make schooling both relevant and meaningful. These changes, more pronounced in some countries than in others, call for a new type of teaching force. This necessarily implies new modes of teacher preparation and new enabling conditions in schools to help teachers to tackle the complex challenges of facilitating student learning.

### **New Expectations for Schooling**

It is also the case that across different national contexts, and indeed within countries, there are differences in expectations for schooling. Key stakeholders, employers and parents have become more vocal about the skills and attitudes they expect schools to develop. This is, of course, not unconnected to the challenges brought about by economic globalization. In countries with mature economies, like the US, UK, Canada and Australia, there are concerns about skills at both ends of the spectrum – a lack of adequate literacy and numeracy skills, especially among disadvantaged groups; and insufficient high-quality science and mathematics graduates to fuel technological change. In a country like China, access to good quality K-12 education in the rural areas is a major policy concern.

### Impact on Teaching

In line with an acceptance that students will need new skills to cope with and prosper in the new economy, there is now an increasing body of research that indicates what it is about teachers' attributes and skills that lead to desirable student outcomes. Darling-Hammond (2000) notes that teacher quality is one of the most important factors contributing to student achievement, more significant than class size. "Reform efforts in both developed and developing countries assume that the most direct and effective way of raising instructional quality is to introduce changes in teacher education and recruitment, to improve the knowledge and pedagogical skills of in-service teachers and to ensure that the organizational conditions under which teachers work promote effective instruction and focus on student learning outcomes" (World Bank, 2005, p. 103). An increasing body of rigorous research and accumulated evidence enables teachers to claim that theirs is, like other established professions, a learning profession whose practices are research informed. Teaching, it can be asserted, is complex and demanding intellectual work. This in turn has led to calls to recognize that effective and powerful teaching cannot be accomplished without careful and adequate preparation (Cochran-Smith, 2004).

The issues detailed above inevitably lead into ongoing discussions about the status of teaching as a profession. Given that we live in "new times" within a radically reshaped economic, political, cultural and social environment, how should teachers position themselves? The United States and United Kingdom are demanding greater accountability and performance and are prepared to mandate changes, even at the level of pedagogy. With Elliott (1991), we argue against a static view of professionalism, from one with an emphasis on autonomy to one in which the task of preparing the young is shared collaboratively with other professionals.

Policy makers also have to contend with a "demographic crisis". The Ministerial Advisory Committee for Educational Renewal (2003), in a report about teaching workforce, asserts that for Australia "the largest generational change in the teaching workforce since WWII is looming" (p. 3). A national survey of almost 10,000 teachers in government and non-government schools in 1999 indicated that the average age of teachers was 41 years, with 46% older than 40 years (Dempster, Sim, Beere, & Logan,

## Introduction

2000). Mayer (2006) also cautioned that we cannot assume that new cohorts of teachers will necessarily have the same aspirations and expectations for teaching and for their careers as earlier cohorts. While new cohorts have to be differently prepared, attention also needs to be given to the revitalization and re-engagement of earlier cohorts of teachers.

One needs to add to this mix government advocacy of such concepts as “personalized learning”. The expectation is that schools will increasingly need to develop and broker individual learning plans to better accommodate student diversity and learning contexts (Department for Education, Family and Skills, 2005). UK’s Teacher Development Agency’s Teaching 2012 and Teaching in 2020 projects are envisioning exercises on how schools and schooling will be transformed. Teacher roles, already complicated, will be further extended – learning coach, broker for learning, enabler, a leader of inter-professional teams, expert practitioners and so forth – all of which hint at the new demands that will be made on teacher preparation (Robinson, 2008).

In one sense, the core problem for the teaching profession remains the same: How do systems attract talented and motivated persons to become teachers? How do we best prepare them? How do we deploy them, ease them into and support them at different stages of their careers? How do we recognize and reward them? The contexts in which these questions are being answered now are very different from those of the latter half of the 20th century. Whereas teaching was once seen as a desired pathway into middle-class status in some countries, many new professions are attracting aspiring youngsters. In some countries, however a persistent feminization of the teaching profession is turning males away while in others, schools are seen as dangerous places to work in. In yet other contexts, excessive control by state bureaucracies is occurring at a time when younger generations of teachers are seeking greater autonomy at their workplaces.

This report addresses these pressing issues. It draws upon a wide range of published sources, government documents, best practices and the accumulated wisdom of leading scholars from the East and West in leading education institutions.

# Redefined Professionalism

- ▶ Redefined Professionalism is Essential
- ▶ Characterizing Redefined Professionalism

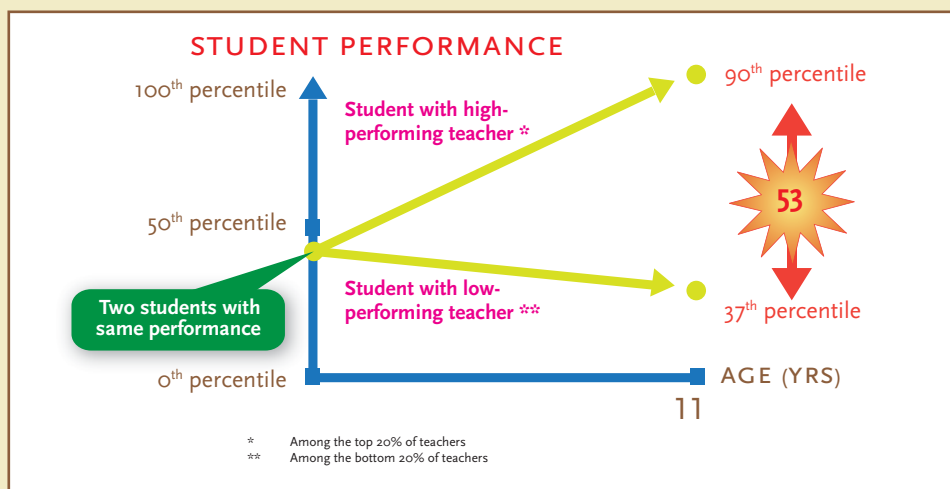


# Redefined Professionalism

The broader societal challenges for schooling outlined earlier has resulted in an increased recognition of the complex and demanding nature of teachers' work, and requires radical rethinking of how we recruit, prepare and deploy teachers. There needs to be a rethink of the aims and processes in initial teacher education and of teacher professional development. Strategies for maximizing the contributions of new knowledge from research and new technologies, which pose challenges and create new possibilities, will need to be considered. In the new landscape, both education and non-education communities, notably parents, must be involved. The contributions of new partners will need to be negotiated. The paramount change agent for our new learners is still the school, and the person to help achieve that change will be the teacher.

The McKinsey report (Barber & Mourshed, 2007) identified teacher quality as being crucial to high quality education. They cite at least three separate studies (Haycock, 2001; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997) that showed a direct relationship between teacher quality and student achievement. Interviews with head teachers of schools in top-performing education systems revealed

**Figure 1: Impact of teacher quality on student achievement**



Source: Adapted from Barber & Mourshed (2007)

## Redefined Professionalism

that much of the wide variations in classroom learning was a function of teacher quality. Other studies, notably those by the World Bank (Hanushek & Wößmann, 2007), the Organisation for Economic Co-operation and Development (OECD, 2005) and Darling-Hammond (2000) have identified teacher preparation and development as a critical dimension in improving teacher quality. Darling-Hammond's review notes that "quantitative analyses indicate that measures of teacher preparation and certification are by far the strongest correlates of student achievement in reading and mathematics, both before and after controlling for student poverty and language status" (p. 1). It is also noted that changing the skills base and practice of existing teachers is difficult, often producing only temporary effects. Even in OECD countries, where the education systems are more developed, changing teacher practice is recognized as difficult because teacher motivation and needs have been found to depend on where these teachers are in their careers (OECD, 1998). Consequently, there have been calls for a rethink of teacher professional development to make it more effective.

Simultaneously, changes to the form and function of initial teacher education as a way of creating a new generation of teachers is seen as vital. Educationists hope that new teacher preparation models will equip new teachers with appropriate knowledge, skills and professional values, which will in turn bring about professional teaching (Cho, 2008; Cochran-Smith, 2004; Farrington, 2008). In this and the following chapters, we illustrate new trends and features in teacher education in the worldwide drive to provide quality teaching.

Global trends in teacher education are hard to determine and even harder to define, not only due to the sheer variety and number but also because each education system is a function of the country's own unique historical, social and political milieu. Our own "sample" of nine countries only represents a small fraction of the variety, forms and relationships in teacher education. Yet, this analysis of initial teacher education in the Alliance countries found key trends that suggest an emergent consensus in efforts to tackle the enduring problems in teacher education.



### Redefined Professionalism is Essential

Darling-Hammond points out that teaching in the context of an increasingly complex and rapidly changing technology-based economy requires “immensely skilful teaching” (1998, p. 6). Whitty (2006) observes that the challenges of the current context require a rethink of the notions of teacher professionalism. Building on Whitty, we suggest that this requires of teachers, individually and of the profession as a whole, a strengthened or *redefined professionalism*, possessing specific 21st century characteristics that are crucial enablers for teachers to continue to do intelligent and demanding work in the classrooms.

Redefined professionalism is a complex but functional mix of old and new ideas about teaching and teachers’ work built upon prevailing theories of learning and learner needs. We believe that the profession as a whole needs to fashion and “own” this redefined professionalism and that the foundations for it needs to be laid in initial teacher preparation programmes.

We should be careful not to see professionalism in uni-dimensional terms. It is both a contentious and value-laden concept. In some of the Alliance countries, principally in the West, the roots of autonomy as a key attribute of professionalism lie in the historical evolution of guilds which grouped together members involved in some form of economic, intellectual or artistic activity. Relations between the guilds, religious and state authorities, though different in different countries and contexts, eventually led to arrangements that provided some measure of autonomy and, for academic institutions, freedom – this is especially true of universities. The Renaissance and later the scientific and industrial revolutions would not have been possible without these hard-won freedoms.

Though wise and well-educated scholars were held in high regard in both the East and West, strong rulers in the East, notably China, whose intellectual and cultural traditions still strongly influence Japan, Taiwan, Korea, were able to maintain authority over intellectual life of their societies for a much longer time. In China, for example, Confucian teachings were co-opted in the service of the state and



## Redefined Professionalism

intelligent and ambitious men mastered Confucian texts and used imperial examinations as a route to power and influence via service to the emperor. Content mastery, loyalty to authority, high ethical standards, group rather than individual orientation are features of an alternative professionalism (Lewis & Tsuchida, 1998; Paine, 1990.) Though first Japan, and later China, borrowed from the West as they sought to modernize, the traditional ethical and intellectual traditions remain strong amongst teachers and education professionals.

### Characterizing Redefined Professionalism

**Table 1: A story of two professionals (as told by one from education)**

A surgeon and a geography teacher are transported out of their 19th century work environments and placed in a 21st century operating theatre and classroom respectively. The surgeon, evidently unable to use any of the skills he had acquired, is dragged out of the operating theatre before he can do the patient any harm. The teacher confidently steps into the modern classroom, where although he notices some funny-shaped machines at the back of the class and the oddly dressed children, continues teaching without a pause. Everything else – the rows of desks, the board at the front, and the lesson to be taught – feels familiar.

*Source: Adapted from Revell (2005)*

The vignette in Table 1 illustrates commonplace perceptions that work done by members of traditionally recognized professions like law, engineering and medicine is challenging and complex while a teacher's work is perceived as simple and not intellectual. It is seen to require very little specialized knowledge, and that which is needed is easily acquired by anyone with a textbook. At its worst, a teacher's work is seen as mere dissemination of already existing information.

## Redefined Professionalism

As 21st century educators, we are now in a position to argue otherwise. Bereiter and Scardamalia (2005) assert that the traditional forms of knowledge are no longer adequate as they are based on a “mental filing cabinet” model. They propose new conceptions based on enabling learners to construct knowledge by drawing on a range of information, thus enabling them to obtain greater depths of understanding which they can then apply to new situations. Such a mastery of knowledge, or rich disciplinarity, is essential if learners are to be prepared for life’s challenges in the 21st century. This in turn has significant implications for teacher preparation.

Our conceptualization of redefined professionalism moves teaching out of the old paradigm, firmly placing teachers’ work as being based on specialized knowledge and skills. A growing body of research in the cognitive sciences and in pedagogic practice shows that to enhance student learning requires teachers to have both a wide body of *knowledge* and the *ability* to use this knowledge appropriately in a variety of institutional contexts. Today, we recognize that teachers must exhibit several distinct categories of knowledge (see Table 2).

**Table 2: Categories of teachers’ knowledge**

- Content knowledge
- General pedagogical knowledge, defined as broad principles and strategies about classroom management and organization that appear to transcend subject matter
- Curriculum knowledge, with particular grasp of the materials and programmes that serve as tools of the trade for teachers
- Pedagogical content knowledge – that special amalgam of content and pedagogy that is unique to the province of teachers, their own special form of professional understanding
- Knowledge of learners and their characteristics
- Knowledge of educational contexts, ranging from the working of the group or classroom, the governance and financing of school districts, to the character of communities and culture
- Knowledge of educational ends, purposes and values, and their philosophical and historical grounds

*Source: Shulman (1987)*

## Redefined Professionalism

These are not discrete categories as it is clear that effective teachers deploy a complex mesh of these categories of knowledge on a daily basis in every lesson. It is this understanding that poses the greatest challenge to traditional models of teacher preparation. Equally significant is that this rich and complex teacher knowledge base needs to be mastered and utilized by *all* who aspire to succeed in teaching. It is only if a majority of teachers can teach well in complex and demanding circumstances that the learning needs of all children can be met. (See Exemplar 1)

Another aspect of redefined professionalism is that of *reflexivity*. Although there is broad acceptance of reflective practice (Schon, 1987), where student-teachers reflect and act on their own classroom teaching experiences, what is needed is more reflexivity. Whereas reflective practices offer teachers the chance to contemplate a series of their actions or events, reflexivity refers to introspection, which is a deeper inward gaze into every interaction (Ryan, 2005). It includes considerations of the mental state, emotional well-being, thoughts and motives of pupils within a learning context.

Related to the notion of reflexivity is that of the use of evidence to judge the effectiveness of pedagogy and more broadly, schooling. Given the complexity of the teaching-learning challenge, teaching must move towards becoming more evidence-based. There is already a considerable body of carefully collected and analysed data that teachers and teacher educators can draw upon. There is considerable interest and support for a range of teacher-led initiatives like action research and lesson study. Tools like SmartPens are already available to enable teachers to use data to assess formatively student learning; large-scale data collection is now available for schools to better chart student progress. Utilizing these tools will go a long way to substantiating the claim that teaching is intellectual work.

### Exemplar 1

## Recognizing and promoting teachers' intellectual work in the US

The work done at the Carnegie Academy for the Scholarship of Teaching and Learning, begun in 1999, is a good example of efforts by teacher educators to bridge the theory-practice divide and build on a knowledge base in teaching. The Academy supports the critical analysis and investigation of classroom practice by pioneering the development and use of information technology that allow examples of examined teaching and learning to be readily shared, critiqued, discussed and built upon. Uncovering the classroom practices of teachers addresses a critical need in teacher learning, both for novices and seasoned professionals, and contributes more knowledge about teaching, which gives a different perspective of teacher education. “Moving teachers and their ‘wisdom of practice’ from the margins to the center of investigations about teaching adds a critical piece that could raise standards” (Mace & Lieberman, 2007). This is especially critical for both initial teacher preparation and continuing professional development. 🐦

*Source: Gallery of Teaching and Learning (2006)*





## Redefined Professionalism





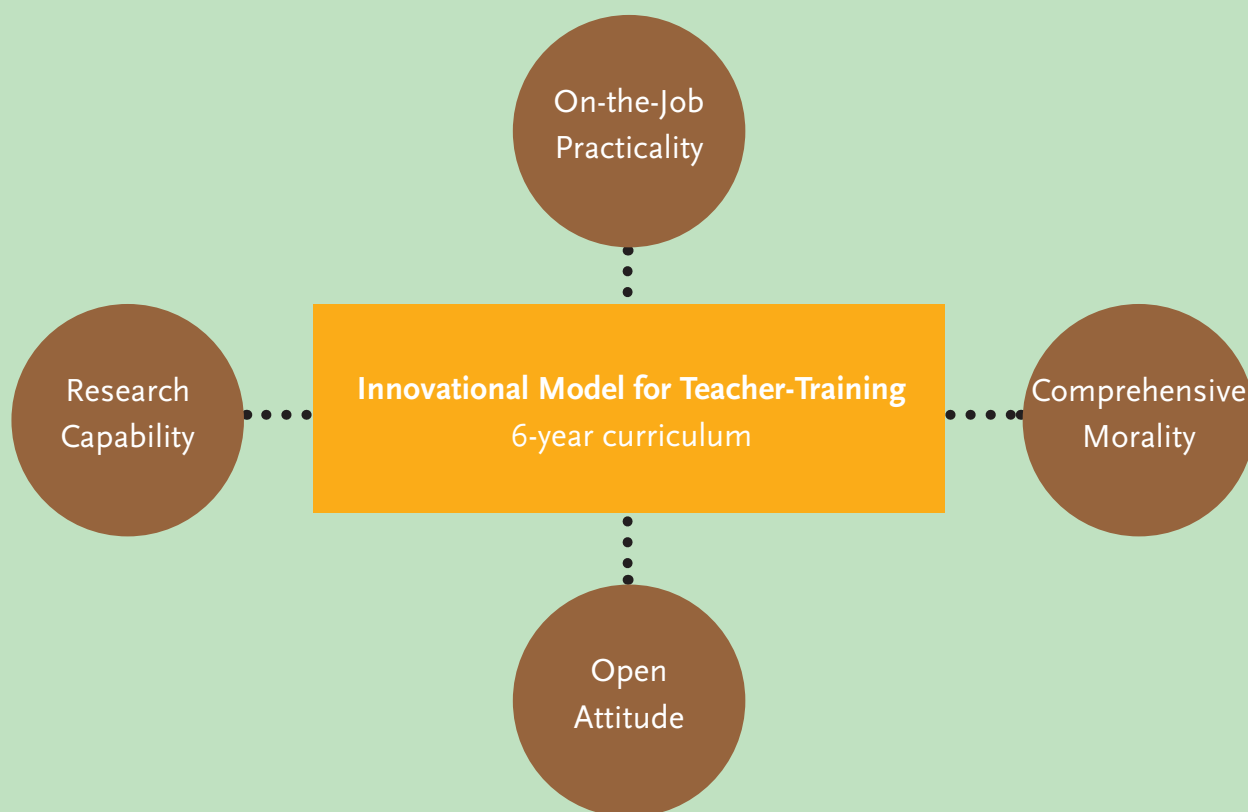


## Exemplar 2

# A case of reflexivity in teacher preparation in Korea

South Korea has proposed that teacher education be changed from a 5-year model to a 6-year one. The model shown in Figure 2 describes the change that is intended to promote reflexivity in teachers. Here, the main ideas of developing research capacity as well as an open attitude are critical elements in the programme. The final year of the programme requires candidates to complete a dissertation as well as to read courses in research methodologies and professional knowledge required for specialized academic research. 🐦

Figure 2: Proposed Korean model for teacher education



Source: Cho (2008)

## Redefined Professionalism

A third aspect of redefined professionalism is related to the issues of autonomy and accountability. A global trend is the emphasis that governments place on accountability in education. The development of human capital via education requires large resources and governments naturally want assurances of effective and responsible use. Today, this is being translated into a sustained effort to set goals, measure achievement, and hold teachers and schools accountable to these goals.

On the other hand, academics and the teaching fraternity believe that empowerment of teachers and deregulation of schools and teaching will lead to better education outcomes. Goodson and Hargreaves argue that “increased opportunity and responsibility to exercise discretionary judgment over the issues of teaching, curriculum and care that affect one’s students” (1996, p. 20) must remain with the teacher and school. This is because teachers are in a better position to recognize and appreciate student diversity, to better judge how well teaching strategies are working, and to recognize non-school factors that may affect their students’ academic performance. That said, “new professionals” will need to accept responsibility for the academic outcomes of their students by setting appropriate goals, creating empowering environments, and assisting and guiding learners. One possible alternative is through the setting up of empowered monitoring bodies for example, the British Columbia College of Teachers.





### Exemplar 3

## Autonomy as an aspect of redefined professionalism in Canada

The British Columbia (BC) College of Teachers is a statutory body in Canada. Its mandate is to regulate the education profession in the public interest. It is empowered through legislation to ensure that educators who work with students in BC classrooms are competent and suitable for the important role they play in society. The College assesses applicants for admission, issues certificates of qualification, conducts reviews of certificate holders, and suspends or cancels certificates when necessary. Governance is via a 20-member Council, administered under the direction of the Registrar. The members of the College include teachers, vice-principals, principals, directors and superintendents from public, independent and First Nations school systems in BC. The College is required by statute to report to the Ministry and the public on the competence of the profession. It is also required to collect information from every board of education and independent school including, among other things, teaching or evaluative reports on certificate holders as well as the number of unsatisfactory reports written. 🐦

*Source: British Columbia College of Teachers (2008)*

## Redefined Professionalism

A fourth aspect of redefined professionalism, which is linked to autonomy and accountability, is that of teachers working as a part of a larger body, a concept referred to as *occupational heteronomy* (Goodson & Hargreaves, p. 21). Major and often disruptive social change is a feature of post-modern societies. The family unit, for example, is under stress. More children are from single-parent homes. Familial attitudes and commitment to children's education is changing. The mass media and peer groups are becoming more influential in children's lives. Schools and teachers alone cannot shoulder the burden of meeting a child's needs which extend beyond the educational to emotional, health and social needs. The education community therefore has to recognize that it needs to arrive at mandates with stakeholders to ensure that educational efforts remain pertinent to society (Whitty, 2006). This is a 21st century take on the old adage "it takes a village to raise a child". Mandates create a grounded commitment by all stakeholders to promote community action in order to ensure better educational outcomes.

Occupational heteronomy is a situation where "teachers and others involved work authoritatively yet openly and collaboratively with other partners in the wider community (especially parents and students) who have a significant stake in students' learning as opposed to self-serving autonomy" (Goodson & Hargreaves, 1996, p. 21.). There is now some acceptance that all stakeholders in education, including the state, teacher educators and teachers, will need to respect heteronomy. This extends old notions of collegiality, which in the past was focused on teacher-to-teacher sharing. Exemplar 4 illustrates well the nature of new social partnerships.



#### Exemplar 4

### A new partnership model in the UK

In the UK, a professional mandate was arrived at when the historic national agreement, Raising Standards and Tackling Workload, was signed on 15 January 2003. The agreement acknowledged an increase in the pressure on schools to raise standards as a result of the reforms in educational achievement, and marked the decision to relieve this pressure and reduce unacceptable levels of workload for teachers. The signatories came together to form a unique social partnership, the Workforce Agreement Monitoring Group (WAMG), made up of 11 organizations representing the employers, government and school workforce unions. It introduced a series of significant changes to teachers' conditions of service over three annual phases from September 2003, which included remodelling, setting aside of time to enable teachers to plan and prepare for class, changes to the teachers' pay structure, revisions to teachers' performance management, and new professional standards. The Training and Development Agency for Schools (TDA) website has several case studies that attest to schools seeing a rise in the status and professionalism of teachers, which has in turn produced better outcomes for the children. 🐦

*Sources: Training and Development Agency for Schools (2008) & MacLeod (2003)*

## Redefined Professionalism

Given that teaching and learning are interconnected, redefined professionalism requires teachers to be ready learners and to be connected to a larger learning community, one that recognizes and acts reflexively with relevant stakeholders. For the teacher, there must be a self-directed commitment to continuous learning related to one's expertise and emergent needs of pupils and schools. Such learning will be the product of new knowledge and experience and will be more useful when directed towards enhancing student outcomes and strengthening professional identity. It will require efforts at the individual, school and professional levels. Individual and profession-driven models of professional development are likely to be more productive and sustainable in the long term, as illustrated in Exemplar 5.

### Exemplar 5

## Singapore teachers as lifelong learners

The Ministry of Education in Singapore provides all its teachers with an entitlement of 100 hours of in-service training a year. This initiative signals the need for teachers to see themselves as lifelong learners as well as enables them to cope better with new curricula and student learning demands. Teachers are actively guided and advised on their professional development choices and are allowed to take responsibility for their career development. It is interesting that the practice of recertification is not utilized as a means of ensuring the practice of lifelong learning. 🐦

*Source: Ministry of Education, Singapore (2006)*



## Redefined Professionalism



## Redefined Professionalism

Finally, redefined professionalism requires the teacher corps to understand that there is an urgent need to address persistent underachievement and marginalization. Teaching is a profession that is committed to realizing the full potential of all students and therefore needs to ensure social justice via educational provision and high-quality teaching. Although schools are generally seen as engines that empower the future citizenry, unequal provision and resourcing to schools leave them unable to overcome existing class divisions (Anyon, 1980; Rist, 1970). Clearly, such a situation requires the creation of opportunities for teachers to engage with the moral and social purposes of schooling. Most significantly, it requires the teaching fraternity to incorporate understandings of the diverse social, cultural and global attributes that students bring to school and to work innovatively with other stakeholders to benefit learners.

In essence, redefined professionalism is an imperative in the new context that teachers and the profession find themselves in. It is manifested in qualities that require teachers to value and sustain the intellect, to work collaboratively with other stakeholders in education, to be responsible and accountable and to be committed to lifelong learning and reflexivity.



# Pathways Into and Preparation For Teaching

- ▶ Addressing Diversity and Representativeness
  - ▶ Continual Response to Changing Needs
- ▶ Reinvigorating University-based Programmes
  - ▶ Addressing the Theory-Practice Gap
  - ▶ Preparing Teachers for Diverse Learners
    - ▶ Developing ICT Literacy in Teachers



# Pathways Into and Preparation For Teaching

Innovative pathways for recruitment and new designs in teacher preparation are required to meet the demands of redefined professionalism and in this chapter, we identify trends that relate to these. We report on and explain the need for the widening of recruitment strategies. We also highlight new designs in teacher education programmes that are successfully addressing key concerns in 21st century teacher preparation.

## Addressing Diversity and Representativeness

As we noted earlier, one consequence of globalisation and the increasing movement of people across borders is that it is radically altering student demographics in schools. Classrooms with international students and those learning English as a foreign language are becoming ever more common (Goodwin, 2002). 21st century teachers must also respond in new, creative and effective ways to the needs of a diversifying student population. There is now a greater need for teachers to have strong intercultural competencies that they will also be expected to nurture in their students (Cho, 2008; Gambhir, Broad, Evans & Gaskell, 2008; Zeichner, 2003).

While student populations in schools are diversifying, the teaching workforce in most countries is, however, not adequately reflecting these changes. There is a notable cultural divide between teachers and students in countries such as Australia, Canada, the United States and United Kingdom. This divide will have to be reduced if the efforts to narrow the achievement gap between majority and minority groups are to be successful (Husbands, 2008; Wong, Murai, Berta-Avila, Arellano & Echandia, 2007). Currently, countries within the Alliance report that the majority of their teaching corps are women, especially at the elementary level, and that they are generally comprised of the majority ethnic group in their countries.



## Pathways Into and Preparation For Teaching

For example, Canada has a large immigrant population in its schools due to a rapid increase in immigrant families, accounting for over 50% of the population in Toronto. Twenty percent of new immigrants are children and almost 80% of them are visible minorities. Moreover, 40% report that they do not know either of Canada's official languages, English and French. However, internationally educated teachers and Canadian-born teachers who are from non-White ethnic minority groups are underrepresented (Gambhir et al., 2008). Studies in the United States have found that 76% of the teaching force are female and 91% White, most coming from suburban or rural backgrounds, and nearly half of them speak only English. However, about a third of the student population belongs to minority groups. In most urban centres, public schools are largely populated by diverse and high-poverty students (American Federation of Teachers [AFT], 2007; Applebome, 1996).

It is clear that a significant proportion of teachers have to be recruited from other ethnic groups if countries are to be successful in redressing differentials in student achievement. It is noted that the populations that are often underrepresented in teaching programmes and in the teaching workforce are often the groups most underserved by the education system (Gambhir et al., 2008; Villegas & Davis, 2007). Yet, cross-cultural studies have shown that teachers of the same ethnic and cultural heritage more successfully connect school knowledge to the cultural lives of their students. They are more likely to empower students as learners and agents of change, and increase community connections to the school (Galindo, 1996; Lipka, 1991, as cited in Wong et al., 2007). Research also indicates that minority students perceive teachers of their own ethnicities as role models, and that the very act of being a teacher demonstrates that minorities can hold positions of authority and influence (Gurskey, 2002; Solomon, 1997, as cited in Wong et al., 2007). These findings have significant implications for the achievement and quality of learning for diverse learners, particularly for students who belong to ethnic and cultural minorities, who speak a different language at home from the language of instruction, or who come from low socio-economic backgrounds. Teacher education institutes will therefore need to rethink and re-examine their entry requirements into teacher preparation programmes and consider alternative methods as is illustrated in Exemplar 6.

### Exemplar 6

### Inclusive pathways in the US

The Pathways Program is an example of a “career ladder” programme for paraprofessionals and a “grow your own” recruitment approach that stems from the belief that members of a minority group who live in a community are particularly suited to teach children from that community as they bring with them personal insight and understanding about working with these children. The university and public school district collaborate in the selection process, which highlights a variety of indicators of ability and future success as teachers including an excellent track record as paraprofessionals in schools and a commitment to teaching in high-need school environments. During the programme, the special needs of paraprofessionals are addressed by various services such as tutorial or academic support, peer support in cohort groups, test-taking preparation, and financial assistance. Two main features of this programme are firstly, the creative arrangement between the university and the partnering school that allows for paid release time, which also shortens the programme duration and secondly, the successful restructuring of the teaching practicum portion, where the participant can complete the certification requirement without foregoing pay and benefits. 🐦

*Source: Villegas & Davis (2007)*



## Pathways Into and Preparation For Teaching



## Pathways Into and Preparation For Teaching

While traditional requirements of academic performance and results on standardized testing should not be ignored and standards maintained, these could be adjusted to include relevant personal and experiential aspects of a candidate which may be strong indicators of teacher success. Community service experiences, participation in activism or leadership activities or a strong understanding of the social and cultural context of learning for minority groups can be valuable in teaching disadvantaged students. Exemplar 7 describes how adjusting entry requirements help to draw target populations into teacher preparation programmes.

### Exemplar 7

## Collaborating with public schools in Chicago

A collaborative initiative between the University of Chicago and public schools in the city allows provisionally certified bilingual Latino teachers to earn standard teaching credentials while receiving in-class support to speed the development of pedagogical skills for teaching English Language learners. Participants are carefully selected based on attributes predictive of future teacher success such as parenting experience, participation in activism or leadership activities, and perseverance in overcoming problems. In the programme, participants receive an individualized plan of study based on a review of their transcripts. They undergo ongoing observations by university field instructors, who are then better equipped to draw connections between theory and practice, and even modify course content as needed. Participants in this programme are also able to complete their practicum requirement without an interruption in pay or benefits. 🐦

*Source: Villegas & Davis (2007)*



## Pathways Into and Preparation For Teaching



## Pathways Into and Preparation For Teaching

Having accepted that teacher quality is the key to increasing student performance and sustaining school reform, nations around the world are increasingly having to develop initiatives to attract high-quality candidates into the teaching profession (OECD, 2005). While, ideally, governments would like to have a high-quality and representative teaching workforce, the reality is that many countries experience a crisis of teacher recruitment and/or of teacher retention. Where economies are growing and diversifying, the challenge of attracting high-quality graduates is greater. It is harder, for example to recruit secondary school teachers. For all governments, the key challenge is to delicately balance the need for sufficient numbers of teachers to staff schooling systems and the need for teachers who are equipped with sufficient skills and knowledge to raise educational attainment, particularly of disadvantaged groups (Husbands, 2008).

Although some countries may be currently experiencing a teacher surplus, as in South Korea or Canada, many are struggling with teacher attrition and shortages in specific areas, especially in science, mathematics, foreign languages and special education. In the United States, about a third of all teachers leave the profession, half of them within 5 years. Special education, mathematics and science experience the highest attrition rates – 20% annually in each field (Suell & Piotrowski, 2007). In hard-to-staff schools such as high-poverty urban schools, 22% of their teachers are lost annually, while low-poverty schools experience a turnover rate of 12.8% (AFT, 2007).

Levels of teacher attrition and retention have deep implications for the quality of teaching. Limited teacher supply increases the need and likelihood for out-of-field teaching, where teachers teach subjects they have not been prepared for or certified to teach. This obviously leads to poor teaching, handicapping students who may wish to specialize in these subjects. Teacher morale is affected and there is likely to be a loss of public confidence in these teachers and teachers in general. In Denmark, a higher probability of out-of-field teaching is foreseen due to teacher shortages in the areas of natural sciences and foreign languages, which could also be the result of the way teacher preparation is organized (Rasmussen, 2008).



### Continual Response to Changing Needs

The persistent crisis of recruitment is further complicated and intensified by the new demands, expectations and ideas of what it means to be a teacher in a globalizing knowledge society. Students are now expected to perform to higher achievement standards and to acquire new skills including technological literacy, foreign language capabilities and intercultural competencies to be competitive in the global economy (Cho, 2008). Teachers are also expected to deliver individualized and differentiated instruction.

While teacher recruitment difficulties are by no means new, new trends add to the difficulty. With an expanding international job market, there are increased and diversified work opportunities available than ever before, providing more lucrative career options. Women and minority groups, who in the past had more limited options, have more choices now and fewer are choosing teaching as a career (Annenberg Foundation, 2006; Walsh & Jacob, 2007). Steps must be taken to ensure that the teaching profession remains competitive within the current labour market in order to draw quality candidates; in this the role of governments is vital. Teacher education institutes can no longer rely on current recruitment systems and the traditional pool of applicants, that is, college graduates. Innovative pathways are necessary to draw “non-traditional” applicants such as mid-career changers or members of minority communities into the teaching profession.

For the purposes of this report we will define alternative pathways as a “heterogeneous set of programs that differ in some way from the traditional campus-based, pre-service teacher preparation” (Dai, Sindelar, Denslow, Dewey, & Rosenberg, 2007, p. 424). Despite the debate on whether alternative pathways are effective or successful, in the current teacher preparation landscape a diversity of pathways does exist. The spectrum of diverse pathways into teaching varies across countries, and some have yet to explore such alternative options in any sustained way. In the United States, for example, throughout the history of formal teacher education there has always been a variety of pathways, both inside and outside colleges and universities (Angus & Mirel, 2001; Fraser, 2007; Lucas, 1999, as cited in Zeichner & Paige, 2007). Currently, 47 states in the United States claim to have at least one alternative route, and about one in every five teachers is prepared via an alternative

## Pathways Into and Preparation For Teaching

route (Walsh & Jacobs, 2007). In England, the Training and Development Agency offers 32 different ways of entry into teacher preparation including employment-based, school-based and university partnership-led routes, in addition to the usual undergraduate, postgraduate, full-time and part-time routes (Husbands, 2008). In spite of the emergence of schools as major sites of teacher education, a majority of teachers are still prepared through college or university programmes. Exemplar 8 describes a programme in Australia designed to draw “non-traditional” candidates.

### Exemplar 8

## Career Change Program in Australia

Australia’s Department of Education and Early Childhood Development has a new Career Change Program that seeks to enlist suitably qualified professionals, such as engineers, scientists, mathematicians, trades people and IT professionals, to become teacher trainees. Participants attend a preparatory summer school before entering the classroom in the following school year. They undergo a school-based induction programme and receive ongoing support from mentor teachers. Participants also receive financial support and paid study leave as they balance classroom duties and study towards a teaching qualification within a 2-year training period. If the training period is successfully completed, participants are offered an ongoing teaching position. There is also a retention incentive should the trainee choose to stay at the school they were appointed to during the programme. 🌿

*Source: Department of Education and Early Childhood Development*



## Pathways Into and Preparation For Teaching



Whilst drawing second-career teachers invigorates the profession, larger countries also face issues of teacher distribution. Exemplar 9 shows how this is addressed in the rural areas of China.

### Exemplar 9

## Introduction of Master of Education in China's rural areas

This initiative was begun in 2004 by China's Ministry of Education to improve education in its rural regions under the "Plans for Nurturing Master of Education for Secondary Schools in Rural Areas". As part of the plan, fresh graduates from universities who are recommended for postgraduate study are selected and trained to become teachers with Master's degrees in rural schools. The cycle lasts 5 years. In the first year, the candidate takes on a teaching assignment in a secondary school in a county. In the second year, the candidate applies to do a year of full-time course work at a university. The third year involves the candidate teaching, taking up online courses and completing a dissertation. No examinations are required, except for the completion of the dissertation and an oral examination taken in the third year. The fourth and fifth years are spent teaching full-time in the school. This teaching-cum-learning programme was trialled in poor, rural communities. It was so successful that it has been extended to other rural communities in mid-western China. 🌸

*Source: Fang & Zhu (2008)*





## Pathways Into and Preparation For Teaching



### Reinvigorating University-based Programmes

Feiman-Nemser (2001) has argued that what is needed for a new generation of teachers is the ability to promote “complex learning”. She notes that while “conventional” models emphasise teaching “as telling and learning as listening, reform-oriented models call for teachers to do more listening as they elicit student thinking and assess their understanding and for students to do more asking and explaining as they investigate authentic problems and share solutions” (p. 1015). Thus teachers who are able to do this kind of teaching must themselves be “practical intellectuals, curriculum developers and generators of knowledge in practice” (p. 1015). In order to achieve this she calls for curriculum designs and frameworks that allow for teacher learning over time.

Yet, university-based teacher educators are facing a “jurisdictional challenge”, where their ability and right to deliver teacher preparation programmes is being tested. University-based programmes, more strongly in some OECD countries are seen to be overly academic and insufficiently sensitive to the needs of beginning teachers, something that student teachers tend to agree with (Furlong, 2008). There is some agreement that researchers and teacher educators alike are ill-equipped to respond to critics who question the value of professional education for teachers with evidence of programme impact and effectiveness (Allen, 2003; Cochran-Smith & Zeichner, 2005; Grossman & McDonald, 2008). Thus there is a need for university-based preparation programmes to be more evidence-based and responsive to school and practitioner needs in terms of their relevance and currency.

Evidence also suggests that many alternative pathways, particularly the notably strong programmes, closely resemble traditional university-based routes (Honawar, 2007). In England, there is little evidence to suggest that schools would want to supplant initial teacher education (ITE) institutions, or that governments would seriously consider a reform which would remove a largely effective supply of teachers (Husbands, 2008).

Current issues such as preparing teachers to teach diverse learners and the ability to use data to improve teaching have been recognized as key competencies required for teaching in the 21st century. As such, these competencies must be given due weight in teacher preparation programmes.



## Pathways Into and Preparation For Teaching

This report is not the place to articulate specific designs for teacher preparation programmes as these are context-specific and need to be responsive to education aims, processes and issues, amongst other considerations. The challenge is to find appropriate design principles to aid in the development of new programmes with more impact and, it might be added, to more rigorously and systematically evaluate existing programmes to determine strengths and weaknesses.

Several principles suggest themselves; these are by no means exhaustive. There is for example the need to see teacher preparation as a continuum and initial teacher education as but a first step. There is a need to more imaginatively and productively integrate campus and school aspects of teacher preparation and learning. We need to better understand the diversity inherent in entry cohorts and offer a reasonable degree of customization of programmes to suit candidate needs. We need, finally, to pay attention to the teacher education pedagogies we employ in our institutions to better reflect the pedagogies we expect our graduates to use in schools.

### Addressing the Theory-Practice Gap

A persistent issue that has plagued teacher education is the disconnect between theory and practice. The theory-practice gap was identified as a serious concern by all Alliance members (Cho, 2008; Farrington, 2008; Gambhir et al., 2008; Husbands, 2008; Rasmussen, 2008). Critics of university-based teacher education question the degree to which initial teacher education courses actually prepare teachers for classroom teaching. Some argue that more credit hours should be spent on ensuring mastery of content knowledge and less in pedagogy, while others assert that the teacher candidates will recognize the value of education studies later in their teaching careers; on the latter point there is little evidence to suggest that this is actually the case. There are also calls to make the practicum more effective and for schools to make more diverse and meaningful learning opportunities available to trainees.

The discontinuity between coursework and practice is also evident to teaching candidates as there is a disparity between the theoretical work they are taught and their observations of teaching practices

## Pathways Into and Preparation For Teaching

in schools (Russel et al., 2001, as cited in Gambhir et al., 2008). Moreover, Gambhir et al. also note a disparity in how candidates are supported in applying theories they learn to practice in meaningful, critical and explicit ways. Rasmussen (2008) notes the need for a closer integration of academic or content knowledge, didactic or pedagogical knowledge, and praxis or practicum. This “triad” is often an uncoordinated patchwork, and the fact that the integration and synthesis of these areas are largely left to the candidates themselves is risky.

Grossman (2008) calls for a stronger connection between research on teaching and research on teacher education. Clearly research on teaching could and should inform the content of teacher education – what gets taught, how and for what purposes. She also makes the point that researchers and teacher educators must look beyond the cognitive demands of teaching to an expanded view of teaching, focusing on teaching as a practice encompassing cognition, craft and affect. There is now an acknowledgement of the necessity for a shift from the traditional skills-based transmission and training models to more holistic models of teacher preparation. This is evident in all Alliance countries. In Canada, social constructivist approaches to learning have been adopted with a focus not only on the development of the individual but also on fostering an awareness and understanding of education in the broader context of the community and the world (Gambhir et al., 2008). This approach is an acknowledgement of the importance of reflexivity, a part of the redefined professionalism. Such a stance arises from a broader perspective of the “whole teacher” and emphasizes reflective practice, critical inquiry, and the engagement of candidates in learning communities (Sleeter, Torres, & Laughlin, 2004; Taylor & Sobel, 2001, as cited in Gambhir et al., 2008).

As called for under redefined professionalism, a constructivist and inquiry orientation is necessary to build teacher capacity to investigate educational concerns and to learn to critically use high-quality research to inform their professional practice over time. Additionally, there is a general understanding that ITE programmes need to introduce and model powerful forms of instruction and collaborative inquiry, to infuse research for teacher candidates and to be responsive to ongoing change (Gambhir et al., 2008).

## Exemplar 10

# Master of Teaching at the University of Melbourne

The Melbourne Graduate School of Education designed and introduced a new 2-year Master of Teaching in 2008 in response to concerns over the theory-practice gap, the relevance of some theoretical components of their courses, and the capacity of beginning teachers to adequately deal with classroom management issues, perform assessment and reporting tasks, and communicate with parents. The purpose of the programme is to cultivate a new generation of teachers as interventionist practitioners with high-level analytical skills and capabilities to use data to diagnose and meet the learning needs of individual learners. The programme has a substantially revised curriculum and is linked to a new partnership model with selected schools. In this programme, teaching is viewed as an academically taught, clinical-practice profession similar to nursing, clinical psychology and other health professions. Schools are used as “clinical” sites involving highly skilled, interventionist teachers, referred to as Teaching Fellows (who are recognized as honorary members of the University for their contribution to the clinical training component of the programme). The programme model requires additional investment from both the university and school sectors, the University Clinical Specialists and schoolbased Teaching Fellows. Another critical element of this programme is the professional development for these two roles. Funding is provided by a number of government bodies. The programme also extends to an induction programme. 🐦

*Source: Farrington (2008); Melbourne Graduate School of Education (2007)*



## Pathways Into and Preparation For Teaching

Developing capacity for collaboration in teacher candidates is also called for under this redefined professionalism. Gambhir et al. (2008) call for systematically building in opportunities for professional inquiry and collaboration in the everyday experiences of teacher candidates in ITE to inform personal practice and programme improvement. Such practices include structured professional dialogue, shared planning as a learning activity, cohorts or communities of practice, and online professional networks.

### Preparing Teachers for Diverse Learners

Given the near universal trend of diversifying student populations, ITE programmes can no longer approach teacher preparation for diverse learners merely through current recruitment methods (Zeichner & Flessner, in press). Instead, Gambhir et al. (2008) call for more systematic and explicit attention to be given to issues such as equity, inclusion and social justice. Nearly all the Alliance members brought up the issue of diversity, of diversifying schools and of teacher preparation for diverse learners and for increasing attention to be given to these topics (Cho, 2008; Farrington, 2008; Gambhir et al., 2008; Husbands, 2008; Rasmussen, 2008). In Canada, various programmes are making more explicit institutional commitments in the areas of recruitment, admissions, hiring, curriculum infusion, conferences and forums, university and field enquiries, among others (Gambhir et al., 2008).

This appears to be less of a concern in countries with more homogenous populations, such as China and South Korea. In culturally diverse Singapore, where there are still overlaps between ethnicity and underachievement, the strategy for schools is to focus on early identification and remediation strategies. Additionally, there are efforts to offer a more diversified curriculum and relevant pedagogy at the secondary level. Teacher recruitment is purely on the basis of merit.

The centrality of relationships in teaching is highlighted by Grossman (2008). She argues that more attention needs to be given to how teachers establish pedagogical relationships with students and how such relationships are used to engage students in learning as there is a lack of research in this area. Such an understanding would also be relevant and useful in preparing teachers to effectively work with students differentiated by race, ethnicity, socio-economic status and language. In Denmark, as in other developed economies, the cultural effects of globalization have resulted in hybrid identities. Nurturing

## Pathways Into and Preparation For Teaching

the capacity of teachers to respond in sensitive ways to students inhabiting a variety of cultural spaces, sometimes simultaneously, is crucial to the effective preparation of teacher candidates. One way in which this can be done is highlighted in Exemplar 11.

### Exemplar 11

## The M/M Center at California State University, Sacramento

The Multilingual/Multicultural Teacher Preparation Center, or M/M Center, in California has developed a comprehensive programme that aims to prepare teachers as change agents working towards social justice in low-income and culturally and linguistically diverse classrooms, schools and communities. Race- and language-conscious policy making and programme development characterize its history and current operations, including candidate recruitment, faculty hiring, and the content and theory of the programme. Multicultural content and the application of theory into practice via extensive field experiences in schools serving low-income and culturally and linguistically diverse students anchor the programme design. Data indicates that the programme and its early recruitment approach have attained significant successes. In 2004, California public school teachers were 72% White, 15% Hispanic, about 5% Asian, 5% African-American, and 3% of other ethnicities. Candidates of the M/M Center invert these statistics with over 75% belonging to ethnic minorities, and their White students are usually bilingual. 🐦

*Source: Wong et al. (2007)*



## Pathways Into and Preparation For Teaching



### Developing ICT Literacy in Teachers

In the 21st century information economy and knowledge society, the need for the development of ICT literacy in teachers and students cannot be ignored. Choi, Han, Cho and Lee (1996, as cited in Pang, 1999) define information literacy as the ability to adapt to an information society and to use electronic equipment, including computers, multi-functional telephones and other modern communication tools, in order to access information as needed. Developing ICT literacy not only allows for the access and navigation of information but also self-directed learning, as it has the potential to free students from the constraints of time and space. It includes the ability to search for, manage and retrieve information rapidly and to work collaboratively with others. ICT literacy also includes the ability to dialogue, learn and chat in cyberspace (Pang, 1999).

At a systemic level, ICT has the capacity to overcome the constraints imposed by distance. Larger countries with considerable variance in educational access are constantly seeking new ways of providing greater access. In the Pro-Letters Mobilisation for Education Quality initiative (Brazil Ministry of Education, 2008) access for poor students in elementary schools is being tackled by innovative means such as using the National Net, videos and customized materials. The Brazilian Open Technical School System (Brazil Ministry of Education, 2008) in a similar fashion uses remote teaching to expand and democratize access to quality instruction for technical students. In order for teacher candidates to nurture such competencies in their students, they must themselves be skilled in such competencies. Teachers need to be skilled in the production of education materials in the form of hypermedia as these can improve classroom pedagogy and learning. ICT also has the potential to impact the ways teachers collect and compile student work and information, as well as to provide different avenues for student learning. In the area of formative assessment, technology can provide teachers with data in a manner that will enable them to offer better pedagogical choices and be better facilitators of learning. It has been noted that communications technologies offer tremendous potential in addressing the theory-practice divide and the division between universities and schools. Information technologies allow students to access, analyze and discuss research materials from off-campus sites (Husbands, 2008). Research in NIE, Singapore has shown how video technology can be effectively used to mentor students doing their practicum in a number of schools in real time (Sharpe et al., 2000).

## Pathways Into and Preparation For Teaching

As knowledge, learning, teaching and technology continue to evolve, teacher education likewise needs to continually evolve and respond to changing landscapes. Therefore, it is fundamentally necessary for teacher education to continually innovate in order to respond to the ever-changing needs. As in all professions, technology offers the potential to enhance practice. Though technological innovation in teaching is relatively sparse, say in comparison to medicine or engineering, it could be argued that the education sector has not generally used well and creatively what has been available. The gap is evident when we realize how technologically savvy students have become and how new and powerful patterns of informal learning are emerging. At the very least, technology has the potential to release teaching and learning from the constraints of space and time, allowing for "anytime anywhere" learning. One example of ICT's potential is case-based teacher education where multimedia cases stimulate teachers' exploring classroom situations and establishing principles and developing methods that operate from the principles. An example of software that allows teachers to proactively work in case-based situations is shown in Exemplar 12.



### Exemplar 12

## Simulation as Practice in Teacher Education

The Cook School District software program is designed to allow teachers to choose a teaching assignment, based on grade and curriculum, and design instruction for that virtual class. The program begins by randomly drawing a set of “students” from its database to form a class and records about the students are then provided to the teacher candidates. Each simulated student’s record, including data about parents, health and attendance as well as cumulative academic performance is gathered from real information and entered into the program with identity protection. The software even features audio files of remarks made by previous teachers and counsellors which the teacher candidates can access. Based on this background information, the teacher candidate then proceeds to develop appropriate pedagogy and inputs this into the software. After this, the simulation provides feedback about the impact of the proposed lessons, giving details about each student’s expected achievement scores and on task behaviours. Such virtual practice and feedback give teacher candidates the opportunity to study the impact of their lessons on each simulated student, which in turn will allow them to connect their actions with the learning of each student in the real classroom. 🐦

*Source: Girod and Girod (2008)*



## Pathways Into and Preparation For Teaching

As indicated in the first two chapters, a rapidly changing social context and recognition of the need to widen stakeholder participation will require new initiatives within teacher education. Traditional preparation models have stressed individual competencies and involvement within individual schools. If teachers are now required to work collaboratively and productively with others, skills to initiate and sustain such dialogue need to be provided for within teacher education.

The transition from *students of teaching* to *teachers of students* is a difficult one. Regardless of the teaching pathway candidates undertake or the programme duration, new teachers may still not be fully prepared when they enter the classroom. Also teacher education programmes often do not prepare teachers to balance the administrative and other responsibilities that they are expected to take on in schools. In the spirit of partnership, universities and schools must collaborate to help novice teachers make effective transitions from campus to school. Possible means to nurture such a partnership include induction programmes and ongoing teacher professional development. The next chapter will discuss issues relating to developing effective induction programmes and the professional learning of teachers.



# 3

## Induction and Professional Development

- ▶ Newer Conceptions of Teacher Induction
- ▶ Strengthening Professional Development for Teachers



# Induction and Professional Development

Entry into any profession is often filled with challenges and stress. This is particularly true for beginning teachers who need to successfully experience the transition from university to school, going from being students of teaching to teachers of students and from being idealistic to practical (Moskowitz & Stephens, 1997). One major challenge stems from the fact that the culture, norms and practices of the campus are very different from those of the school. It is very important to support beginning teachers in making an effective transition and to facilitate this process by supporting them in becoming effective classroom teachers through a set of appropriate induction activities or programmes.

## Newer Conceptions of Teacher Induction

Five of the nine Alliance member countries – Australia, Canada, South Korea, Singapore and the United States – were included in a study of teacher induction in APEC countries published a decade ago (Moskowitz & Stephens, 1997). Mentoring was identified as the primary induction strategy for providing both personal and professional support to beginning teachers. Targeted interventions, such as orientation sessions, professional development courses, and school or regional workshops were other popular induction strategies. The APEC countries studied were found to be quite uneven in the provision of induction in terms of its structure, duration and support.

In 2003, another comparative study of teacher induction was undertaken by Britton, Paine, Pimm and Senta. The study was entitled *Middle Grades Mathematics and Science Teacher Induction in Selected Countries*. Shanghai (China) and France were chosen as sites for mathematics teacher induction and New Zealand and Switzerland as sites for science teacher induction, with Japan added later. These sites were selected based on the high average scores in the Trends in International Mathematics and Science Study (TIMSS) and after two rounds of interviews with a dozen countries. In addition, these countries shared features of robust induction policies and practices, both in centralized and decentralized systems that had a history of more than 10 years. Researchers found that despite differences in cultural values and teacher education systems, “there is a universal belief that induction is important [to] form[ing] teachers and their profession” (Britton et al., 2003, p. 301).

## Induction and Professional Development

Positioned at a key juncture of learning, growth and support, induction occupies a special place, looking both backward to pre-service teacher preparation and forward to a career in teaching with its challenges of becoming and being a teacher. While some content will be mastered in teacher preparation courses, a deeper understanding of issues can only occur after novices take on responsibilities as classroom teachers. “At all phases, at different times, at various levels and varying degrees, individuals will be working on subject-matter knowledge, pedagogical content knowledge, and teaching. They will be affected by various policies, program designs and providers’ activities. In all of these phases, they will need to be involved in continual reflection and learning,” (Britton et al., 2003, p. 4). It is in this sense that induction is a *phase* in learning to teach, a *process* of enculturation into the school’s organization, and a *formal programme* for beginning teachers (Feiman-Nemser, Carver, Schwille, & Yusko, 1999).

Induction is first useful for supporting beginning teachers in making the all-important transition from campus to school and for facilitating their enculturation into the teaching profession. It can also address problems thrown up by weak teacher education, low recruitment, high teacher turnover, and an inadequate response of teacher education curricula to school reforms (Britton et al., 2003; Cho, 2008; Darling-Hammond, 1998; Fang, 2008; Farrington, 2008; Husbands, 2008; Zeichner & Paige, 2007.) How a system perceives and defines its problem determines how induction is approached to address the problem. For example, in the United States, which faces a high attrition rate for beginning teachers, induction has been regarded as an important device to retain teachers (Darling-Hammond, Berry, Hasselkorn, & Fideler, 1999). In Shanghai, Japan and France, where pre-service education focuses on subject-specific content mastery with very limited exposure to actual classroom experience (such as a very brief teaching practicum), induction has become an important tool for supporting beginning teachers in learning to become effective classroom teachers.

In spite of differences in the origins induction practices in all the five sites studied aimed to achieve broader goals; not just improving teaching quality but also personal development. They assumed that to support high achievement in pupils, beginning teachers are required to have a breadth of skills, knowledge and dispositions that can only be developed through guided learning in situ. To provide



## Induction and Professional Development

such guided learning, induction is conceived as “not primarily about fixing a problem but about building a teacher, a teaching force, a profession” (Britton et al., 2003, p. 302).

Newer conceptualizations of induction recommend that it be viewed as a system, and a comprehensive one “using a variety of coordinated means tailored to the perceptions of the novices’ and the general education system’s requirements” (Britton et al., 2003, p. 5). It is suggested that a comprehensive and robust induction system should have clearly articulated goals that go beyond mere support and assistance and aim to promote career learning and enhance teaching quality. Designers of induction programmes should take into account the different skills and knowledge required at different stages of a teacher’s growth in expertise in the context of a need for lifelong career learning. In order to achieve this, a comprehensive induction system will demand the well-coordinated efforts of multiple and complementary providers with clearly articulated roles and purposes. Given the challenges in supporting this important transition, induction support and activities may need to last for an extended period of time; the greater the degree of customization possible, the greater the benefits. The programme should, for instance, pay attention to initial school and teaching conditions, taking into account subjects, pupils and non-teaching duties assigned to beginning teachers.

Thus effective induction involves more than mentoring. It is a systematic framework with an overall design supported by policies to be conceived and coordinated among multiple providers to meet the early career learning needs of novice teachers.



### Exemplar 13

## A case in Shanghai

A formal induction policy was created by the Shanghai Municipal Education Commission in the late 1980s on top of long-standing school practices. Before the introduction of this formal policy, both secondary and elementary schools had informal induction programmes comprising mentoring, ongoing teacher research, study forums and teaching competitions among new teachers. The formal induction policy gave the new teachers one year's probationary status, during which schools provided contract mentoring and districts provided training that focused on three areas: education and professional ethics; education and teaching theory; and education and teaching practical skills. A minimum of 30 hours/periods over a year for the first two areas of training was allocated and guidance and training by the mentor involved at least 2 hours per week. Stronger teachers who are able to articulate their reflections on practice and connect their teaching to principles are selected to be mentors. The mentor/novice pairs are required to engage in weekly observations of one or two classes (including observing each other's lessons) throughout the year, and the mentor is required to keep a record of their activities and the novice's growth. Training units in the city provide programmes for new teachers, who are required to spend a half day during most weeks for much of the year participating in these programmes. For new teachers without prior formal teacher preparation, four courses are offered: pedagogy, psychology, subject-area methods, and being a class director. The Education Commission policy clearly stipulates the responsibilities, and the levels of the system are responsible for assessing specific aspects of the probationary teachers' knowledge and performance: ideological and professional ethics are assessed at the school level, and the subject-matter pedagogy and principles for being a class director by the district. General pedagogy and general psychology are assessed via a written municipal test. The policy also specifies conditions for probation to be extended; teachers who do not meet the assessment standards at the end of the first year are delayed from moving from probationary to permanent status. 🐦

*Source: Paine, Fang, & Wilson (2003, pp. 29–32)*



## Induction and Professional Development

The United Kingdom offers a contrasting but nevertheless revealing case, given their shift to more school-based models of teacher preparation. Their example suggests that where there is extensive school involvement in the preparation of teachers, the format of the induction programme will be different; for example, it will not be an “add on” to initial teacher education programmes. Extensive school improvement, by itself, will not result in better induction opportunities for there are a variety of arrangements and not all are equally effective. It is how well beginning teacher needs are met rather than the differences in models that will be the criterion of effectiveness.

### Exemplar 14

## Induction in the United Kingdom

For the past 15 years, 85% of all provision of initial teacher education in the United Kingdom has been through “close liaison between universities and school” (p. 3). Such a heavy school-based partnership model not only requires that students spend at least half of their initial training time in schools but also involves schools in selecting ITE students and in assessing student performance. Surveys have consistently indicated a high satisfaction rate of ITE students regarding the training provided through this model. Even though no specific information is available on the wide variety of ways that schools are involved in the ITE programme offerings, such a school-based model of teacher preparation does seem to suggest a better, almost seamless transition for beginning teachers into school teaching. 🐦

*Source: Husbands (2008)*

## Induction and Professional Development



## Induction and Professional Development

The Shanghai system of induction, according to Gu Lingyuan, Head of the China Centre for Research on Teacher Continuing Education, has enabled a majority of teachers to make an effective transition into classroom teaching – “few Chinese teachers ‘sink’ but ‘few excel’” (Paine et al., 2003, p. 54). It is interesting to note that Gu’s comment echoes Chris Husbands’ comment that while the UK model “produced largely effective practitioners, the models of reflection on practice which emerged constituted a restricted form of professionalism” (Husbands, 2008, p. 8). Care must therefore be taken to ensure that induction programmes do not lapse into a form of apprenticeship.

The development of future induction systems should therefore involve multiple providers working closely, with well-articulated roles defined by each provider. However, developers of teacher induction programmes across countries should be aware that such partnership-building poses challenges when the providers need to cross boundaries in order to successfully implement their roles. Overall planning and policy support are thus critical for such schemes to succeed.

### Strengthening Professional Development for Teachers

The call for higher educational standards for all students is supported by cognitive research in the mid to late 1980s, which concluded that “the linguistic and verbal reasoning abilities, literary standards and sophistication, and most values and precepts traditionally associated with elites are within reach of most students” (Hawley & Valli, 1999, p. 132). Teachers’ continued learning and professional development are key avenues for developing the knowledge, skills and dispositions required to teach all students to reach higher standards. Yet, higher expectations cannot be taught or imposed independent of context; they develop out of improved relationships with students and workplace collegiality.

Professional development needs to be understood as activities that lead to changes in knowledge and skills that more effectively respond to the problems of practice. It is predicated on the belief that such enhanced competencies will lead to improved student learning. Related to this is the idea that schools are valuable sites for teacher learning and that learning together with others in the school and in more extended networks of teachers will provide powerful learning opportunities.

## Induction and Professional Development

Effective professional development therefore needs to be primarily school-based, centred on issues of teaching and student learning and needs to be both developmental and ongoing. Teachers need to be involved in the identification of what they need to learn, and their individual learning needs must be met through organised and collaborative problem-solving settings. After the induction stage, teachers have better and more contextualised knowledge of their students, learning and non-learning issues and a better appreciation of what they, as individuals and as a school community, need in order to meet student needs. Hawley and Valli (1999) suggest that the content of learning should include the items indicated in Table 3.

**Table 3: What should learning involve?**

- Focus on what students learn and be driven by how to address the problems that students may have in learning that material
- Be driven by analyses of the differences between goals and standards for student learning as well as student performance
- Incorporate evaluation of multiple sources of information on the outcomes for students and process
- Provide opportunities to engage in developing a theoretical understanding of the knowledge and skills learned, which are then employed in implementing the lessons learned through professional development

*Source: Hawley & Valli (1999)*





## Induction and Professional Development

In order to create the best conditions for teacher learning, schools need to be organized in ways that integrate teachers' learning from daily practice into a comprehensive change process which deals with impediments to and enablers of student learning. Having enough time and a supportive school environment are important. Interestingly, in many East Asian countries rooted in so-called Confucian heritage cultures that have had a collectivist orientation to teaching and learning, there have been long traditions of teachers' learning together in their workplaces, which share most of the features of effective professional development design outlined above.

Teachers in China, Japan and South Korea share a long tradition of planning together and observing each other's lessons, fostered by a culture that values collegiality over individualism. This culture of collaboration enables teachers to pool together good ideas and resources and to form multiple perspectives of teaching materials and learners.





### Exemplar 15

## Lesson study as professional development in Japan

Japanese teachers have a long history of doing lesson study – cycles of activities in which teacher groups, usually by grade level, design, implement and improve together one or more research lessons and seek to make positive changes in instructional practice and student learning. Such collaboratively and carefully planned research lessons are taught by teachers, with team members observing lessons and taking careful notes on learning processes. This ongoing form of professional development has generated “shareable knowledge” and the development of schools as organizations where teachers can learn and progress together. It is also believed that lesson study contributed to Japan’s shift from “teaching as telling” to “teaching for understanding”, especially at the elementary level, from the 1970s to 1990s. 🐦

*Sources: Lewis & Tsuchida (1998); Stevenson & Stigler (1992); Stigler & Hiebert (1999)*

### Exemplar 16

### Team work as professional development in China

In China, team work is institutionalized by traditional Teaching Research Groups and Lesson Preparation Groups in every school, and opportunities to share in these groups help to socialize new teachers into a community that shares a common body of knowledge and speaks a common language. Teachers teach a relatively light load and sit together in the staff rooms by the subject matter or grade level they teach. Such physical arrangements provide opportunities to learn from other teachers and engage in collective analysis of their daily practice. The workplace culture promotes support, both personal and professional, for teachers as they go about their complex and demanding jobs. It also allows them to refine their craft together and engage in continual and gradual improvement of planning and teaching. As a result, mathematics teachers in China have a deeper understanding of the content knowledge and produce coherent and well-structured lessons. 🐼

*Sources: Fang, Hooghart, Song, & Choi (2003); Paine, Fang, & Wilson (2003); Stigler & Hiebert (1999)*



## Induction and Professional Development



### Exemplar 17

## Teacher Professional Development Model in Singapore

In 2001, the Education Service Professional Development and Career Plan (EduPac) was established. The EduPac career structure provides three tracks (viz., teaching, leadership and senior specialist) and is more responsive to the different talents, professional growth, development and aspirations of teachers. A related initiative, the Professional Development Leave (PDL) scheme, was improved to enable teachers to use the PDL scheme to seek continuous learning in professional practice.

In 2006, the Structured Mentoring Programme (SMP) was implemented to provide additional guidance and support for beginning teachers. The SMP is a structured and systematic approach, where the Ministry of Education and the National Institute of Education (NIE) collaborate to assist beginning teachers in the planning of their own learning and professional development under the Learning Framework, which outlines key developmental areas and milestone programmes and activities that teachers would require in their various school roles. Working with school mentors, NIE faculty, and other beginning teachers, and using practice-oriented courses, the collaborative nature of the





SMP provides for opportunities to develop a culture where teachers, school leaders, experienced and beginning teachers share a sense of growing together as a community of learners.

NIE, in consultation with the Ministry, also developed a Professional Development Continuum Model to help teachers enhance their classroom practices (through lifelong learning) and support their professional growth (through systematic upgrading and higher certifications). Two distinct features help teachers plan their professional development journey. First, a wider variety of programme courses allows teachers to select those courses that would interest and benefit them, thus encouraging them to take ownership of their own learning plans. Second, academic units linked to the course can be accrued for accreditation purposes, with the relevant certification being provided by NIE. 🐦

*Source: Goh & Lee (2008); Ministry of Education, Singapore (2006)*

In 1998, the Singapore Ministry of Education established a Teachers Network to cultivate collaborative inquiry as a way of increasing teachers' individual capacities to learn, and to manage knowledge and value diversity, thereby increasing both individual and organizational capacity to manage continuous improvement. Through the device of learning circles teachers with similar interests come together to share via the collaborative research groups committed to improving practice; more than 1000 learning circles exist today (Chong & Gopinathan, 2008, p. 120).

Two decades of effort in implementing education reform has provided new insights to the vital task of changing teacher pedagogical behaviours to accommodate challenges posed by reform initiatives. In order to be effective, professional development programmes must incorporate such demanding changes as building the cultural competencies of both young and old teachers, and utilizing new technologies in teacher development. For example, the online professional development courses offered by Martha Stone and colleagues at Harvard University are being accessed by teachers in China who have benefited from the student-centred concepts and approaches to teaching English as a foreign language. Video cases and web-based cognitive tools which have been developed by researchers at universities and other non-government agencies are playing larger roles in the professional development of teachers.



## Induction and Professional Development

As structuring coherent and coordinated programmes is challenging and often costly, policy willingness to support such evidence-based programmes is critical. Teacher professional learning must be viewed as an ongoing and job-embedded habit, with opportunities for substantive learning seen to be part and parcel of the teachers' daily work and rooted in the larger contexts of school practice. A teacher professional development continuum that incorporates elements of career tracks and performance monitoring which has been put to use by the Ministry of Education in Singapore is a small step in this direction (see Exemplar 17).

Another effective but costly professional development initiative is to create and sustain communities of practice; in the same way that industries involve designers, researchers, engineers and end users in research and development, teachers can be involved in developing the prototype knowledge and skills needed to teach for enhanced student understanding. Feiman-Nemser (2001) suggests that through “critical and thoughtful conversations, teachers develop and refine ways to study teaching and learning” (p. 1042). These discussions will involve “rich descriptions of practice, attention to evidence and possibilities” (p. 1042). This is high-level contextualized intellectual work. The creation of such networks and communities of “teachers helping teachers” will need to be speedily addressed if pedagogical reforms are to be successfully implemented.

# 4

## Partnerships for Teacher Education

- ▶ Collaborative Partnerships for Higher Quality Teachers and Teaching
  - ▶ Successful Partnerships in Teacher Education
    - ▶ Partnerships as Win-Win Relationships
  - ▶ Governments as Key Facilitators of Partnerships



# Partnerships For Teacher Education

We noted in the previous chapters how global trends impact teacher education. These realities, we argued, require a redefined professionalism for teacher education, innovative pathways into teaching, comprehensive teacher induction and continuous professional development of teachers. In order to realize the innovations we have outlined we need to move beyond traditional partnerships such as between teacher education faculties and schools to those involving other social agencies involved in child welfare to more effectively address barriers to learning and achievement (Husbands, 2008). With the publication of *Every Child Matters* in 2003, the UK government signalled this new approach (Education and Skills Committee, 2006). It requires educational agencies, especially schools, to work with a number of partners and have the skills to collaborate meaningfully with these agencies.

## Collaborative Partnerships for Higher Quality Teachers and Teaching

There is of course a reasonably long tradition of partnerships in teacher education. Schools and faculties of education have been involved in partnerships to ensure that teacher trainees are adequately prepared for the processes and routines of classrooms and schools; the practicum is an essential part of teacher preparation. An example is the well-known Oxford Internship Scheme in the United Kingdom, which is a one-year postgraduate programme designed to ensure that the school and university partners would offer different, distinctive and complementary contributions to teacher candidates' learning (McIntyre & Hagger, 1992). Yet other partnerships exist to make the professional development of teachers more effective. Still others aim to address the social equity issues of schooling by helping teachers build and enhance cultural competencies in order to help students from different socio-economic and cultural backgrounds achieve academically. These partnerships are especially numerous in the United States, where many of its urban schools are characterized by diverse learners and marginalized student populations.

This chapter focuses on partnerships in teacher education to improve learning outcomes for pupils. It outlines the characteristics of successful partnerships in teacher education and the necessary conditions that make them successful. In this chapter we define successful partnerships to be those that result in improved teacher quality and higher student achievement in the context of meaningful involvement by key stakeholders in the education process.

## Partnerships For Teacher Education

Professional development schools (PDSs), which were popular in the United States in the 1990s, are an example of innovative responses. PDSs can be compared to teaching hospitals in that they are clinical fields in which the university and school share responsibility for the preparation of teachers, faculty development and student learning. The teacher preparation programmes in effective PDSs are characterized by field experiences that are spread throughout the duration of the programme, close linkages between theory and practice, continuous supervision of candidates by both school and university personnel, strong support systems for the teacher candidates and collaborative programme design and implementation. Such programmes have had a deep impact on the design of new teacher education programmes (Mantley-Bromley, 2001, as cited in Ridley, Hurwitz, & Hackett, 2005, p. 47). The closely worked-out partnership between schools and higher education institutions that characterizes the Oxford Internship Scheme is described in Exemplar 18.





## Exemplar 18

# The Oxford Internship Model

The Oxford Internship Scheme is a one-year postgraduate programme for intending secondary school teachers, operated in partnership by the University of Oxford, Oxfordshire Local Education Authority and its secondary schools. The scheme allows the interns to acquire situational knowledge of teaching and enjoy the status of school membership as a teacher. It is aimed at ensuring the interns' attainment of basic classroom competence necessary for certification, and also at development of the skills, understandings and attitudes necessary for them to be self-evaluating and self-developing teachers. The programme is underpinned by a closely integrated school-university programme, jointly developed by university tutors and school teachers/mentors, but the gradual development of the tasks set for the interns throughout the year is the major responsibility of the mentors. The scheme recognizes that each partner has diverse contributions to make and that they complement each other as different sources of ideas and practices. 🐦

*Source: McIntyre & Hagger (1992)*





## Partnerships For Teacher Education

Given the challenges noted earlier, we need more expansive and comprehensive partnerships that better address the complexity of schooling and education and the growing diversity of learners. Partnerships are not only about internship or working with teachers to acquire skill sets for classroom teaching and/or to understand policies and practices of the school system. Redefined professionalism requires models of partnerships that engage both expert teachers and university faculties in the design, development and evaluation of teacher preparation programmes. Such partnerships cannot be limited to the period of the internship or practicum; university faculty are increasingly involved in other school activities such as school planning and curriculum development.

### Successful Partnerships in Teacher Education

In order to strengthen partnerships in teacher education, other faculties within the university have to be involved in teacher preparation together with the faculty of education and the schools (Friedman & Wallace, 2006). No longer is the student-teacher the sole responsibility of the teacher education faculty; co-sharing arrangements will bring to a teacher preparation programme the broad expertise that resides in other faculties of the university. Innovative and inter-faculty twinning of curriculum and preparation processes and adviser support are examples of these new linkages. Such involvement will enable teacher preparation and teaching to be recognized as serious intellectual work, and thus create a better understanding of the importance of high quality teacher preparation within the university.

### Exemplar 19

### A partnership exemplar from the US

The Teachers College of Emporia State University in the United States, home of the National Teachers Hall of Fame, values two elements of partnerships. The first element involves public schools. Professors and teachers, who built the professional development schools and the school district, invest time, human capital and resources to make the project work. The elementary education professors are in schools every day teaching demonstration classes, team teaching with school teachers, and mentoring student-teachers; arts and sciences faculty frequently join them. The second aspect of partnership is with the arts and sciences faculty who teach methods courses in their disciplines and supervise student teaching. These faculty members feel a sense of ownership and pride in the teacher education students. Some even look for potential teachers among their freshman and sophomore classes and persuade them to apply to become teachers, or advise pre-education students to shift to other careers if they lack the qualities that would make a good teacher. The desire to provide high-quality teacher education is so ingrained in the arts and sciences faculty that one of the criteria for hiring faculty is the candidate's interest in preparing teachers in their respective academic discipline. 🐦

*Source: Levine (2006)*



## Partnerships For Teacher Education



### Exemplar 20

### More hands make a better teacher

At Clark University in Massachusetts, its partnership with University Park Campus School, received national recognition for its outstanding student achievement. “Several teachers play co-instructor or assistant instructor roles in teacher preparation programmes with education faculty, while other teachers participate with arts and sciences and education faculty on curriculum teams in history, humanities, mathematics, and sciences focusing on authentic curriculum and disciplinary learning consistent with state guidelines and corresponding classroom practice” (p. 52). Mentor teachers, education faculty and student-teachers all participate in classroom observation. It is observed that continuous professional learning is embedded in the culture, and the teachers frequently visit each other’s classrooms. 🐦

*Source: Del Prete (2006)*





## Partnerships For Teacher Education



## Partnerships For Teacher Education

Traditional conceptions of partnerships have largely been limited to enhancing university-school links. However, given the complexity of the educational challenge and raised expectations of key stakeholders, there is a trend towards enlarging the circle in partnerships. The UK government's *The School's White Paper*, for example, proposes the creation of a self-governing Trust, among others, "that will enable them to work with new partners to develop their ethos and raise standards" (Education and Skills Committee, 2006, p. 8). It also proposed the creation of a National Schools Commissioner to drive change and match schools and new partners. Parents are to be further empowered with greater access to pupil achievement data, better local complaints procedures, and the ability to set up new schools supported by a dedicated fund.

These proposed changes will have a major impact on how teachers in future schools see their roles; it will certainly not be focused only on instruction. The whole process of improving student achievement will now be shared with key stakeholders. Attributes of good teaching therefore will no longer be limited to mastery of content or pedagogic skills but will have to include interpersonal skills, communication skills, and enhanced empathy for the views and perspectives of others in the community.

### Partnerships as Win-Win Relationships

A mere memorandum of understanding among schools, school districts and universities for teacher preparation would not be enough to establish a productive partnership in teacher education. A report that surveyed 50 teacher education institutions about their partnerships in Queensland, Australia, identified the need for clear definition and recognition of purposes, flexible strategies for achieving the purposes and the continued and active participation of all as being important (Queensland Board of Teacher Registration [BTR], 1997). Mutual respect, continuous resource allocation and a rewards and recognition system that is equitable and fair are also significant elements of successful partnerships (Del Prete, 2006).

## Partnerships For Teacher Education

First, the partnership has to have shared goals and purpose that are developed collaboratively, taking into account the different interests of the various partners as partnerships are agreements to do something together that will benefit all partners, bringing results that could not be achieved by a single partner operating alone. The shared goals and purpose will also facilitate commitment in the partnership as the partners see that the focus of the partnership is relevant to their own core work. In Massachusetts, a university-school partnership resulted in enhanced teacher quality and student achievement. The main ingredient in this success story was that all the partners (university and school district) shared “the hope and belief in the power of education to increase the life chances of the children in the neighbourhood and in belief that all students can achieve” (Del Prete, 2006, p. 49).

The second ingredient for a successful partnership is the establishment of clear objectives and a flexible strategy to accomplish those objectives. The University Park Campus School in Massachusetts was jointly conceived by Clark University and the school district “in response to the challenge of ensuring academic success for the increasingly diverse and low-income children living in the relatively distressed neighbourhood” (Del Prete, 2006, p. 49). With that clear objective in mind, the strategy they employed included: a core academic curriculum supported by longer class periods in English language, arts and mathematics; a before/after school homework centre; a commitment to authentic learning; high expectations for all and a core belief in the capability of each student; and a close university-school partnership which promotes professional learning culture. The objective and hope of the school has been fulfilled: the first graduating class and the two subsequent classes qualified for postsecondary education. “All but one passed the state-wide standardised test on the first try over a period of five years, with an increasing number of students scoring in the top categories over time” (Del Prete, 2006, p. 49).

Another important aspect for successful partnership in teacher education is a mutual respect for the beliefs, perspectives, experiences, expertise and knowledge of partners, and a shared understanding that the ultimate purpose is to prepare teacher candidates more effectively so they can serve all the children in an equitable manner (Friedman & Wallace, 2006). Though trust and collegiality would not be easy in situations where teachers and university professors are differentiated by status and

## Partnerships For Teacher Education

power, this has to be overcome to ensure successful and long-term partnership. The partnership has to emphasize and make explicit the equality of all partners, recognizing that each one has its own expertise and critical perspective to contribute. This equality can be demonstrated through openness and sharing in decision making and responsibility. Practical strategies can also be employed to foster trust and collegiality such as engaging in social events, spending time getting to know each other and making each other feel that each one's contribution is valued.

The fourth ingredient for a successful partnership is to have adequate ongoing resources. For example, in Queensland, Australia, one of the barriers to success in educational partnerships is inadequate resources (Queensland BTR, 1997, p. 5). An OECD document noted that the successful partnerships not only started with sufficient government grants but also attracted resources from the private sector to continue and deepen the partnership among the university faculties, schools and beginning teachers (OECD, 1998). If a long-lasting partnership is the aim, then “stable structures are required and one should invest in them as a company would invest in its structures to ensure survival” (Brandstetter et al., 2006 , p. 17).





### Exemplar 21

## Heteronomy in English classrooms

The introduction of information technology (IT) into the classroom to encourage learner-centred instruction is increasingly becoming critical, especially with the advent of the information age. Although many higher institutions of learning are working closely with schools to provide better learning opportunities, the lack of expert IT skills and media resources hampers their work. This example illustrates how heteronomy works, where seemingly unrelated partners, coming from areas outside education, harness each other's strengths and work collaboratively. The resulting programme, called "Savannah", involved work by FutureLab, a small Bristol-based company that specializes in developing new IT environments in education; the state's Department for Children, Schools and Families; Nottingham University's Mixed Reality Lab; Hewlett Packard; and the BBC. 🐦

*Sources: FutureLab (2006) & Revell (2005)*

## Partnerships For Teacher Education

The fifth important aspect is compensation and rewards. Successful partnerships have creative ways of compensating the partners – stipends, travel reimbursements, provision of teaching and other professional materials, technology and software, child-care compensation to enable more time be devoted to writing, and so forth. These partnerships have recognized that teacher collaborators' lives are complex and busy and thus, compensation has to be adequate and sensitive to the needs of collaborators. Also, faculty collaborators must be given formal recognition for their service in schools that figure into their promotion, tenure and annual pay increases (Friedman & Wallace, 2006).

And lastly, to be able to create capacity and institutionalize the collaboration, continuing active participation is required by having ongoing renewal, leadership and management that would facilitate space for partners to grow and freedom for them to contribute in different ways at different stages. It is important to find ways of involving more followers, and even inviting sceptics and nay-sayers, in activities or meetings.

### **Governments as Key Facilitators of Partnerships**

Effective partnerships are vital in the effort to produce higher quality teachers and enhanced student achievement. It supports the redefined professionalism of teachers discussed in Chapter 2 as it enables teachers to work collaboratively with others (heteronomy). Partnerships also facilitate the growth of reflexivity among teachers, which is an important element in facilitating knowledge creation, authentic learning in the classroom, and lifelong learning of teachers and other professionals in the partnership.

Broader-based partnerships would also facilitate better engagement of the community in teacher education. With different perspectives, experiences and knowledge from the partners, there would be a higher probability of coming up with effective and responsive ways of connecting with the community to inform teacher education. Community engagement in teacher education is especially necessary so that future teachers can deal and communicate with the students and parents more effectively. Forms of community engagement could include teaching classes on-site in schools with community-based organizations, and integrating the community members (parents, community-based organizations,

## Partnerships For Teacher Education

community librarians, church workers, etc.) in workshops and conferences on teacher education. These forms of partnerships can vary depending on the goals, such as making the faculty aware of community resources that can be included in the courses, or even recruiting future teachers, or simply just valuing the community and parents in teacher preparation. This community engagement will improve the school setting of teacher education to promote culturally responsive pedagogies that will help improve student achievement.



### Exemplar 22

## Innovation in Partnership

The introduction of policy in Brazil (Law of Policies and Bases of Brazilian Education – known as LDB) in 1996 has required the inclusion of child-care and pre-primary education into mainstream education programmes. This challenge has been met by an innovative partnership strategy. The result of this has been a dedicated move by a consortium of three universities, the Foundation of São Paulo State Development, the Vanzoline Foundation and the Carlos Chagas Foundation to form degree programmes at the college level for all teachers teaching in early childhood education and the initial grades (1st to 5th years) of elementary school. The Secretary of State for Education, one of the largest employers of teachers, which funds the programme, worked with three universities, University São Paulo (USP), Universidade Estadual Paulista (UNESP), and Pontificia Universidade Catolica de São Paulo (PUC-SP) to create a unique teacher education programme with three distinct areas. Firstly, programming is organized around thematic blocks with deliberate interdisciplinary infusions. Secondly, it is technically supported by the Vanzoline Foundation and is externally evaluated by the Carlos Chagas Foundation. Thirdly, it uses interactive technology and media such as video and teleconferencing as well as the World Wide Web extensively. The programme has resulted in more than 11,000 teachers attaining college level degrees from 2003 to 2006, which is a remarkable feat. 🐦

*Source: Penin (2008)*



## Partnerships For Teacher Education

Lastly, if institutional collaborative partnerships require considerable funding, the government could intervene by providing attractive grants to facilitate the institutionalization of the partnership between the university and the school/school districts. This is vital because in many instances institutional resources for teacher education are already stretched. There is also a need to overcome initial resistance which will need to be managed by auxiliary staff. Given that the state, as in the UK, is promoting a wider involvement and distribution of responsibilities it should be ready to shoulder the additional costs.





# Conclusion



# Conclusion

In this report we have sought to provide a context both at the global and national levels and presented a case for strong initiatives in teacher education to better meet new challenges for teacher education.

We identified as key drivers at the global level the rapid pace of economic integration, technological advances, global competition for talent, the persistence of underachievement especially among minority and marginalized populations, increasingly diverse classrooms and heightened expectations for schooling among key stakeholders.

We have drawn attention to the differences, at the national level, to context, social trends and issues, culture and education histories. National school systems confront simultaneously the need to attend to national educational issues as well as to ensure that international research and best practice on persistent educational problems can be brought to bear on national problems.

While raising education budgets and curriculum reforms, among other measures, are important, it will be teacher and teaching quality that will ultimately be the most important factor in raising achievement for all students. Well-prepared, committed teachers will need to play multiple roles as instructors, coaches, facilitators, mentors and so forth. In order to play these roles well they will need to engage in broader and more empowering partnerships with key stakeholders and be committed as well to continual learning.

In this report we make four key assertions:

1. That teachers' work be re-conceptualized as complex and demanding and that the profession commit to a redefined professionalism that will enable teachers to better meet instructional and professional challenges;
2. That systems need to be innovative in attracting high quality and representative applicants and in constantly improving the design and delivery of teacher education programmes;
3. That a widened framework for teacher induction be adopted to build upon foundational skills and that opportunities be created for more relevant, powerful and teacher-owned professional development; and



## Conclusion

4. That new challenges in improving schooling and student achievement need new partnerships which governments can help resource, facilitate and, where appropriate, initiate.

Education reform, new opportunities for more engaged learning, greater involvement of key stakeholders, among others, provide an alternate environment for major changes in the way we prepare teachers. How well the education and policy community meets this challenge will determine how well our societies are able to prepare our young for complex and demanding futures.

# References

- Allen, M. B. (2003). *Eight questions on teacher preparation: What does the research say?* Denver, CO: Education Commission of the States.
- American Federation of Teachers. (2007). *Meeting the challenge: Recruiting and retaining teachers in hard-to-staff schools*. Retrieved June 10, 2008, from <http://www.aft.org/pubs-reports/downloads/teachers/h2s.pdf>
- Angus, D., & Mirel, J. (2001). *Professionalism and the public good: A brief history of teacher certification*. Washington, DC: Thomas Fordham Foundation.
- Annenberg Foundation. (2006, September 16). *Teacher education is out of step with realities of classrooms*. Retrieved June 10, 2008, from [http://www.annenbergfoundation.org/news/news\\_show.htm?doc\\_id=4039](http://www.annenbergfoundation.org/news/news_show.htm?doc_id=4039)
- Anyon, J. (1980). Social class and the hidden curriculum. *Journal of Education*, 162(1), 67–92.
- Applebome, P. (1996, January 7). Teaching teachers: Is experience the best teacher? *The New York Times*. Retrieved June 10, 2008, from <http://www.nytimes.com>
- Barber, M., & Mourshed, M. (2007). *How the world's best-performing school systems come out on top*. London: McKinsey & Company.
- Bereiter, C., & Scardamalia, M. (2005). Beyond Bloom's Taxonomy: Rethinking knowledge for the knowledge age. In M. Fullan (Ed.), *Fundamental change. International Handbook of Educational Change Series* (pp. 5–23). Netherlands: Springer.
- Brandstetter, R., Bruijn, H., Bryne, M., Deslauriers, H., Förschner, Macháčová, J., et al. (2006). *Successful partnerships: A guide*. Retrieved May 15, 2008, from the OECD LEED Forum on Partnerships and Local Governance Web site: at [http://www.forumpartnerships.net/attach/PartnershipsGuide\\_final.pdf](http://www.forumpartnerships.net/attach/PartnershipsGuide_final.pdf)
- Brazil Ministry of Education. (2008, March). *The teaching issue in the E-9 countries: Supply, retention, preparation and development of the teaching career*. Brazilian National Report presented at the 7th Meeting of Ministers of Education of Nine Developing Countries with Greatest Population-E9, Bali, Indonesia.
- British Columbia College of Teachers. (2008). *Teacher education programmes in British Columbia*. Retrieved July 10, 2008, from <http://www.bcct.ca/TeacherEducation/TeacherEducationOverview.aspx>

## References

- Britton, T., Paine, L. W. Pimm, D., & Senta, R. (Eds.). (2003). *Comprehensive teacher induction: Systems for early career learning*. Netherlands: Kluwer Academic.
- Cho, Y. (2008). *Innovations in training new teachers: The development of Korean education through a new system for colleges of education*. South Korean submission to the Alliance, College of Education, Seoul National University.
- Choi, D. J., Han, S. E., Cho, C. H., & Lee, Y. B. (1996). *Multimedia sidae jongbo gyokcha haeso pangahne gwanhan yongu* [How to dissolve the information gap in the multimedia age]. Seoul, Korea: Information Culture Center of Korea.
- Chong, S., & Gopinathan, S. (2008). Singapore. In T. O'Donoghue & C. Whitehead (Eds.), *Teacher education in the English-speaking world: Past, present and future* (pp. 121–137). Charlotte, NC: Information Age.
- Cochran-Smith, M. (2004). The problem of teacher education. *Journal of Teacher Education*, 55(4), 295–299.
- Cochran-Smith, M., & Zeichner, K. (2005). *Studying teacher education: The report of the AERA Panel on Research and Teacher Education*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Dai, C., Sindelar, P., Denslow, D., Dewey, J., & Rosenberg, M. (2007). Economic analysis and the design of alternative-route teacher education programs. *Journal of Teacher Education*, 58(5), 422–439.
- Darling-Hammond, L. (1998). Teacher learning that supports student learning. *Educational Leadership*, 55(5), 6–11.
- Darling-Hammond, L. (2000). Teacher quality and student achievement: A review of state policy. *Education Policy Analysis Archives*, 8(1). Retrieved June 10, 2008, from <http://epaa.asu.edu/epaa/v8n1>
- Darling-Hammond, L., Berry, B., Hasselkorn, D., & Fideler, E. (1999). Teacher recruitment, selection, and induction. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 183–232). San Francisco: Jossey-Bass.
- Del Prete, T. (2006). Equity and effectiveness: Challenge and promise in a tale of two schools and a partnership. *Equity and Excellence in Education*, 39, 47–54.
- Dempster, N., Sim, C., Beere, D., & Logan, L. (2000). *Teachers in Australian schools: A report from the 1999 national survey (Final report)*. Canberra: Australian College of Education.

## References

- Department of Education and Early Childhood Development. (2002). *Career Change Program*. Retrieved June 3, 2008, from <http://www.teaching.vic.gov.au/news/careerchg/default.htm>
- Department for Education and Skills. (2005). *The Schools White Paper: Higher standards, better schools for all*. Retrieved October 6, 2008 from the Department for Children, Schools and Families Web site: <http://www.dcsf.gov.uk/publications/schoolswhitepaper>
- Education and Skills Committee, House of Commons. (2006). *The Schools White Paper: Higher standards, better schools for all*. London: The Stationery Office.
- Elliott, J. (1991). A model of professionalism and its implications for teacher education. *British Education Research Journal*, 17, 309–318.
- Fang, Y., & Zhu, Y. (2008). *Reform and development of teacher education in China in the new century*. Singapore-based research for the Alliance, The National Institute of Education.
- Fang, Y., Hooghart, A., Song, J., & Choi, J. (2003, April). *Roles in context—Examine staffrooms as sites for teacher learning in three cultures: China, Japan, and South Korea*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.
- Farrington, F. (2008). *Teaching and teacher education in Australia*. Australian submission to the Alliance, Graduate School of Education, University of Melbourne.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013–1055.
- Feiman-Nemser, S., Carver, C., Schwille, S., & Yusko, B. (1999). *A conceptual review of literature on new teacher induction (A report prepared for National Partnership on Excellence and Accountability in Education)*. Washington, DC: NPEAT.
- Fraser, J. W. (2007). *Preparing America's teachers: A history*. New York: Teachers College Press.
- Friedman, A., & Wallace, E. K. (2006). Crossing borders: Developing an innovative collaboration to improve the preparation of high school English teachers. *Equity and Excellence in Education*, 39, 15–26.
- Furlong, J. B. (2008, February). *Changing models of partnerships in initial teacher education: The English experience*. Paper presented at the Asia Pacific Deans of Education Forum, Perth, Australia.
- FutureLab Projects. (2006). *Savannah Project*. Retrieved July 10, 2008, from [http://www.futurelab.org.uk/resources/documents/project\\_flyers/savannah.pdf](http://www.futurelab.org.uk/resources/documents/project_flyers/savannah.pdf)



## References

- Galindo, R. (1996). Reframing the past in the present: Chicana teacher role identity as a bridging identity. *Education and Urban Society*, 29(1), 85–102.
- Gallery of Teaching and Learning. (2006). *Inside teaching*. Retrieved June 10, 2008, from <http://gallery.carnegiefoundation.org/insideteaching>
- Gambhir, M., Broad, K., Evans, M., & Gaskell, J. (2008). *Characterizing initial teacher education in Canada: Themes and issues*. Canadian submission to the Alliance, Ontario Institute for Studies in Education, University of Toronto.
- Girod, M., & Girod, G. R. (2008). Simulation and the need for practice in teacher preparation. *Journal of Technology and Teacher Education*, 16(3), 307–337.
- Goh, C. B., & Lee, S. K. (2008). Making teacher education more responsive and relevant. In S. K. Lee, C. B. Goh, B. Fredrikson & L. P. Lan (Eds.), *Towards a better future: education and training for economic development in Singapore since 1965*. Washington, DC: World Bank Publications.
- Goodson, I., & Hargreaves, A. (1996). Teachers' professional lives: Aspirations and actualities. In I. Goodson & A. Hargreaves (Eds.), *Teachers' professional lives* (pp. 1–27). London: Falmer Press.
- Goodwin, L. (2002). Teacher preparation and the education of immigrant children. *Education and Urban Society*, 34(2), 156–172.
- Grossman, P. (2008). Responding to our critics: From crisis to opportunity in research on teacher education. *Journal of Teacher Education*, 59(1), 10–23.
- Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal*, 45(1), 184–204.
- Gurskey, D. (2002). Recruiting minority teachers. *The Education Digest*, 67(8), 28–34.
- Hanushek, E. A., & Wößmann, L. (2007). *Education quality and economic growth*. Retrieved June 10, 2008, from [http://edpro.stanford.edu/hanushek/admin/pages/files/uploads/Edu\\_Quality\\_Economic\\_Growth-1.pdf](http://edpro.stanford.edu/hanushek/admin/pages/files/uploads/Edu_Quality_Economic_Growth-1.pdf)
- Hawley, W. D., & Valli, L. (1999). The essentials of professional development: A new consensus. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 127–150). San Francisco: Jossey-Bass.
- Haycock, K. (2001). Achievement in America: Can we close the gap? *Educational Leadership*, 58(6), 6–11.

## References

- Honawar, V. (2007). Reports renew debate over alternative preparation. *Education Week*, 27(1), 11.
- Husbands, C. (2008). *Reflections on issues in teacher education*. United Kingdom submission to the Alliance, Institute of Education, University of London.
- Lee, T. J. (2007, July 1). South Koreans won over by bargain buys overseas. *The Straits Times*. Retrieved June 10, 2008, from <http://www.nationmultimedia.com/search/page.news.php?clid=6&id=30038217>
- Levine, A. (2006). *Educating school teachers*. Retrieved May 27, 2008, [http://www.edschools.org/pdf/Educating\\_Teachers\\_Report.pdf](http://www.edschools.org/pdf/Educating_Teachers_Report.pdf)
- Lewis, C., & Tsuchida, I. (1998, Winter). A lesson is like a swiftly flowing river: Research lessons and the improvement of Japanese education. *American Educator*, 14–17 & 50–52.
- Lipka, J. (1991). Towards a culturally based pedagogy: A case studying of one Yup'ik Eskimo teacher. *Anthropology & Education Quarterly*, 22, 203–223.
- Lucas, C. (1999). *Teacher education in America*. New York: St. Martins.
- Mace, D. P., & Leiberman, A. (2007). *Learning to teach: Sharing and the wisdom of practice*. Retrieved June 10, 2008, from the Carnegie Foundation for the Advancement of Teaching and Learning Web Site: <http://www.carnegiefoundation.org/perspectives/sub.asp?key=245&subkey=2056>
- MacLeod, D. (2003, January 6). Breakthrough teaching agreement 'only weeks away'. *The Guardian*. Retrieved June 10, 2008, from <http://education.guardian.co.uk/schools/story/0,,869629,00.html>
- Mantle-Bromley, C. (2001, April). *The status of early theories of professional development school potential: Progress of four settings across the United States*. Paper presented at the annual meeting of the American Educational Research Association, Seattle, WA.
- Mayer, D. (2006). The changing face of the Australian teaching profession: New generations and new ways of working and learning. *Asia-Pacific Journal of Teacher Education*, 34(1), 57–71.
- McIntyre, D., & Hagger, H. (1992). Professional development through the Oxford Internship Model. *British Journal of Educational Studies*, 40(3), 264–283.
- Melbourne Graduate School of Education. (2007). *Master of teaching: Incorporating the postgraduate diploma in teaching*. Retrieved June 9, 2008, from <http://www.edfac.unimelb.edu.au/mteach>

## References

- Ministerial Advisory Committee for Educational Renewal. (2003). *A creative workforce for a smart state: Professional development for teachers in an era of innovation*. Retrieved June 9, 2008, from the Queensland Government Department of Education Web site: <http://education.qld.gov.au/publication/production/reports/pdfs/creativeworkforce.pdf>
- Ministry of Education, Singapore. (2006, January 26). *Strengthening teacher development: The structured mentoring programme for beginning teachers* [Press release]. Retrieved August 2, 2008, from <http://www.moe.gov.sg/media/press/2006/pr20060126.htm>
- Moskowitz, J., & Stephens, M. (1997). (Eds.). *From students of teaching to teachers of students: Induction around the Pacific Rim*. Washington, DC: Department of Education.
- Organisation for Economic Co-operation and Development. (1998). *Staying ahead: In-service training and teacher professional development* ("What Works in Innovation in Education" series). Paris: Author.
- Organisation for Economic Co-operation and Development. (2005). *Teachers matter: Attracting, developing, and retaining effective teachers*. Paris: Author.
- Paine, L. W. (1990). The teacher as virtuoso: A Chinese model for teaching. *Teachers College Record*, 92(1), 49–81.
- Paine, L. W., Fang, Y., & Wilson, S. (2003). Entering a culture of teaching. In T. Britton, L. W. Paine, D. Pimm, & R. Senta (Eds.), *Comprehensive teacher induction: Systems for early career learning* (pp. 20–82). Netherlands: Kluwer Academic.
- Pang, M. (1999). *Trends and issues of teacher in-service & pre-service training in ICT: South Korean case*. Korea: Korea Multimedia Education Center.
- Queensland Board of Teacher Registration. (1997). *Partnership in teacher education: Report of the Working Party on Partnerships in Teacher Education*. Retrieved 10 June 2008 from <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED417151>.
- Penin, S. (2008). *Special teacher education programme at the college level*. Brazilian submission to the Alliance, São Paulo University, Brazil.
- Rasmussen, J. (2008). *Training teachers in Denmark: Ongoing reforms*. Danish submission to the Alliance, School of Education, University of Aarhus.

## References

- Revell, P. (2005). *The professionals: Better teachers, better schools*. England: Trentham Books.
- Ridley, D. S., Hurwitz, S., & Hackett, M. (2005). Comparing PDS and campus-based pre-service teacher preparation. *Journal of Teacher Education*, 56(1), 46–56.
- Rist, R. C. (1970). Student social class and teacher expectations. *Harvard Educational Review*, 40, 411–451.
- Robinson, W. (2008). England and Wales. In T. O'Donoghue & C. Whitehead (Eds.), *Teacher education in the English speaking world: Past, present and future* (pp. 45–61). Charlotte, NC: Information Age.
- Russel, T., McPherson, S., & Martin, A. (2001). Coherence and collaboration in teacher education reform. *Canadian Journal of Education*, 26(1), 17–55.
- Ryan, T. (2005). When you reflect are you also being reflexive? *The Ontario Action Researcher*, 8(1). Retrieved September 01, 2008, from [www.nipissingu.ca/oar/archive-Vol8No1.htm](http://www.nipissingu.ca/oar/archive-Vol8No1.htm)
- Sanders, W., & Rivers, J. (1996). *Cumulative and residual effects of teachers on future student academic achievement*. Knoxville: University of Tennessee, Value-Added Research and Assessment Center.
- Schon, D. A. (1987). *Educating the reflective practitioner*. London: Jossey-Bass.
- Sharpe, L., Hu, C., Crawford, L., Gopinathan, S., Moo, S. N., & Wong, A. F. L. (2000). Multipoint desktop videoconferencing as a collaborative learning tool for teacher preparation: A Singapore experience. *Educational Technology*, 40(5), 61–63.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
- Sleeter, C., & Grant, C. (2003). *Making choices for multicultural education: Five approaches to race, class, and gender* (4th ed.). New York: John Wiley & Sons.
- Sleeter, C., Torres, M., & Laughlin, P. (2004). Scaffolding conscientization through inquiry in teacher education. *Teacher Education Quarterly*, 31(1), 81–96.
- Solomon, R. P. (1997). Race, role of modeling, and representation in teacher education and teaching. *Canadian Journal of Education*, 22, 395–410.
- Stevenson, H., & Stigler, J. (1992). *The learning gap*. New York: Simon & Schuster.
- Stigler, J., & Hiebert, J. (1999). *The teaching gap*. New York: The Free Press.

## References

- Suell, J. L., & Piotrowski, C. (2007). Alternative teacher education programs: A review of the literature and outcomes. *Journal of Instructional Psychology*, 34(1), 54–58.
- Taylor, S., & Sobel, M. (2001). Addressing the discontinuity of students' and teachers' diversity: A preliminary study of preservice teachers' beliefs and perceived skills. *Teaching and Teacher Education*, 17(1), 487–503.
- Teo, C., H. (1997, July 30). *Ministerial statement at budget debate in parliament by Rear Admiral Teo Chee Hean, Minister for Education* [Press release]. Retrieved June 10, 2008, from <http://www.moe.gov.sg/media/press/1997/st00397.htm#1>
- Training and Development Agency for Schools. (2008). *Workforce Agreement and Monitoring Group*. Retrieved June 10, 2008, from <http://www.tda.gov.uk/remodelling/nationalagreement/wamg.aspx>
- Villegas, A. M., & Davis, D. (2007). Approaches to diversifying the teaching force: Attending to issues of recruitment, preparation, and retention. *Teacher Education Quarterly*, 34(4), 137–147.
- Walsh, K., & Jacobs, S. (2007). *Alternative certification isn't alternative*. Washington, DC: Thomas B. Fordham Institute and National Council on Teacher Quality.
- Whitty, G. (2006, March). *Teacher professionalism in a new era*. Paper presented at the 1st General Teaching Council for Northern Ireland Annual Lecture, Belfast. Retrieved June 4, 2008, from <http://www.ioe.ac.uk/directorate/GeoffWhittySpeeches/GTC-NIAddress03-2006.pdf>
- Wong, P. L., Murai, H., Berta-Avila, M., Arellano, A., & Echandia, A., (2007). The M/M Center: Meeting the demand for multicultural, multilingual teacher preparation. *Teacher Education Quarterly*, 34(4), 9–25.
- World Bank. (2005). *Expanding opportunities and building competencies for young people : A new agenda for secondary education*. Washington, DC: World Bank Institute.
- Wright, S. P., Horn, S. P., & Sanders, W. L. (1997). Teacher effects on student achievement. *Journal of Personnel Evaluation in Education*, 11, 57–67.
- Zeichner, K., & Flessner, R. (in press). Educating teachers for critical education. In M. Apple, W. Au, & L. A. Gandin (Eds.), *International handbook of critical education*. New York: Routledge.



## References

- Zeichner, K. M., & Paige, L. (2007). *The current status and possible future for 'traditional' college and university-based teacher education programs in the US*. United States submission to the Alliance, School of Education, University of Wisconsin-Madison.
- Zeichner, K. M. (2003). The adequacies and inadequacies of three current strategies to recruit, prepare, and retain the best teachers for all students. *Teachers College Record*, 105(3), 490–519.