

# Teacher Education and Ireland's National Strategy to Improve Literacy and Numeracy

SCOTENS Annual Conference  
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A Airí, a Chathaoirleach, agus a chairde uilig:

Cúis mhór áthais dom an cuireadh a fuair mé ó choiste Scotens labhairt ag bhur gcomhdháil bhliantúil anseo i gContae an Chabháin. Is mór agam an deis seo bheith i láthair ag bhur gcomhdháil agus an téama tábhachtach seo á phlé agaibh. Táim an-bhuíoch de bhur gCoiste Stiúrtha agus díot, a Chathaoirleach.

Ministers and friends:

I am delighted to be here today and honoured by your invitation to speak at this Scotens annual conference. As Minister Cannon remarked, you could hardly have chosen a more apt, nor a more strategically relevant, theme for your conference.

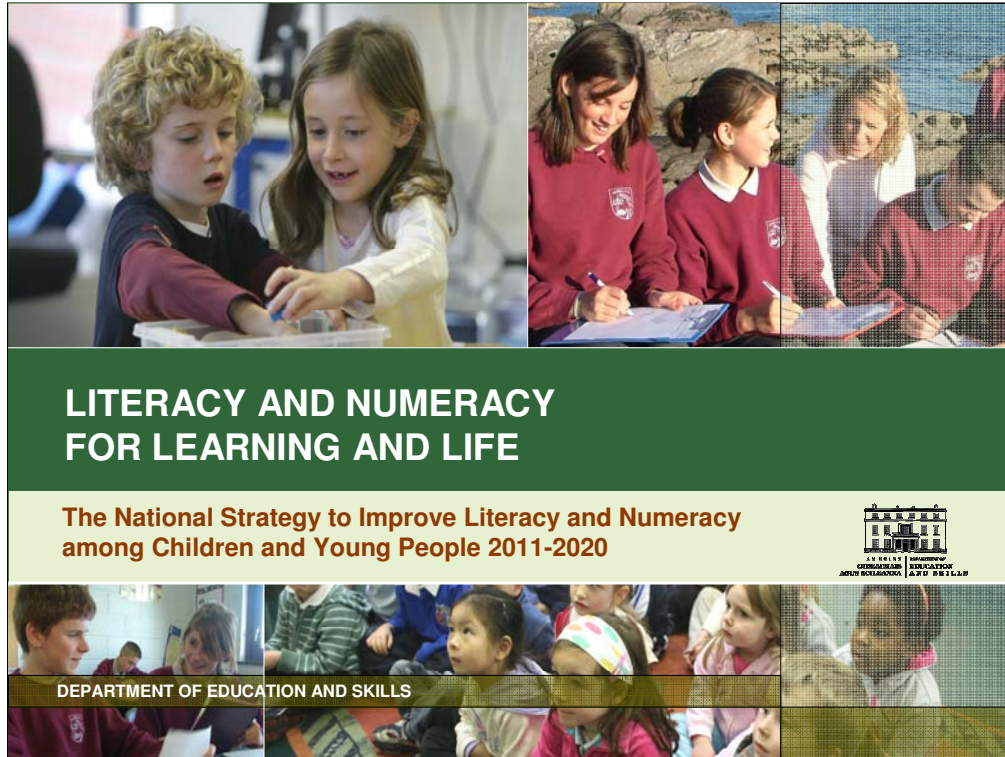
## The power of literacy and numeracy



Educational policy and the provision of education has always been a matter of central importance for Irish people and at times a matter of some controversy. A former owner of this house, the 5th Lord Farnham was a key protagonist in the evangelical Second Reformation and the associated bitter national controversies about Irish educational policy in the early nineteenth century. Those controversies centred on whether all Irish people would have access to a genuinely acceptable elementary education and whether education could or should be used for utilitarian, social or sectarian, denominational religious purposes.

We have come a long way since the 1820s and sectarian disputes of the sort in which Lord Farnham took part are thankfully long in the past. Yet, whatever the causes and contexts of those emotive arguments, they remain as evidence of the power that is inherent in literacy and numeracy. So, the historian in me cannot help but feel that it is somehow appropriate, that Scotens, which has done so much to build practical cooperation between educational communities north and south, should meet here. And I am genuinely honoured by the opportunity to be part of your conversation about how we can improve literacy and numeracy for all young people.

Improving the quality of teaching and teachers' ability to use all available approaches to encourage and monitor learning are perhaps the policy initiatives that are most likely to lead to significant gains in school performance and pupils' achievement. This conference provides a valuable opportunity to reflect on how teacher education can contribute to improving the teaching and learning of literacy and numeracy.



Your committee asked Sir Bob Salisbury and me to speak about the Literacy and Numeracy Strategies that have been developed in our respective jurisdictions, north and south. We hope to outline some of the concerns that the Strategies are designed to address and some of the challenges that face us in implementation.

*Literacy and Numeracy for Learning and Life* was published by Minister Ruairí Quinn in July of this year, following an intensive public consultation process and considerable development work between the Department of Education and Skills, the Department of Children and Youth Affairs and a number of agencies including the Republic's Teaching Council, its National Council for Curriculum and Assessment and the Educational Research Centre at Drumcondra in Dublin. The document sets out a ten-year strategy up to 2020 and it is perhaps the first educational policy document in the Republic to set out an integrated approach to improving standards across all the phases of education from early childhood to the end of the post-primary cycle as well as addressing curricular design and related teacher education issues.

## OUTLINE

- Context issues in the development of the Strategy
- Key features
- Targets in the strategy
- Areas for action
- Defining literacy and numeracy
- Improving the professional practice of teachers and pre-school staff

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Time this morning does not permit us to examine all of the areas of the Strategy in detail. Instead, I thought it might be useful to examine these issues and, in particular, to concentrate on themes that may be of immediate relevance to your own conference.

## CONTEXT: Concerns about literacy & numeracy

- Many aspects of the Irish educational system are very successful
- But we have had concerns about literacy and numeracy for some time...
  - No improvements in reading and maths over many years
  - Lack of problem-solving skills in maths
  - Low proportion of students taking maths at higher level in post-primary school
  - Inspection evidence showing concerns about the teaching of English and mathematics
  - Average performance on PISA Maths for several cycles <sup>5</sup>

Many aspects of the Irish educational system have served us well to date. Traditionally, Irish people have had a deep commitment to learning which has ensured that their children achieved high standards in our schools. Our very high school completion rates (at over 90%), the high proportion of students who go on to third level (approaching 70%) and the success of our graduates at home and abroad – all these indicators demonstrate that our educational system compares favourably with educational systems in other developed countries.

For some time however, we have had concerns about the quality of teaching of literacy and numeracy in our schools and the learning outcomes that are achieved by our learners. For example, many pupils at primary level continue to experience difficulties in the development of problem-solving skills. National Assessments suggest that at primary level, there has not been an improvement in standards in Mathematics in the past decade and in English reading in the past twenty years, despite the introduction of a revised curriculum and significantly increased resource provision such as additional mainstream teachers and special educational needs personnel.

At post-primary level, we continue to grapple with the challenge of increasing the proportion of students who are studying Mathematics at higher level for the State Examinations. Just over 15% of students took the Higher Level Paper in Mathematics for the Leaving Certificate in June this year.

## CONTEXT: PISA 2009

- **Ireland had been a strong performer in literacy in all previous rounds of PISA (2000, 2003, 2006)**
- **Declines in performance in 2009**
  - Reading: from “above average” to “average” range
  - Maths: from “average” to “below average” range
- **Impact of some population factors a mitigating factor**
- **Performance on digital literacy significantly above OECD average (yet not at the levels seen in 2000)**
- **Degree of decline almost certainly exaggerated by weaknesses in PISA methodology**
- **BUT declines have occurred since 2000**

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The results of the OECD’s PISA 2009 tests were a shock for the Irish educational system. The decline in the reading and mathematics scores of students in Ireland compared to previous PISA tests was unexpected. We were very disappointed to move dramatically from being positioned among the above average performing countries to among the average performing countries in reading, and from among the average performing countries to among the below average performing countries in Mathematics. Indeed, it is sobering to reflect on the fact that PISA suggests that 17% of all fifteen years olds and almost one in four teenage boys lack the literacy skills to function effectively in today’s society.

A number of population factors, such as higher numbers of SEN students in mainstream classes and students learning English as a second or additional language, go some way to explaining some part of these declines. Our performance in the digital literacy test gave us some solace; our students performed better on this test than they did in the pencil-and-paper test with the average score of students significantly above the OECD average. Yet this digital literacy performance lagged behind our performance in conventional reading in 2000.

Independent international investigations of the Irish outcomes in PISA 2009, have shown that the degree of decline in the Irish maths and reading scores is almost certainly exaggerated by fundamental weaknesses in the underlying methodology used in the calculations of trends in PISA. However, let me be perfectly clear: the PISA data show that the performance of Irish students’ in the reading and maths tests has declined in the decade since 2000.

## A PERFECT STORM...

- **Public and political attention aroused by coverage of PISA**
- **Coverage that ignored the complexities of PISA and its limitations**

### *But...*

- **Deepened public and political interest in how well students were learning**
- **Commitment to tackling long-standing issues and questions that needed to be addressed**
- **Real opportunity for national effort to improve the learning experience for young people**

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Inevitably, of all the context factors that I have mentioned, it is PISA that has attracted most coverage in the media. It is also probably frustrating for many educationalists that that media coverage, which is often simplistic and repetitive, ignores many of the complexities and limitations in the PISA data.

We could be disheartened by this – and I have some sympathy with that view – but ultimately railing against poorly informed comment is likely to be counter productive. I prefer to grasp the opportunities that this media attention has brought to the public discourse on the quality of our educational system. Many academic evaluations, inspectorate reports and national assessments which pointed out weaknesses in our educational system did not receive the same level of attention.

In 2010, we had a unique opportunity to galvanise the political and educational systems and the wider public into tackling long-standing issues and challenges in Irish education. The formulation of the Literacy and Numeracy Strategy was designed to harness this energy for the long-term improvement of the educational system.

## OVERALL APPROACH

### Consultation demonstrated support for...

- A renewed emphasis on literacy and numeracy in the educational system
- The importance of L&N for an individual's personal development, life chances and prosperity
- Good L&N skills – good for equity and social justice
- Need to improve literacy and numeracy standards
- A comprehensive approach from early childhood education to end of schooling
- Making improvements through a broad range of measures in an integrated way
- Setting clearly defined targets and the identification of definitive, time-bound actions

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In November 2010, the Department of Education and Skills launched a national consultation on a literacy and numeracy strategy. The response was overwhelming: almost 480 detailed written submissions and a number of oral submissions were received. Representatives of over 60 organisations took part in face-to-face focus group meetings. Several journals carried articles on the process. The extent of the response demonstrated the genuine interest that people within and beyond the educational system had for this issue.

A number of themes emerged strongly in the consultations. Clear support emerged for...

- A renewed emphasis on literacy and numeracy in the educational system
- The importance of literacy and numeracy for an individual's personal development, life chances and prosperity
- Ensuring that effective learning of literacy and numeracy make a major contribution to equity and social justice in Irish society
- A clear need to improve literacy and numeracy standards
- A comprehensive approach from early childhood education to the end of schooling
- Making improvements through a broad range of measures in an integrated way
- Setting clearly defined targets and identification of definitive actions



## KEY FEATURES

- Setting out measurable targets for improving literacy and numeracy in the period 2011-2020
- Identifying six areas for action to provide a comprehensive and integrated framework for developing literacy and numeracy at all stages of education
- Within the six areas, identifying specific actions with timeframes attached

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We therefore sought to address our concerns about standards by putting in place a framework that would support the seamless development of literacy and numeracy from early childhood to adulthood. The National Literacy and Numeracy Strategy does this through three key features:

- setting out measurable targets for improving literacy and numeracy in the period 2011-2020
  - identifying six areas for action that provide a comprehensive and integrated framework for developing literacy and numeracy at all stages of education
- and
- within these six areas, identifying specific actions with timeframes attached.

## AMBITIOUS TARGETS

For example...

- Ensure every school sets targets and monitors progress as part of school improvement plan
- Increase proportion of primary children performing at level 3 and above on national assessments of reading and maths by 5 percentage points
- Reduce proportion at level 1 on national assessments by 5 percentage points

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There is no doubt that the targets in the Strategy are ambitious. Nonetheless, I believe that they are realistic and provide a key focus for moving forward as well as a reference point for monitoring progress. For example, the Strategy commits us to decreasing the percentage of learners performing at the lowest and increasing those at the highest bands in national and international assessments of reading and mathematics by at least 5 percentage points.

## AMBITIOUS TARGETS

For example...

- Introduce standardised assessments of reading and maths at second level
- Increase proportion of 15-year olds at Level 4 or above in PISA by 5 percentage points
- Halve percentage of students at Level 1
- Raise public awareness of the importance of oral and written language
- Promote better attitudes to mathematics among children and young people

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The Strategy also commits us to raising public awareness of the importance of oral and written language and promoting better attitudes to mathematics among children and young people.

## SIX AREAS FOR ACTION

- **Enabling families and communities to support children's learning**
- **Improving practice among teachers and pre-school workforce**
- **Enabling principals and deputy principals to lead change and improvement**
- **Making sure the curriculum is clear about what we want children and young people to learn**
- **Supporting students with additional learning needs (SEN, high achievers, EAL, disadvantaged)**
- **Harnessing the potential of assessment and evaluation to support better learning**

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The six areas for action in the Strategy reflect the main drivers of educational success as identified in research. These are:[see slide]

You will note the inclusion of teachers' professional skills as a key area for action. Indeed, teachers and practitioners in early childhood and care education settings are the most powerful resource that we have within the educational system. We are well aware that recruiting the most able students to become teachers, and providing high-quality initial and continuing professional development for teachers throughout their careers make a very substantial difference to the quality of students' learning.

However, the strategy acknowledges that while teacher competence is undoubtedly a crucial determinant of quality, it must be complemented by other drivers such as harnessing the support of parents, the primary educators of their children; building the capacity of school leaders to create a climate conducive to improvement; ensuring that the content of the curriculum is amenable to implementation; and developing a culture of improvement in schools through improving assessment and evaluation approaches.

## WHAT IS LITERACY AND NUMERACY Consultation...

- Stressed need for comprehensive definition that encompassed oral and written language and digital literacy
- Mathematics as applied in everyday life, not as mechanical operations; greater emphasis on problem solving and areas that need additional attention
- Make sure definitions are carried throughout the document

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Can I turn to the definitions that we adopt for literacy and numeracy? Many of the submissions made to us stressed the need for us to adopt a comprehensive definition of literacy embracing all forms of written and oral communication and one for numeracy that stressed the ability to apply mathematical ideas in every day life. Commentators, fearful no doubt of a reductionist approach centred on the traditional 3Rs, emphasised the importance of a broader understanding of these skills being adopted consistently.

## Literacy

- Literacy and numeracy are much more than “reading, writing and arithmetic”
- Literacy is the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media and digital media
- Reflected in curriculum, in teacher education, in assessment, in overall targets

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The Strategy seeks to allay those understandable fears about a narrowing of the curriculum. In the Strategy, we define literacy as ‘*the capacity to read, understand and critically appreciate various forms of communication including spoken language, printed text, broadcast media, and digital media*’. This definition includes not just reading but the skills of speaking and listening as well as communication, using not only traditional writing and print but also digital media.

## Numeracy

- **Encompasses the ability to use mathematical understanding and skills to solve problems and meet the demands of day-to-day living in complex social settings.....**
- **Need to be able to think and communicate quantitatively, to make sense of data, to have a spatial awareness, to understand patterns and sequences, and to recognise situations where mathematical reasoning can be applied to solve problems**

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Rather than the traditional understanding of numeracy as an ability in number skills, the definition of numeracy in the Strategy prioritises the use of mathematical understanding and skills to solve problems and meet the demands of day-to-day living. The title of the Strategy itself, *Literacy and Numeracy for **Learning and Life*** is also apt. It reflects the fact that literacy and numeracy are not just important in their own right but help to equip children and young people with the skills and attitudes that will prepare them to meet the demands of the modern world in their personal lives, in their current and future learning, and in the workplace.

I am very much looking forward to hearing Professor Marsh and Professor O'Donoghue discuss these issues of definition in the next session of this conference.

## IMPROVING THE PROFESSIONAL PRACTICE OF TEACHERS AND PRE-SCHOOL STAFF

### ***Strengths to build upon...***

- Existing strengths of teaching workforce
  - Entrants of high calibre
  - Remains a high status profession
- Quality of teacher educators
  - Their knowledge of the growing body of national and international knowledge about teaching, learning and assessment in literacy and numeracy
  - Research capacity and track record
- Teachers as a profession
  - The major contribution of the Teaching Council

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I'd like to turn now to the area of teachers' professional development. I have already said that the quality of teaching in pre-schools and schools is a key determinant in successful literacy and numeracy learning. And I think it is important that we recognise the significant strengths that we have in our teaching profession.

While other countries have faced significant challenges in attracting suitable candidates to teaching, we are very fortunate to have a highly educated and committed teaching force. We have continued to attract entrants to teaching of a very high calibre even during a period of economic prosperity which contrasts with many other countries where the demand for teaching declined in such circumstances. Teaching remains a high status profession and entrance to teaching at both primary and post-primary level continues to be very competitive. For example, entrants to primary teaching continue to achieve a high level of points in their Leaving Certificate Examination and come from the highest achievement quartile of the students in the examination.

The development of the Literacy and Numeracy Strategy also demonstrated the strengths of the education departments in our teacher education institutions. The quality of the written submissions received from individuals, departments and whole colleges was very impressive as you will see if you visit the Department's website. Almost all of them encompassed superb wide-ranging reviews of current national and international research on literacy, numeracy and teacher formation. They illustrated the way in which those in charge of teacher formation are acutely aware of, and major contributors to, the growing body of knowledge about teaching, learning and assessment of literacy and numeracy. These contributions had a direct, tangible impact on the Strategy.

I believe that the development of Ireland's Literacy and Numeracy Strategy also points to the key role that the Teaching Council can play in improving educational standards. Long before the strategy was thought of, the Council, working within a policy framework set by the Minister for Education, had begun to evaluate and ask challenging questions about the effectiveness of existing teacher education courses. The Council's officers and committees worked closely with Department officials in setting the targets and defining the actions that were incorporated into the National Literacy and Numeracy Strategy. I am glad to have this opportunity to acknowledge publicly the major contribution that Council and particularly its Director, Aine Lawlor, played in ensuring that the teaching profession helped to shape the sort of professional development we will need to realise the targets in the Strategy.



## IMPROVING THE PROFESSIONAL PRACTICE OF TEACHERS AND PRE-SCHOOL STAFF

### ***But some concerns...***

- Low mathematical ability and poor standards in Irish among some entrants to teaching
- Lack of requirement for all students to complete courses in mathematics in BEd programmes
- Insufficient focus on developing teachers' knowledge of, and ability to apply, the growing body of knowledge about teaching, learning and assessment in literacy and numeracy

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Indeed, the work of the Teaching Council and others has pointed to some of the long-standing concerns that we have about teacher education. We know that the quality of entrants to teaching and the competences of our teaching graduates and teachers with regard to literacy and numeracy cannot be taken for granted. For example, low mathematical ability among a number of students entering undergraduate initial teacher education has been of concern for some time. So, too, has the ability of students in Irish.

There is also clear evidence that existing teacher education courses are providing insufficient opportunities for young teachers to develop their own literacy and particularly their numeracy skills. While the submissions from the colleges and university departments were a rich source of knowledge about teaching, learning and assessment in literacy and numeracy, concerns have been expressed that only a minority of student teachers enjoy opportunities to engage with this critical body of professional knowledge and practice in their pre-service courses.

Partly, this is to do with time: for some years we have known that the three year period for BEd courses and the nine-month university based post-graduate initial teacher education courses have been of insufficient duration to adequately prepare teachers for the professional challenges of classrooms and schools.

## IMPROVING THE PROFESSIONAL PRACTICE OF TEACHERS AND PRE-SCHOOL STAFF

### ***But some concerns...***

- Lack of linkages between theoretical and practical components of teacher education courses
- Inadequacies in diploma qualification for second-level teachers
- Need to encourage continued upskilling of pre-school workforce
- Need for high quality continuing professional development for teachers and school leaders<sub>18</sub>

That said, time is not the only factor: there was strong support from teachers and others in the public consultation on the Literacy and Numeracy Strategy for fundamental changes in the content of teacher education programmes: for better linkages between practical and theoretical components of teacher education courses; for a much greater focus on the professional understandings, skills and dispositions needed for effective professional practice in the area of literacy and numeracy; and for much better professional courses generally for second-level teachers.

Weaknesses also exist beyond initial teacher education. The introduction in 2010 of the Free Pre-school year in the Early Childhood Care and Education Programme has improved the availability and access of children to pre-school provision but has brought further challenges in ensuring that leaders and teachers have the skills necessary to support the development of emergent literacy and numeracy skills.

And it will be of no surprise to you that a strong theme in the consultations on the Strategy was the need for high quality professional development for serving teachers and current and future school leaders.

## IMPROVING THE PROFESSIONAL PRACTICE OF TEACHERS AND PRE-SCHOOL STAFF

- Higher entry requirements
- Longer initial teacher education
  - 4-year BEd
  - 2-year diploma for primary and post-primary teachers
- Increased time in school-based experience – a developmental experience
- Replacing the current “humanities/academic electives” in BEd programmes
- Major changes to course content to develop student teachers’ understanding and ability to apply skills in areas such as...<sup>19</sup>

For all these reasons, the Strategy includes:

- Higher entry requirements
- Longer initial teacher education courses
  - 4-year BEd
  - 2-year diploma for graduate entrants to primary and post-primary teaching
- Increased time in school-based experience – a developmental experience
- Replace the current humanities/academic electives in some BEd programmes in order to facilitate....
- Major changes to course content to develop student teachers’ understanding and ability to apply skills in areas such as these....

## Areas including...

- Children's language acquisition
- Development of second language learning
- Parents supporting their children's learning
- Teaching and learning of literacy and numeracy
- Literacy and numeracy across the curriculum
- Teaching of children with special and additional learning needs (SEN, EAL, disadvantaged, etc.)
- Digital literacy and how ICT can be used to support teaching and learning
- Teaching in Irish-medium and immersion settings
- Use of assessment for formative, diagnostic and summative purposes

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- Children's language acquisition
- Development of second language learning
- Parents supporting their children's learning
- Teaching and learning of literacy and numeracy
- Literacy and numeracy across the curriculum not just for teachers of English, Irish and mathematics but for teachers of all subjects
- Teaching of children with special and additional learning needs (SEN, EAL, disadvantaged, etc.)
- Digital literacy and how ICT can be used to support teaching and learning
- Teaching in Irish-medium and immersion settings
- Use of assessment for formative, diagnostic and summative purposes

## ASSESSMENT + EVALUATION

### Strategy includes

- **Balanced use of AfL and AoL**
- **Curriculum: learning outcomes + examples of children's work to guide teachers' assessment and teaching – to support AfL**
- **Standardised testing in reading and mathematics at critical points**
- **Reporting of individual student data to parents**
- **Schools will aggregate data and look at strengths and areas for improvement**
- **Aggregated data reported to Department**
- **Encourage school self-evaluation to complement external inspection**

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As an aside, can I say that one of the greatest challenges to us and for teacher educators will be to help the Irish school system to use both assessment for learning and assessment of learning to improve student outcomes.

Several actions in the Strategy will support this including: changes to the way in which the curriculum is written; new requirements regarding the use of standardised tests; and better reporting to parents and to the Department for national monitoring. The Minister has made it clear that he is not interested in publishing league tables of schools, but we need to ensure that a range of assessment approaches are used professionally to monitor learning, to evaluate practice and improve teaching. The reform of teacher education courses presents an ideal opportunity for colleges to address these needs among future and indeed existing teachers.

## IMPROVING THE PROFESSIONAL PRACTICE OF TEACHERS AND PRE-SCHOOL STAFF

- Mandatory induction programme for newly qualified teachers
- Focussed CPD for teachers
  - **teaching, learning and assessment of literacy and numeracy**
  - **part of ongoing professional development requirements**
- Targeted CPD for principals and d/principals
  - **leading improvements in teaching, learning, assessment of literacy and numeracy**
  - **effective school self-evaluation**

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The Strategy also includes:

- Mandatory participation in induction programme for beginning teachers
- Focussed CPD for teachers on teaching, learning and assessment of literacy and numeracy as part of ongoing professional development requirements
- Targeted CPD for principals

Progress has already been made on some of these changes. For example, over 10,430 primary teachers completed in-service courses in literacy over the summer period with another 1200 attending courses on numeracy and a further 1230 completing courses on Irish. Additional staff have been recruited for the Professional Development Service for Teachers which will be rolling out courses for principals in the current school year. A pilot project will commence shortly in which the Inspectorate will be working with schools on a self-evaluation model.

## IMPROVING PROFESSIONAL PRACTICE

### Restructuring of teacher professional development

to support...

**“A concerted national effort to achieve world-class literacy and numeracy skills among our children and young people”**

***Ruairí Quinn, Minister for Education and Skills***

Initial Teacher Education:  
Criteria and Guidelines  
for Programme Providers

Policy on the Continuum  
of Teacher Education

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All of these changes have implications for your role as teacher educators. I welcome the publication of the Teaching Council's Policy on the Teacher Education Continuum and its guidelines for course providers which have signalled the new requirements for course content, and have sought the views of colleges and others on the proposed higher entry requirement for courses.

I don't underestimate the challenge that these changes will pose for the Council, the Department, for the large number of teacher education providers that we have in Ireland and the staffs in those colleges and university departments. Fundamental re-structuring of courses and provision will be required if we are to realise the continuum of teacher education that we want and need.

But I believe we have at this time an important opportunity to effect changes that many have advocated for some time, and gain real improvements in the fundamental skills that young people need. Your own discussions today and tomorrow here in Cavan can be a further step in realising these ambitions and in securing the contribution of teacher education to what Minister Quinn has described as *“a concerted national effort to achieve world-class literacy and numeracy skills among our children and young people.”*

Go raibh maith agaibh.