

National Plan to Improve Literacy and Numeracy in Schools



Irish Business and
Employers Confederation

Submission to the Department of Education and Skills

February 2011

Executive summary

The *Draft National Plan to Improve Literacy and Numeracy in Schools* represents a serious and focused response to a specific problem that appears to be emerging in Irish schools. Inevitably it also highlights some of the longer term challenges facing Irish education – improving teachers' professional practice, building the capacity of school leadership and curriculum reform. International research has highlighted the circumstances that regularly 'ignite' school system reform including economic crises, a high profile and critical report about system performance and new political leadership. Therefore the circumstances exist for Ireland to start the improvement journey.

IBEC has some concern with the apparent juxtaposition of the critical core skills of literacy and numeracy with other key skills. We share the view that the both primary and secondary curricula are over-crowded. However the establishment of a solid foundation in literacy and numeracy and the ongoing development of a modern curriculum and pedagogy emphasising higher order skills should not be regarded as a zero sum game.

Notwithstanding the above, IBEC welcomes the main thrust of the report. This submission has included some specific recommendations which should support attainment of its objectives. Some of these are longer-term but are critical to achieving sustainable improvement in the education system

- All students should have a strong early foundation in the core subjects of mathematics, science, and literacy in two modern languages.
- The National Plan should set out a pedagogical vision to integrate ICT effectively in the teaching of literacy and numeracy
- The Plan should set a target date for all Early Childhood Care and Education (ECCE) practitioners to have a formal qualification in oral language and early literacy/numeracy
- The Department of Education and Skills (DES) and the Teaching Council should develop a model of teacher career development that encourages and rewards ambition and achievement (see IBEC's submission to the Teaching Council).
- The DES should put in place systems for identifying and training future leaders in the education system.
- The development and testing of functional literacy skills should address writing as well as reading.
- The recommendations of the Report of the Project Maths Implementation Support Group should be expedited.
- The DES should develop a policy on the use of calculators in the classroom up to the end of first year at secondary level
- The junior cycle reform process proposed by the National Council for Curriculum and Assessment should be expedited.
- Further education college strategic plans should include systems and procedures to make their institutions literacy and numeracy friendly.
- The National Literacy and Numeracy Plan should be benchmarked against similar strategies in related education systems.

Context

Ireland's education system has made an important contribution to the country's economic transformation. The introduction of free post-primary education in 1967 was a seminal moment in Ireland's socio-economic history. More recently, the supply of high calibre graduates from Irish third-level institutions was instrumental in attracting the foreign direct investment that fuelled rapid economic growth in the 1990s. However, there is some evidence that we have become complacent about the performance of our education system. Even in recent months, we have seen a series of statistics that raise concerns:

- The OECD PISA (Programme for International Student Assessment) study 2009 found that the performance of Irish 15 year olds in mathematics and reading had deteriorated markedly since the previous survey in 2006. Ireland ranked 26th in mathematics and 17th in reading literacy, out of a survey of 34 OECD countries in 2009. This compares with a ranking of 16th in mathematics and 5th in reading literacy in 2006.
- The PISA results suggest that 17% of Irish fifteen year-olds – and as many as one in four teenage boys – lack the literacy skills necessary to function in today's knowledge-intensive society
- The National Assessment of Mathematics and English Reading survey in 2009 suggested that 60% of students in second class were taught by teachers who reported themselves as 'somewhat confident' or 'not very confident' in teaching mathematics to lower-achieving students. Up to a third of students were taught by primary teachers who had not participated in any form of continuing professional development for either English or mathematics in the three years prior to the study.
- Data from inspectors' whole-school evaluations conducted in 2009-10 suggest that 20% of schools demonstrated weak practice in English teaching.

Therefore IBEC welcomes the publication of the *Draft National Plan to Improve Literacy and Numeracy in Schools* and the opportunity to provide a business perspective on an issue that is causing increasing concern for Irish employers. As international competition intensifies, it is more important than ever that the Irish workforce should not lag behind in terms of basic skills in reading writing, communicating and making practical use of mathematics.

The Draft Plan has a specific short to medium term focus on improving literacy and numeracy. It represents a serious response to address a specific problem that appears to be emerging in Irish schools. However, it inevitably highlights some of the longer term challenges facing Irish education – improving teachers' professional practice, building the capacity of school leadership and curriculum reform.

International research (McKinsey 2010, OECD 2010) has highlighted the circumstances that regularly 'ignite' school system reform:

- Economic crises – these have frequently sparked schools system reform efforts which have been designed either to mitigate the potential ill effects of the crisis or to take advantage of new opportunities. McKinsey (2010) cites one Asian leader: ‘It is not just about riding a crisis and trying to plug school system reform into it. It is about making clear that school system reform is essential to surviving the crisis itself.’
- A high profile and critical report about system performance. For example, Germany’s poor performance in the 2000 PISA survey led to intense national debate – the so-called ‘PISA-Schock’ - and gave significant momentum to school reforms.
- New political or strategic leadership

In several countries, only one of these circumstances were present to start the improvement journey. In Ireland’s case, all three circumstances exist.

Therefore IBEC argues that while it is important to maintain a short-term focus, the Draft Plan – along with other concurrent consultation processes on the teacher professional development and junior cycle reform – should provide a catalyst for other far-reaching reforms.

In responding to the Plan, we are also acutely aware that we are providing a specific business perspective on this issue. IBEC acknowledges that the education system fulfils a vital role in society that extends well beyond the utilitarian one of satisfying enterprise’s needs. The quality of our children’s schools affect every aspect of their life, shaping the child’s personal destiny and society’s capacity for creativity, cohesion and economic development. Poor basic skills damage people’s lives and their employment prospects. Weak functional skills are associated with higher unemployment, lower earnings, poorer chances of career progression and social exclusion.

This submission follows the structure of the Draft Plan.

Section 1: Introduction

The Draft Plan sets out a definition of literacy (footnote, p9):

Literacy conventionally refers to reading, writing, speaking, viewing, and listening effectively in a range of contexts. In the 21st century, the definition of literacy has expanded to refer to a flexible, sustainable mastery of a set of capabilities in the use and production of traditional texts and new communications technologies using spoken language, print and multimedia. In this plan, literacy refers to the development of these capabilities in the first language of the school.

and numeracy (footnote, p9):

Numeracy is the capacity, confidence and disposition to use mathematics to meet the demands of learning, school, home, work, community and civic life. This perspective on numeracy emphasises the key role of applications and utility in learning the discipline of mathematics, and illustrates the way that mathematics contributes to the study of other disciplines.

For the purposes of the Draft Plan, IBEC accepts these definitions and acknowledges the need for a serious and focused response to this issue. The Draft Plan quite rightly acknowledges that the education system should refocus on the development of the concepts and skills needed to establish sound foundations for literacy and numeracy development. However, while IBEC agrees with the thrust of this argument, it is essential that we do not confuse the importance of improving the 'Three Rs' with the continuation of a curriculum which is not sufficiently attuned to 21st century teaching and learning, and is dominated by rote learning.

For example, the Draft Plan states, "*We have to say clearly to teachers that we want them to emphasise the development of literacy and numeracy above all other aspects of the curriculum*". The establishment of a solid foundation in literacy and numeracy and the ongoing development of a modern curriculum and pedagogy that emphasise higher order skills should not be regarded as a zero sum game.

While the Draft Plan extends the definition of literacy to embrace the context of new communications technologies, it fails to acknowledge the potential of ICT in improving literacy and numeracy. European Commission research (Blamire, 2009) shows that a range of skills and competencies are acquired by the use of ICT: digital, communication, language (first and second), social and cognitive skills. Teachers interviewed in the LearnInd survey which form part of the Commission study note a positive impact on basic skill acquisition (reading, writing and arithmetic) through the use of ICT. The study also cites UK research which shows that English, maths and science test scores improve with ICT, and a Hungarian study which shows that ICT-rich constructivist learning environments improve learning outcomes, especially for disadvantaged children. It concludes that ICT can promote new pedagogical approaches, but only if it is fully

integrated into subject lessons. IBEC's submission to the Teaching Council's Policy on the Continuum of Teacher Education addresses the issue of ICT competence in more detail.

The Department's Draft Plan also fails to explore the relationship between literacy in the school's first language and other modern languages. In this regard, the European Council's Language Policy Division (2005) has warned: 'The main challenge for Ireland is to move away from 'an official but lame bilingualism' to become a truly multilingual society, where the ability to learn and use two and more languages is taken for granted and fostered at every stage of the education system and through lifelong education.'

Recommendations:

- All students should have a strong early foundation in the core subjects of mathematics, science, and literacy in two modern languages.
- The National Plan should set out a pedagogical vision to integrate ICT effectively in the teaching of literacy and numeracy

Section 2: Improving teachers' and early childhood care and education (ECCE) professional practice

IBEC welcomes the Plan's emphasis on improving the professional practice of ECCE practitioners. Good quality early childhood education can enhance language development and skills. This is well documented by PISA data from 2003: children who have participated in early education programmes score significantly higher in mathematics at age 15 even after accounting for socio-economic status. The provision of a universally available, full-time, play-based education programme closes the gap in achievement in social development, numeracy and literacy achievement between children from socially advantaged and disadvantaged backgrounds (Bennet, 2008)

IBEC also welcomes the Draft Plan's emphasis on initial teacher education including the introduction of longer and more education-skills focused BEd and HDipEd courses. However, the Plan is less convincing in its ambitions for the continuous professional development (CPD) of existing teachers. Twenty hours of in-service training on literacy and numeracy education for primary teachers and post-primary teachers of English and Maths every five years are unlikely to make the required impact.

More critically, this approach exposes the limitations of a system that appears to restrict its conceptualisation of teacher CPD to in-service training.

International evidence suggests that centrally imposed educational reforms have tended not to achieve deep and lasting changes in practice because: i) the reforms were focused on things that were too distant from the instructional core of teaching and learning; ii) the reforms assumed that teachers would know how to do things they actually didn't know how to do; iii) too many conflicting reforms asked teachers to do too many things simultaneously; and iv) teachers and schools did not buy in to the reform strategy. The success of this plan will depend on a

- Strategy that is directly focused on improving the act of teaching.
- Careful and detailed attention to implementation, along with opportunities for teachers to practice new ideas and learn from their colleagues.
- Support from teachers for the reforms.

IBEC has provided a more detailed submission on the critical issue of teachers' professional practice to the Teaching Council's Draft Policy on the Continuum of Teacher Education

Recommendation

- The Plan should set a target date for all ECCE practitioners to have a formal qualification in oral language and early literacy/numeracy
- The Department of Education and Skills and the Teaching Council should develop a model of teacher career development that encourages and rewards ambition and achievement (see IBEC's submission to the Teaching Council, February 2011).

Section 3: Building the Capacity of School leadership

The Draft Plan's section on building the capacity of school leadership is the most disappointing in the limit of its ambition. Success will depend on the implementation of robust self-evaluation in schools. While the Draft Plan acknowledges the critical role of principals in this process, it offers little more than on-line advice to support the implementation of self-evaluation and leadership development programmes for aspiring principals.

Research suggests that 'school leadership is second only to classroom teaching as an influence on learning' (National College for School Leadership, 2006). Without an effective principal, a school is unlikely to have a culture of high expectation or strive for continuous improvement. According to McKinsey (2007), top-performing school systems leverage a substantial and growing knowledge about what constitutes effective school leadership to develop their principals into drivers of improvement in instruction. This means doing three things:

- Getting the right teachers to become principals
- Developing instructional leadership skills
- Focusing each principal's time on instructional leadership.

While the OECD (2007) has acknowledged that this concept is widely accepted in the Irish education system, it has also highlighted a series of weaknesses. These reside in the lack of focus on system data for planning for leadership; the lack of planning and preparation for leadership succession at school and system level; the lack of professional development for leadership prior to appointment; the drive to devolution of responsibility to school level without sufficient analysis and support; the complexity of school governance in Ireland and the implications for demarcation of roles; the seemingly open-

ended nature of the role of the principal; the lack of defining parameters and the lack of specific contracts and conditions of employment for school principals.

Most critically in the context of the Draft Plan's aspirations, the OECD concludes that the burden of compliance and accountability which falls to the individual principal means that the balance in the role of between management/administration and learning centred leadership is skewed to the former (the IBEC submission to the Teaching Council's Draft Policy on the Continuum of Teacher Education discusses this issue in greater detail) .

Recommendation

- The Department of Education and Skills should put in place systems for identifying and training future leaders in the education system.

Section 4: Give priority to language skills, literacy and numeracy in early childhood, primary and post-primary education

Section 4 states:

'We have to recognise that the curricula cannot mediate all issues that are of relevance to young people. Including a broader range of issues, topics and subjects in school curricula inevitably has meant that the time available for the acquisition and consolidation of critical core skills has been eroded. We have to acknowledge that understanding and using literacy and numeracy are such core skills that time for their development must be safeguarded, sometimes by delaying the introduction of some curriculum areas and always by ensuring that teaching literacy and numeracy is integrated across the curriculum.'

This submission has already highlighted our IBEC's concern with this apparent juxtaposition of the critical core skills of literacy and numeracy with other key skills. We share the view that the both primary and secondary curricula are over-crowded with subjects. And research by the National Adult Literacy Agency (see below) amongst others support the view that the teaching of literacy and numeracy should be integrated across the curriculum. **However the shortcomings of a overly content-heavy curriculum should not be confused with the need to inculcate a broader range of key skills through the development of pedagogy, the learning environment and multiple methods of assessment.**

Notwithstanding this, IBEC supports the thrust the Plan's prioritisation of language skills, literacy and numeracy. This section of the Confederation's response is largely based on individual feedback received while conducting research for the IBEC Education and Skills Survey (2010) and detailed discussions in IBEC's Education and Skills Committee.

Employers define 'literacy' broadly and in a way that goes well beyond reading and writing to include abilities relating to oral communication and use of English as a whole. Similarly, 'numeracy' or 'mathematical literacy' goes beyond manipulation of numbers to

cover all aspects of mathematical awareness, including measuring, weighing, estimating and applying formulae. These broad definitions are important because, ultimately, the business focus is on 'functional skills' — the real world skills needed and used in real workplaces. There are no neat boundaries, for example, on the way communication is handled. For any item it may be written or it may be oral or it may be both. Equally, mathematical awareness and skills crop up in all sorts of guises.

IBEC shares the view expressed in the Draft Plan that the teaching and learning of mathematics in Ireland requires even greater attention than literacy. As the Plan points out, surveys of mathematics achievement at primary level, and patterns of participation and achievement in the State examinations and in international surveys, indicate that there are systemic issues in the mathematics that require attention. IBEC has repeatedly highlighted this issue and its implication for our economic recovery. We do not intend to revisit these arguments. The Department of Education and Skills and the NCCA should continue to implement Project Maths and monitor the effect of implementation on standards. The recommendations of the Report of the Project Maths Implementation Support Group should also be expedited.

IBEC also welcomes the Plan's positioning of literacy and numeracy development in the context of the reform of the second level junior cycle. Radical reform of junior cycle teaching methods and curriculum content could have a profound impact on education outcomes including the development of critical thinking and moving away from the dominance of rote learning. The National Council for Curriculum and Assessment (NCCA) consultation document on junior cycle reform addresses some critical issues such as teacher quality and professional development, the autonomy of school leaders in adapting the curriculum to local contexts, reducing the number of subjects in favour of inter-disciplinary teaching and a smoother transition from primary school. While many of these issues will take longer to address, the process should start immediately. We believe that junior cycle reform is the most significant challenge facing the Irish education system. Therefore it should be regarded as a priority area for policy attention and investment.

While IBEC welcomes the actions outlined in Section 4, we believe that it would be useful to provide some specific employer concerns on the elements of literacy and numeracy.

Reading and writing should be considered separately when discussing literacy. While few adults are wholly unable to read, writing tends to pose much more of a problem. The ability to put together a piece of writing that conveys meaning clearly and accurately is an essential functional skill. Some companies have resorted to standard letters as they do not feel they can rely on staff to compose a letter to a customer. From standard business letters to emails, from the completion of self-appraisal forms to the recording of customer complaints and the compilation of accident reports, many employees struggle to express themselves in writing.

Spelling and grammar are important and are seen as weak. Correct spelling of everyday words and proper use of basic grammar are important for clarity of expression, fostering

a reader's confidence and the company's reputation. There is a particular dislike of 'text speak' among some employers.

Understanding and responding appropriately to oral communications are also essential skills. Employees need to be sufficiently articulate to be able to raise queries if the instructions are not clear to them, or to raise practical matters of concern that flow from the instruction

With regard to numeracy, some employers pointed out that multiplication tables and mental arithmetic without using a calculator can help in many work activities. From being able to cope when tills go out of action to making an estimate of the quantity of materials needed for a particular task, the quick and accurate application of basic maths, often in the form of mental arithmetic, can be helpful.

Spotting errors and rogue figures is also an important element of functional maths. A functionally numerate employee will almost instinctively carry out a reality check and pause to check what may be potentially a rogue result. It was suggested by some companies that overdue reliance on calculators in early education may be interfering with the child's ability to appreciate numbers and appears to have led to a general decline in some aspects of numeracy.

Other specific numeracy requirements include:

- Calculating and understanding percentages. Percentages are widely used in internal communications and in many jobs it is essential to be able to calculate them readily.
- The ability to work comfortably with fractions, decimals and ratios
- An awareness of the different measures and the ability to convert them. Despite all the moves towards metrication, imperial and metric measures remain in use.
- Basic understanding of odds and probabilities to enable people to make a more realistic assessment of chances, rather than treating every risk as equally likely to happen.

IT skills are also of growing importance in most jobs, but the ability to acquire those depends on a solid foundation of literacy and maths skills. In virtually every sector, IT is being used to carry out a lengthening list of tasks and, as a result, employees need to have basic familiarity with spreadsheets and other applications. It is, however, important to stress that IT skills are seen as an addition to functional literacy and mathematical skills, not a substitute for them.

Recommendations

- The development and testing of functional literacy skills should address writing as well as reading.
- The Department of Education and Skills and the NCCA should continue to implement Project Maths and monitor the effect of implementation on standards.

- The recommendations of the Report of the Project Maths Implementation Support Group should be expedited.
- The DES and the NCCA should develop a policy on the use of calculators in the classroom up to the end of first year at secondary level
- The junior cycle reform process proposed by the National Council for Curriculum and Assessment should be expedited.

Section 5: Target available additional resources at learners risk of failure

IBEC fully supports the principle of allocating additional resources to learners at risk. Ensuring that every child benefits from high-quality instruction is not only an important end in itself. Evidence from international assessments suggests that strong performance for the system as a whole depends on this being the case (McKinsey, 2007). For example, the PISA scores of the top performing systems show a low correlation between outcomes and the home background of the individual student. The best systems have produced approaches to ensure that the school can compensate for the disadvantages resulting from the student's home environment.

While the Draft Plan acknowledges the importance of Youthreach, it stops short of making detailed recommendations on how literacy and numeracy could be improved within further education.

Further education (FE) marks a new start for people who are taking on the challenge of young adult learning. Where earlier experiences of learning have often left gaps, it makes sense to find new and better ways to approach these past omissions. NALA's research (2009) has suggested that adopting an integrated approach to language and literacy development can provide an effective means of simultaneously dealing with literacy, vocational and other learning needs. Some of its key recommendations are worth restating:

Recommendations

- FE college strategic plans should include systems and procedures to make the whole organisation literacy and numeracy friendly. A cross-college language and literacy group convened by a senior staff member should champion this task. Literacy should be a priority on all agenda.
- FE staff require appropriate professional development to support them in facilitating language and literacy in their courses.
- Literacy specialists should be central to the FE college integrated approach to language and literacy. They will provide a range of support to students and staff and advise in the planning and development of the whole college literacy strategy.

Section 6: Fostering continuous improvement and assessment of evidence

IBEC welcomes the Draft Plan's emphasis on collecting national data on student achievement using standardised tests. Too much education policy draws on the shorthand of commentary around school improvement.

Germany provides a useful example in this regard. As the Germans did not place a high value on the use of empirical data and its analysis in the education policymaking process, the country had not invested much in educational research. While things had begun to improve from 1965, the 'PISA shock' greatly accelerated the process. Now government is making systemic investments in the capacity of the educational research establishment to do the kind of research that is needed to base school policy on empirical data on system performance. For example, in 2007 the Federal ministry of Education announced a Framework Programme for the Promotion of Empirical Education Research. The framework lays out topics and methods for research that the government is particularly interested in pursuing. The ministry is collaborating with the Länder on the design of this research programme, thereby increasing the chance that the research will actually inform policy and practice.

In addition, the National Literacy and Numeracy Plan implementation group needs to look very carefully at the impact of the introduction of similar strategies in related education systems – including the four UK systems – to assess their impact.

Recommendation

- Benchmark the National Literacy and Numeracy Plan against similar strategies in related education systems.

Section 7: Enabling Parents and Communities to Support Children's Literacy and Numeracy Development

IBEC supports the recommendations in this section which, again, are supported by international evidence (McKinsey 2010). There is a very pragmatic reason why the top performing systems engage with parents, in particular to enlist their support in improving their children's outcomes. Students spend less than fifteen per cent of their childhood in schools, while more than half of their time is spent at home and in the community. Stewardship of this time is therefore critical.

Ireland is fortunate in still being able to rely on deeply embedded social values which hold education in high esteem. The school system can create a positive experience in engaging with parents in relation to their children's schooling. The more parents engage with the school, the more likely it is that they will actively support their children's education and help raise performance.

Conclusion

Many of the recommendations included in the Draft Plan and this response are resource-intensive. Therefore the incoming Government need to make a strong commitment to funding if we are to get the type of return envisaged in the Plan.

In making this commitment it should be acknowledged that education and training at all levels of progression has an essential role to play in putting our economy back on a growth path. It is the key to enabling us to be both competitive and prosperous. In a deep recession and a time of large-scale unemployment, it is alarming to discover that many key business sectors such as pharmaceuticals, medical devices and ICT are experiencing significant skills shortages.

Economic returns from education tends to accrue mainly in the medium to long term, but it is vital that we treat it as a priority area for investment, even during this time of acute fiscal stress. If we are seen to falter, we will lose the valuable momentum.

The change process will require a sense of urgency, political support and flexibility from teachers themselves. It also needs appropriate investment in training and development for teachers and school leadership. As a key stakeholder in the education system, the business community looks forward to working with other in helping to meet this challenge

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