

Irish Teachers' Journal

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Irish Teachers' Journal

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≡ Editorial ≡

The Irish National Teachers' Organisation celebrates its 150th birthday in 2018. On August 1868 the first INTO Congress was held in Dublin and attended by 24 men. The 150th Congress was held last April in Killarney and was attended by 519 women and 245 men. The status of teachers and conditions of employment, including pay, were issues then as they are today. *The Irish Teachers' Journal* of 1868 was a forerunner of both *InTouch*, the INTO's monthly magazine and the current iteration of *The Irish Teachers' Journal*.

Established to promote the teaching profession and to improve pay and conditions for teachers, the INTO continues to pursue these same issues today in their 21st century context. Life is very different for the primary teacher of 2018 than it was for teachers in 1868. Teachers continue to be well regarded by their communities as they were in 1868, however, today teachers are involved in school management at local level, a far cry from the disregard in which they were held by school managers in the middle of the 19th century. Teachers today are regarded as professionals and have their own regulatory body, The Teaching Council. Teachers also have opportunities to engage with educational policy and curriculum developments both through the INTO and through relationships with educational agencies. Nevertheless, there are new challenges pertaining to the status and professionalism of teachers. The economic context of the last ten years created pay inequalities and led to additional demands being made on schools and teachers without the necessary resources, creating additional stress and workload. Despite the additional pressure, teachers continue to derive satisfaction from their teaching (Morgan et al, 2015). Over the next 150 years the INTO will continue to promote the status of teaching ensuring that teachers continue to be highly regarded professionals supported in their work by decent and attractive working conditions, opportunities for professional development and collaboration, and by professional autonomy.

When the National School System was established in 1831 only very young children attended. National schools struggled to provide early years' education as we understand it today. Large class sizes, a paucity of materials and resources, and a lack of opportunity to study education were factors impeding the development of kindergarten education. Reflecting educational developments in Europe, the Revised Programme of Instruction in National Schools in 1900 introduced a child-centred approach and recognised the individuality of each child. A junior assistant mistress was appointed in small schools in recognition of the needs of infant children as well as older children. Kindergarten organisers were appointed by the Board of Education to support and advise teachers. However, implementation was problematic, due to insufficient training, a lack of resources, equipment and materials and unsuitable school buildings. The revised programme for infant education of 1948 brought back a focus on child-centred education and was accompanied by *An Nai-Scoil: The Infant School, Notes for Teachers* in 1951. It is worth quoting the purpose of the Infant School as described in the notes of 1951:

The purpose of the infant school is to provide for young children the environment, opportunities and activities most favourable to their full development. Infant teaching if it is to be successful, must be based on the young child's urge to play, to talk, to imitate, to manipulate materials, to make and do things. (*An Naí-Scoil: The Infant School, Notes for Teachers, 1951*)

Child-centred philosophies and pedagogies also underpinned the 1971 and the 1999 Primary School curricula. *Aistear: the Early Years Curriculum Framework* built on these earlier works reflecting the most up-to-date thinking on how young children develop and learn, and though many infant teachers embraced *Aistear*, it was never formally introduced. The INTO played a significant role in the lead up to these curriculum developments.

It was not unusual for children as young as two to be in infant schools or classes in the early days of the National School System. By 1884, children had to be three years of age, and by 1934, children had to be four years of age. Three year-old children were again part of the national school system when the Rutland Street Project, a two year pre-school programme was established and attached to Rutland Street Primary School in inner city Dublin. It still exists today. It wasn't until 1994 and 1995 that the Department of Education expanded its preschool provision for children at risk when it established Early Start in 40 primary schools.

In more recent years, rather than expand pre-school early years provision as part of the national school system, the government decided in 2010 that the future of preschool early years' education would take place under the auspices of the Department of Children, now the Department of Children and Youth Affairs (DCYA), building on existing voluntary and community pre-school initiatives.

This most recent development means that early years' education spans two government departments and two sectors – the infant and early start classes in the primary school and the early childhood sector. Today, we have an expansion of funded preschool provision, the *Aistear Curriculum Framework* spanning both the early childhood sector and the infant classes, the work on transitions from preschool to primary school, and ongoing revision of the primary school curriculum. Therefore, it was timely for the INTO to collaborate with Early Childhood Ireland to reflect on these significant developments and to explore some key opportunities and challenges for the future, when both organisations jointly organised a seminar on transition to mark the 150th anniversary of the foundation of the INTO. The teaching profession has a long history and much can be learnt from the INTO's struggle for professional recognition and status by our colleagues in the emerging profession of preschool educators. While many informal conversations have taken place over the years between the INTO and Early Childhood Ireland, the organisation of a joint seminar sees the beginning of a more formal relationship and the opening up of conversations across the early childhood and primary sectors.

Yes, there are issues to be addressed. We still have large classes in infants. Not all schools are suitably equipped in terms of indoor and outdoor facilities and there is still a lack of ongoing professional development for teachers. But we continue to progress. Developments in education cannot be understood in a vacuum, but must be considered in the context of the political, social and economic factors of the time. Struggles and successes regarding infant education throughout the 19th and 20th centuries reflected such contexts.

The guest article in this edition of the *Irish Teachers' Journal* is the Chief Inspector's address to the joint INTO – Early Childhood Education seminar on transitions held in June 2018 in the Clock Tower in the Department of Education and Skills. We also include a paper from the second keynote speaker, Professor Emer Smyth. The theme of the seminar was transitions and Dr Harold Hislop in his address, focused on transitions as occasions of excitement and anticipation, whether from home to pre-school, to primary, from class to class and then to post-primary. Transitions can also be times of anxiety and stress and the role of adults in supporting children through transitions is paramount. Dr Hislop focused on the learning experiences of children during transition processes, and referred to *Aistear*, the curriculum framework for the early years that highlights the outcomes the system aspires for its children and expresses the values of care, growth and development of each and every child. He acknowledged the principles underpinning the *Primary School Curriculum* developed in the 1990s, stating that it was now over 20 years old, and written when universal pre-school education was not available. He also referred to the opportunity the revision of a primary school curriculum presented for enabling smoother transitions.

Drawing on the experience of the Inspectorate, Dr Hislop referred to the pressure in some early years' settings to prepare children for school and the lack of opportunities for play-based learning in primary schools as children move beyond the infant classes. He referred to expectations and beliefs in what early years and primary education should be. He acknowledged constraints such as large class sizes and the challenges in meeting the needs of children with additional needs. He recommended more engagement between early years' practitioners and primary teachers, such as joint professional development and the building of relationships to support transitions. He spoke about the role of inspectors in supporting transitions, through providing advice and guidance. Dr Harold Hislop's thought-provoking address at the joint seminar highlighted issues that require attention at both at policy and practice levels if we are to develop better transition processes from pre-school to primary school.

Professor Emer Smyth also addressed the joint seminar on transitions drawing on the Growing Up in Ireland (GUI) longitudinal research. Her article focuses specifically on teaching and learning in the early years of primary education. She provides an interesting profile of infant classes in primary schools in relation to class size, and multi-grade classes. For example, one fifth (21%) of five year olds were taught in classes with fewer than 20 pupils, while a further fifth (19%) were taught in classes of 30 or more pupils. Professor Smyth describes the structure of the school day in relation to how time is allocated across various subjects and how much time is devoted to play-based activities. It is perhaps not surprising that children in multi-grade classes experience less play than children in single-grade classes. In her article Professor Smyth gives an insight into teaching methods, grouping practices, and home-school communications, highlighting challenges to be addressed at both policy and practice levels.

The third article in this edition of the journal fits very well with the first two. Focusing on *Play and the Primary School Curriculum: Developing Quality Practices and Examining Curricular Possibilities*, Tara Concannon-Gibney investigates the current status of play in the infant classes both in terms of policy and practice. The article highlights the centrality

of play in child development and its place in curriculum for the early years. The introduction of *Aistear – the curriculum Framework* for the early years caused some confusion for primary teachers who struggled to align *Aistear* with the *Primary School Curriculum* that has literacy and numeracy as its main focus. Concannon-Gibney describes how primary teachers respond to *Aistear*, through the organisation of play hours, and through guided play. She offers useful insights into the theory of play-based learning, and how it relates to language development and other areas of the curriculum. She concludes by calling for professional development for teachers in relation to play-based learning in infant classes.

Caoimhe Moloney and Barbara O’Toole have carried out a fascinating analysis of textbooks in use in primary schools, particularly in the early years, from the perspective of representing diversity. Children from a diverse range of backgrounds now attend primary school in Ireland. The authors present a brief outline of the literature around anti-bias education, the power of images and identity formation and then describe how they analysed a series of textbooks in use in one junior school using a critical discourse analysis approach. Their findings indicate that many textbooks in use in today’s schools reflect a narrow image of disability, a limited form of gender equality, an absence of diverse families and Travellers, and rely on assumed culturally-specific experiences of the reader. The message arising from this small-scale piece of research is that creators of textbooks and teaching materials need to be alert to bias and allow space for pupils to engage in critical reflection and dialogue in order to challenge homogeneous or tokenistic representations.

Helen Roycroft’s article is about STEM learning in Ireland. She describes the Science in a Box programme, which seeks to cultivate a love of science from an early age. In this programme, PhD science graduates work alongside class teachers, supporting an enquiry-based approach to teaching and learning science. Roycroft draws on research reports that indicate the challenges of teaching science in primary schools, particularly the lack of opportunity students have for experiential and practical learning. She takes a children’s rights’ approach to the evaluation of this innovative primary science learning initiative focussing on the students’ perspective. It is perhaps no surprise that students enjoyed science experiments and activities and that they found science fun. The evaluation of the programme throws some useful light on how science teaching can be enhanced in primary schools.

The final two articles in this edition of the journal address the theme of wellbeing, a topic receiving increasing attention at policy level in education. Tess Hughes’ article, co-written with Chris Gibbons, examines the contribution of breakfast clubs to enhancing children’s psychological wellbeing. Children’s psychological wellbeing was assessed by using a strengths and difficulties questionnaire and a breakfast club engagement questionnaire. It is interesting, though not perhaps surprising, that regular attendance at breakfast clubs was positively associated with wellbeing. The authors refer to the impact of healthy eating, enjoyment, class level and whether breakfast clubs were paid for, on students’ psychological wellbeing. Among the findings are that participation in breakfast clubs bolstered peer relationships and engagement in academic activities. The authors conclude that breakfast clubs provide opportunities to develop peer relationships and to interact with teachers in a less formal context and have a positive impact on student wellbeing.

The final article explores the attitudes of principal teachers, lecturers in teacher education and class teachers regarding the introduction of preventative mental health strategies. The focus is mental health among adolescents, in both Ireland and Northern Ireland. Many of the issues raised, however, are also relevant for younger students. In their article, Caithlin Stenson, Karen Kirby, Donal McAteer and Allison Gillen, work on the premise that children's emotional health informs preventative mental health strategies. Their research involved interviews with principal teachers and with teacher educators, and a focus group with teachers. Their findings highlight how inadequate teachers feel in handling the emotional and mental health issues of their students and the pressure schools are under to solve problems of society. The extent of teachers' responsibilities in the area of students' mental health is clearly an issue for teachers, as is the best and most effective way to support teachers through professional development. There is no doubt that, increasingly, more is expected of teachers, whether in primary or post-primary schools, regarding the mental health and wellbeing of students. There is a need for much more debate and discussion regarding student wellbeing. This article, in addition to Tess Hughes' article is a significant contribution to this discussion.

In this year of the INTO's 150th anniversary, the articles in this edition of the *Irish Teachers' Journal* are a testament to teachers' professionalism. Their interest in enhancing their profession and in improving outcomes for pupils, from a holistic perspective, is laudable. The INTO is delighted to offer to teachers from across the system both North and South, an opportunity to share their insights and their research findings with colleagues both within the profession and outside the profession. We wish to thank all teachers who contributed articles, and also record our appreciation of our guest contributors, Dr Harold Hislop, Chief Inspector, Department of Education and Skills and Professor Emer Smyth, Economic and Social Research Council. The INTO hopes that teachers will continue to contribute articles to the *Irish Teachers' Journal*.

DEIRBHILE NIC CRAITH, EDITOR

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Author Notes

Dr Harold Hislop

Dr Harold Hislop is Chief Inspector and a member of the management board at the Department of Education and Skills. Prior to joining the Inspectorate, Harold taught at primary level, in a college of education and at university level. He was a school principal and he worked as an education and development officer at the National Council for Curriculum and Assessment. He has led a series of reforms in the inspection and evaluation of schools, including most recently, the expansion of the Inspectorate's work into the early years sector. He is a current member of the Governing Board of the Centre for Educational Research and Innovation (CERI) at the OECD, and a member of CERI's Bureau.

Prof Emer Smyth

Professor Emer Smyth is a research professor and head of the Social Research Division at the Economic and Social Research Institute (ESRI) in Dublin, and is Adjunct Professor of Sociology at Trinity College, Dublin. She has published extensively on her main research interests of education, school to work transitions, gender and comparative methodology. She is co-principal investigator of the Growing Up in Ireland (GUI) study and has used GUI data to look at arts and cultural participation among children and young people, spatial variation in child outcomes and the transition into primary school.

Dr Tara Concannon-Gibney

Dr Tara Concannon-Gibney lectures in the area of literacy. A former primary school teacher, she has worked with pre-service and in-service teachers in Ireland and in New York for over a decade. Prior to joining DCU in 2017, she was programme coordinator of the BSc in Early Childhood at Marino Institute of Education where she lectured in literacy and early childhood. Her current research interests include emergent literacy, language and literacy development through play, English language learners and teacher professional development. She is also a past-president of the Literacy Association of Ireland.

Caoimhe Moloney and Barbara O'Toole

Caoimhe Moloney is a primary school teacher. She graduated with a BA in English, Media and Cultural Studies in 2011. Following this, she taught English in South Korea. She completed her Professional Master of Education (Primary) at Marino Institute of Education in 2016. She is currently teaching in Esker Educate Together National School in Lucan, Co Dublin.

Barbara O'Toole is a senior lecturer in Marino Institute of Education in Dublin, where she lectures in intercultural education and global justice education. She is a director of the Master in Education Studies (Intercultural Education) and a coordinator of the research module on the Professional Master of Education (Primary). Current research interests include language education, intercultural education, and global justice education.

Helen Roycroft

Helen Roycroft is a primary teacher with 14 years' experience and is currently seconded to the Special Education Support Service/NCSE as a full-time advisor. She has a keen interest in special education, primary science and the participatory rights of children and has studied these fields in recent years. She holds a BEd from Mary Immaculate College, Limerick and a MEd and Postgraduate Diploma in Special Educational Needs from University College Cork.

Tess Hughes and Dr Chris Gibbons

Tess Hughes is a primary teacher in St Joesphs NS, Dundalk. She holds a BEd, MSc Health Promotion, HDip Psychology, MSc Applied Psychology, and presented this research at three national conferences in 2017. She also coordinated an award-winning breakfast club that featured in a national health promotion programme Healthy Heroes developed by Real Nation who implemented the World Health Organisation award winning Food Dudes supported by the Department of Education. Information is available at: www.realnation.ie/healthy-heroes-lunch-club/.

Dr Chris Gibbons is a lecturer in psychology in Dublin Business School. He teaches psychology across Diploma, BA and MSc programmes. He has two research interests – health psychology, with a focus on stress, coping and well-being and the importance of measuring stress as a potential to help one achieve (eustress) as well as the 'distress' aspect of stress. His second area of interest explores the factors that contribute to student learning and achievement. Chris was Tess's supervisor on her undergraduate and postgraduate theses.

Caithlin Stenson, Dr Karen Kirby, Dr Donal McAteer and Dr Allison M. C. Gillen.

Caithlin Stenson is a doctorate student of Psychological Science in Clinical Psychology, National University of Ireland, Galway, employed by HSE West. Her previous publications reflect her varied areas of research interests such as; adolescent and young adult mental health and wellbeing; mindfulness in mental health intellectual disabilities populations; restrictive practices and assistive technology.

Dr Karen Kirby is a senior lecturer of psychology, working in the School of Psychology, Ulster University. She is also a chartered and health and care professions council registered counselling and health psychologist. Dr Kirby's area of research expertise is in child and adolescent mental health, with ongoing studies in several published papers relating to understanding prevalence and predictors of mental health issues such as self harm, anxiety and depression in adolescence, in addition to researching the most efficacious school-based preventative mental health promotion models.

Dr Donal McAteer is a lecturer in counselling psychology, and course director for the MSc Applied Psychology programme, in the School of Psychology, Ulster University. He is a British Psychological Society Chartered and HCPC registered counselling psychologist, and a systemic practitioner. He teaches in the area of mental health and psychological therapies. Research interests include secondary and vicarious traumatisation, the exploration of the helping relationship in a range of fields, and particularly the impact of this relationship on the helper.

Author Notes

Dr Allison M. C. Gillen (PhD, MSc, BSc, CPsychol, SFHEA, AFBPsS) is an assistant lecturer in psychology at the Institute of Technology Sligo and is a chartered psychologist with the British Psychological Society. Dr Gillen was awarded a full Vice Chancellor's Research Scholarship from Ulster University to conduct her PhD which focused on the prevalence and mediating intrinsic and extrinsic predictors of self-harm in Northern Irish adolescents. Dr Gillen's research interests focus on the areas of child and adolescent mental health and wellbeing.

Supporting effective transitions in early years: an inspector's perspective on practice and policy

≡ DR HAROLD HISLOP ≡

Background note

This is the text of a keynote speech given by Harold Hislop, Chief Inspector, at a joint seminar organised by the INTO and Early Childhood Ireland, on Transitions across Early Years Education: from pre-school to primary. This seminar took place on Thursday 14 June, 2018 in the Clock Tower, Department of Education and Skills, Marlborough Street, Dublin.

Introduction

To get us started, I want you to do a little reflection for me. Think of a time of transition in your life: perhaps when you went to college for the first time, or when you began your first serious adult relationship, or when you moved house, or took up a new job, or when you contemplated retirement. Think about how you felt how you reacted.

Transitions like these can be occasions when we are excited and full of anticipation, when we look to fulfil our dreams, when we grow most quickly. Yet they can be periods of enormous stress, worry, anxiety and even regression. We know, too, that some adults cope better than others with such transitions. How well did you cope? Who helped you most to cope?

If we, who have years of experience behind us, feel challenged by change, how much more challenging can transitions feel for young people? Think of the child's transition from being at home all day to spending part of the day in an early years setting, the move from the familiarity of the early years setting to the primary school, moving from one classroom or one teacher to another within the primary school, and progressing from primary to second level education.

Each of these transitions, and many more, are big steps for all children to take. Supportive and stress-free transitions (or at least transitions in which stress is minimised) are likely to influence greatly how well young people develop their potential socially, physically and academically, not only in the early years phase but throughout the rest of their lives. And we know, too, that some children, like some adults, are more vulnerable to the stresses involved in making transitions successfully.

We are the adults who know how challenging transitions can be. That's why we have the responsibility to ensure that, as far as possible, children are supported, encouraged and helped to make those exciting and challenging transitions in the best possible environment.

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It's our privilege and our duty to find the best way of promoting a continuum of learning across the education system. In that way, we can smooth and support each child's transition from home to early years setting to school and beyond.

An historic event

That's why today's seminar is so important. INTO and Early Childhood Ireland – representing two of the major groups of adults involved in supporting young children – are to be commended for bringing together today all of the groups of adults involved in supporting children's transitions: parents, early years practitioners, teachers, school leaders, evaluators, regulators, curriculum developers, advisers and policy makers.

Both the INTO and Early Childhood Ireland have strong track records in this regard. Over its 150-year history, the INTO has initiated many campaigns and published many policy papers and reports on infant or early years education. Since its establishment, Early Childhood Ireland has campaigned strongly for practices that would support better transitions for young children. It is to be welcomed that both have come together around this significant topic of transitions.

And, I think it is worth noting that this initiative from teachers and early years practitioners comes against a background where other key actions are falling into place. The recent commissioning of the National Parents' Council-Primary by the Department of Children and Youth Affairs (DCYA), to represent parents' voices formally in the early years sector, ensures that a third key group is engaged fully in this, and other conversations, about early years provision. And as we will see later in the morning, it is really good that academic researchers like Professor Emer Smyth of the Economic and Social Research Institute (ESRI), and policy makers like Assistant Secretary General Bernie McNally in DCYA, and colleagues in my own Department of Education and Skills (DES), are equally well engaged in today's conversation.

My approach this morning

As one of those involved in evaluating and advising on early years provision, the DES Inspectorate is delighted to be involved today. But what do we bring to the conversation? In the next few minutes, I want to talk from the perspective of someone who is involved in looking at the continuum of children's learning from the earliest years through to adulthood. I hope I can make some helpful observations about both continuity and discontinuity for the learner. I'll talk mainly about the juncture between the early years and primary phases on the continuum, but also refer to further stages in the life of the learner.

This talk is not meant to be a comprehensive review of policy research or inspection, rather it is based largely on the observations of early years inspectors and other inspectors in the Department, and also on the analysis, thinking and conversations that we are engaged in, both within the Inspectorate, with you our partners in the Irish system, and with our colleagues abroad.

A structure for the talk

I want to consider four themes concerning transitions:

At the outset, I think we need to be clear what we are talking about when we use the word transitions, so I want to say a few, short words on that.

Secondly, for me the core of this issue revolves around the young child and the set of experiences that he or she encounters: the experiences through which he or she is cared for, grows and develops. Of course these learning experiences occur in a myriad of places – at home and in many different environments – but primarily I am going to talk about those experiences that we seek to provide or facilitate for the child in early years settings or in schools.

Thirdly, I think that it's important to note that we know that some children are more vulnerable than others in their growth and development, especially during transitions, so I want to say a few words about how we could have particular regard for these learners at times of transition.

Finally, I want to consider the adults involved and the things we can do to enable us to support children in the transitions that occur during their learning journey. That involves talking about the professional life of early years practitioners and teachers, the work of evaluators, and how early years settings and schools can, through their engagement with parents, support both parent and child during transitions.

What do we mean by transitions?

Firstly, what do we mean by transitions? Can you think back to that change experience that you thought about when I began: when you moved house, for example. All those memories and emotions – the joys and sorrows that you experienced – did they all occur on one day when you crossed the threshold of your new home? I doubt it.

There were, I am sure, many weeks and months of thinking, preparation, delights, anticipation, concerns and fears before you moved. And following your move, I am sure it took you many weeks, perhaps months, to settle into your new home. I bet you ate the same comfort food in the new home as in the old, you probably brought some of your old familiar furnishings or keepsakes to your new flat or house; the former phase of your life continued to shape and enrich the new phase you had entered.

That's because transformative transitions are not once-off events at a point in time, they are dynamic change processes that stretch back into our past experiences and forward into the new experiences that we are engaging with.¹ The transition is not simply a once-off physical move from A to B; we do not leave A behind and live only in B. Rather a transition is a sustained episode of learning and growth in itself, in which the child is an active agent. So that means transitions are not about 'making the young child ready for school' (or the older child ready for post-primary school). Transitions for young children are not single events for which the early years practitioner has sole professional responsibility (nor the

1 OECD (2017). *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*. Paris OECD Publishing, p. 257.

primary school teacher for the transitioning 12-year old). They are phases of learning during which all those caring for the child – parents, practitioners and teachers – must cooperate together to understand and support the child during a key phase in their lives.

Transitions and the learning experiences we want for children

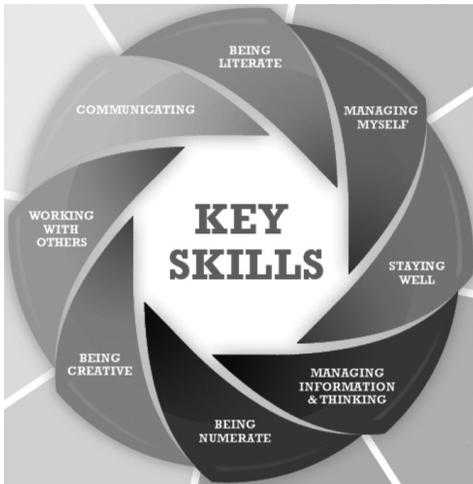
How well, then, do the learning experiences that we as adults provide or facilitate for the child respect and accord with the notion of the child on a continuous learning journey? Do they support the notion of valuing and building on the child’s past experiences to enrich his or her current and future learning?

Curriculum frameworks try to express what we believe are to be important learning and care experiences, and the outcomes we aspire to for our children. Just as important, they express the values we hold about the care, growth and development of each child and young person.

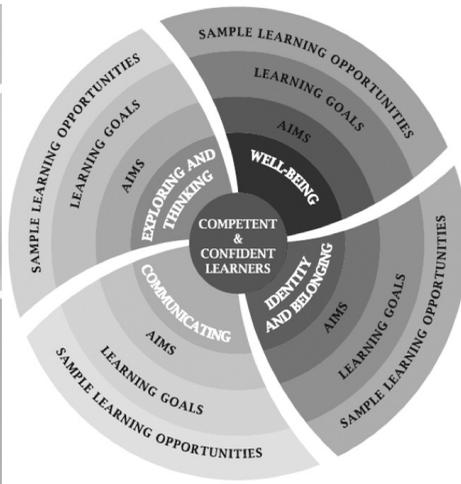
I think it is interesting to look, for a moment, at two of the more recent curriculum frameworks that we have produced in Ireland: the Junior Cycle framework for 12 to 15 year olds and the *Aistear* framework for 0-6 years.²

There are obvious parallels and connections in the conceptualisation of these curricular frameworks: the emphasis on communication (defined, in the *Junior Cycle Framework*, as literacy and numeracy using the broadest sense of these terms); the development of learners’ thinking and exploring; the importance of well-being; the development of identity and belonging, or managing myself and working with others.

Two curriculum frameworks



Junior Cycle Framework



Aistear Framework

2 NCCA (2009). *Aistear: the Early Childhood Curriculum Framework*. Dublin, NCCA; and Department of Education and Skills (2015). *Framework for Junior Cycle*. Dublin, DES.

More striking still is the emphasis both frameworks place on the child or young person being active in his or her own learning. One of the fundamental aims in the reform of junior cycle has been to change the learning experiences of young people of that age to enable and empower the young person as a creator and leader of his or her own learning. The *Framework for Junior Cycle* emphasises activities and skills such as experimentation, creativity and risk-taking.

Essentially, the junior-cycle student is expected to become a much more active agent in his or her own learning and, as you know, the concept of 'the agentic child', engaging with the world and leading his or her own learning, needs no explanation to an audience of early years practitioners. There is cause for optimism here, therefore, that even when we look at two distinct phases of children's learning, we can find many parallels and linkages in the aspirations we have for these learners, linkages that certainly have the potential to ensure a certain continuity in children's learning and development.

Ironically, the phase between the periods covered by the *Aistear* and junior cycle frameworks may appear to be somewhat out of step with both of these frameworks. It has to be said that the *Primary School Curriculum* was developed in the 1990s, so it is over twenty years old and it was written before Ireland made a conscious and long-overdue decision to make universal early years care and education available.³

To be fair, the principles underpinning the *Primary School Curriculum*, and its accompanying guidance, emphasised strongly how a child-centred curriculum could be provided in an integrated way across the curriculum areas. It strongly recommended play-based and constructivist approaches. But we have to ask ourselves what happened between design and implementation?

Many aspects of the *Primary School Curriculum* were widely praised, and many parents and children speak positively about their enjoyment of primary school. However, as one who was involved in the design of the 1999 curriculum, I can now reflect that some of its features did not pay sufficient regard to the implications of what a truly child-centred education might look and feel like, particularly for four and five year olds and younger children more generally. I think it is true that its presentation in subject booklets, for example, may not have been helpful in supporting teachers to provide a truly integrated learning experience that could allow the child's growth and development to happen organically. The extensive nature of the curriculum and the guidelines that accompanied it had the effect of reinforcing a more subject-based approach at the expense of cultivating the dispositions for learning that we now see articulated in the *Aistear Framework* and in the underpinning *Framework for Junior Cycle*.

All this meant that when *Aistear* came to be developed for 0-6 year olds about a decade later, the *Primary School Curriculum* and especially the sections of it that dealt with the learning experiences for young children were not well aligned with the experiences being promoted in *Aistear*. Indeed, the overlap between the *Primary School Curriculum* and

3 Department of Education and Science (1999). *Primary School Curriculum Curaclam na Bunscoile*. Dublin, DES.

Aistear for four to six year olds served only to highlight the gap that had opened up in what was considered best practice for early years education.

Several school leaders and teachers of infants have used the curricular autonomy that they have to go beyond the practice of the published *Primary School Curriculum*. They provide exciting and wonderful learning experiences for young children, experiences often informed by *Aistear* while retaining some of the best elements of the 1999 curriculum. These best practices build on the competences, knowledge and dispositions developed during the child's pre-school experience, and they support the learner and his or her parents in the transition from early years settings to school.

Schools are also feeling the impact of early childhood education being universally available and the consequent raising of school entry age. Undoubtedly, therefore, we need significant reform of the curriculum for primary schools and that is why the National Council for Curriculum and Assessment (NCCA) has embarked on an extensive review and redevelopment of the primary curriculum which builds on last year's consultation on an appropriate structure for the curriculum and time allocations within it. Work on changing the languages and mathematics elements of the curriculum has already commenced.

Such a reform of curriculum is a real opportunity for us to encourage the practices that we need to provide for the continuum of learning and effective transitions between early years and primary years. In this regard, we are no different to many countries. Many systems are grappling with this challenge and there is much we can learn from research here at home and curriculum change in several of our European neighbours, including issues about emphases on play, self-regulation, the optimal range of learning experiences and even the length of the learning day.⁴

Curriculum reform at primary level in Ireland will inevitably need to be complemented by a matching review of *Aistear* in due course, if we are really to set out a viable continuum of learning for young children. While *Aistear* has been widely praised as a curriculum document, it has not been without its implementation challenges. Some early years practitioners and organisations have argued that the curriculum framework is challenging to work with, largely because of a lack of sufficient professional development support for it in initial and continuing professional development. Indeed, the NCCA has also noted on a number of occasions what it has described as the relative absence of national continuing professional development (CPD) to support the implementation of *Aistear*. Whatever the cause, the *Aistear* framework has proved to be demanding for practitioners to access and use, so much so, that the DES and DCYA commissioned the NCCA in 2015 to produce the *Aistear-Síolta Practice Guide* to support practitioners in the implementation of the emergent and inquiry based learning advocated in *Aistear*.⁵

4 OECD (2017). *Starting Strong V: Transitions from Early Childhood Education and Care to Primary Education*, Paris, OECD Publishing, p. 148.

5 NCCA (n.d.) *Aistear-Síolta Practice Guide* (Dublin, NCCA). Available at <http://aistearsiolta.ie/en/Introduction/Full-Print-Version/Full-Print-Version-of-Aistear-Siolta-Practice-Guide.pdf>

Finally, on the issue of curriculum reform more generally, I see no reason why we should not eventually seek to have a common overarching framework for young people's learning spanning from 0 to 18 years. To date, in Ireland, we have tended to undertake curriculum reform in distinct phases of the education system at different times: early years, primary, junior cycle, senior cycle. Such phased development allows for the particular needs of learners at each phase to be considered in detail and that is, of course, valuable. However, given that a single body, the NCCA, has overall responsibility for curriculum development across all of these phases, there may be opportunities to consider the value of a single overarching curriculum framework as one possible mechanism to facilitate good transitions for learners.

During curriculum development for each distinct phase, it might also be valuable to ensure the involvement, not only of teachers and practitioners from that phase, but also practitioners and teachers from other phases. For example, while development of the curriculum for the primary school will be led by primary teachers and experts, the involvement of early years practitioners and post-primary teachers might assist greatly to ensure continuity in children's learning; similarly, reforms at second level could benefit significantly from greater involvement of primary teachers and third level lecturers working alongside second-level teachers and experts.

The lived reality in settings and schools

Of course, curriculum statements and frameworks are simply statements of what we aspire to provide for children. The lived reality can be quite different. As inspectors, my colleagues and I have the great privilege of observing the intimacy of the learning experiences that occur in early years settings and schools, day in and day out. As our reports show, we are fortunate that these settings and schools are led and staffed by many gifted and dedicated professionals. Many settings and schools provide excellent care and learning opportunities to the young people that they serve and we write about the strengths that we see in their practice in our reports.

For a moment, however, I want to talk about where practice is less ideal: not because this is a frequent occurrence but rather because these instances may point to the challenges that we have to tackle if children's learning and growth is to be optimal, and if transitions are to be successfully achieved.

Inspectors from the Department of Education and Skills have been working in early years settings in the ECCE (Early Childhood Care and Education) programme for over two years now. One issue that came to the fore early on for us as we observed practice in these settings was the pressures that settings felt to 'prepare children for school'. Sometimes early years practitioners told us they felt this pressure as a result of the expectations they believed that others had of them (including parents, primary schools and inspectors). Practitioners felt, rightly or wrongly, that in the competitive commercial world in which they operated, parents believed that a mark of excellence would be when early years children had 'learned their letters' or begun reading before they went to 'real school'. Ironically, Professor Emer Smyth's research shows that the vast majority of teachers in primary schools do not hold these views.⁶

6 Smyth, E. (2018). *The Transition to Primary Education: Insights from the Growing Up in Ireland Study*. Dublin, ESRI, p. 34.

However, such beliefs can lead to a formalisation of learning and an erosion of the play-based approaches that are critical if the child is to be agentic in his or her own learning. This approach to transitions fails to respect the nature of the child and his or her learning as an early years learner. (In fact, it also fails to respect the sort of learning that our education system is attempting to emphasise not only at early years but in primary school and at junior cycle.)

Inspectors have a similar concern about the learning experiences in many infant classes. Our experience suggests that while excellent play-based approaches may be used skilfully by many teachers of infants, children experience them less frequently as they progress through junior and senior infants. Attempting to gain some of the benefits of *Aistear*, some schools have decided to provide at least some Aistear-style opportunities by creating 'Aistear hours' in their timetables, an approach that may be well meant but is clearly at odds with the underpinning principles inherent in *Aistear*.

Inspection has highlighted that by the time that young children are six or seven years old and enrolled in first class, their experience of school can be predominantly one of frequent whole-class teaching and considerable periods of seated individual work on undifferentiated tasks. While both approaches may have some value as part of a range of methodologies, an over-reliance on them can limit the possibility for child-to-child and child-to-adult engagement.

An over-reliance on these more formalised approaches is not ideal if we want to create a seamless transition from early years to primary. Equally important, these approaches do not fulfil the aim of the *Primary School Curriculum* to enable the child to progress in his or her learning at a pace that is suited to his or her needs and interests. This means that a frequent recommendation that inspectors make to individual teachers (and not just teachers of infants) is to use small group work more frequently so that the pace and nature of the child's learning can be more suited to their needs.

I am not going to analyse all the reasons why learning and teaching become overly formalised at a relatively early stage of the primary school years but I will mention a few. I have already referred to one factor: that is the beliefs held by parents, practitioners and teachers about each other's expectations of what 'school' should be. All of us, including inspectors, have a role in dispelling those myths.

A second constraint in the primary school relates to the numbers of children that are typically enrolled in primary classrooms. The average class size in many (though by no means all) primary schools is significantly higher than the adult to child ratios that are required in early years settings here in Ireland and internationally. Changing class size in schools, of itself, is no guarantee that teachers' approaches and methodologies will alter. That is why many studies have shown that, despite its popularity, lowering pupil-teacher ratios in schools

has little or no effect on the standards achieved by learners (other than for specific groups such as children in early years settings) unless teachers' practice changes fundamentally.⁷ However, it is undeniable that having fewer pupils in infant classrooms could support the provision of the sort of learner-led, play-based learning advocated in *Aistear* and in a revised primary school curriculum.

Given that the growth in Ireland's primary-age school population has peaked and enrolment is expected to decline in the next decade, some have argued cogently that a case could be made that any demographic dividend could well be used to lower adult-child ratios in infant classes. If this was combined with significant changes in teaching approaches and more appropriate design of these learning spaces, Irish children could benefit from greater continuity in learning and, more importantly, a learning experience that would be better suited to their needs and future learning.

- 7 Recent research summarised by the OECD shows that smaller ratios and group sizes were associated with positive child-staff relationships in early years services for children aged 3 to 6, although child-staff ratios and group size do not appear to be consistently linked to child development and learning. See OECD (2018). *Starting Strong: Engaging Young Children: Lessons from Research about Quality in Early Childhood Education and Care*. Paris, OECD Publishing, pp. 43, 44, 49.

I am indebted to the Educational Research Centre, Drumcondra, for the following additional information on class size and student learning:

Research evidence suggests that smaller classes (fewer than 20 students) in the early stages of schooling (the first four years) can have a positive and long-lasting impact on student achievement, and that benefits are greatest for students from disadvantaged and minority backgrounds. See Glass, G, and Smith, M. (1979). Meta-analysis of research on class size and achievement. *Educational Evaluation and Policy Analysis*, 1(1), pp. 2–16; Schanzenbach, D.W. (2014). *Does class size matter?* Boulder, CO: National Education Policy Centre; Zyngier, D. (2014). Class size and academic results, with a focus on children from culturally, linguistically and economically disenfranchised communities. *Evidence Base*, 1, pp. 1-23.

Research findings also suggest that for class size reduction benefits to be optimised, teachers must adapt their practice for smaller classes (Zyngier, 2014). Where this does not happen, for example, where teachers do not have the skills, experience or motivation to change, then the full potential of a reduced class size will not be realised. See Hattie, J. (2005). The paradox of reducing class size and improving learning outcomes. *International Journal of Educational Research*, 43, pp. 387–425.

A fuller treatment of the issue of class size impact completed at the Educational Research Centre may be found in: Weir, S., Kavanagh, L., Kelleher, C. and Moran, E. (2017). *Addressing Educational Disadvantage. A Review of Evidence from the International Literature and of Strategy in Ireland: An Update since 2005*. Dublin: Educational Research Centre.

The challenged learner

Can I turn now to the learner with additional learning needs? Some children experience greater challenges in their learning. This can arise for a range of reasons including physical, linguistic, ethnic, intellectual, social, family, economic and other factors. Over the last two decades the school system has invested heavily in putting in place a range of supports to facilitate the learning needs of these children. Policies such as those on special education and Delivering Equality of Opportunity in Schools (DEIS) have been developed and implemented. National bodies such as the National Educational Psychological Service (NEPS) and the National Council for Special Education (NCSE) have been established. Additional staffing as well as extra financial and professional development supports have been provided to schools.

It has been good to see steps being taken in recent years to provide such supports in the early years sector. The advent of AIM (the Access and Inclusion Model which provides a programme of supports designed to ensure that children with disabilities can access the Early Childhood Care and Education (ECCE) programme in mainstream pre-school settings) has been particularly welcomed by parents and practitioners in the sector. The recent announcement by Dr Katherine Zappone, Minister for Children and Youth Affairs, that a scheme of additional DEIS-style targeted funding would be made available in the early years sector is a clear indication that the need to support vulnerable learners is recognised.⁸

National and international evidence suggests that at-risk learners and their families become even more vulnerable at times of transition, so ensuring continuity of supports across the transition phase could play an important role in the overall success of the child's progress. The new special needs resource allocation model in primary schools is introducing a more needs-based model which is better aligned to more recent reforms in other sectors, including AIM, and this should help transitions. But I think it is widely recognised that consideration must be given to making available coordinated psychological, health and other services to early years children in settings and schools, particularly to children from disadvantaged backgrounds and those with special educational needs. I am glad to know that these issues are under active consideration by DCYA, my own Department, the Department of Health and the Health Service Executive (HSE) in the context of the development of the Early Years Strategy.

The role of the adults

Practitioners, teachers and parents

We know that high quality, child-centred interactions between practitioners and children, or teachers and children, are strongly associated with improved child development and well-being, as well as socio-emotional and academic outcomes in both early years and

8 Speech by Minister Katherine Zappone at the Open Policy Debate on the Early Years Strategy, Thursday, 7 June 2018. Available at: www.dcy.gov.ie/viewdoc.asp?Docid=4714&CatID=11&mn=&StartDate=1+January+2018

primary settings. This means that the ways in which we recruit, develop and retain the professionals to whom we entrust our children are critical in ensuring high quality care and learning experiences for those children. Indeed, recent findings from the OECD suggest that workforce development, namely in-service training, is the policy intervention with the strongest evidence for higher process quality in early-years settings and better child development and learning.⁹ This professional development is just as important for enabling successful transitions for the learner.

We can't consider any of the issues concerning practitioners, teachers and their professional development without acknowledging the historical developments in Ireland that have brought us to where we are now. Primary education and primary teaching are long-established features of Irish society; in contrast, high quality early years provision has not been widely recognised as an important and vital public good until relatively recently, so its infrastructure is at an earlier stage of development.

There are many positives in both the early years and primary systems, the most important of which is that we attract many dedicated and inspired people to work as teachers and practitioners. Irish public policy has valued teaching as a career – primary teaching became a graduate-only profession in the 1970s, and during the last decade and a half, it has gradually gained the right, through the Teaching Council, to set standards for the registration of its membership and for the content of teacher education programmes. Very considerable sums are spent on teachers' continuing professional development and the importance of this CPD has been recognised in the Teaching Council's work on *Cosán*¹⁰ and in Minister Richard Bruton's *Action Plan for Education* commitment to develop a strategy for teachers' professional development.¹¹

Universally available, state-provided early years provision – a radical step achieved in a very short period of time through the leadership of the DCYA and an enterprising early years sector – has highlighted the importance of early years practitioners. Early years education focussed inspections carried out by the Inspectorate of the DES have, I hope, added to the recognition of the key educational role that early years practitioners play.

As a result, many initiatives are underway to provide better initial and continuing professional development opportunities for early years practitioners, and the Minister for Children and Youth Affairs has recently stated her commitment to “attract and retain a well-qualified workforce, [and] enabling continued professional development across their career.”¹² We have seen the provision of a greater range of undergraduate and diploma courses, the establishment of the Better Start Quality Development Service, and the funding of training programmes through city and county child care committees and organisations

9 OECD (2018). *Starting Strong: Engaging Young Children: Lessons from Research about Quality in Early Childhood Education and Care*, p. 79.

10 Teaching Council (2016). *Cosán: Framework for Teachers' Learning*. (Maynooth, Teaching Council).

11 Department of Education and Skills (2018). *Action Plan for Education 2018*. Dublin, DES, p. 37.

12 Speech by Minister Katherine Zappone at the Open Policy Debate on the Early Years Strategy, Thursday, 7 June 2018.

like Early Childhood Ireland, Barnardos and other NGOs. The National Síolta Aistear Initiative, which is developing and delivering nationally approved CPD in *Aistear* for practitioners is a really good example of DCYA, DES, Better Start and NCCA working in collaboration to provide much needed learning opportunities for serving practitioners.

It is also worth noting that financial incentives are provided to settings that are under contract to DCYA to encourage them to employ better qualified graduate practitioners. Significantly, Minister Kathernie Zappone has announced that she is giving consideration to the introduction of a new “voluntary or opt-in contract to deliver high-quality early childhood care and education to young children and their families.” She has stated that “in return for meeting agreed quality criteria under this contract, providers will receive additional funding.”¹³

While there is not yet any equivalent of the Teaching Council for the registration of early years practitioners, processes have been put in place by DCYA and the DES to review and set standards for graduate and diploma programmes. All of this indicates, therefore, that we are on a trajectory that will enhance the initial and continuing professional development of early years practitioners and can only enhance their status and working conditions in the long term.

Within this context we can take steps to improve transitions for learners. One practical step relates to the content of professional development programmes for both practitioners and teachers. Enabling all teachers and practitioners to understand and implement the principles and practices that lead to successful transitions is essential.

A second practical step is greater use of common professional development. Many countries have moved to providing a considerable degree of shared initial and continuing professional development for early years practitioners and primary teachers. In Ireland, the Sahlberg review of teacher education and the consequent consolidation of teacher education into larger teacher education institutes¹⁴ was specifically intended to ensure that professional programmes for early years practitioners and teachers would take place in the same institutions. I think there would be benefits in exploring the possibilities of collaboration between support services such as Better Start and the Professional Development Service for Teachers, particularly in ensuring common understandings and coherence in supporting the implementation of *Aistear*.

A third, and perhaps the most important step to mention in supporting successful transitions, is the fostering of collaborative practice and professional respect on the ground. The NCCA’s innovative project on early years to primary transitions¹⁵ has developed excellent materials to enable practitioners, teachers and parents to exchange information, involve children in their own transitions, and ensure that transitions are the sort of positive learning

13 Ibid.

14 Sahlberg, P. (2012). *Report of the International Review Panel on the Structure of Initial Teacher Education Provision in Ireland: Review conducted on behalf of the Department of Education and Skills July 2012*. Dublin, DES.

15 NCCA (2018). *Preschool to Primary School transition Initiative: Final Report*. Available at www.ncca.ie/media/3367/transitionpreschoolprimary_reportfinalfeb.pdf It is expected that the reporting templates and support material will be published in autumn 2018.

experience that we need. But the project has also shown that getting transitions right is not just about the exchange of information, important as that is. It has demonstrated that the professional encounter and collaboration that takes place between the practitioners and teachers, and between both of them and the parent and child are much more important. Both practitioner and teacher have much to learn from each other; both have much to gain by collaborating with the parent; and I would argue that these should be continuing and respectful conversations, not confined to a once-off annual event.

Inspectors

Inspectors are a further group of adults that can and should support successful transitions. One of the ways in which inspectorates like ours can support best practice is to describe it in our evaluation frameworks and their accompanying signposts. We can also emphasise its importance as we observe practice in settings and schools, advise practitioners and teachers, and report on standards.

That's why we have specifically included the need to think about and build good practices around transitions in the framework we use in the early years inspections we carry out. The following is one of the statements of quality and its accompanying signpost for practice that we have included in the Early Years Education-Focussed Inspection (EYEI) framework:

EARLY YEARS EDUCATION-FOCUSSED INSPECTION (EYEI) FRAMEWORK¹⁶

Statement: .

- ⌘ Transitions into, from and within the setting are managed effectively to support children's learning and development

Signpost for practice:

- ⌘ Policies and practices have been developed to promote the sensitive management of transitions within and between settings

And here is a parallel statement of highly effective practice in *Looking at Our Schools*, the quality framework for primary schools:

LOOKING AT OUR SCHOOLS 2016¹⁷

- ⌘ The principal and other leaders in the school build and maintain very productive relationships with other schools, and education providers to extend learning opportunities for pupils

Tá an téama céanna le feiceáil sna critéir d'aitheantas mar scoil Ghaeltachta: (*The same theme is to be found in the criteria for the recognition of Gaeltacht schools*):

16 Inspectorate, Department of Education and Skills (2016). *A Guide to Early-years Education-focussed Inspection (EYEI) in Early-years Settings Participating in the Early Childhood Care and Education (ECCE) Programme*. Dublin, DES.

17 Inspectorate, Department of Education and Skills (2016). *Looking at Our School 2016: A Quality Framework for Primary Schools*.

CRITÉIR D’AITHEANTAS MAR SCOIL GHAELTACHTA¹⁸

- ⌘ Ag leibhéal na bunscoile, náisc teanga agus chultúrtha atá úsáideach agus chun tairbhe an dá thaobh a bhunú leis na naíonraí áitiúla

CRITERIA FOR RECOGNITION AS A GAELTACHT SCHOOL

- ⌘ At primary level, establish useful and mutually beneficial language and cultural links with the local naíonraí

We have been able to report on excellent examples of practice around transitions in early years inspection reports.¹⁹ Here is a recent example:

EXTRACT FROM EYEI INSPECTION REPORT

Excellent systems are in place to support transitions to primary school. These include sharing of comprehensive information with parents and the local primary schools. Junior infant teachers from the local primary school visit the pre-school and the children visit the local primary schools prior to transition. Staff have attended training in autistic spectrum disorders along with staff from local primary schools to support the transition of children from the setting to primary education.

Interestingly, when our recommendations or “actions advised” in our early years reports are analysed, we can see that there are particular challenges in relation to transitions for early years services.²⁰ The most frequent actions advised in respect of transitions relate to communicating with parents and making connections with primary schools.

MOST FREQUENT ACTIONS ADVISED IN RESPECT OF TRANSITIONS

- ⌘ Fostering concrete strategies to enable and promote meaningful partnerships with parents in the learning and development of their child
- ⌘ Developing relationships with primary schools and teachers to support children’s smooth transitions to primary school

18 Department of Education and Skills (2016). *Policy on Gaeltacht Education 2017-2022*. Dublin, DES, p. 12.

19 Inspection reports arising from the Early Years Education-Focussed Inspections (EYEIs) of the Department of Education and Skills are available at www.education.ie

20 An analysis of the trends and findings from the first early years education-focussed inspections carried out in 2016 and early 2017 was published in January 2018. See Inspectorate (2018). *Early Years Education-focussed Inspection: Findings and Future Developments*. Dublin, DES.

Some of the challenges we see relate to the lack of a common language, and the absence of support or guidance for practitioners and teachers in both settings to share and exchange information. The NCCA work I mentioned earlier, as well as publications like *Ambitions for Transitions*, developed by ABC Start Right in Limerick²¹ and similar resources, will be really valuable in addressing these needs. The NCCA findings, in particular, will be invaluable for initial and continuing professional development for both teachers and practitioners, and they have the potential to improve practice significantly if implemented consistently by settings and schools.

We also have more work to do within the DES Inspectorate, particularly in regard to how we evaluate and inspect in infant classes. The recruitment of early years inspectors and their collaboration with primary inspectors who are early years specialists have certainly strengthened our awareness and capacity to encourage best practice in transitions and practice in infant classrooms.

One of the changes to be made in the next revision of our current inspection framework is to highlight even more explicitly the need for better attention to be paid to transitions, both into and from the primary school. Having early years colleagues within the Inspectorate, has highlighted for us the value of advising schools on this aspect of their practice. In a recent inspection report, for example, the issue of transitions was highlighted in our recommendations to a school, and we received this school response:

SCHOOL RESPONSE TO WSE RECOMMENDATIONS

The Board [of Management] agrees to continue developing our links with feeder preschools and to establish effective links with preschools within the local community. This should further enhance the smooth transition into Junior Infants.

During the final term the principal and the Home-School-Community Liaison teacher visited many preschool services in the local and surrounding areas and met key personnel.

Following recommendations in the [inspection] report, a formal transition document for our school was created with the assistance of the pre-school staff. We will continue to liaise with the local services and will build on the links within our local community to implement our transition programme. This important work will inform our transition policy and this will be available on our school website.

21 ABC Start Right Limerick (2018). *Ambitions for Transitions: A Guide to Support Every Child's Progression from Early Years services to Primary School*. Limerick, ABC Start Right.

I know that we have to build on examples like this, and make transitions a much more visible part of our own Looking at Our Schools framework and our evaluations in schools.

Finally, inspection can help to inform policy as well as practice. Earlier this year we published our analysis of the trends, strengths and challenges that we observed in early years settings,²² and we take regular opportunities to discuss with our colleagues in the Department's Early Years Policy Unit and the DCYA the possible policy responses that we believe would address emerging issues and improve provision for children. I know that long-term policies that will address several of the issues that I have discussed today (and many more besides) are being considered by Minister Katherine Zappone and officials in DCYA as part of the development of the Early Years Strategy and we have been delighted to be involved in consultations on that strategy.

Transitions will become the sort of successful learning experiences that we want when policy and practice envision education as a true continuum from 0 to 18 and beyond. That's why inspectors, working closely with colleagues across a range of policy areas in the Department and with colleagues in other government departments, have helped to ensure that several national policies include specific actions or provision for each phase of education including early years, primary and beyond.²³ Ensuring that policies encompass all phases of education can only help in aligning provision and easing transitions. Our challenge as practitioners, teachers, parents, evaluators and policy makers is to ensure that we do all that we can to deliver the child-centred coherence necessary to translate this vision into real life experiences for all our learners, irrespective of their age and stage of participation in our education system.

22 Inspectorate (2018). *Early Years Education-focussed Inspection: Findings and Future developments*. Dublin, DES.

23 For example, some recent Department and government policies that have included specific reference, provisions or actions relating to early years education as well as to primary and further phases of education include:

- *Literacy and Numeracy for Learning and Life: the National Strategy to Improve Literacy and Numeracy among Children and Young People 2011-2020* (2011).
- *A Framework for Sustainable Development in Ireland* (2012).
- *Digital Strategy for Schools 2015-2020: Enhancing Teaching, Learning and Assessment* (2015).
- *Policy on Gaeltacht Education 2017-2022* (2016).
- *Creative Youth: A plan to enable the creative potential of every child and young person* (2017).
- *National Strategy: Literacy and Numeracy for Learning and Life 2011-2020 – Interim Review 2011-2016: New Targets: 2017-2020* (2017).
- *STEM Education: Policy Statement 2017-2026* (2017).
- *Action Plan for Education 2018* (2018).

key principles (NCCA, 2009a). There has not been a systematic evaluation to date of the implementation of *Aistear*. However, a number of small-scale studies provide useful insights, with one study pointing to the continued dominance of didactic methods in early years primary classrooms, with teachers pointing to large class sizes, among other factors, as constraints on implementing a play-based curriculum (Gray and Ryan, 2016). Another study (Fallon and O’Sullivan, 2015) highlights the expectations of parents as an additional barrier to adopting a play-based curriculum. Consultation with teachers indicated that many reported the lack of support and resources to offer a truly play-based curriculum (NCCA, 2018). *The Primary Curriculum* is itself changing with the recent introduction of a new language curriculum, work on a new mathematics curriculum, as well as broader efforts to review and re-develop the full primary curriculum.

In spite of these changes, there has been little systematic evidence on the kinds of primary classrooms experienced by young children. The Growing Up in Ireland (GUI) study data yielded new insights into early years provision at primary level and this article focuses on information collected from primary teachers to trace the profile of teachers, the size and structure of classes, the time allocated to different subject areas, the kinds of teaching methods used and the nature of communication between school and home. The article draws on a broader study of the transition to primary school (Smyth, 2018).

Data

The GUI study was commissioned by the Department of Health and Children through the (then) Office of the Minister for Children, in association with the (then) Department of Social Protection and the Central Statistics Office. The study has been carried out by a consortium of researchers led by the Economic and Social Research Institute (ESRI) and Trinity College Dublin (TCD). The study focuses on two cohorts of children: a nine-month (infant) cohort and a nine-year-old (child) cohort. Analyses presented in this article focus on the infant cohort.

The infant cohort survey was based on a nationally representative sample of 11,134 children drawn from the child benefit register. Parents were first surveyed when the child was nine months old, and surveyed again when the child was three years of age (2010-2011) and five years of age (2013). A total of 9,001 families were surveyed when the child was five years of age. At all waves, detailed interviews were conducted with the primary caregiver (who was the mother in over 99% of cases) and the secondary caregiver, if resident in the household. Physical measurements were taken of the child and children completed cognitive tests at the ages of three and five. Home visits occurred between March and September 2013. Because of differences in month of birth and age starting school, over one-quarter (28%) of children had not started school by the time of the home visit. This means that some information, especially on contact with the school and teacher, is not available for this group of families.

Later in 2013, questionnaires were sent to the child’s principal and classroom teacher to gather information on the characteristics of their school and class, as well as on teacher perceptions of the study child. All but a handful of the children had started school by this

stage. The survey covers both children who had started school in September 2012, before the home visit, and children who newly joined junior infants in September 2013. The study children were therefore spread over two class levels – junior and senior infant classes. Thus, the study allows for a contrast in experiences for children who are the same age but in different class levels.

Class size and structure

Information was collected from the teachers of the children regarding the size of the class and whether or not it was multi-grade (that is, contained more than one year group). One-fifth (21%) of the five-year-olds were taught in classes with fewer than 20 pupils, 24% were taught in classes of 20-24 pupils, 36% were in classes of 25-29, while 19% were in classes of 30 or more pupils. Working-class children and those from non-employed families are more likely to be in smaller classes (29-30% are in classes of fewer than 20 compared with 18% of those from professional/managerial backgrounds). This is largely because of the smaller class sizes found in DEIS (Delivering Equality of Opportunity in Schools) schools, particularly in Urban Band 1 schools; almost half (48%) of children taught in Urban Band 1 schools are in classes of fewer than 20 pupils, compared with 16% of those taught in non-DEIS schools. Children living in urban areas are more likely than those in rural areas to be in larger classes of 30 or more pupils (22% compared with 16%). Children with disabilities are much more likely to be taught in small (<20 pupil) classes than those without disabilities (31% compared with 21%). This pattern is mainly due to smaller class sizes for the small group of children with disabilities allocated to special classes.

One-quarter of five-year-olds are being taught in multi-grade classes, that is, in classes with two or more year groups. Children living in rural areas are more than five times as likely as urban children to be taught in a multi-grade class (39% compared with seven percent), reflecting smaller school sizes in rural areas.

The profile of early years teachers

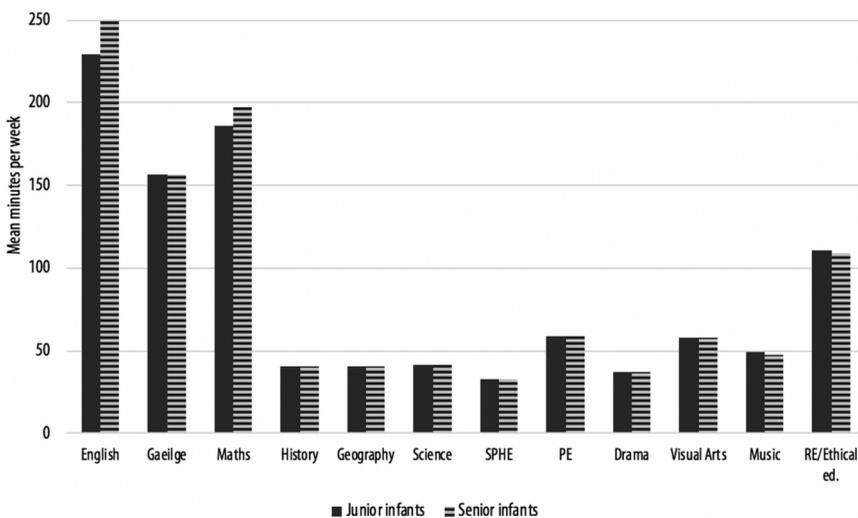
Only 3.6% of five-year-olds are taught by a male teacher, with men slightly more likely to work in senior infants than in junior infant classes. Over one-quarter of the children were taught by teachers who had less than five years' experience, while just under one-quarter had teachers with 15 years or more experience. No differences in teacher experience were found between junior and senior infant classes. There tend to be fewer more experienced teachers (15 years or more) in urban DEIS schools; 14-17% of five-year-olds in Urban Band 1 and 2 schools are taught by teachers with this level of experience, compared with 34% in rural DEIS schools and 25% in non-DEIS schools. The pattern for rural DEIS schools reflects a more general trend towards rural schools having more experienced teachers; 27% of children in rural areas are taught by those with 15 or more years' experience compared with 20% of urban children. The differences found between urban DEIS and other schools mean that children from working-class or non-employed families and those from migrant backgrounds, groups that are over-represented in urban DEIS schools, are less likely to be taught by very experienced teachers.

The structure of the school day

The teachers of the children in the GUI study were asked about the amount of time they spent across the different subject areas of the primary curriculum. Figure 1 shows that more time is spent on English than on other subject areas, typically four hours per week, followed by maths (around three hours per week). About 2.5 is spent on Gaeilge, and 100 minutes on religious/ethical education. One hour per week is spent on average on physical education and visual arts, with slightly less than an hour a week spent on the other subject areas. The time allocation does not differ much between junior and senior infants, but there is a slight increase in the amount of time spent on English and maths over the transition between the two class levels.

There is some variation in time allocation by teacher experience, with more experienced teachers spending more time on English, art and music, though the differences involved are not very large. Teachers in Urban Band 1 DEIS schools spend significantly more time on English than other school types, with a difference of around half an hour per week on average, compared to teachers in non-DEIS schools. The trade-off is that these schools allocate less time to Gaeilge and to religious/ethical education. Rural DEIS schools appear to spend more time on Gaeilge per week than the other schools. Time spent on maths is somewhat higher in Urban Band 2 and rural DEIS schools, but Urban Band 1 schools do not differ from non-DEIS schools in their maths time allocation. Single-sex schools devote somewhat more time to English (with boys' schools allocating more time than girls' schools) and slightly less time to Gaeilge. Time spent on PE does not differ between junior and senior infants. Teachers of multi-grade classes spend slightly more time on English and maths than single-grade teachers, though these differences are small.

Figure 1: Average number of minutes per week spent on different subject areas in junior and senior infant classes.



Teachers were also asked about the proportion of time in the classroom that was based around play-based activity; the type of play used is discussed further below. Around one-quarter of classroom time was described as being devoted to play-based learning (with only a slightly higher rate in junior infant classes, at 27% compared to 23%). Less experienced teachers tended to allocate more time to play-based learning than their more experienced counterparts; 30% of the newly qualified group (those with less than three years' experience) devoted one-third or more of classroom time to play-based learning, compared with 20% of teachers with 20 years or more experience. No difference was evident by class size, school social mix (DEIS or non-DEIS) or gender mix. Teachers in multi-grade classes tended to spend somewhat less time on play-based activity, most likely because they were also catering to the needs of older children in the class.

Teaching methods in early years classes

Class teachers were asked how often they used a variety of approaches in their classroom – whether 'never or almost never', 'some days', 'most days' or 'every day'. Given the recognition of play as a crucial form of learning for young children, teachers were specifically asked about different kinds of play. Figure 2 shows the proportion of children who engaged in physical play, creative play (such as painting or using modelling clay), pretend play (such as make-believe) and games with rules (such as board games) in the classroom context every day. For junior infant groups, physical play and creative play were the most prevalent types, with around half of children engaging in these activities every day. Creative play was frequent for around one-third of those in junior infants and under one-quarter of those in senior infant classes. Playing games with rules (such as board games) was a much less prevalent activity at either class level. Overall, play-based activities are used to a greater extent with junior infant groups, with a marked decline in the use of creative and pretend play over the transition to senior infants.

With regard to the time allocation to subject areas, the use of play varies by school teacher and class characteristics. The use of creative play is somewhat more common where classes are taught by more recently qualified teachers. At junior infant level, those in multi-grade classes engage in creative and pretend play less frequently than their counterparts in single-grade classes (39% compared with 56% for creative play; 27% compared with 39% for pretend play). This seems to reflect constraints in providing a more play-based curriculum where young children are being taught alongside their older peers. In junior infant classes, there appears to be a greater use of creative play in Urban Band 1 DEIS schools than in other school types (63% every day compared with 51% in other schools) so teachers in DEIS schools appear to be emphasising play in order to engage and integrate children. Pupils in boys' schools experience physical play more frequently than those in coeducational or girls' schools, with a bigger difference for junior infants. On the other hand, pupils in girls' schools engage in pretend play more frequently; among senior infants, 35% do so every day compared with 20% in boys' schools and 23% in coeducational schools.

Figure 2: Proportion of children experiencing different forms of play in the classroom 'every day'

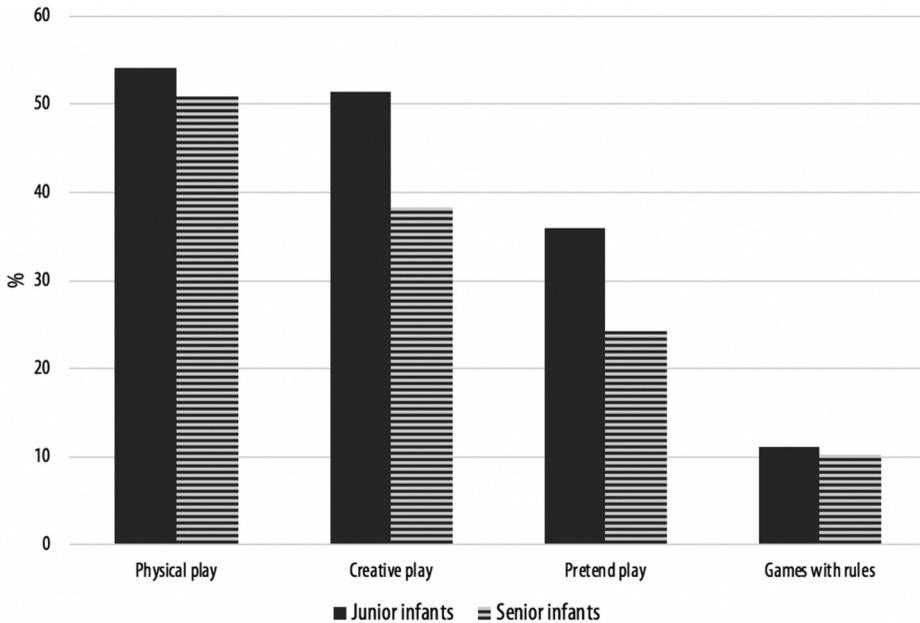
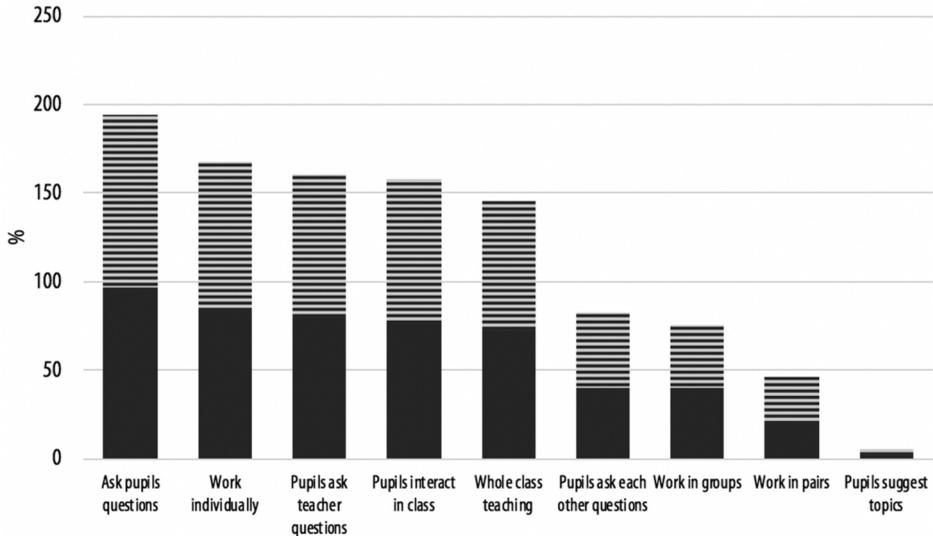


Figure 3 looks at the nature of interaction between teachers and pupils in the classroom as well as the use of group, individual or pair-work. In almost all cases, teachers ask children questions every day while pupils asking teachers questions is prevalent for four-fifths of children. Similarly, pupils interacting by taking turns and engaging in conversation is common in four-fifths of cases but pupils asking each other questions in class is a less common occurrence (happening every day for 40% of children). The use of individual work and whole-class teaching emerges as the dominant pattern, with group work and pair work employed only in a minority of classrooms. Pupils rarely suggest topics to be covered in class, with this 'never or almost never' happening in four out of every ten cases.

In contrast to the pattern for play-based activities, there are very few differences between junior and senior infant classes in the use of grouping and different forms of interaction. Pair work is more commonly used by more recently qualified teachers; for example, one-quarter of those qualified in the last five years use pair work with junior infants every day, compared with 16% of those with more than 15 years' experience. A similar pattern is found for pupils asking teachers questions in class and pupils asking each other questions in class, both being less prevalent among more experienced teachers. The practice of pupils working individually is slightly more common in larger classes, though the difference is not sizeable. Group work is less commonly used in multi-grade classes at both junior and senior infant levels. Whole-class teaching is less commonly used by more experienced teachers (more than 15 years' experience) compared to other groups of teachers. It is also much less commonly used in multi-grade classes (62% versus 76-78%), though the patterns nonetheless show that the majority of five-year-olds in multi-grade settings experience whole-class teaching on a daily basis. The use of whole-class teaching is significantly related to class size, being more prevalent in larger classes.

Figure 3: proportion of children experiencing different forms of grouping and interaction in the classroom 'every day'

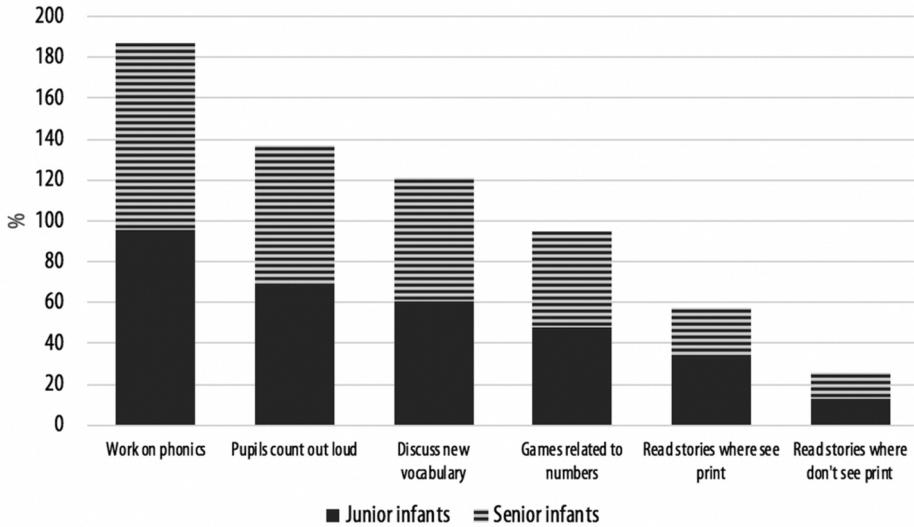


Over half of the children are given the opportunity to engage in hands-on activities every day. Teachers appear to use hands-on activities to a greater extent with junior infants. Hands-on activities are used less often by more experienced teachers and by those in multi-grade settings, with a much larger difference by class structure for junior infant classes (54% compared with 66% every day). For senior infant classes, hands-on activities are more frequently used in Urban Band 1 DEIS schools (73% daily compared with 45-55% in other schools) but there is little variation by DEIS status for junior infant classes.

Figure 4 shows the use of different approaches to reading and maths in the classroom. Work on phonics and word sounds takes place every day in almost all classes, while new or difficult vocabulary is often discussed in six out of ten cases. In over one-quarter of cases, teachers read stories to the children where they can see the print every day, while reading to them where they cannot see the print is less prevalent, at 13%. Counting out loud was found to happen every day in 70% of cases, while games related to numbers occur on a daily basis in around half of settings.

Few differences are evident between junior and senior infant classes in approaches to reading and maths. However, teachers are more likely to read to junior infants every day (at 35%, compared with 25% for senior infants), at least in single-grade classes. In addition, teachers, especially at junior infant level, appear to read (showing the print) more frequently to groups of children who are expected to be less engaged with reading. Thus, the frequency of reading to junior infant pupils is much higher in urban DEIS than in rural DEIS or non-DEIS schools (40-49% compared with 25% and 32% respectively). Similarly, reading on a daily basis is more prevalent in boys' schools than in coeducational or girls' schools (45% compared with 32% and 26%).

Figure 4: proportion of children experiencing different approaches to reading and maths in the classroom 'every day'



Pupils counting out loud is much less common where they are taught by more experienced teachers and in multi-grade settings. Among senior infant classes, pupils counting out loud is more common in urban DEIS schools than in rural or non-DEIS schools. Newly qualified teachers (with less than three years' experience) are more likely to use games relating to numbers or maths than other teachers, while multi-grade teachers are much less likely to use such games. Children attending boys' schools engage in these games more frequently than those in girls' or coeducational schools.

Teachers were also asked about the frequency of using information and communications technology (ICT) and other equipment in the classroom. The teacher used a computer and/or interactive whiteboard every day in the majority (four-fifths) of cases. In contrast, usage of computer equipment by children themselves was found to be very rare for this age group, with four in ten children never or almost never using such equipment in class. The use of video or audio recordings is a common feature of classroom experience for only a minority of children. Few differences are found between junior and senior infant classes in the use of ICT.

Home-school communication

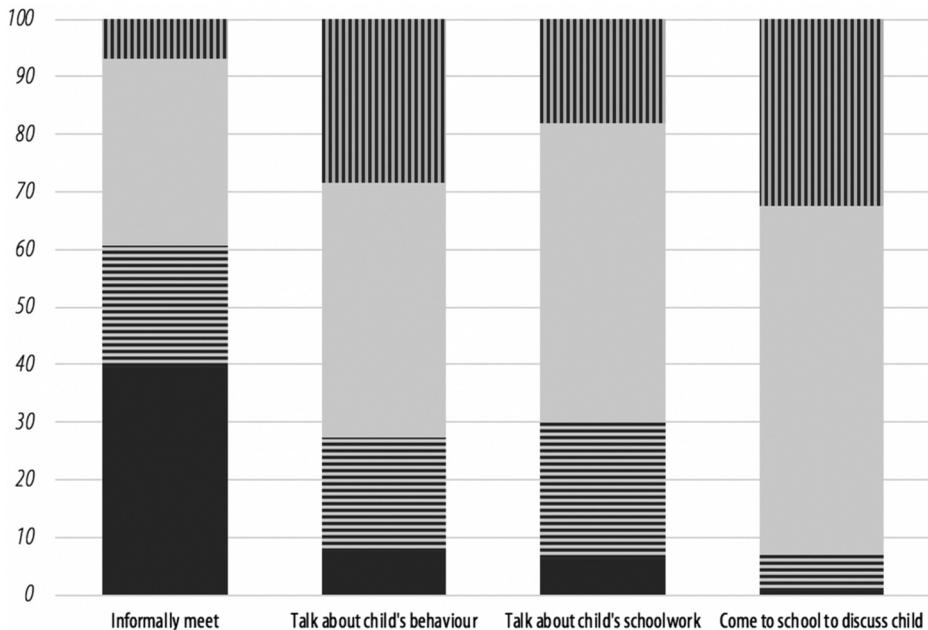
Communication with parents is a common feature of teachers' work, but is likely to be especially important with regard to the transition into school. The GUI study provides new information on this contact from the point of view of both teachers and parents.

The vast majority (95%) of teachers reported that 'nearly all' parents of the children in their class attended parent-teacher meetings while 31% reported that 'nearly all' parents attended other meetings organised by the school. However, teachers felt that 'nearly all'

parents would approach them informally to discuss their child's progress in only a quarter of cases while a similar proportion of teachers indicated that 'only a few' parents would approach them. Levels of attendance at parent-teacher meetings were lower in Urban Band 1 DEIS schools (with 'nearly all' parents attending in 80% of these cases, compared with 96% in non-DEIS schools). Teachers highlighted even greater variation by school social mix in attendance at other school events, with only a few parents attending such events in 18% of Urban Band 1 schools, compared with nine percent in non-DEIS schools.

Teachers were also asked questions about their level of communication with the parents of the study child (that is, the specific child or children included in the GUI sample). Four different aspects of communication were captured: the frequency of informally meeting with the child's parent(s); the parent(s) talking to the teacher about the child's behaviour; the parent(s) talking to the teacher about the child's schoolwork; and the teacher asking the parent(s) to come to the school to discuss the child. Informal meetings were found to be relatively common, taking place at least once a week in four out of ten cases; only seven percent of families never have such meetings (see Figure 5). The high level of informal contact is likely to reflect interaction while bringing the child to, or collecting them from, school. Meetings about the child's behaviour or schoolwork are much less common, though over one-quarter of families have such meetings at least monthly. It is less common for a teacher to request parent(s) to come for a meeting, something that occurs regularly for only seven percent of children, with the main responses being less often than monthly (60%) or never (32%).

Figure 5: teacher reports on frequency of contact with parents



The four measures were combined to give an overall scale of parent-teacher communication. The parents of sons are found to have more contact with teachers than the parents of daughters, mostly because they are more likely to have specific meetings regarding the child's behaviour or schoolwork. There was a slight tendency for more frequent contact with working-class and non-employed families, again largely driven by the prevalence of more formal discussions. Migrant families have somewhat greater levels of contact with teachers across all dimensions, most likely because of their greater reliance on the school as a source of information because of the absence of insider knowledge on the education system. The largest difference was evident in relation to the parents of children with disabilities, who have much more frequent contact with teachers across all of the dimensions examined.

Parent-teacher contact also differed across different schools and classrooms. More frequent contact was evident where children are in junior infant classes than in senior infants, reflecting the emphasis on the settling-in process. Teacher-parent contact was greater in smaller classes (that is, those with 20 or fewer pupils), with lower levels found in classes of 25 pupils or more. As with class size, contact levels were greater in smaller schools (those with fewer than 100 students). Families with children attending DEIS Urban Band 1 schools have the most frequent contact with teachers; this pattern is not only driven by more formal discussions but also relates to much higher levels of day-to-day informal contact.

Teachers viewed the majority of parents as supportive of their children's learning, with 80% stating they support learning 'daily' and a further 12% mentioning this occurs 'at least once a week'. Teachers described the majority (76%) of mothers of the study children as 'very interested' in their children's education. They described fathers as 'very interested' in just over half of cases, but this lower figure reflects a higher proportion of cases where teachers felt they 'could not say' or there was no father present (30%). Not surprisingly, teachers viewed parents as more interested in their children's education where they had had frequent communication with them.

Parents were themselves asked about how often they or their spouse or partner spoke in person to their child's teacher. It should be noted that this question was asked during the home interview, at a stage when not all the children had yet started school. One in six said they spoke to the teacher daily, while a further quarter did so at least weekly. A sizeable proportion – almost four in ten – said they spoke to the teacher less often than monthly. Teacher and parental reports on the frequency of meeting tended to be highly consistent. Non-employed families and mothers with lower levels of education were more likely to report meeting the teacher frequently. This may reflect the fact that these groups of parents were more likely to drop the child off to the school in the morning and collect them in the afternoon, which facilitates contact with the teacher. There was a slight discrepancy between the accounts of teachers and those of migrant parents, with migrant parents themselves reporting lower levels of communication than Irish parents. This contrasts with the higher levels of contact with migrant parents reported by teachers. As with teacher reports, parents of children with a disability reported more contact with teachers. Variation by school type resembled the patterns reported by teachers, with greater parent-teacher contact in DEIS Urban Band 1 schools, small schools and small classes.

Conclusion

This article has explored the kinds of learning experienced by children in the early years of their primary education using rich data collected from teachers and parents in the *Growing Up in Ireland* study. Different forms of play, including physical, creative and pretend play, are common features of early years classrooms, as is the engagement of pupils in hands-on activities. However, the dominant teaching methods used centre on questioning, individual work and whole-class teaching, with relatively low levels of use of group and pair work. In terms of the amount of time spent on different subject areas, the greatest amount of time is spent on English (an average of four hours per week), followed by maths (at three hours per week).

Even though some of the children across junior and senior infant classes are the same age, their experience of teaching and learning can be quite different. Teachers appear to tailor methods and activities to the class level, with a greater emphasis on play-based and hands-on activities in junior infant classes than at senior infant level. There is some evidence that teachers adapt their approaches to the profile of pupils, although not to the same extent as for older children (see McCoy et al., 2012). Teachers in urban DEIS schools appear to make greater use of methods to encourage pupil engagement while at the same time developing key skills in literacy and numeracy. Thus, teachers in urban DEIS schools place a greater emphasis on hands-on and play-based activities, as well as on reading to pupils and pupils counting out loud. Teachers in Urban Band 1 DEIS schools spend around half an hour more a week on English than those in other schools, with the time spent on Gaeilge and religious/ethical education reduced accordingly. Some differences were found by the gender mix of the school, with a greater use of physical play and reading out loud found in boys' schools. The size and structure of the class appears to act as a constraint on certain approaches. Thus, whole-class teaching is more prevalent in larger classes; in addition, junior infant children in multi-grade classes experience fewer play-based and hands-on activities than their peers in single-grade settings.

Overall, the findings highlight the way in which teachers can tailor their practice to provide additional support for certain groups of children – by emphasising play-based learning to encourage engagement in urban DEIS schools and by stressing reading in boys' schools in response to an emerging gender gap in reading outside school (see Smyth, 2016). At the same time, logistical constraints operated in reducing the potential for more interactive and play-based learning in multi-grade and larger classes. Given the importance of play-based learning, there appears to be greater potential to provide children in senior infants (and indeed, beyond) with a more playful experience of education and the need to provide schools and teachers with the supports and resources to do so.

Acknowledgements

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Play and the primary school curriculum: developing quality practices and examining curricular possibilities

≡ TARA CONCANNON-GIBNEY ≡

Abstract

This paper investigates the current status of play in the infant classes in Irish educational policy and practice. It seeks to examine the alignment of the *Primary School Curriculum* (DES, 1999) and *Aistear: The Early Childhood Curriculum Framework* (NCCA, 2009) through the development of quality practices and curriculum mapping of objectives and learning outcomes to play activities. The aim of the article is provide a discussion around the current policy provision and classroom realities that exist in relation to play-based learning and explore possibilities in relation to how Ireland might eventually establish a play-based curriculum at infant level in Irish primary schools.

Keywords: play-based curriculum, Aistear, Primary School Curriculum, Ireland

Introduction

There is a general consensus that play-based learning is the most effective pedagogy for young children (Pramling Samuelsson and Asplund Carlsson, 2008; Whitebread, 2013; Whitebread and O'Sullivan, 2012; Whitebread, Kvalja and O'Connor, 2015). However, the implementation of such practices in classrooms will require a major cultural and attitudinal shift in view of the traditional, formal learning which still permeates classrooms in Ireland (Gray and Ryan, 2016). Irish policy in relation to the early years is at a pivotal juncture where a play-based curriculum for the under sevens may become a classroom and policy reality in the very near future (NCCA, 2016) owing to the introduction of *Aistear: The Early Childhood Curriculum Framework* (NCCA, 2009) [hereafter referred to as *Aistear*], the introduction of the *Primary Language Curriculum* (NCCA, 2015) and the current consultation process which is underway regarding the possibility of linking the two-year pre-school initiative more directly to the junior end of the *Primary School Curriculum* (NCCA, 2017). This would provide more scope for the implementation of a play-based curriculum in Irish primary school classrooms and would align it more definitely to effective models of practices in other countries such as Australia's *Early Learning Framework* (Commonwealth of Australia, 2009), New Zealand's *Te Whariki* (Ministry of Education, 1996), the *Canadian Curriculum Framework* (2011), *The Swedish Curriculum for the Preschool* (Lpfö, 1998, revised 2010), *Reggio Emilia* (Thornton and Bruton, 2010) in Italy and the United Kingdom's

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Statutory Framework for the Early Years Foundation Stage (Department of Education, 2017). These curricula have a common goal of recognising the need for young children to learn through play while minimising traditional teaching methods that may have been more prevalent in the past.

The place of play in Irish policy

Play has been identified as a crucial aspect of child development, most notably in the early childhood years (Hirsh Pasek et al., 2008; Singer Gollinkoff and Hirsh-Pasek, 2006; Whitebread, Kvalja and O'Connor, 2015). It has been found to contribute to a child's physical, social, emotional, creative and cognitive development and is understood to be a powerful and empowering form of learning (Diamond and Lee, 2011; Singer and Singer, 2009). A play-based curriculum can be defined as a curriculum model that uses play as a teaching and learning medium throughout the day, as outlined in *Aistear* (NCCA, 2009). A play-based curriculum can help to encourage a wide vocabulary, creative thinking, collaborative skills and problem solving to a much greater extent than a traditional learning environment (Skolnick et al., 2015). The implementation of a play-based curriculum has also been found to enhance pupil engagement significantly (Walsh et al., 2006). However, in the Irish *Primary School Curriculum* (PSC) (DES, 1999) play has been allocated a secondary role, and is often ignored in infant classrooms (Murphy, 2005). Indeed, Ireland has been criticised by the OECD (2004) for an over-emphasis on directed, formal learning. While the concept of active learning and the use of concrete materials may have been embraced to a certain extent in many classrooms, many teachers are reluctant to incorporate play in their timetables and are often unsure as to the value inherent in allowing extended periods of play in their infant classroom (McConnell, 2016; Hollingsworth, 2016).

When *Aistear* (NCCA, 2009) was introduced in 2009, it caused some confusion amongst teachers with regard to its relationship with the *PSC* (Gray and Ryan, 2016). It emphasised the centrality of play in young children's learning and development, placing it prominently throughout all four themes and in the guidelines for good practice contained in the document. However, no mandatory professional development was provided and while infant teachers were implementing the *PSC*, they were provided with little advice in relation to the alignment of the *PSC* with *Aistear* in theory or practice (Gray and Ryan, 2016). The professional development that was available to primary teachers was optional, outside working hours and at a cost to participants. Early childhood practitioners experienced similar professional development challenges, leading Moloney (2010) to describe *Aistear* as 'soft policy' that was implemented without being enforced due to the lack of training provided, which became increasingly problematic in both sectors. Indeed, similar contexts internationally have highlighted a definite tension between the ideology of a play-based approach and the pressure to focus on a prescribed curriculum (Brooker and Edwards, 2010; Wood, 2013; Lynch, 2015). Therefore, despite its existence in policy documents, play continues to remain 'on the periphery of the school day with curricular subjects afforded the greatest amount of time and teacher attention' (Gray and Ryan, 2016, p. 200). Research has shown that Irish teachers already felt overloaded by the *PSC* (DES, 1999) prior to the

emergence of *Aistear* (NCCA, 2009; NCCA, 2010) and the addition of a new curriculum framework without targeted support was inevitably going to present challenges.

The audit of the *PSC* (DES, 1999) and *Aistear* (NCCA, 2009), carried out by the NCCA in 2009 outlined the similarities and differences between the two curriculum documents, pointing to the shared vision of the child as a competent and confident learner and an emphasis on active learning and integration. However, *Aistear's* (NCCA, 2009) holistic, interconnected thematic approach (communicating, exploring and thinking, identity and belonging and wellbeing) is quite different from the focus on eleven well-defined subject areas in the *PSC* (DES, 1999). This subject-based approach for children as young as four years of age is gathering criticism continuously within early childhood research (Moyle, 2010). The *PSC* (DES, 1999) prioritises literacy and numeracy while *Aistear* (NCCA, 2009) maintains an equal focus across its four themes. Play in the *PSC* (DES, 1999) is mentioned in a limited manner and there are very few examples of how to enact this methodology within the infant classroom. For example, 'play' is only referred to five isolated times in the lengthy curriculum introduction document (DES, 1999) and there are no exemplars in any subject area to illustrate the role of play in the curriculum. The new *Primary Language Curriculum* (NCCA, 2015) has recognised this shortcoming and has made considerable effort to prioritise a playful approach to teaching and learning in relation to language teaching, including the provision of exemplars related to socio-dramatic play in its on-line materials. There is also a major disparity between curricular approaches with the *PSC* (DES, 1999) following a more traditional prescriptive curriculum, while *Aistear* (NCCA, 2009) espouses an emergent curriculum, which is more desirable for young children (Wood, 2013). In a prescriptive curriculum, a teacher plans both content and methodologies in advance in a systematic manner, and while this might be more suitable for older children, current research emphasises the need to follow the child's lead in learning whenever possible and as much as possible (Fisher, 2013). The description of the role of the adult in both curriculum documents is, therefore, different. When adopting a prescriptive curriculum, the adult has a more central role and the teacher tends to lead the learning. However, an emergent curriculum is child originated and teacher-framed, allowing for power sharing between the child and the adult while also developing the children's agency (NCCA, 2009).

It is evident that the new *Primary Language Curriculum* (NCCA, 2015) represents the first step towards the alignment of the *PSC* (DES, 1999) and *Aistear* (NCCA, 2009), a marriage which is both desirable and extremely necessary, however there remains much work to be done across the curriculum. *Aistear* (NCCA, 2009) envisions a play-based curriculum where play is used as a teaching and learning medium throughout the day, which is significantly different to the more formal approach to instruction that is currently a feature of most Irish infant classrooms (Smyth, 2018).

It has to be acknowledged, that many schools are currently engaging with *Aistear* (NCCA, 2009) through the 'Aistear Hour' or 'Integrated Play Hour' (NCCA, 2009b). This approach, however, has been criticised as a compartmentalised approach (Ring and Mhic Mhathúna et al., 2016), which is not consistent with the concept of a play-based curriculum. Recognising that change is incremental, it is suggested that applying the good practice that has evolved from the 'Aistear Hour' across the curriculum at this juncture, can potentially contribute significantly to the evolution of a play-based curriculum in infant classes.

Developing quality practice across the curriculum

Organisation

Research has shown that children need time to immerse themselves in play and to commit to roles, expand their creativity and deepen their learning (Kernan, 2007). The traditional approach to play, where it is generally situated in the first twenty minutes of the school day for 'settling in' (Gray and Ryan, 2016) needs serious attention as children who routinely arrive late to school may miss play entirely. It also does not allow for the plan-do-review structure (NCCA, 2009b) of play-based learning which is critical in developing mature playskills (Bodrova and Leong, 2006). If play is to be valued in Irish classrooms, then it should be incorporated into timetables accordingly. If we are to move towards a play-based curriculum, then the play needs to be of good quality. Gray and Ryan (2016) found that while many Irish teachers were aware of the general value of play they did not know how to use play as a teaching tool. Therefore, it is important to acknowledge from the outset that a significant amount of professional development needs to be done in this area to support teachers in transitioning to a play-based curriculum.

Quality begins with the classroom lay-out and organisation (Hart, 2013; Whitebread and Coltman, 2015). The adult must carefully prepare the environment, known as 'the third teacher' (Edwards and Gandini, 2015) so that the play is well-resourced and organised as 'high quality play environments support unity between playing, learning and teaching' (Wood, 2013, p. 80). There needs to be a variety of play areas developed in the classrooms reflecting different types of play (NCCA, 2006), for example: a socio-dramatic area, a small world area, a creative play area (junk art, play dough), a sensory area (sand, water, light/shadow, natural materials), a construction area (with a variety of materials) and some choice activities (such as reading corner, writing table, jigsaws etc.). Furniture should be kept at a minimum in infant classrooms to allow space for these play areas. When including play in the curriculum, furniture may have to be moved, chairs stacked or shelves pushed at right angles to the walls to allow for the creation of a slightly enclosed space for each play area. The development of an 'Aistear Room' is not recommended as it implies that *Aistear* (NCCA, 2009) is distinctly separate from the *PSC* (DES, 1999), requiring its own space. If Irish teachers are ever to embrace the concept of a 'play-based curriculum', then infant classrooms should reflect this commitment to play and activity across the day from the beginning.

Resourcing play has been cited as a barrier to implementing a play-based curriculum in the past (see Gray and Ryan 2016 for example), however, many of the resources used for effective play-based learning are reasonably affordable and relatively easy to source. The High Scope approach recommends the use of 'real materials' such as old kettles (with the power lead removed), old pots and pans and empty milk cartons (Holt, 2010), which can serve to enhance socio-dramatic play themes. The *Reggio Emilia* approach encourages teachers to incorporate natural materials such as pine cones, shells, rocks and leaves into play activities which are freely available and work well in small world play scenarios and in sand and water play (Thornton and Bruton, 2010). Junk art as a creative play activity is focused on the use of recycled materials. Simple materials such as books, magazines, pens, paper and clipboards can enhance any play situation. Charity shops often have a wealth of

materials that can be useful for a variety of themes. When choosing materials for incorporating play across the curriculum, it is important that materials are open-ended intelligent resources (Wood, 2013) that provoke creativity, imagination and problem-solving. A teacher who is knowledgeable about play as a learning medium will carefully choose these types of resources and then guide the children in their use in order to maximise learning during play-based activities.

The teacher's role: guided play

In order to delineate the opportunities that a play-based curriculum could provide, curriculum mapping of teaching objectives or learning outcomes to play activities must be carried out. In order to achieve curriculum objectives or learning outcomes, the role of the teacher is critically important (Martlew, Stephen and Ellis, 2011). In the past, play was often used as a time to listen to reading or to prepare for lessons by the teacher (Gray and Ryan, 2016; Murphy, 2005). However, teacher participation during play has been found to increase children's cognitive challenge and higher order thinking skills (Walsh et al., 2006). In the infant class, it is necessary to recognise that while free play is an effective vehicle for children to explore their social and self-regulatory skills, research suggests that it might not be the best way to achieve specific curricular objectives (Fisher et al., 2010). Free play is entirely child-led, while adult-directed play is controlled by the teacher. However, guided play is a combination of adult initiation and child direction. The *PSC* envisages the teacher in a more directive role, as one who makes decisions about the content and sequence of a child's learning (DES, 1999). While *Aistear* (NCCA, 2009) highlights the need for the teacher to take the lead in some situations (such as modelling language or social skills), it also recognises the need to step back at times so that the children can develop their own initiative and creativity in different ways allowing scope for an emergent curriculum. This approach also allows the teacher to observe the children and to take notes on their learning and development which is more definitely related to the notion of 'guided play'. According to Skolnick-Weisberg et al. (2015), 'guided play is the best way to incorporate play into early curricula without compromising educational goals, while allowing children to enjoy school' (p. 2). The adult in guided play may initiate the play context but does not direct the play within that scenario. An important aspect of the teacher's role during guided play is scaffolding the children's learning (Fisher et al., 2010) so that the child can reach an optimal level of development. As a result of the adult's role in developing the learning environment and the provision of subtle scaffolding, the child is more likely to develop a knowledge of the key concepts or skills than she/he would through free play and is more likely to be highly motivated to engage in the play scenario than a more formal methodology because it is enjoyable, social and meaningful (Weisberg et al., 2013).

One of the aims of a play-based curriculum is to aid children to develop mature play skills (Bodrova and Leong, 2012) as research has shown that this skilful playing is more likely to achieve cognitive, social, emotional and creative developmental goals. A teacher can assist the child by using a range of strategies during scaffolding including extending or sustaining the play where the teacher builds upon the children's ideas, themes and interests during play (Yang, 2013) in order to develop the play narrative. This can be done as a co-player (Tarman

and Tarman, 2011) or as a play director. During play, the teacher might also have to play the role of mediator when conflicts arise and may have to model appropriate learning dispositions and social skills within and outside of the play scenario (Tarman and Tarman, 2011). While a teacher can have a very positive effect on children's play, Jung and Recchia (2013) warn that inappropriate or poorly planned teacher interactions can have a negative effect on play-based learning and restrict its potential. In Ireland's attempts to combine both the methodologies and objectives espoused in the *PSC* (DES, 1999) and the play-based model encouraged by *Aistear* (NCCA, 2009), guided play appears to be the most effective vehicle for combining the two curriculum documents (Weisberg et al., 2013) as it allows for teaching rich content in a way that incorporates the elements of free play, discovery learning and traditional pedagogy (Weisberg et al, 2013).

The teacher's role in assessment

In order to ensure that play across the curriculum is a high-quality learning experience for children, assessment is a crucial aspect of the teacher's role. Assessment of a play-based curriculum should be multi-faceted ranging from teacher reflection in relation to his/her own interactions with the children, examining the learning environment and resources and observing the interactions between children (Moyles, 2004). While the teacher spends most of his/her time interacting with the children during the play-based curriculum activities, it is helpful to allocate some time for observation, note-taking and capturing activities through photography. Not only will these tools provide opportunities for self-assessment during the review stage of the curriculum activity, they can also provide a stimulus for teacher reflection and discussion in further curriculum planning. Notes, photographs and written reflections could also be placed in individual portfolios for each child in order to document their learning journey. *Aistear* (NCCA, 2009) also recommends the use of conversations as an assessment method, which can be very useful in determining whether language goals have been met and if a child has understood a particular concept or demonstrated a particular skill that had been planned for that play activity.

Using curriculum mapping to provide for a play-based curriculum

Curriculum mapping is a useful tool to begin to identify the myriad of opportunities for implementing a play-based curriculum in infant classes. If we focus first on the *Primary Language Curriculum* (NCCA, 2015) and how its strands relate to the principles inherent in *Aistear*, we can then investigate the other areas of the curriculum. Oral Language development is central to the *PSC* (DES, 1999) and research shows that it is best developed in meaningful contexts that are interesting and enjoyable for the children (French, 2007). *The Primary Language Curriculum* (NCCA, 2015) identifies 'adult-child interactions as essential for language teaching and learning' (p. 20). Therefore, play provides a very appropriate forum for expanding and developing children's vocabulary. When planning, the teacher should carefully consider what new vocabulary could be modelled for the children. Pepper and Weizman (2004) recommend that a teacher should plan for vocabulary development by considering various categories such as nouns, verbs, describing words,

questions, location words and feelings as a child needs all these language components to develop complex speech patterns. Vygotsky (1978) highlighted the essential role played by the teacher in developing a broader range of vocabulary, a variety of language registers and more complex sentence structure through careful modelling and scaffolding during play. Indeed, the use of strategies such as the use of targeted vocabulary, open-ended questions and expanding on children's utterances by the teacher during play has been found to encourage children's lexical diversity, increased target word frequency and longer utterances (Coombs, 2010).

Table 1 below provides some examples of the range of vocabulary that might be used in the 'baby clinic' socio-dramatic play scenario as an insight into the possibilities for language development that play might present. It also outlines the oral language learning outcomes from the *Primary Language Curriculum* (NCCA, 2015) that may be achieved through this socio-dramatic play scenario. It is clear that the list is fairly extensive but many of these skills are developed over time with frequent opportunities for socio-dramatic play in the classroom. There are numerous learning outcomes that relate to general communication skills which would be practised through role playing various scenarios and in the development of play narratives. For example, the learning outcomes that refer to the development of joint attention, the ability to give and follow instructions and working collaboratively with others can all be fostered through regular role-playing which demands communication from players. Other learning outcomes relate to language style or registers, which would be developed in the 'baby clinic' scenario through the use of phrases such as '*Do you have an appointment?*', '*Please take a seat*', '*Have you completed the form?*' and so forth which are also examples of the learning outcome related to the ability to ask and answer questions (see Table 1). The ability to answer imagined questions and develop characters and narratives in an imagined reality such as the 'baby clinic' relates to the learning outcome where children are expected to 'tell and retell stories and personal and procedural narratives' (see Table 1). For example, the five-year-old child playing the role of a new mother discussing her baby's health requires the child to draw on cognitive, creative and language skills in a holistic and integrated manner. The examples of nouns, verbs and describing words listed are examples of the learning outcome related to subject specific vocabulary and the ability to show understanding of new words in a meaningful context. The learning outcome 'describe, predict and reflect upon actions, events and processes relating to real and imaginary contexts' (see Table 1) relates to the planning and review stage of play, where children are supported in their intentionality and evaluative skills.

Table 1: Oral language development through a play-based curriculum (using learning outcomes from the PLC (NCCA, 2015).

Key Vocabulary: Socio-dramatic play in 'The Baby Clinic'

Learning Outcomes that could be addressed (NCCA, 2015, p. 51)
Through appropriately playful learning experiences, children should be able to:

<p>Nouns: Baby, toddler, new-born, soother, bottle, injection, vaccination, queue, waiting area, doctor, nurse, temperature, vomit, ill, check-up, stethoscope, weighing scales, pounds and ounces, record book</p> <p>Verbs: Waiting, crawling, eating, drinking, vomiting, screaming</p> <p>Describing Words: Feverish, upset, worried, scared, terrified, poorly, happy, ordinal number (first, second, third, last)</p> <p>Questions: Do you have an appointment? Can you sign your name here? What is the matter? How long...? How old...? Did you bring your vaccination record booklet? Have you completed the form?</p> <p>Location/chronological words: On, under, between, next to, before, after</p>	<ul style="list-style-type: none"> • Show interest in, demonstrate joint attention and actively listen for enjoyment and for a particular purpose. • Recognise that language style changes with different relationships and audiences and show understanding of the listener's needs while initiating, sustaining and engaging in conversations on personal and curriculum-based topics and responding non-verbally and verbally. • Use language with confidence to work collaboratively with others and share the learning outcomes with familiar and unfamiliar audiences. • Use coherent sentences of increasing complexity with correct tense, word order and sentence structure, while using connectives and producing compound and complex sentences to elaborate appropriately. • Use different strategies such as a speaker's gestures, tone of voice, known words, pictures, sentence structure, definitions and descriptions to acquire and show understanding of new words. • Use sophisticated oral vocabulary and phrases including the language of text, topic and subject-specific language, and express and use decontextualized language. • Demonstrate understanding through the ability to give and follow instructions, comprehend narratives and explanations, and clearly state a case including speculating, hypothesising, justifying, negotiating, arguing and complaining. • Express personal needs and preferences, and make requests with confidence. • Ask and answer a variety of open and closed questions to seek help, get information, develop understanding, clarify and extend thinking. • Name, describe and categorise people, objects, and experiences showing increasing depth of knowledge and improved understanding. • Tell and retell stories and personal and procedural narratives of increasing complexity to familiar and unfamiliar audiences using appropriate sequencing, tense and oral vocabulary. • Supply, explain and justify points of information to familiar and unfamiliar audiences using topic-specific language. • Describe, predict and reflect upon actions, events and processes relating to real and imaginary contexts.
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A play-based curriculum provides an effective forum for developing emergent reading and writing and to address language curricular objectives in an informal manner (Imeideh, 2015). The provision of a writing table stocked with; notepads, paper of different colours and sizes and a choice of writing implements as per Table 2 encourages children to develop emergent literacy skills in a playful manner through the creation of signs and posters, cards and invitations, notes, lists and drawings (Excelsa, 2014). Teacher modelling and scaffolding are crucial to enable children to develop their skills in this area, such as the conventions of print, sentence structure and invented spelling. In encouraging writing and mark-making in this meaningful context, teachers are enabled to address the ‘fun’ aspect of writing instruction found in the first learning outcome listed (Table 2). Children’s attempts to use writing to communicate during play should be celebrated during the review session which might serve to encourage more reluctant writers to attempt similar tasks.

Table 2: Learning outcomes for junior infants that might be encouraged through play from the Primary Language Curriculum (NCCA, 2015)

Writing (NCCA, 2015, p. 53)	Reading (NCCA, 2015, p. 52)
<ul style="list-style-type: none"> • Take part in and have fun mark-making, drawing and writing to communicate with others. • Use basic conventions of print and sentence structure. • Choose appropriate tools, content and topics for their own writing and select texts for sharing with others. • Recognise, name and sound letters and use some correct spellings drawing on their sound and letter patterns to try out invented spelling. • Use a growing range of vocabulary from their personal experiences and engagement with text and use language playfully and creatively in their writing. • Share the meaning of their own texts and demonstrate understanding through responding to the texts of others. • Write upper and lower case letters as separate, flowing letters. 	<ul style="list-style-type: none"> • Take part in and enjoy listening to, reading and talking about the meaning and interpretation of written words and illustrations with others. • Choose, read and talk about text in a range of genres for pleasure and interest. • Recognise, name and sound all lower and upper case letters and common letter patterns, displaying some word-identification strategies when reading instructional and independent-level texts.

Emergent reading can also be supported by providing various texts for use during play. For example, storybooks might be read before bedtime when playing ‘house’ or cookbooks might be consulted when playing in the kitchen. In addition, a reading corner stocked with interesting and engaging children’s literature should always be available to all children. These relatively simple additions can help to address the first two learning outcomes in the table above. Each play area should be adorned with appropriate environmental print such as signs and labels to encourage reading and print awareness and to help develop the skills such as letter recognition as listed in the third reading learning outcome in the table above.

Curriculum mapping: other areas of the curriculum

An effective play-based curriculum must be carefully and meticulously planned (Pramling Samuelsson, 2004 in Kernan, 2009). While many of the current curriculum objectives for infant classes may be adequately addressed through song, story or group discussion, the majority can be explored most effectively through play. If we take ‘the baby clinic’ as our example again, we can see that it covers a wide range of objectives across the curriculum as demonstrated below.

Table 3: Curriculum mapping across the Primary School Curriculum (using learning objectives from DES, 1999b-f)

Mathematics (DES, 1999b, p. 20-36)

- Develop an understanding of the concept of weight through exploration, discussion, and use of appropriate vocabulary – heavy/light, balance, weigh, compare objects according to weight.
- Develop an understanding of the concept of length through exploration, discussion, and use of appropriate vocabulary
- enabled to use ordinal number.

Social, Personal and Health Education (SPHE) (DES, 1999c, p.16-23)

- Identify what babies need to help them to grow and develop; love, regular food and water, warmth, nappy-changing, careful bathing, medical check-ups.
- Become aware of new life and birth in the world new growth in springtime; baby animals being born; develop an awareness of human birth that a baby grows and is nurtured in the mother’s womb until ready to be born.
- Explore the variety of ways in which feelings are expressed and coped with – hugging or cuddling when expressing affection, becoming red in the face when embarrassed, crying when upset or afraid.
- Identify and name the people who constitute a family and appreciate that all family units are not the same.
- Explore the things that families do together.
- Realise how families take care of, support and love each other.
- Recognise and appreciate people or groups who serve the local community and how their contribution enhances the quality of life of others.
- Listen and respond to the opinions and views of others.
- Use verbal and non-verbal behaviour to perform social functions.
- Practise care and consideration, courtesy and good manners when interacting with others.
- Resolve conflicts with others.
- Realise that each person is important and has a unique and valuable contribution to make to the class.
- Recognise the importance of sharing and co-operating and being fair in all activities in the class and school.
- Realise and understand the necessity for adhering to the class and school rules.
- Explore and respect the diversity of children in the class and school.

Science (DES, 1999d, p. 24-30)

- Develop an awareness of human birth and human needs for growth.
 - The changes that occur from baby-toddler-child.
 - Identify parts of the body.
 - Recognise and measure physical similarities/differences.
-

Geography (DES, 1999e, p. 24)

- Become aware of some buildings and places where people work, especially those in the locality.
-

Drama (DES, 1999f, p. 14-18)

- Develop the instinct for make-believe play into drama.
 - Develop the ability to play in role as an integral part of the action.
 - Experience how the use of space and objects can help to create the reality of the make-believe world.
 - Experience how the fictional past and the desired fictional future influence the present dramatic action.
 - Develop awareness of how he/she, as part of a group, helps to maintain focus in the dramatic action.
 - Develop the ability to reflect on the action as it progresses.
 - Experience the relationship between story, theme and life experience.
 - Share insights gained while experiencing the drama.
 - Develop the ability, out of role, to co-operate and communicate with others in helping to shape the drama.
 - Develop, in role, the ability to co-operate and communicate with others in helping to shape the drama.
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There are many similarities between the learning objectives from the science curriculum and the social, personal and health education curriculum in relation to human growth, the needs of a baby and physical attributes and body parts. The 'baby clinic' scenario provides an effective forum to discuss and role play these topics in a manner that is meaningful to young children. It also provides an opportunity for the teacher to model new vocabulary related to these concepts and to answer questions they might have about the topic under study. Observing children interacting with the 'babies' (dolls) in this play activity allows a teacher to learn more about a child's emotional world, while also addressing the objective related to exploring 'the variety of ways in which feelings are expressed and coped with' (DES, 1999c, p. 18) by discussing how children of different ages express their feelings. The 'baby clinic' topic might also allow for discussion of the family and how families care for each other. The objective relating to citizenship in the table above may be addressed by simply exposing children to the existence of a 'baby clinic' and developing the topic of 'service to the local community' by inviting a local public health nurse to visit the class and interact with the children. There are also many objectives under the heading 'myself and my friends' such as 'resolve conflicts with others' and 'developing citizenship', for example, 'recognise the importance of sharing and co-operating' (see Table 3), which are best enacted in real, social situations, such as, play under the careful guidance of the teacher. Indeed, objectives related to fairness and rules might be further developed in the planning of the play activity.

In addition to curricular objectives, *Aistear* (NCCA, 2009) also emphasises the need to develop positive learning dispositions among children and these are best developed through well-organised play opportunities. Walsh et al (2006) found that teacher scaffolding during play can enhance a child's positive learning dispositions such as taking initiative, independence and responsibility. Teachers can help facilitate the development of friendships and peer acceptance during play (Stanton-Chapman, 2014), which are important aspects of the SPHE curriculum. Many socio-dramatic play themes encourage the use of mathematical concepts and language and the 'baby clinic' has many opportunities to discuss the language of measure (as the babies will be weighed and measured during their visit to the clinic) and

ordinal number (as ‘parents’ will have to wait in line – first, second, third etc. to be seen). Finally, socio-dramatic play presents a genuine opportunity to develop core aspects of the drama curriculum as the children are encouraged to plan their roles, develop narratives and reflect on their socio-dramatic play to coincide with the ‘plan-do-review’ model encouraged by the *Aistear* (NCCA, 2009b) document.

Conclusion

It is clear that *Aistear* presents many opportunities to address learning outcomes and learning objectives across the curriculum. However, play-based learning is significantly underdeveloped in Irish classrooms at the moment (Gray and Ryan, 2016, McConnell, 2016; Hollingsworth, 2016). In order to ensure that *Aistear* – an essential pre-requisite for a successful play-based curriculum – reaches its potential in infant classrooms, the issue of professional development and support must be addressed. *Aistear* was launched in the depths of a recession which was followed by significant austerity measures that did not allow for the support and funding required for effective implementation (Gray and Ryan, 2016). However, we are now emerging from austerity and the establishment of a play-based curriculum in Ireland will require significant investment in on-going professional development that is multi-faceted in nature. It is unfeasible to imagine a major shift in our approach to early years education without substantial investment in professional development as this has often been the reason behind the failure to implement curricular change in the past (Murphy, 2015). Real change must be lived through by teachers (Pramling Samuelsson and Carlsson, 2008) which means that professional development must be long-term in nature and on-going support is also required throughout the process. Indeed, studies (see Pramling Samuelsson and Carlsson, 2008; Moyles, 2010) have revealed that teachers require specific training to understand how play and learning are related, as otherwise, teachers tend to revert to more traditional or ‘teachy’ approaches to learning (Gray and Ryan, 2016, p. 191). Teachers’ personal beliefs, experience and the cultural norms that exist in Irish schools in relation to traditional classroom practices versus the notion of a play-based curriculum can have a significant impact on curriculum change and development (Gray and Ryan, 2016; Murphy, 2005). Gray and Ryan’s (2016) study revealed a lingering preference amongst infant teachers for traditional teaching methods and a lack of understanding of the concept of a play-based curriculum (Smyth, 2018). This may be due to a lack of understanding in relation to the power of play as a teaching and learning tool from the perspective of teachers, principals, parents and Irish society in general (Gray and Ryan, 2016). However, as a play-based curriculum is regarded internationally as best practice in the early years, it is essential that Irish policy aligns itself with this curriculum model at the earliest possible juncture. The current development of a three-phased approach for 0-12 year olds in Irish education, and the introduction of a new curriculum for Irish primary schools may allow for the implementation of a play-based curriculum in Irish infant classrooms in the near future if adequate professional development and support is provided.

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'Windows and mirrors' or 'closed doors'? Representations of diversity in early years' textbooks

≡ CAOIMHE MOLONEY AND BARBARA O'TOOLE ≡

Abstract

This research examined representations of diversity in a sample of early years textbooks. Using critical discourse analysis as a framework, the study examined how particular groups were represented, or, of equal importance omitted, from these books. The scope of the analysis included images and text. The study found significant omissions of particular groups. It identified uncritical tokenistic approaches towards certain groups which functioned to reinforce stereotypes rather than challenge them. The study further identified an assumption that readers were members of the dominant 'in-group', an assumption that functioned as exclusionary towards children from minority groups.

Keywords: diversity, identity, representations, textbooks, early years

Introduction

The classroom in contemporary Ireland is a microcosm of society, with children from a range of backgrounds attending school together. This study examines how such diverse groups are represented in a sample of early years' textbooks. Textbooks play a key role in transmitting ideologies as they are "constructed as education tools" (Pingel, 2010, p. 46). Studies at second-level (Bryan, 2007, 2008, 2014; Bryan and Bracken, 2011) have demonstrated that textbooks can perpetuate inequality through misrepresentation of particular groups. Faas and Ross (2012) have also pointed to a contradiction between the inclusive rhetoric of policy documents and the content of textbooks which portray diversity as a recent phenomenon while promoting "an explicit (usually Catholic) notion of Irish identity" (Faas and Ross, 2012, p. 586). At primary level, Waldron (2005, 2013) has examined history textbooks; she found that, despite the "stripping away of historical concepts, the neglect of processes and the blandness of the writing", the status of these texts "continues to confer on them powers of definition in terms of identity and belonging" (Waldron, 2013, p. 56).

This study focused on textbooks in the early years classroom. It aimed to establish whether young children can see accurate representations of themselves and those outside their immediate world within their texts. Critical discourse analysis of the textbooks was undertaken as the research methodology in order to ascertain which values are projected as the norm, or, of equal relevance, what is omitted.

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Early years' curricula

Siolta, the National Quality Framework for Early Childhood Education was developed by the Centre for Early Childhood Development and Education (CECDE, 2006), followed by *Aistear: the Early Childhood Curriculum Framework* (National Council for Curriculum and Assessment, 2009). *Siolta* (2006) focuses on quality of learning and development in Early Childhood Education and Care (ECEC), while *Aistear* (2009) is a framework for providing learning experiences for children from birth to six. The underpinning principles of *Aistear* (2009) and *Siolta* (2006) include diversity, equality and citizenship. The theme of diversity in *Aistear* encompasses ethnicity, race, faith/no faith, home language, family background, special educational needs, physical appearance, gender and abilities. *Siolta* (2006) also encourages practitioners to anticipate any stereotypes or bias that may be reflected in the classroom through books, images or toys. *The Siolta Research Digest* (CECDE, 2007), notes that children identify differences from a very early age, and assimilate both positive and negative messages about difference, which influence their self-identity. Murray, Crooke and O'Doherty (2006) also state that children's views are reinforced through adults and through the broader community.

Anti-bias education

Children have the capability to distinguish racial differences and to develop prejudices towards particular groups from the age of three (Connolly, 2003, 2009, 2011; MacNaughton 2006; Connolly, Smith and Kelly, 2002; Nixon and Aldwinckle 1997; Siraj-Blatchford, 1994; Van Ausdale and Feagin, 2001). Van Ausdale and Feagin (2001) argue that young children "are far from being oblivious to racial group and racism" and that they are "inundated with [racism] from the moment they enter society" (pp. 189-190). Those authors contend that children's social interactions have the power to generate or reinforce stereotyping, or facilitate and encourage mutual self-esteem.

Derman-Sparks and Ramsey (2006) emphasise the importance of anti-bias education, arguing that children notice and are influenced by racially-related images and messages, while Murray and O'Doherty (2001) advocate that such education must not be confined to cultural issues but must also address class, language, faith/belief, gender and disability (Derman-Sparks, 1989). Derman-Sparks and Edwards' (2010a) guide for selecting textbooks and storybooks notes the importance of checking content for stereotypes, tokenism and invisibility, in illustrations as well as storylines. If books display unbalanced representations of particular cultures, classes or family structures, children learn that certain groups are more 'deserving' of a voice in society, a message that can undermine the child's sense of self.

Anti-bias education actively avoids a superficial "tourist curriculum" which can perpetuate stereotypes as the educator "drops in" to "exotic" people before returning to the dominant cultural norms (Derman-Sparks and Edwards 2010b, p. 12). Banks (2010, p. 240) calls this the "contributions approach" arguing that it trivialises cultures and reinforces stereotypes as children are not enabled to see the character as a whole person like themselves. Banks (2010, p. 240) also describes the "additive approach" where content is added to the curriculum without changing the structure and with no critical engagement with facts.

Images

'Young children are sophisticated readers of visual and verbal text and can make sense of images on literal and metaphorical levels' (Arzipe and Styles, 2003).

CECDE (2007) advocates diverse images of community and family life, and avoidance of stereotypical role-models and bias. Barnardos (2002) note that children pick up notions about ethnicity from books and media, and that children who do not have first-hand experience of particular groups "depend totally on these sources of information if they are to develop an opinion or an image of such groups" (p. 5). This emphasises that children need to be assisted in developing positive self-identity. The complexity of identity formation is also noted by Hegarty and Titley (2013) who argue that "uncritical use of stereotypes risks cementing in people's minds a homogenised view of a certain group or community" (p. 6). Readers need to be presented with accurate representations in order to avoid sensationalised or exoticised views of particular groups.

The Dóchas Code of Conduct on Images and Messages (Dóchas, 2014) highlights the power of images. It was produced for those responsible for communicating images and messages, including teachers. It demonstrates that images have the power to create stereotypes or promote solidarity, and it encourages diverse voices, perspectives and representations. Images can misrepresent groups particularly if cropped or if information is omitted. Images that stereotype or exoticise people, situations or places can perpetuate myths, especially if these images or stories are the only viewpoints the reader has been given.

Identity formation

The metaphor of "windows and mirrors" is used by a number of theorists (Bishop, 1990; Ladson-Billings, 1995; Dolan, 2014; Landt, 2006; Derman-Sparks and Edwards 2010b) to describe how books can reflect and affirm the child's culture, and how a child can look through a window to a different world. Dolan (2014) states that omissions are as significant as what is represented and that minority groups often have few literary "mirrors" that affirm their identities. Mendoza and Reese (2001) demonstrate the importance of avoiding distorted "windows and mirrors", in that representations should be accurate, while Hegarty and Titley (2013) note that "the impact of images can be internalised inviting deficit identity conclusions" (p. 7), further reiterating that images can empower or disempower the reader.

Methodology

Research question

This research examined representations of diversity in a sample of early years' textbooks and accompanying books (Appendix A), and questioned whether readers would be enabled to see accurate representations of themselves and others in these books. It further aimed to identify whether these representations challenged or reproduced stereotypes. Questions in textbooks were analysed to decipher whether they were inclusive or whether they presented cultural assumptions. Both the presence and absence of representations of minority groups were analysed.

Textbooks were chosen as the sample, as they are operational in the majority of classrooms and are based on the primary curriculum. It was envisaged that social environmental and scientific education (SESE) textbooks would deal specifically with diversity and citizenship, but it was decided to analyse all textbooks and accompanying books in use in one junior school as this represents the reality that many children encounter. The sample included 14 textbooks and 21 accompanying books from one school's booklist. These books are listed in Appendix A.¹

Methodological approaches

The research encompassed a qualitative framework, with critical discourse analysis forming the main approach. The qualitative aspect was a key component in identifying the underlying assumptions and messages the textbooks were transmitting. A quantitative element was also embedded in the research survey as the representations of particular groups were recorded numerically to determine which groups were represented and how frequently.

A rubric was developed to ascertain the degrees of representation of particular groups (Appendix B), and was adapted from the *Equal Measures* (Department of Education and Skills, 2006) literature analysis survey and textbook analysis survey. These two surveys, created for the purpose of exploring gender equality, were adapted to explore further equality issues based on the 'nine grounds' of equality legislation, specifically to identify the level of representation of minority ethnic groups, Travellers, characters with special educational needs, and a range of family structures, including the variety of family types as presented in the *Different Families, Same Love* (INTO, 2015) campaign. The quantitative aspect of the survey included counting and recording the number of characters in order to identify whether the degrees of representation were tokenistic or representative of societal realities. Derman-Sparks and Edward's *Ten Steps for Reviewing Children's Books* (2010a) was consulted because the anti-bias approach was key to the investigation. This involved checking illustrations for stereotypes, tokenism and identifying whether characters were presented as complex human beings rather than one-dimensional "add-ons". Derman-Sparks and Edwards (2010a) also identified the need to question subtle messages that may carry bias in story lines. This questioned whether characters from minority groups were presented as dependent or passive; whether such groups had positive representations or had unnaturally inspirational qualities in order to gain approval or acceptance.

Critical discourse analysis.

The qualitative aspect of the research entailed critical discourse analysis, which identified what was implied through the text rather than what was stated through linguistic and non-linguistic depictions (Denscombe, 2010). Therefore what was said and what was unsaid were considered of equal importance. Discourse analysis reveals "underlying assumptions that cannot be measured" (Pingel, 2010, p. 68). Fairclough (1995) argues that units of text are ideological. Denscombe (2010) reiterates this, stating that words and images are not used to

1 Within this study "readers" are referred to as "accompanying books" in order to differentiate them from the textbooks and from the "reader", as in the person who engages with the text.

depict reality, but for “creating and sustaining reality” (p. 287). Within the research it was important to identify what “realities” were being created and reproduced, as these realities can influence the young reader’s sense of identity and their identification of others (Faas and Ross, 2012).

Questions in textbooks were analysed to deduce what the author took for granted or felt needed to be explained. Further analyses were conducted based on Pingel’s (2010) list of criteria for analysis (p. 71) which involved the hermeneutic analysis of underlying assumptions, target group, narrative, balance and rationality of the representations. This included examining textbooks from the reader’s point of view in order to ascertain whether the reader was ignored or included. Van Dijk (1993) notes how dominance may be enacted through subtleties and through everyday forms of talk and text that appear “natural” (p. 254). He argues that social dominance may be ideologically sustained and reproduced by the media or textbooks. The level of culturally assumed knowledge was examined through the rubric in order to identify levels of “natural dominance”. As the textbooks were designed based on the *Primary School Curriculum* (1999), they reflect and reproduce societal values which can impact on the child’s sense of self.

Image-based research

Early years’ textbooks tend to be more visual than textual; therefore, some textbooks required more emphasis on image analysis. Images present factual information and represent things through symbolism and hidden meanings (Denscombe, 2010), and so they were examined in relation to their function with the accompanying text, as their combined relationship can alter the meaning (Barthes, 1977). However, this was not always possible as there were often no textual references to the imagery, which led to reliance on the reader’s prior knowledge and experiences as Apple (2000) argues that readers interpret texts based on their own “classed, raced, religious and gendered biographies” (p. 191).

Denscombe (2010) further cautions against the taking images out of context and as such it was important to note the purpose and position of the image. This was illustrated in the *Dóchas Code of Conduct* (2014) which was considered during the analysis of images of the global south, where the functions of illustrations were considered to ascertain whether they complemented the text or altered the meaning.

Data analysis processes

Quantitative data were input into Microsoft Excel, and bar charts were created to represent the number of male and female characters, occupations according to gender, and the number of minority ethnic groups within textbooks. The number of white characters was quantified as well as those from minority ethnic groups in order to exemplify the representations proportionately. Bar charts were utilised to make the degrees of representation more visual while undertaking qualitative analysis; however it was important to remain aware that this represented a small sample (Appendix C, Figures 2 and 3).

Findings and discussion

The following is a summary of key findings:

- ⌘ All representations of disability were presented through an image of a person in a wheelchair with no textual references to disability. This was with the exception of one text where the Paralympics was briefly explained².
- ⌘ Regarding gender: while textbooks depicted men and women in a variety of non-traditional occupations, women were more likely to be seen engaging in perceived masculine activities such as physical labour, than men were seen in nurturing roles.
- ⌘ Traditional roles within families were prevalent, and nuclear families remained the dominant image. LGBT families were absent.
- ⌘ There were omissions of families suffering from socioeconomic hardship.
- ⌘ Within representations of countries in the wider world, there was a failure to show diversity within regions, countries or continents.
- ⌘ While 'home' was a recurring theme, it was generally assumed that children had homes. Travellers were not referenced within the sample texts.
- ⌘ Some of the questioning relied on assumed culturally-specific experiences of the reader.

Disability

Within the sample, there was a limited number of children and adults with special needs, all of whom were presented in wheelchairs with no textual references. Some of the images presented active wheelchair users; however, only one of these representations was integrative and "natural", while other representations portrayed stereotypical views of disability.

The only representations of special needs throughout *Bun go Barr* and *Planet Maths* featured in the second class textbooks. Within *Bun go Barr 2* a young boy in a wheelchair was presented playing basketball with his friends. He asked his peers to look at him and see that he was happy and not afraid. According to Derman-Sparks (2010a), children with disabilities should not have to display extraordinary qualities in order to gain acceptance from their peers. As the boy drew attention to his lack of fear, an everyday activity was exemplified as an achievement for a person with a disability.

In *Planet Maths 2* a boy in a wheelchair was presented painting with his peers. This was the only representation in which a person with a disability was presented as independent and distinct. There was only one wheelchair user throughout the *Wonderland* collection, a boy who appeared in the text *The Wrong Car* and pointed where to go while his mother attentively gazed at him. This representation could be interpreted as uncritically reinforcing the stereotype of people with disabilities as being helpless and dependent (Derman-Sparks, 2013).

Direct references to ability were made in *Grow in Love 1* on a page entitled "Hey! Look what I can do!" (p. 12). Readers were asked which of the following they could do: jump, balance books on their head, play ball or do a handstand. The image of playing ball was presented with a girl in a wheelchair, however the choice of physically challenging activities further emphasised what a wheelchair user could not do.

2 Feena's Second Book of Facts (Holmes, 2011, p. 16)

Grow in Love 2 presented a young boy in a wheelchair playing tic-tac-toe. His friend pointed towards which section he should choose. This suggested incapacity to make decisions which implied that the boy had both physical and intellectual disabilities. *Small World 1* included one young wheelchair user watching his peers play. He held his hand up but no one looked at him, which emphasised his exclusion. There were no representations of children with disabilities in *Small World 2*; however, children were asked to design a house for a person who uses a wheelchair, an exercise which elicited critical thinking, a key component of anti-bias education (Derman-Sparks, 1989).

In summary, disability was presented in the sample textbooks through a homogenised wheelchair motif. The representations further suggested physical and intellectual disabilities to be interlinked. Textbooks failed to reflect the diversity of special needs. As wheelchair users were the only characters with special needs presented, this reflected a stereotypical “naturalised” view of disability (Hyatt, 2005, p. 252).

Gender

Gender marking in job titles was avoided, suggesting a move towards inclusivity. For example, in *Small World*, inclusive language such as “lollipop-person”, “milk-person”, “delivery driver” and “bin-person” was used. This inclusive language was absent from other texts; however, those texts did not directly deal with the theme of occupations.

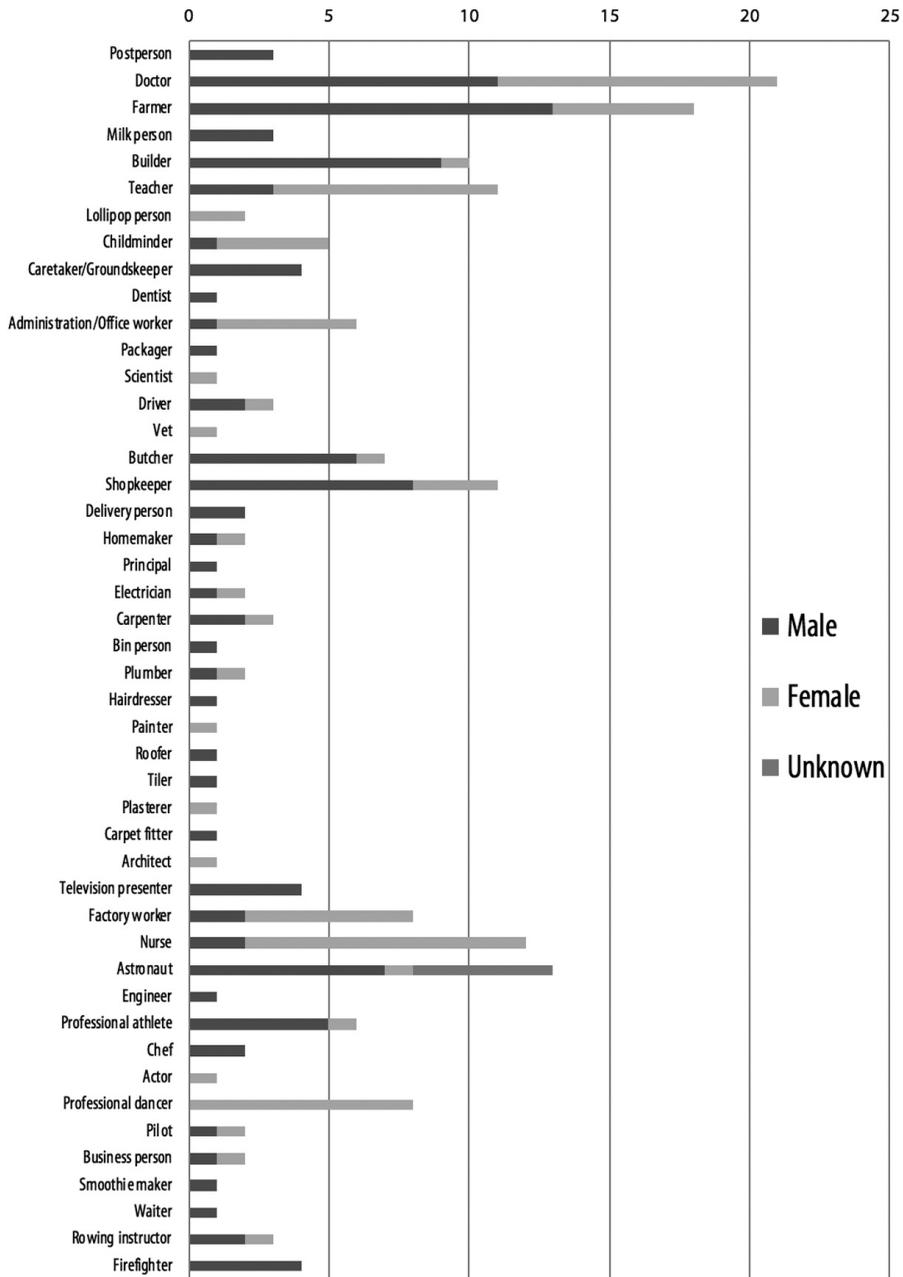
Within *Small World*, women were pictorially represented doing non-traditional roles including plumbing and building. This challenged stereotypes and supported critical thinking as advocated by Murray, Crooke and O’Doherty (2006, p. 12). However, men dominated the roles of builders and caretakers (Figure 1).

There were representations of male nurses and teachers but female representations outnumbered them. Therefore, the extent to which women were presented engaging in perceived masculine roles was not reflected in the reverse. Furthermore, men outnumbered women in almost all of the textbooks (Appendix C, Figure 2).

The language attempted to open up roles to men and women but traditional roles were reverted to in accompanying images. Throughout the textbooks all representations of “lollipop-people” were of women and all images of “post-people” and “milk-people” were of men. In *Small World 1* the term “milk-person” was used once on a page that explored occupations (p. 86). However, all other references were to the “milkman”, demonstrating inconsistency.

Gender roles within families were selective and although men were frequently seen cooking for their children, there were no images of men pushing a pram or holding a baby. As families were explored in *Small World 1*, the reader was told “everybody’s family is different. You might not have any brothers or sisters. Your granny might not be alive anymore. Your dad might live in a different place” (p. 80). This portrayed the mother as the primary caregiver because the father was presented as a person who may be absent. The textbook then asked readers to draw their “granny”, “grandad”, “uncle”, “aunt” or “cousin”, rather than providing children with a space to depict their immediate family.

Figure 1: Occupations according to gender within the sample.



Representation of 'family' in textbooks revealed the prevalence of traditional roles, and nuclear families remained the dominant image. In instances where there was only one parent in the image there was no occupying text, therefore personal interpretation of family dynamics was required from the reader. LGBT families were absent.

Within *Wonderland* there were constant references to the male character GG's size. In *Dance Shoes for GG*, he had to specifically order extra-large shoes but was unimpressed with the feminine shoes he was delivered; "they were very big, very soft and very pink... I can't wear these. Everyone will laugh at me" (p. 10). The *Wonderland* series often made overt references to femininity and masculinity which were not present in the textbooks. For example, in *The Treasure Hunt*, GG and Winchilla had a disagreement about whether boys or girls were better at reading maps whereby Winchilla stated, "the girls have won. Girls are much better than boys at things like that" (pp. 4-5). Such statements perpetuate gender stereotypes that may have implications for a young child's identity formation (Derman-Sparks, 1989; Derman-Sparks and Edwards, 2010b; MacNaughton, 2006; Murray, Crooke and O'Doherty, 2006).

To summarise, although there was a move towards inclusive language in texts, further work needs to take place in order to present balanced representations of women and men, and the roles they occupy within families and society. Representations of families need to reflect the diversity of modern family life.

Socioeconomic status

Jobs were presented as something to be taken for granted in the *Wonderland* series. In *Feena's Second Book of Facts*, the reader was told people "need jobs so there *must* [emphasis added] be work nearby" (p. 9). Multiple reasons for working were given "*the main reason* [emphasis added] people work is to earn money to buy the things they need" (p. 13); people were described as choosing to work to use their skills or "get a sense of achievement" (p. 13) rather than for economic necessity. These presuppositions projected the availability of jobs as an assumed "reality" (Hyatt, 2005, p. 48).

Young labourers in "other countries" were referenced but were presented as a deviation from the norm; "in many countries there are laws that stop children from working... in *other* [emphasis added] countries, children start working much younger" (*Feena's Second Book of Facts*, p. 13). This was accompanied by the image of a smiling Asian child carrying water on his shoulder with the caption "young worker". The image-text relationship functioned to position the young worker as "other" it did not specify which country he was from, therefore the reader had to make his or her own deductions.

Country fact files

Within the sample, various countries were explored in terms of facts and cultural elements. *What a Wonderful World* in-text fact files took the reader on what Banks (2010, p. 240) describes as a "contributions approach". The main foci of these approaches were on flags, famous animals, landmarks and facts about the country. This dipped into parts of the country with no depth. Young children are highly influenced by the imagery with which they are presented (Derman-Sparks and Ramsey 2006, 2010; Dolan, 2014; Ladson-Billings, 1995; Landt, 2006; MacNaughton, 2006; Murray and O'Doherty, 2001). Therefore, showing one-sided views of a country or lifestyle can greatly influence children's understanding of the world. For example, Mexico was explored in *Small World 1* with stereotypical Mexican celebrations, foods and objects. It was depicted as a monolingual country; "Spanish is the

language that is spoken in Mexico" (p. 65). The reader was then asked to write two facts about Mexico which the child would likely base on the information provided, thus potentially reinforcing and reproducing said stereotypes.

Throughout the textbooks, there were minimal representations of minority ethnic groups (Appendix c, Figure 3). References to African countries throughout the sample varied from a thematic approach to facts in isolation. The range of living environments was limited to recurring images of mud huts and one image of a township. Within the sample, Kenya, Chad, Egypt, Ethiopia, South Africa and Zambia were referenced explicitly. Selective stereotyping prevailed throughout texts. This was evident with Kenya being explicitly referred to as "African" while Egypt was rarely linked with Africa textually or graphically. When referring to Kenyan homes in *Small World 2*, the text describes how "some African people build their homes with mud" (p. 28) rather than "some Kenyan people". This depicted Africans as one homogeneous group. The Maasai people were suggested to be underdeveloped in *Feena's First Book of Facts*, "In some parts of the world some people still wear the same style of clothes that they have worn for hundreds of years. The Maasai women in Africa *still* [emphasis added] like to wear colourful free flowing clothes" (p. 15). On the following page the question "What do people living in hot areas wear?" was answered with "In areas where the weather is hot and dry, people wear loose, light coloured clothing" (p. 16) accompanied by an image of a nuclear white family wearing light clothing on a beach. This contradicted the prior reference to Maasai women, thus deviating them from the norm.

In *Small World 2*, industry in Zambia was focalised through an Irish person, John, who moved to Lusaka in 1968 for work; "it is a new city with building sites everywhere, it's no wonder they *need* [emphasis added] engineers... the city badly needs a good supply of clean drinking water" (p. 92). This wording suggested that there were no Zambian engineers and 'John' was doing work that could not be provided by locals.

In the same text, "Muna" explained that she lived in a hut in Ethiopia. Her lifestyle was portrayed as an ordinary non-emotive experience; "I help my mother by sweeping the house and fetching water... my family eat the dinner that I cook with my sister" (p. 77). This was accompanied by an image of Muna and her sister 'fetching water' barefoot. Muna further stated, "We often have coffee after dinner, even the children!" Her statement "even the children" demonstrated awareness that this may be perceived as unusual. Following this story, readers were asked to write "two differences" between their lives and Muna's life. This further distanced readers as they were not asked to draw any similarities.

A view of rural Ethiopia was presented with no references to urban life. This could have implications for both Ethiopian children in the class and children who rely on these representations as their only window into Ethiopia, thus reinforcing rather than challenging stereotypes (Derman-Sparks, 2013).

In summary, a homogenous and superficial view of Africa was presented within the texts, with a failure to represent the diversity of urban living within countries on that continent. Selective imagery and dialogue created a binary between the global north and the global south, presenting an unbalanced and inaccurate representation of the wider world.

Homes and homelessness

Home was a recurring theme. The geography strand unit of 'homes' for infant classes aims to ensure children "acquire some, awareness of different types of homes in the locality flat, cottage, house, caravan, trailer and begin to appreciate the need for shelter for a family". (NCCA, 1999a, p. 24). The variety of homes is extended within the first and second class curriculum, with developing an awareness of homelessness as a stated aim (p. 38). The researchers argue that the variety of homes presented in SESE textbooks functioned as an "additive approach" (Banks, 2020, p. 240) to suit curricular requirements. Outside of pages where particular homes were arguably present to cover curricular objectives, detached homes permeated the textbooks, reflecting a natural dominance (Fairclough, 1995).

The pictorial and textual representations of homes in *Small World 2* reinforced the global north/global south binary, with selective and unbalanced representations within particular regions. This was further emphasised through language. For example, representations of South Africa's and Hong Kong's living spaces were both suggested to be 'crowded'. Houses in South Africa were described as "small and overcrowded" while Hong Kong was described as having "lots of people" in apartments, framed with the exclamation "Wow!" to make it seem appealing. The cost of townhouses in New York was referred to, while people who have swimming pools in their gardens in Australia were described as "lucky" (p. 29), mirroring Bryan's (2014) concept of "development as luck". She argues that this encourages children to favour Western society over the developing world, creating a "cultural superiority" (p. 67).

Small World 1 assumed that readers had a home. Children were asked to write their address, write about their own home or draw a picture of it. In *Grow in Love 2* children were asked to draw where they live. This question was more inclusive than those in the SESE textbooks as the children could draw their town as per the example. Although *Small World 2* attempted to deal with the issue of homelessness, its approach was contradictory. It firstly assumed that readers had a home: "What does our home give us?", then children were asked to choose from the following options: "It shelters us from the weather; It keeps us safe from danger; It is a place for our things; It is a place to eat, sleep and play" (p. 28). Subsequently, children explored selected homes around the world and were asked "How is this home different from your own *home* [emphasis added]?" (p. 29). These possessive pronouns functioned to segregate rather than include (Hyatt, 2005).

Another page in *Small World 2* presented an Irish girl's story of homelessness. While there were intentions to exemplify homelessness as normal, it was abnormalised through questions which assumed home-ownership: "Write three things you love about your home", "Write three feelings you would have if you were homeless" (p. 30). The pronouns positioned the reader as an "in-group member" (Hyatt, 2005, p. 47) which marginalised readers without a permanent home. These activities could be particularly isolating for the increasing number of children living in emergency accommodation, with figures showing almost 4,000 children homeless in Ireland in May 2018 (Peter McVerry Trust, 2018; Scanlon and McKenna, 2018).

There were no references to Travellers within the sample; however some imagery of caravans was present with emphasis on temporal aspects. Caravans were framed as a "type of transport" or somewhere to stay for a holiday as seen in *Small World 2*. The word "caravan"

was used despite the fact that Travellers use the word “trailer” (Kenny and McNeela, 2006). According to Kenny and McNeela (2006); “curricula are not neutral, and how settled people are taught about Travellers is a significant factor in the reproduction of prejudice” (p. 55). As Travellers were not the focalisers and inaccurate language was used, Travellers’ voices were delegitimised.

In summary, a number of children would not have their identity reaffirmed through these textbooks, such as children suffering from socioeconomic hardship, children from non-nuclear families, and those in temporary or emergency accommodation. Furthermore, the invisibility of particular groups such as Travellers, served to delegitimise their place in society.

Questioning

The SESE textbooks elicited prescribed answers with multiple-choice or “fill in the blanks” questions. In instances where questions were open, prescribed examples led readers to a particular answer. This was evident in *Small World 2* where readers were asked to write two facts about Ireland, guided with prior information. Readers were then asked to write a fact-file which was heavily prescribed “(flag, famous animal, famous place, two facts) for another country, e.g. Spain or Canada” (p. 5). These references assumed that readers would know facts about these countries despite other countries being covered previously within *Small World*. This reflects Fairclough’s (1995) concept of naturalisation of “common sense” (p. 74) which positions the world from a dominant eurocentric/global north paradigm.

Although multiple choice questions often accompanied a factual piece, they sometimes related to personal experiences, which was problematic. Within *Small World 1* readers were asked whether the first present that they received was a teddy, blanket or a doll, which presented cultural assumptions. Children who did not receive such gifts would not be able to write a different answer which further perpetuates a natural dominance of particular “norms”, and functions to exclude those not in the “in-group” (Hyatt, 2005, p. 47). More open-ended questioning in textbooks would recognise the heterogeneity of contemporary classrooms and would provide greater opportunities for increased dialogue in class.

Conclusion

This study examined representations of diversity through the analysis of a sample of textbooks for children in junior classes. The research found that peripheral representations of diversity were present, constituting an “additive approach” (Banks, 2010, p. 240) that did not reflect the anti-bias education advocated by Derman-Sparks (1989, 2010b). Textbooks provided limited scope for children to see those already marginalised in society fairly represented. Although some texts attempted to present non-traditional roles through gender-neutral language, there were inconsistencies between text and image whereby the imagery reverted to traditional gender roles. As the pertinent issue of homelessness was ignored outside its explicit position as a theme, it was disconnected from the remainder of texts. This uncritical approach positioned homeless children as outsiders. As suggested by Banks (2004), in order for curricula to be truly inclusive, content needs to be examined and

restructured as dominant ideologies can be covertly presented. Literature has the potential to function as both “windows” and “mirrors” but textbooks in this sample did not provide this opportunity. Critical discourse analysis revealed the natural dominance of the reader being Irish and not suffering from socioeconomic hardship. This dominance was further constituted through personal pronouns and presumed experiences which excluded some readers. Closed and prescribed questioning functioned to further exclude those who were not part of the “in-group” (Hyatt, 2005, p. 47).

Authors need to be aware of the implications of these findings when creating texts for use in primary schools. To be fully inclusive, textbooks should provide children with space for critical reflection and for dialogue, in order to challenge homogeneous or tokenistic representations. Greater attention to the matters raised in this study would support the development of the type of anti-bias curricula necessary for schools in contemporary Ireland.

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Appendices

Appendix A

Gaeilge:

Bun go Barr. Bunchéim A, Bunchéim B, Bun go Barr 1 agus 2, (2009). Dublin: C.J Fallon.

Maths:

Whelan, D. (2011). *Planet Maths. Junior Infants*. Dublin: Folens.

Curley, A. (2011). *Planet Maths. Senior Infants*. Dublin: Folens.

Ó Conghaile, P. and McCann, E.(2011) *Planet Maths. First Class*. Dublin: Folens.

Hande, M. and Ward, V. (2011). *Planet Maths. Second Class*. Dublin: Folens.

Religious Education:

O'Connell, D. and Mahon, E. (2015). *Grow in Love. Primary 1 and 2*, Dublin: Veritas.

Social, Environmental and Scientific Education (SESE):

Griffin, A. and Sheehy, L. (2015). *What a Wonderful World! Junior Infants and Senior Infants*. Dublin: CJ Fallon.

Daly, L., Finn, D.], Fletcher, M. and McCarthy S. (2015). *Small World. First Class*. Dublin: CJ Fallon.

Connolly, C., Fletcher, A. and McCarthy, S. (2015). *Small World. Second Class*. Dublin: CJ Fallon.

Wonderland Accompanying Books

Stage One:

Holmes, F. (2011). *The picnic; GG is too big!; Where can GG sit?; Ella goes to the airport; The wrong car; Globby helps out; The beach house; Globby's football match; Wandsville friend's; Wandsville rhymes; Fairytale 1* Dublin: CJ Fallon.

Stage Two:

Holmes, F. (2011). *Looking after Zara; The new suit; Dance shoes for GG; Camper van fun; Feena's first book of facts; The treasure hunt; GG's new job; A surprise for Feena; The magic ring; Feena's second book of facts*. Dublin: CJ Fallon.

Appendix B: Textbook analysis survey

Number of female characters	
Number of male characters	
Unknown gender of characters	
Ratio of male to female characters	
Number of Traveller characters	
Number of ethnic minority characters (specify ethnicity)	
Number of characters with special needs (specify Special Needs)	

	Almost Always	Sometimes	Rarely	Never/No	Not Applicable
Are minority ethnic groups or Travellers equally represented in positions of authority?					
Are men and women equally represented in positions of authority?					
Do characters with special needs have superior qualities such as extra intellectual or sporting ability?					
Do characters with special needs have positive representations?					
Do minority characters display unnaturally inspirational qualities?					
Do boys and girls participate in stereotypical activities?					
Are men and women shown in a variety of occupations including non-traditional ones?					
Are a variety of family structures present?					
Are women as homemakers presented as competent and decisive?					
Are men presented in nurturing or caring roles?					
Is inclusive language used e.g. "firefighter" instead of "fireman"?					
Do illustrations stereotype characters?					
Are achievements of minority characters represented as heroic?					
Do the books present a range of socioeconomic conditions?					
Do questions assume prior culturally specific knowledge? Give examples					

Appendix C:

Figure 2: Representations of male and female characters within the sample.

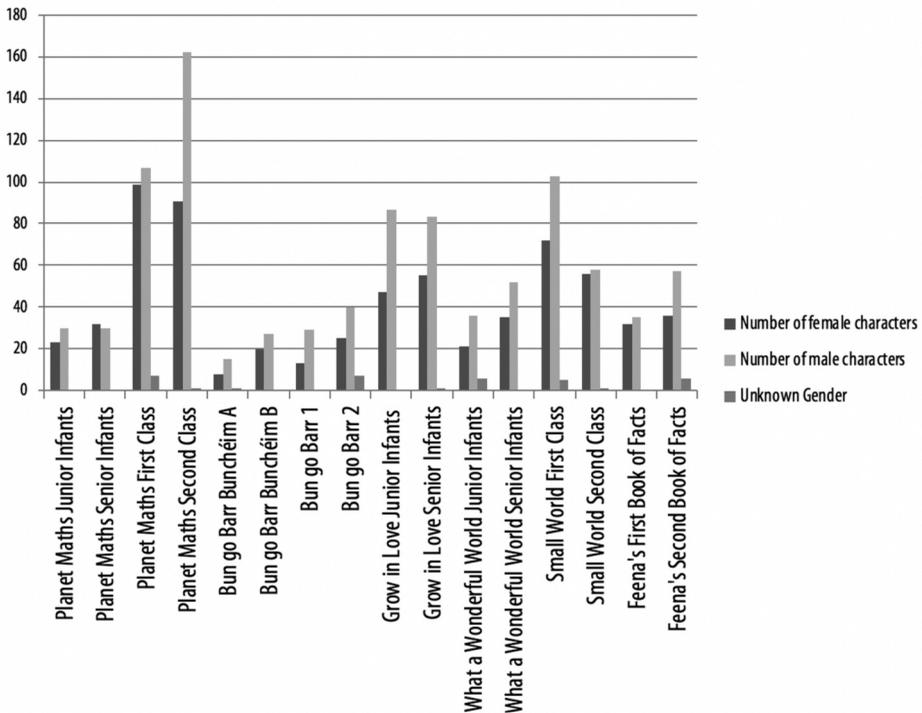
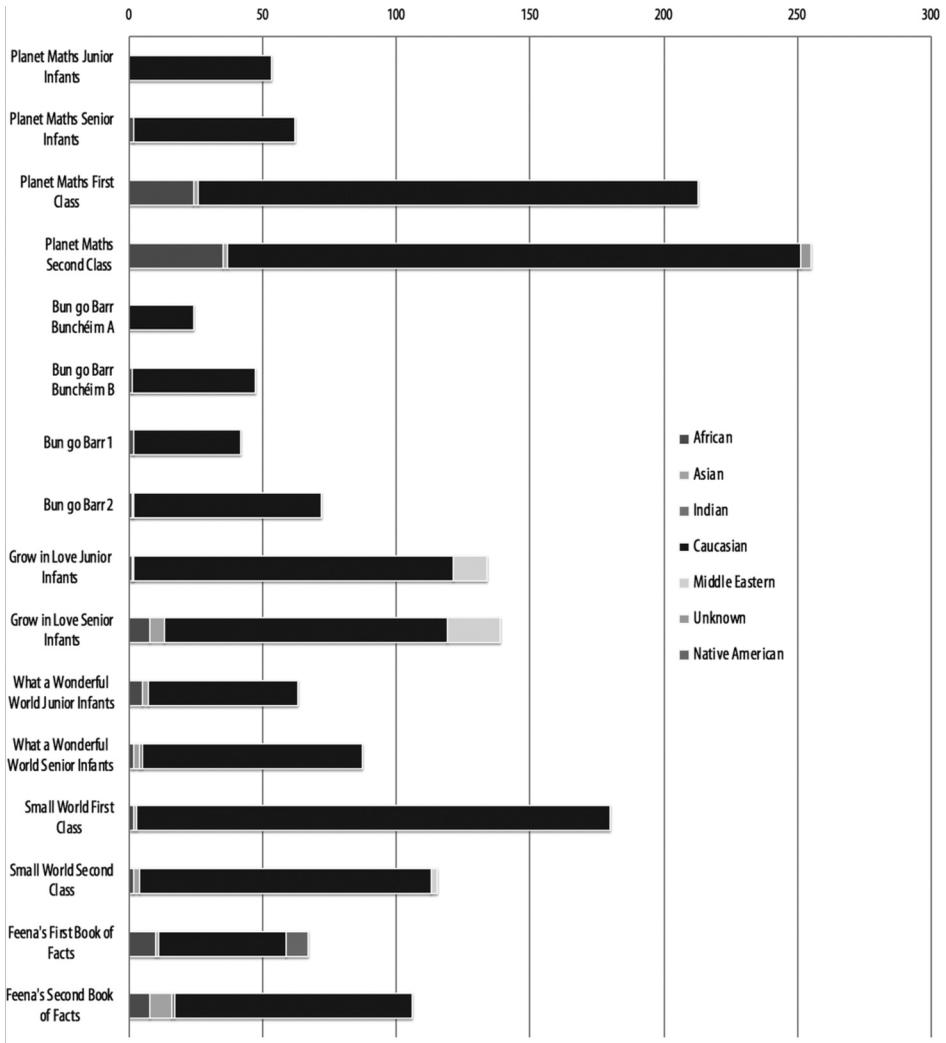


Figure 3: Representations of ethnicity within the sample



STEM learning in Ireland: an evaluation of an innovative primary science learning initiative from the students' perspective

≡ HELEN ROYCROFT ≡

Abstract

This study draws on elements of a larger study, building on and contributing to research in the field of primary science learning in the context of Irish primary schools. Adopting a constructivist approach, the study is an evaluation of an innovative primary science learning initiative aimed at upper primary students, called 'Science in a Box', which incorporates collaborative teaching and learning and inquiry-based science education. As the study was concerned with the students' perspectives of the 'Science in a Box' programme, a forward-thinking, children's rights –based approach was adopted, which ensured the students were involved at all stages of research. The aim of the study was to ascertain whether the programme could address the challenges facing primary science learning in Ireland and whether the programme could enhance science learning experiences for students in upper primary classes. Employing mixed research methods this paper highlights key findings. Most significantly, the findings show that the students are positively disposed to learning science through the 'Science in a Box' programme, with a clear indication that the programme provides the motivation and inspiration upper primary students need to engage in meaningful science learning experiences both in primary school and into the future. The findings also indicate that the holistic design of the programme and the inclusion of several examples of best practice supports the effective implementation of the Primary School Science Curriculum. Implications and recommendations for practice, policy and further research are considered.

Keywords: children's voice, science learning, inquiry-based science education, STEM education, Irish primary science curriculum



Introduction

Science education is currently going through a transformation both in Ireland and internationally. In recent decades, educators have witnessed a shift from traditional didactic methods of science learning, towards inquiry-based, experiential learning, focusing on a collaborative, constructivist, child-led approach. This shift in how science learning is conceptualised also illustrates that there is now an understanding that science learning is not a linear process and requires collaboration, dialogue, inquiry-based strategies, problem-solving, critical thinking and creative thinking. Science, technology, engineering

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and maths (STEM) education is at the forefront of the minds of educators, policymakers and the media, both internationally and in Ireland and currently there is a need for primary and post-primary science programmes to be developed which reflect the innovation, creativity, ingenuity and integrated nature of STEM education.

Science, technology, engineering and maths (STEM) education has received much attention in education circles in recent years and the need for a 'knowledge economy' could be an underlying reason for this focus. A knowledge-based economy such as that found in Ireland needs to be able to draw on a pool of quality STEM graduates, so it is not surprising that a STEM Education Review Group was set up by the Irish government in November 2013. The STEM Education Review Group explored STEM education in Ireland, particularly at primary and post-primary level and the report which was published in November 2016 provides details of current practice in STEM education in Ireland, with particular focus on the following:

- ⌘ The preparation of teachers (at first and second level) for STEM education in Ireland
- ⌘ Means of supporting/enhancing the current cohort of STEM Teachers within the system (with a particular focus on continuing professional development)
- ⌘ The introduction of new teaching and learning modalities that would enhance STEM education in our schools
- ⌘ The use of technology to enhance STEM education in our schools
- ⌘ The promotion of STEM careers and the identification of methods to enhance the engagement of students in STEM subjects

The report provides a vision for the future of STEM education in Ireland:

Our vision is to provide students in Ireland with a STEM education experience of the highest international quality; this provision should underpin high levels of student engagement, enjoyment and excellent performance in STEM disciplines. (DES, 2016)

What is also noteworthy from this report is that there is reference to the inclusion of the arts in STEM Education to form STEAM (DES, 2016, p. 48). International research shows that there is a movement towards this idea to acknowledge the importance of creative thinking and creative learning through the arts. Georgette Yakman, a leading researcher in the area of STEM education in the United States of America, refers to STEM as STEAM, to include science, technology, engineering, the arts and maths. She describes STEAM as:

a developing educational model of how the traditional academic subjects (silos) of science, technology, engineering, arts and mathematics can be structured into a framework by which to plan integrative curricula. (Yakman, 2008, p. 1)

Yakman sees the need to include the arts in STEM Education, and she justifies this inclusion with the following statement:

We now live in a world where you can't understand science without technology, which couches most of its research and development in engineering, which you can't create without an understanding of the Arts and Mathematics. (Yakman, 2008, p. 17)

Designing and making, language, creativity, innovation and imagination are a huge part of STEM education and the inclusion of the arts into STEAM education, can only enhance the integrative model further. Another strong advocate for the move from STEM to STEAM is John Maeda, President of Rhode Island School of Design, Massachusetts. He refers to the constant dialogue between eye, mind and hand as “critical thinking, critical making” and describes STEAM education as “an education in getting your hands dirty, in understanding why you made what you made, and owning the impact of that work in the world”. (Maeda, 2012). There is a strong argument for the inclusion of the arts in STEAM education because the exposure to, and participation in the arts, help to cultivate creativity, artistic appreciation, imaginative exploration, experimental initiative and empathic awareness, all of which are valuable for students' overall development.

In relation specifically to the science element of STEAM, Yakman (2008, p. 8) and other science experts (AAAS, 1989; Driver, Asoko, Leach, Mortimer and Scott, 1994; Matthews, 1997, cited in Yakman, 2008, p. 8) have all attested to the fact that science education has “blended borders” with other disciplines and that science education contributes to understanding in other STEAM subjects and therefore lends itself to meaningful integration. DeBoer claims that:

It is this transference of knowledge, an ability to apply scientific thought in novel situations, which students need in order to be productive members of society. It is through making sense of science versus just finding out about facts of science, that students will not only be able to understand science, but be able to apply it to new situations. (De Boer, 1991, cited in Yakman, 2008, p. 8)

With STEAM education forefront in the minds of educators, policymakers and the media, both internationally and Ireland, there came an opportunity for the development of primary and post-primary programmes, which would reflect the fluid, integrated nature of STEAM education.

The Science in a Box programme

With a growing focus on STEAM education internationally, it was important to acknowledge progress in this area in Ireland and this became the rationale for my research study. One particular programme currently being piloted in Irish primary schools is the Science in a Box Programme (SIAB). SIAB is the brainchild of Seamus Devlin of STEAM Education Ltd. and forms part of a bigger vision, whereby education programmes for all the STEAM subjects are being researched and developed in tandem, through partnerships with Trinity College Dublin, National University of Ireland in Galway, Marine Renewable Energy Ireland,

Engineers Ireland and the Glucksman Gallery, Cork. At the time this research was carried out, STEAM Education Ltd. was in its foundation stages, but it is one of the first programmes of its kind in Ireland to incorporate the arts into its overall vision, which puts it on par with international developments. STEAM Education Ltd. is being developed on a phased basis, beginning with the Science in a Box (SIAB) programme. It is envisaged that the programmes currently being developed in the other STEAM subject areas, will also be piloted and developed in a similar way in the future.

The SIAB project aims to provide a national/international framework for cultivating a love of and expertise in science, from an early age. Over time, the creators of the SIAB programme seek to increase the number of highly qualified science graduates and postgraduates in STEAM sectors, leading to a positive impact on Ireland's future economic competitiveness and attractiveness as a place to locate STEAM industries, as described by Dr John O'Halloran, a STEAM Education Ltd. Director, and Vice President of Teaching and Learning, University College Cork.

The Implementation of the Science in a Box Programme

This study explores the implementation of SIAB in primary schools in its first pilot phase, with a particular focus on the students' perspectives. SIAB consists of a 25 week programme, in which PhD science graduates work alongside mainstream class teachers, using a co-teaching model, to implement the *Primary School Science Curriculum* (PSSC) (DES, 1999) in senior primary classes. The course outline piloted in 2014/2015 can be seen in Appendix A and was seen by the SIAB programme co-ordinator as a draft course outline.

The programme included weekly lesson plans, resources and equipment for the co-teaching partners and regular review meetings were facilitated by the programme co-ordinator, to monitor progress and communicate feedback. However, the students' feedback was not part of this process at that stage and this is what formed the rationale for my research study. Understanding the students' perspectives of the programme could provide very relevant and constructive information which could improve and develop the SIAB programme in the future.

Policy and theoretical context

The Revised Primary School Science Curriculum (PSSC) (DES, 1999) was designed to address the shortfalls of the previous curriculum and using a child-centred, spiral approach, strands and strand units for each class level were outlined. The aims of the PSSC are ambitious and science learning is defined as:

Meaningful learning occurs when the pupils construct their understanding by modifying their existing ideas in the light of new insights gained from scientific investigations. Thus, science may be seen as the active process of the personal construction of meaning and understanding. (DES, 1999, p.11)

What is important in the *PSSC* (PSSC, 1999) is the transition towards focussing on the child and the development of concepts, scientific skills and processes. There is also a mention of problem-solving, creative thinking, exploration and independent inquiry. Even more significant is the mention of science learning and how it relates to the world around us, our environment and especially how science can contribute to society as a whole (DES, 1999, p. 11). The *PSSC* aims to develop the learning dispositions required to think scientifically and it can be argued that the curriculum is less about knowledge and facts, than acquiring a set of scientific skills and concepts, through inquiry and investigation.

The introduction of the *Primary School Science Curriculum* (DES, 1999), addressed some of the difficulties highlighted in a research carried out by the Irish National Teachers' Organisation (INTO, 1987 and 1992), in particular the lack of hands-on experiments being used in primary science education. The National Council for Curriculum and Assessment Review of Science in the *Curaclam na Bunscoile* (Primary Curriculum) (DES, 1971) also revealed that Irish teachers lacked the confidence and competence to teach science effectively (NCCA, 1990). It appears from current research, in particular that of Varley, Murphy and Veale, (2008a) and Varley et al (2008b), both of these difficulties are still seen in Irish classrooms along with many more challenges. Despite the aspirations of the *PSSC* (DES, 1999), the combined findings of the *Primary Science Reviews* carried out by Varley et al (2008a and 2008b) portray a different picture, highlighting a range of challenges still facing primary science learning in Ireland at that time:

- ✎ Limited use of inquiry-based, hands-on strategies for science learning
- ✎ Limited use of ICT to support science learning
- ✎ Lack of funding for ICT and resources for science learning
- ✎ Lack of challenge in science learning in the upper primary classes
- ✎ Teachers' lack of confidence and competence teaching science
- ✎ Neglect of certain strands and strand units in the *PSSC* (DES, 1999)
- ✎ Limited development of students' scientific skills and concepts (Varley et al, 2008a and 2008b)

This is a substantial list of challenges and due to the limitations of this study, I will be focussing on three of these challenges in the following sections, acknowledging that further in-depth study is needed in the other areas to provide a complete picture of primary science learning in the Irish context.

Limited use of inquiry-based science education (IBSE) and hands-on learning

Following the introduction of the *PSSC* (DES, 1999), the National Council for Curriculum and Assessment (NCCA) commissioned a two-phase review of primary science in 2003, which surveyed primary students in third to sixth class in its first phase and surveyed first year post-primary students in its second phase. This two-phase review of primary science in Ireland, undertaken by Varley et al. culminated in a wealth of findings and recommendations published in 2008 (Varley et al., 2008a and 2008b). The findings in the *Phase 1 Report* (Varley et al, 2008a, p.12) suggest that, in general, Irish primary students enjoy science learning, especially when they are facilitated to work collaboratively and to

participate in hands-on, active science learning. Unfortunately, despite the students' love of active, hands-on strategies, these are not being experienced regularly and child-led inquiry is rarely used in science learning in Irish classrooms (Varley et al, 2008a, p. 12). A later study carried out by Murphy, Varley and Veale, also raised concerns about the type of hands-on inquiry the pupils were experiencing and that the students were not being facilitated in inquiry-led investigations and teacher-led investigations were more frequent (2011, p. 432). There is a considerable amount of evidence to show the benefits of IBSE on students' science learning. Smith (2014), Zhai et al. (2014), Dunlop et al. (2013), Dunne et al., (2013), Murphy et al. (2011) and many others acknowledge the important place this strategy has in creating effective science learning experiences. However, despite both Irish and international evidence highlighting the need for students to experience inquiry-based science education (IBSE), its use in Ireland seems to be limited.

A deeper understanding is needed of why these types of strategies are important. The underlying skills which these learning experiences help develop become the motivator for embedding inquiry-based strategies in our practice. We want students to think scientifically, using problem-solving, critical thinking, creativity and collaborative learning and to construct knowledge socially together with their peers through inquiry-based practice. From an educator's perspective it is also important for science learning experiences to be motivating and engaging for our pupils but alongside this we need to understand how to challenge our students appropriately, whilst ensuring all the skills and concepts of the *PSSC* (DES, 1999) are explored. The following section discusses the lack of challenge in science learning experienced by upper primary students and the neglect of certain skills and concepts in the implementation of the *PSSC* (DES, 1999), as highlighted by Varley et al. (2008a and 2008b).

Lack of challenge in primary science learning and limited development of scientific skills and concepts

The second phase of the *NCCA Primary Science Review* involved a survey of first year post-primary students' science learning (Varley et al, 2008b). This report was especially informative, as the findings were consistent with those in the *Phase 1 report* (Varley et al, 2008a). The report also investigated issues such as student readiness for post-primary science as well as their perspectives on their experience of the *PSSC* (DES, 1999).

Despite a majority of older primary students having a positive outlook on post-primary science learning and the fact that most of the participants claimed that their post-primary science experience had met or exceeded their expectations, there were a number of alarming findings in the report, which related to the participants' primary science experiences (Varley et al., 2008b, p. 12). The authors claimed that "the students' generally positive views of post-primary science contrast strongly with their views about the science they experienced in primary school" (Varley et al, 2008b, p. 13-14). There was a clear preference for post-primary science, which was justified by a number of reasons, identified by the students themselves; higher frequency of science lessons, more opportunities to carry out hands-on experiments and more challenging content (Varley et al., 2008b, p. 14). The *PSSC* (DES, 1999) requires

that just one hour per week be allocated for science learning, whereas, from the review of science, it seems the students are eager for more time to be allocated (Varley et al., 2008b, p. 14).

Students also highlighted hands-on learning as important to them and from the students' perspective, post-primary science learning seems to be providing this for these students (Varley et al., 2008b, p. 14). In contrast to their primary science learning experience, these students felt adequately challenged by the content of the post-primary science curriculum, but found it a little difficult at times. Similarly to the phase 1 participants, these students highlighted issues such as a lack of inquiry-based learning, a focus on teacher demonstration and explanation, limited use of ICT to support science learning and an over-dependence on reading and writing, as issues negatively impacting their post-primary science learning experiences (NCCA, 2008b, p. 13). It could be argued that, by overlooking strategies such as inquiry-based investigations and designing and making, that Irish students not only miss out on scientific skills development, but also on the engagement, enjoyment, motivation, social skills development and oracy development outlined by Dunlop, Compton, Clarke, and McKelvey-Martin (2013, p. 18).

However, what was more informative was that the participants in the phase 2 study refer a number of times, to the difficulty of post-primary science and how they felt their experience of primary science was too easy (Varley et al., 2008b, p. 13-14). Even more concerning, in this study, was "that pupils' scientific skill development was limited and that older pupils appeared to have been operating at skill levels similar to those seen in much younger classes" (Murphy et al., 2011, p. 432).

The lack of challenge in primary science, the apparent neglect of certain strands and scientific skills in primary school and the rarity of hands-on learning experiences, may have led these students to feel ill-prepared for post-primary science, an argument made by Murphy, in which she claims that:

Clearly, if not taught properly, children can enter post-primary education more confused than informed about some science topics. This leads to greater learning and teaching problems at secondary level than if children had never been introduced to such topics previously. (Murphy, 2003, p. 7)

These feelings of inadequacy in terms of science competency, felt by some students (Varley et al., 2008b), could also be the result of other factors, some of which are outlined in the Murphy and Beggs study in the United Kingdom (2003, p. 115): lack of experimental work in the upper primary school, repetition of topics for revision, pre-assessments to prepare for national tests and inappropriate curriculum content that does little to inspire and motivate students to learn science. With Vygotsky's theory in mind, the difficulties mentioned above indicate that many Irish primary students may not be learning science within their Zone of Proximal Development (ZPD), (Vygotsky, 1978 cited in Madden et al., 2012), with some students experiencing a lack of challenge and others finding science too difficult following the transition to second level. Vygotsky (1978, cited in Madden et al., 2012) defined the ZPD as:

the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (p. 83)

If students are not facilitated in developing their scientific skills and concepts within their ZPD, this could impact their motivation and engagement in science learning. This could have significant implications for some students who may avoid studying science in school or university and consequently preventing some students from pursuing a career in science in the future. Reflecting on *STEM Education in the Irish School System Report* (DES, 2016), the promotion of STEM careers and the identification of methods to enhance the engagement of students in STEM subjects is a priority area for development. The STEM Education Review group discuss the issues around subject choice in second level, leaving certificate points, family influence, perception of science careers and the need to promote STEM disciplines (DES, 2016, p. 43), but more significantly, there is no mention of the difficulties being experienced in primary science and the causal factors for low uptake of science subjects in second level.

If it is the case that many upper primary students are not being challenged enough and that many post-primary students are being over-stretched, there may be a break-down in meaningful learning. Without the inclusion of inquiry-based and collaborative strategies it is possible students are missing out on socially constructed knowledge as described by Madden et al. (2012, p. 15), whereby students can make abstractions from the more concrete and therefore extend beyond their developmental bounds (Piaget, 1953) with the help of their learning community. Social constructivist theory also suggests that expertise is distributed among groups. Madden et al. found, in their study, that every student has potential to work within their ZPD alongside their peers and through this collaboration push beyond their developmental bounds (2012, p. 15). One of the main recommendations for primary science learning in Ireland, which emerged from Varley et al., was that:

students entering post-primary school should all have experienced a similar range, depth and type of primary science prior to entry, to ensure that curricular continuity is as effective as possible. (Varley et al, 2008b, p. 14)

This recommendation links directly to aims found in the discussion paper on the *Draft Specification for Junior Cycle Science* (NCCA, 2014), whereby the consolidation of scientific skills acquired in primary school is referred to at least four times within the document. Understandably, there appears to be an assumption that all primary students will enter post-primary school with a similar set of skills and knowledge, as outlined in the *PSSC* (DES, 1999). But when reflecting on findings in the NCCA reports (Varley et al, 2008a and 2008b), the inconsistencies found in implementation of the *PSSC* since 1999, have resulted in difficulties in the transition to post-primary science learning for many students. It could be argued that the *Draft Specifications for Junior Cycle Science* (DES, 2014) could be faced with the same challenges that the implementation of the previous post-primary science

curriculum faced, unless the inconsistencies in the implementation of the *PSSC* (DES, 1999) are addressed.

It is important also to recognise that there cannot be a 'one size fits all' approach to science learning and when considering theories such as Piaget's cognitive constructivism and Vygotsky's social constructivism (Powell and Kalina, 2009, p. 242-243), it is apparent that this may be where problems arise. Because science learning requires the development of scientific skills, critical thinking, problem solving, inquiry-based strategies, hands-on activities, student-led investigation, collaborative learning and other cognitive processes, an understanding of cognitive development and constructivist theory is vital for educators to successfully engage science learners. It must be acknowledged that there is also a need for differentiated instruction, a scaffold approach and peer learning.

It can be claimed that the *PSSC* (DES, 1999) provides a good basis for science learning but what is needed is a systematic approach to its implementation, which addresses all the issues in an interconnected way. This paper describes an evaluation of the SIAB programme from the perspective of the students, to determine whether this programme was able to address some of the challenges impacting on science learning in Irish primary classrooms. The three main challenges discussed above, will form the basis for the research design and findings:

- ⌘ Limited use of inquiry-based science education and hands-on learning
- ⌘ Lack of challenge in primary science learning
- ⌘ Limited development of scientific skills and concepts

Research design

As outlined in the SIAB course outline (Appendix A), the programme consisted of 25 weekly lesson plans. The aim of this study was to evaluate the programme from the perspective of the students and I adopted a children's rights-based approach to research, explained in detail below. The students themselves were involved at all stages of the research, including helping to create the main research questions:

1. What are the students' perspectives on the teaching and learning methodologies used in the SIAB programme?
2. Is the programme challenging and motivating for all upper primary students?
3. What elements of SIAB, if any, make it innovative or different?

These research questions stemmed from meetings with the students themselves and reflected what was important to them. These questions also helped me, as lead researcher, to determine whether SIAB could address some of the challenges facing primary science learning in Ireland, as discussed in the previous section. My rationale for choosing a children's rights-based approach to research is outlined below, followed by a brief account of the research process.

A children's rights-based approach to research

Engaging children in the research process, through student participation, is both innovative and progressive and requires an interpretative approach. A children's rights-based approach was adopted from the beginning of this study, in which the students themselves became co-researchers, which led to interesting and relevant findings. The inclusion of students' voice and the acknowledgement of students' agency in the direction of their learning experiences, is an approach which students themselves value. The aim was to involve the students in all stages of the research, including formulating the specific research questions, designing the data collection tool and the analysis. The notion of participatory rights and realising children's agency in matters which impact on them is a powerful yet challenging approach to take in research, but it is an approach which is being used more and more in the field of education, to reflect the *United Nations Convention on the Rights of the Child* (UNCRC), Article 12 (UN, 1989):

Article 12 states parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child (UN, 1989).

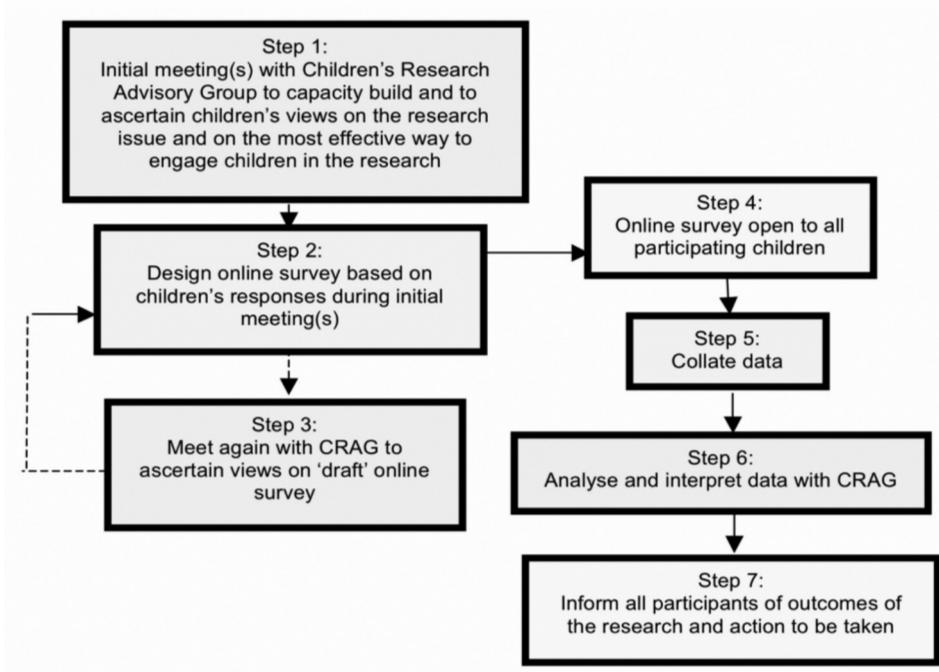
So significant was Article 12 that one of the four guiding principles of the *UNCRC* also reflects the need for children to be heard, "that the child's views must be considered and taken into account in all matters affecting him or her" (UN, 1989) and in the Irish context the National Children's Strategy included "Children will have a voice" as one of its national goals (Department of Health and Children, 2000, p. 29). Consequently, this type of research required careful consideration of children's rights, ethical issues and methodological issues. The ethical issues are dealt with in Appendix B.

Many researchers have adopted a children's rights-based approach including Habashi (2013), Lundy et al. (2011), Murphy et al. (2010), Pole et al. (2010), Lundy and McEvoy (2007 and 2009) and Maulther (1997), and are strong advocates for using this approach but they too urge caution especially in relation to ethical issues when working with children. Lundy et al conceptualized Article 12 in relation to other key *UNCRC* provisions and identified four key concepts underpinning successful children's rights-based research:

- ⌘ Space — children must be given the opportunity to express a view in a space that is safe and inclusive,
- ⌘ Voice — children must be facilitated to express their views,
- ⌘ Audience — the view must be listened to, and
- ⌘ Influence — the view must be acted upon as appropriate. (Lundy et al, 2011, p. 800).

These concepts formed the basis for what Lundy and McEvoy called a Children's Advisory Group (2009, p. 47), which was also known as a Children's Research Advisory Group (CRAG). This CRAG provides a framework for involving students at all levels of the research process, which ensures an authentic children's rights-based approach.

Figure 1: Involving children in the research process (Lundy and McEvoy, 2007, cited in Murphy et al, 2010, p. 29)



As I was working with the students themselves using a children's rights-based approach, the principles underpinning this study were interpretative and included mixed research methods; with qualitative and quantitative elements. Similarly to Malone (2003, p. 800) the term qualitative research was used with the understanding that data or new information needed to be interpreted by the researcher(s) and that information can change or can have different meanings, as people make sense of new information gathered. This meaning-making can be both a strength and weakness in terms of research ethics, which are discussed in Appendix B, but for the purpose of this study, the interpretative paradigm was selected, as working with young people is complex and multi-dimensional in nature and flexibility was needed. The interpretative paradigm commonly known as a constructivist approach or naturalistic approach, implies that, in research, reality and interpretations are socially constructed (Robson, 2002, p. 27) and Robson comments that:

Within the tradition there is almost a rejection of the view that 'truths' about the social world can be established by using natural science methods. People, unlike the objects of the natural world, are conscious, purposive actors who have ideas about their world and attach meaning to what is going on around them. In particular, their behaviour depends crucially on these ideas and meanings... Their behaviour, what they actually do has to be interpreted in the light of these underlying ideas, meanings and motivations (Robson, 2002, p. 24).

This understanding became even more important in the data analysis stage and is the reason I chose to work with the students as co-researchers, as they could provide another level of interpretation and understanding of their peers' ideas, thoughts and motivations.

Alongside the qualitative components of the study, some outcomes also needed to be identified. A fixed, quantitative component was needed, which would be open to interpretation by the researchers.

This study is effectively a programme evaluation from the students' perspective. Programme evaluation is designed to "assess the effects and effectiveness of something, typically some innovation, intervention, policy, practice or service" (Robson, 2002, p. 202) and therefore evaluation research lends itself well to this educational research. Often this type of evaluative research is commissioned by the programme creators but in this case, I chose to research SIAB as it was being piloted in my school and I had a direct link with students involved in the programme.

The framework in Figure 1 helped clarify the phases and processes involved and supported the planning, whilst ensuring the meaningful involvement of the CRAG through each step of the process. I identified four phases of the research process in the SIAB study and included the CRAG in all but one; the initial SIAB lesson observations. What resulted was a partnership in research design, data collection and data analysis.

The research process

The research process consisted of four phases:

1. Three lesson observations
2. Building capacity as co-researchers – CRAG
3. Designing, piloting, re-drafting and distributing the survey – n=119
4. Collating and analysing data – by coding the responses thematically

Firstly, the three lesson observations were carried out by me, as lead researcher. These provided a first-hand experience of what the lessons were really like in the classroom. The information gathered provided a background for further research to be carried out with the students as co-researchers. Also some of my observations provided an insight into other data collected later, especially in terms of student disposition in the SIAB lessons.

The second phase of research was the selection of CRAG members and group sessions to develop the students' capacity as researchers. Below are the CRAG participants:

Table 2: Participants in the CRAG

co-researcher code	gender	class level	urban/rural background
CRAG 1	female	sixth	urban
CRAG 2	male	fifth	urban
CRAG 3	male	sixth	rural
CRAG 4	female	fifth	rural
CRAG 5	female	sixth	urban

We then began capacity-building exercises which involved group discussions and mind-mapping. The students shared their opinions on SIAB and explored the idea that other students might have different opinions about the programme. The CRAG members were asked to respond to a selection of questions including the following:

- ⌘ Describe the SIAB programme. Who? What? Why? Where? When?
- ⌘ Compare and contrast what it is like to learn science through the SIAB programme and what it was like before?
- ⌘ What's important to science learners in the upper primary classes?
- ⌘ What is it like to have a scientist and a teacher helping you learn science?
- ⌘ If you were the teacher/scientist, how would you teach SIAB? How would you make it better?

All of these questions channelled the students' thinking and supported them in the next phase of research.

The third phase of research was formulating the three main research questions. These stemmed from the CRAG meetings and were agreed together:

1. What are the students' perspectives on the teaching and learning methodologies used in the SIAB programme?
2. Is the programme challenging and motivating for all upper primary students?
3. What elements of SIAB, if any, make it innovative or different?

The CRAG members then began the task of designing a data collection tool. We discussed ways in which we might gather information from the other SIAB students and how we might collate this data. The CRAG chose to carry out a survey of students in six schools in Cork and designed a questionnaire to include both closed and open-ended questions. They then drafted, edited and piloted the questionnaire in their own classroom before redrafting the final questionnaire to be sent out to participants. The participant selection also happened at this stage and the selection is outlined below. We decided that we would like our survey to include approximately 100 participants so we selected all six schools participating in the SIAB programme in Cork. The schools that participated were coded and are shown in Table 3. These schools included single gender, mixed gender, urban and rural schools. In the end 119 participants responded to the survey. All the relevant consent and assent was sought from the school management, parents and the students themselves. The ethical issues which arose during this phase are dealt with in Appendix B.

Table 3: Schools that participated in the survey

school code	urban/rural	classes surveyed	gender	class setting
S1	urban/city	sixth	mixed	single class
S2	urban/city	sixth	all girls	single class
S3	urban/village	sixth	mixed	single class
S4	urban/town	sixth	mixed	single class
S5	urban/city	sixth	all boys	single class
S6	rural	fourth	mixed	multi-grade class

Phase four involved collecting all the questionnaires and collating the data. It is important to note here that 119 students responded to the survey and not all of them responded to each question. The numbers of respondents for each question is included in the graphs and pie charts in the findings section. Collating the data was challenging for the CRAG members but insofar as possible, they developed their own strategies for organising and interpreting the data collected. They began by tallying the data from Questions 1, 2 and 8. I visually represented this quantitative data, which can be seen in the findings and analysis section. The remaining open-ended questions provided interesting information but the data was more difficult to collate. The CRAG members looked for commonalities and themes and began to see patterns in the data from the open-ended questions. They decided to record interesting and significant quotes and group these to see the patterns more clearly. They observed that many of the students were saying the same things so they created tallies of commonly used words or phrases. Findings began to emerge especially in relation to the methodologies used in SIAB and the students' disposition towards SIAB. The CRAG members really enjoyed this stage of research as being asked to interpret this data gave them great confidence. We also made sure to discuss the potential for bias in their interpretations, so we challenged one another's thinking and tried to ensure a sense of neutrality when analysing the data. They were also given the opportunity to interpret these results and to hypothesise about what the data meant. The students were extremely motivated and excited by the whole research process and having completed the study with the CRAG members, I feel justified in my approach as it provided the students' perspective in its truest form.

Findings and analysis

It is evident from the literature outlined above, that there are numerous challenges currently facing primary science learning in Ireland. The following three challenges in particular have been highlighted in this paper:

- ⌘ Limited use of inquiry-based science education and hands-on learning
- ⌘ Lack of challenge in primary science learning
- ⌘ Limited development of scientific skills and concepts

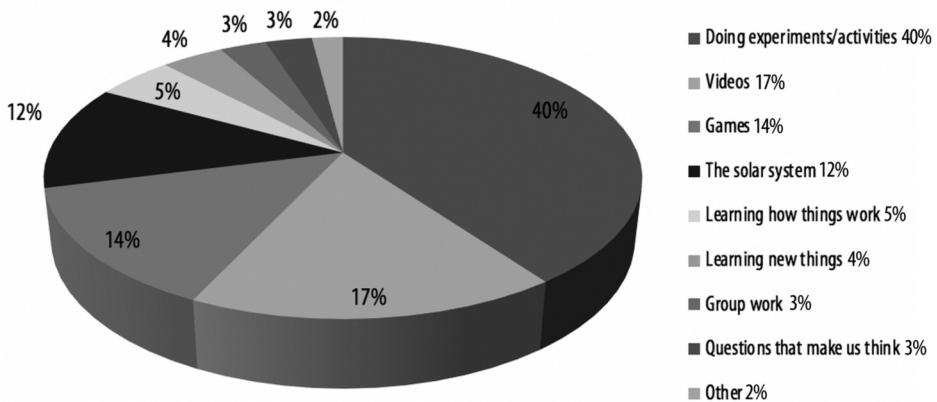
It is important to acknowledge that there are several other challenges hindering the development of quality primary science education in Ireland and these warrant further study in the future (Varley et al. 2008a and 2008b). The three challenges which we have explored are particularly relevant as some of the data collected can help determine whether SIAB is addressing these challenges. Linking this information to the main research questions provides the students' voice and helps create an understanding of the successes and failings of the SIAB programme in the eyes of the students.

The findings are presented under each of the main research questions and links will be made to the challenges facing primary science education throughout this section.

Is the programme challenging and motivating for all upper primary students?

One of the most relevant challenges facing upper primary students was that of “an apparent lack of breadth and complexity to science learning” highlighted by researchers reviewing the implementation of the curriculum (Varley et al., 2008a, p. 13). It was important to ascertain how the students in the SIAB pilot programme felt about the level of challenge in this new primary science initiative. By reviewing the SIAB course outline (Appendix A), it was evident that the SIAB programme aims to include all the strands and strand units of the curriculum, as well as additional content, such as elements of cosmology and geology. This extra content would appear to be challenging and motivating and 12% (n=14) of survey respondents mentioned that the lessons about the solar system were their overall favourite element of SIAB (Figure 3). During the CRAG sessions, this challenging content of the cosmology section of SIAB was also highlighted, especially the lesson about the big bang theory. This indicates that some participants enjoyed the cosmology elements of the programme but it doesn't prove that the content of the programme is adequately challenging for all students.

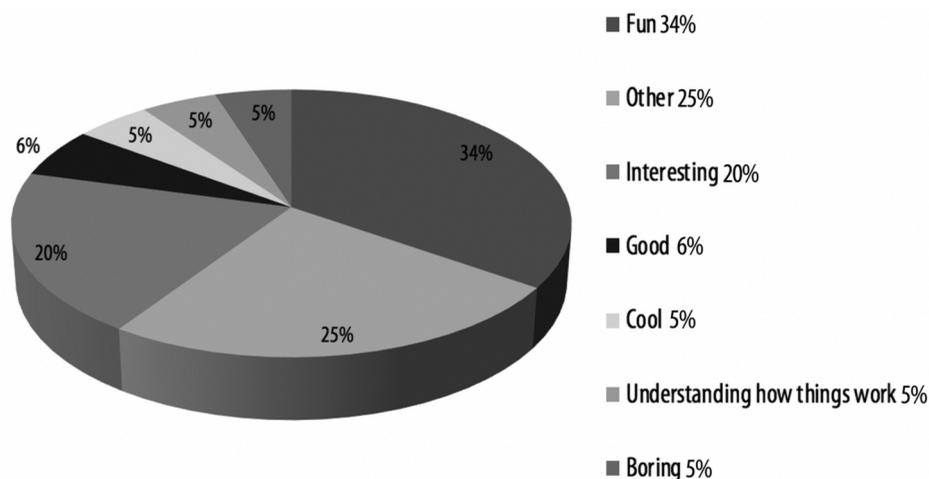
Figure 2: Students' overall favourite elements of SIAB



As can be seen in Figure 2, a small number of respondents really enjoyed that the programme helped them “learn how things work”, “learn new things” and they were asked “questions which made them think”. Again this data gives some indication that the programme is challenging and motivating but as only a small number of respondents mentioned this, the data is inconclusive.

What was more significant is that 40% (n=48) of respondents chose experiments as their favourite part of the programme, with 17% (n=20) favouring videos and 12% (n=14) favouring the games. This data shows us that the students enjoyed many elements of the programme. However we learn more from the words chosen by respondents when asked to describe SIAB. There is a strong indication that the SIAB students found the programme both fun, 34% (n=26), and interesting, 20% (n=24) (Figure 3).

Figure 3: Words used by students to describe SIAB



During the three lesson observations, the students were also observed to be actively engaged, motivated and energised by video content, experiments, discussions, thought-provoking questioning and group work. The energy in the classroom was palpable and the words “wow” and “that’s amazing” were heard during lessons. Much of this data echoes the data found in the survey and indicates that the SIAB programme is motivating and enjoyable for students. When analysing the combined data from the three lesson observations, the course outline (Appendix A), the survey data and the CRAG discussions, there is evidence to indicate that the SIAB is both motivating and challenging for many students.

However, some questions emerged in relation to the level of challenging content in the programme and also whether the lessons were being differentiated for all learners. The inclusion of extra, more challenging content within the SIAB programme will of course motivate and engage some students but it may also be too challenging for others. Some students highlighted their concerns in the survey. One explained that “the scientist was way too advanced. We’re learning the same stuff as my brother in secondary school”. Another student wrote “Having a scientist is more difficult to understand”. More qualitative data showed that even though the students thought the lessons were fun and interesting, “it can get complicated with all the hard words”. Some students also mentioned that the video and PowerPoint presentation content could be confusing and that the scientific language could be challenging. The data here shows small numbers of students who are finding the SIAB too challenging, but this is still an interesting finding as it highlights the need to include differentiated learning experiences, in order for each student to access the *PSSC* (DES, 1999) through the SIAB programme.

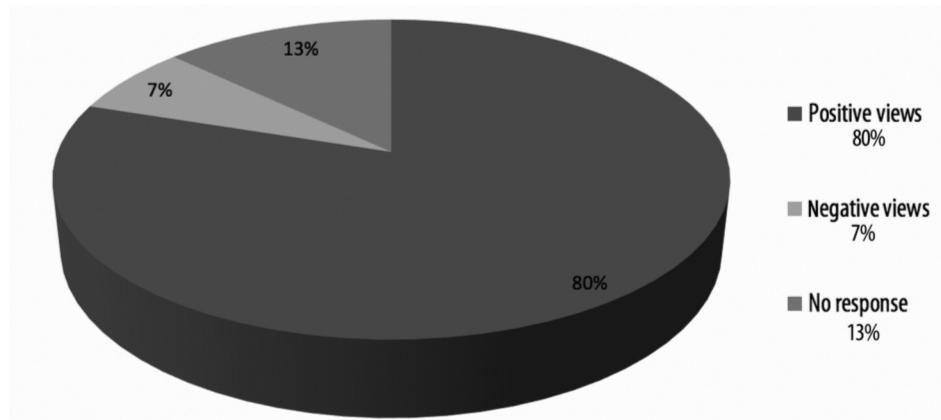
It became apparent from both the survey, SIAB course outline (Appendix A), lesson observations and discussions with the CRAG members, that some success in developing the scientific skills of questioning, observing, investigating and experimenting and analysing was evident. However, other scientific skills, as outlined in the *PSSC* (DES, 1999), were lacking from the course outline (Appendix A); namely predicting, estimating and measuring,

recording and communicating, evaluating and designing and making and no other reference was made to these scientific skills throughout the research process. This is an important finding as these skills are prioritised in the *PSSC* (DES, 1999).

What are the students' perspectives on the teaching and learning methodologies used in the SIAB programme?

The SIAB programme is delivered by a co-teaching partnership, made up of a class teacher and a PhD Scientist. The intention is for the co-teaching relationship to be an equal and supportive partnership with the class teacher providing the pedagogical knowledge and understanding of the students and the scientist providing the content knowledge. Figure 4 indicates that the majority of survey participants were positively disposed to the notion of the co-teaching model. The presence of the scientist in the room was very motivating for the pupils, and this was also witnessed in the lesson observations.

Figure 4: Students' views about co-teaching

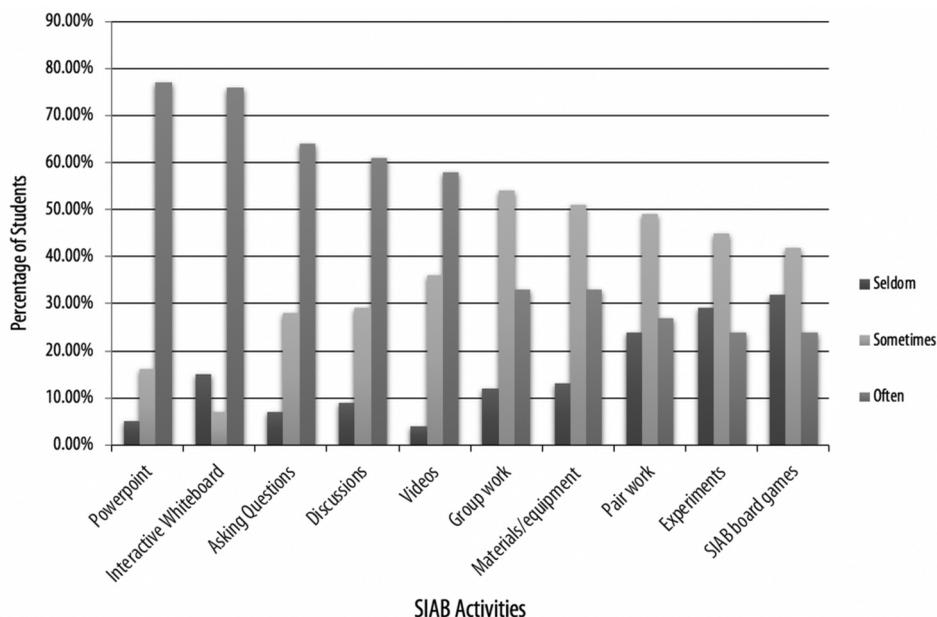


In relation to inquiry-based science education, the data indicated that some hands-on, inquiry-based strategies and collaborative learning are incorporated regularly in the SIAB programme and the students are enjoying and benefiting from these learning experiences. Figure 5 shows the frequency in which these methodologies were used in SIAB lessons. Through the CRAG group meetings, two issues arose which may impact how the data was interpreted;

- (i) the survey was carried out midway through the 25 week programme
- (ii) the students may not be able to distinguish between the methodologies used, especially when questioning and discussion can merge easily with group work, experiments and games.

Therefore we felt that the data in Figure 4 was inconclusive. It does however, give some indication of the frequency of the use of IBSE and collaborative learning, which is encouraging but surveying at the end of the 25 week programme may have provided more reliable data.

Figure 5: Inquiry based pedagogy and collaborative learning in SIAB



Listed below are some of the teaching and learning strategies and skills which lend themselves to IBSE, which are included in the SIAB programme. These were identified from the survey, lesson observations and examining the course outline (Appendix A):

- ⌘ Stimuli for inquiry – videos, PowerPoint presentations, experiments, activities, games
- ⌘ Group work and pair work – collaborative learning
- ⌘ Discussion
- ⌘ Questioning – by students, by scientists and teachers
- ⌘ Critical thinking
- ⌘ Problem solving

From Figure 5 it can be seen that PowerPoint presentations, interactive whiteboards, videos, questioning and videos were all used often in the SIAB lessons. This is very promising, as when these are used appropriately, they can form very good stimuli for inquiry-based learning, which is seen as best practice in science learning. It is promising to see that these elements are developed in SIAB, however, the students reported that experiments, group work and pair work were only included in the lessons sometimes (Figure 2). Considering the fact that 40% (n=48) of students chose doing experiments as their favourite part of the SIAB programme (Figure 2), then there is an obvious need to incorporate more experiments into the programme and to further develop the opportunity for inquiry.

What elements of SIAB, if any, make it innovative or different?

The SIAB programme seems to be an obvious departure from the established practice in science learning which participating students were accustomed to. When asked about their science learning experiences before SIAB, the CRAG members said that they thought it was “rubbish”, “all over the place”, they “never got to do anything” and “the teacher did everything”. Conversely those same CRAG members described SIAB as “interesting”, “awesome”, “cool”, “planned and organised” and “everyone gets to take part”. This data was echoed by the survey participants in how they described the programme in Figure 3, using words like fun and interesting. The findings seem to show that SIAB is a very different science learning experience to what the students were used to before.

The findings also show that the CRAG members and the majority of survey respondents felt positively about having a scientist and class teacher co-teaching the SIAB programme (Figure 4). This co-teaching model is a very innovative part of the programme as it allows the class teacher to contribute his/her pedagogical knowledge and the scientist can provide the expertise and inspiration to the students. The co-teaching model can be mutually supportive to the both scientist and teacher, providing the opportunity for both professionals to develop their skills, for the good of their students. As the focus of this study is primarily on the students' perspectives, it is important to highlight again that this co-teaching approach is enjoyable for the students (Figure 4). It also reduces pupil/adult ratio which is helpful in itself, and it means more hands-on learning can be facilitated. The use of a co-teaching approach using scientists is also an excellent way of linking community to education in a real way and it is extremely motivating and exciting for students to meet a real scientist.

Another aspect which sets SIAB apart from other primary science programmes is the use of specially designed resources, equipment and games to support the programme itself. This makes a difference as the programme comes as a complete set, resources, videos, equipment, games and lesson plans all included. Many of students themselves mentioned how much they enjoyed the experiments/activities, videos and games (Figure 2) which would seem to indicate that these elements, which are specially designed to support the learning in SIAB, are effective for the students.

Lastly, what sets SIAB apart from other programmes is that the programme is part of a bigger vision, linking all the STEAM disciplines together to create meaningful learning experiences for students in Ireland and to help them to develop the 21st century skills they require as they advance through the education system and into the workforce.

Conclusion

Overall, the findings of this study indicates successes of the SIAB pilot programme, from the perspectives of the students themselves, but as it is in its pilot phase, there are still some areas that need to be developed (see Table 4). Because of the research approach adopted in this study the students were provided a platform for their voice to be heard and these findings could potentially influence the future development of the SIAB programme. The programme addresses many of the challenges which impact on primary science learners in Ireland, particularly in terms of hands-on learning, inquiry-based strategy and providing the challenge and motivation that upper primary students need.

Table 4 Positives elements and areas for improvement

Positive Elements of the SIAB Programme	
1.	PhD Science Graduates work alongside class teachers as co-teachers.
2.	Inspires and motivates students to want to learn science.
3.	Provides the breadth and complexity of science learning necessary to challenge upper primary students.
4.	Includes best practice in science learning, e.g. inquiry-based strategies.
5.	Provides resources and equipment to support inquiry-based, hands-on learning.
6.	Adopts collaborative learning strategies e.g. group work and pair work.

Areas for improvement within the SIAB Programme	
1.	The need for the inclusion of all scientific skills in the SIAB programme as outlined in the <i>PSSC</i> (DES, 1999, pp. 78-82).
2.	The need for differentiation of process, content and product to facilitate the meaningful inclusion of all learners.

At this juncture, it appears that the findings highlight the many positive elements of the SIAB programme and there is some evidence to show that it may well provide some solutions to the challenges facing science learners in upper primary school, as identified throughout this paper. The findings from this study indicate that the SIAB programme is innovative in its approach, includes elements of best practice in primary science learning and provides a comprehensive programme to support the effective implementation of the *PSSC* (DES, 1999).

This paper draws on a larger study and is limited by its focus on the students' perspectives. The dichotomy of teaching and learning must also be acknowledged and further analysis is needed to understand the teachers' perspectives on SIAB and how the programme can support their professional development in the area of primary science.

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Appendix A

Science in a Box: 25 weeks, 25 x 1 hour classes					
	WK	Title	Brief description	Crossover with Primary Science Curriculum	
Nature of science	1	Introduction to the nature of science	What is science? How we look at the world – observation, hypotheses, perspective etc. – universe themed	Science skills	Observing, predicting, investigating, experimenting – how science works.
Formation of the universe and chemistry module	2	Introduction to the universe	Introduction to the formation of the universe, the big bang, the expanding universe, the sound of the beginning.	Materials stand	Elements (formation of compounds and characteristics, states of matter, change processes (heating, cooling, mixing, separating etc.)
	3	The universe – in time and space	What happened when? The size and scale of the universe		
	4	The big bang and the formation of the elements	Big bang, formation of hydrogen to calcium – the first 20 elements of the periodic table		
	5	The periodic table	The periodic table and characteristics of the elements – experiments!		
	6	Elements from compounds	Elements from compounds, ionic and covalent bonding, balancing equations		
Physics module	7	The nature of physics – mysterious forces and energy	Introduction to the forces released at the big bang and limits of our understanding: a. things we don't understand at the macro-scale – dark matter and dark energy b. things we don't understand at the micro-scale – double slit and quantum entanglement	Energy and forces stand	Light, sound, heat, magnetism, electricity, forces
	8	electricity and magnetism	Introduction to electricity and magnetism, how they work, making a simple electric motor		
	9	Waves: light and sound	Introduction to sound & light waves, the human audible spectrum, the electromagnetic spectrum, how they work, examples and activities		
	10	Mechanics and motion	Introduction to a number of important forces e.g. gravity, friction and simple introduction to Newtons laws of motion		
	11	Heat and thermodynamics	Introduction to heat and thermodynamics – how energy is used to do work, introduction to the gas laws using an experiment		
Cosmology and astronomy	12	The solar system – inner planets	Introduction to the formation of the solar system, with a focus on the inner planets – how they formed, characteristics, etc. with an emphasis on team work and presentation skills	Science skills and Geography	Basics of
	13	The solar system – outer planets	focus on outer planet's – how they formed, characteristics, possibility of life on moons, again with an emphasis on team work and presentation skills		Natural environments: weather, climate, atmosphere, planet earth in space
	14	The earth and moon	Introduction to the formation of the earth and moon, how the earth has changed over time, the movement of the plates and continental drift		
Biology, geology and ecology module	15	Geology and fossils	Introduction to geomorphology, the basic rock types, how fossils are made the nature of science through paleontology	Science skills and Geography	Exploring investigating, analysing, pattern identification, sorting and classifying. Geographic investigation and physical features of earth – rocks and soils
	16	Introduction to evolution	Introduction to the evolution of life on earth, the tree of life, important scientists in the field	Living things stand and science skills	Characteristics of living things – different organisms, processes of life – breathing eating, movement, reproduction etc., human biology. Exploring, investigating, analysing, pattern identification, sorting and classifying.
	17	Natural selection – variation, inheritance, adaptation	Exploration of the diversity of species, and the wonder of adaptations		
	18	Adaptation diversity and extinctions	Introduction to link between diversity and extinction, and a look at mass extinctions in prehistory		
	19	Humans: evolution, civilization, impacts	A look at the evolution and impact of humans of life on earth and planet		
	20	Cells! Evolution, diversity, cell energy, mechanisms	Cell evolution and diversity – differences between plants and animals, how we get our energy methanogenesis, photosynthesis, respiration etc.		
	21	Scientific recording and drawing, ecological experiments, habitat mapping and species identification	Introduction to microscopy and magnification, scientific drawing and recording		
	22	Scientific recording and drawing, ecological experiments, habitat mapping and species identification	Introduction to scientific fieldwork, habitat mapping and animal identification		
	23	Human biology 1	The senses – brain and eyes (eye dissection)		
	24	Human biology 2	Respiration and circulation (heart and lungs – group dissection)		
Nature of science	25	Wrap up and highlights – assessment class	What have we learned about becoming a scientist and nature of science? Science crossword/table quiz of the whole course		

Appendix B

Ethical Issues

INFORMED CONSENT AND ASSENT

It was especially important to be thorough when seeking informed consent and assent for this study, as I was working with primary school students. The power dynamic between adult and student can also lead to ethical issues, so it was important that the students were not coerced into participating and were given complete freedom to take part or not. This ensured that the volunteers were really willing to contribute to the CRAG and the survey in a meaningful way. Using informed consent letters, voluntary participants were sought in School 6 (S6) to participate in the CRAG. Once consent was given, a sample of five students was selected from the list of voluntary participants, informed assent was sought from the participants themselves before the first CRAG session was held. Also informed consent was sought from the class teacher and scientist involved in the SIAB programme before carrying out the three lesson observations.

Before the questionnaire was piloted, informed consent was sought from the parents of pupils in fourth, fifth and sixth class in S6 who would participate in the SIAB survey; those students not involved in the CRAG. The questionnaire itself included informed assent for the participants before they started the survey. A letter to the class teacher with all the information required to administer the survey, was also included, to provide the relevant information to the participants before they chose whether to volunteer to participate in the survey or not. As mentioned previously, the questionnaire was piloted with sixth class students from S6 and the CRAG met them following completion of the questionnaire to help determine where the questionnaire could be improved and a final draft was agreed. Having received the consent from school authorities, data collection packs were posted to all participating schools; S1, S2, S3, S4 and S5. These packs included the class teacher information letter, parental consent letters, the student questionnaires and a stamped addressed envelope for returns. All documents were coded with the school code. Having clarified the time-frame for administering the survey, all data collection packs were returned promptly.

CONFIDENTIALITY AND ANONYMITY

The issues of confidentiality and anonymity are also ambiguous, so to address this I informed the participants, their parents and school authorities that no school, teacher or student would be named, but that they might recognise themselves and their quotes in the final paper, because anonymity can never be totally guaranteed. I assured them that the raw data would be stored securely and not shared with anyone and would be used solely for the purpose of this study. I also assured the CRAG members that the recordings from their sessions would not be shared with anyone.

RESEARCH BIAS

The need for informed consent and assent was not the only ethical issues in this study. Researcher bias is always a risk in all research including that with children and to counteract this, I purposely spoke very little in the CRAG sessions, acting as a facilitator of the discussion, careful not to ask leading questions or to allow them to lead each other. I reminded the co-researchers that they should try to think about how other students think about science learning, rather than just offering their own ideas, in order to promote a balanced discussion. This was challenging and this risk of researcher bias also impacted on how I behaved in the CRAG. Despite having considered Lundy et al's four concepts of children's rights-based research (2011, p. 800), asking the students to use my first name and my concerted effort to avoid leading questions, there still remained the issue of power balance in the relationship. The CRAG students knew me as a teacher and it may have been difficult for them to separate me from that role and see me as a researcher. The use of the CRAG was an effort to reduce this power relationship which can sometimes be influential when researching with children.

RESEARCH METHODS, RELIABILITY AND VALIDITY

This section involves reflection on what constitutes good quality, trustworthy research and how this study measures up to that. Alongside the CRAG being involved in the research design and analysis, the two main research methods used are lesson observations and a survey and there are validity and reliability issues with both. It could be claimed that the Process of Involving Children in the Research outlined in Figure 3, is itself a reliable research approach, as it has been used successfully by Lundy et al. (2011), Lundy and McEvoy (2009), Murphy et al. (2010) and Lundy and McEvoy (2007) in previous large-scale research studies. In terms of reliability, the survey tool, created and designed in this study, is not standardised so it cannot be termed reliable unless it was shown to produce similar results if the survey was repeated. Piloting the study only proved that it was user-friendly for a small group of students so I attempted to support reliability of the whole research study by recording an audit trail, as described by Robson (2002, p. 176), which includes careful, detailed, honest recording of every stage of the research. Because the study is limited in size and only six schools were surveyed in total, even though other schools in Galway and Dublin were also piloting SIAB, this means that the study is not a true representation of the whole SIAB pilot programme, and consequently external generalisations cannot be made. Any internal generalisations will be limited to six schools only.

Robson makes suggestions to counter the threats to validity of description, interpretation, theory, researcher bias and respondent bias (2002, pp. 171-172). Using lesson observations is a classic interpretative method but there are issues surrounding this interpretation, so following Robson's advice, I used recordings and detailed field notes to ensure an accurate description of observations and CRAG sessions were documented. In order to counteract researcher bias, I chose a children's rights-based approach, which meant that the students themselves helped design the data collection instrument. Some triangulation is also present in the study; "methodological triangulation; combining quantitative and qualitative approaches" which can reduce threats to validity (Robson, p. 174). The CRAG sessions

formed the basis for the questionnaire, which as co-researchers they were involved in drafting, piloting and re-drafting. This helped ensure that the questionnaire was relatable for the students participating in the survey. As mentioned previously there is still a risk of researcher bias by the students themselves, but this risk is somewhat reduced by the methods used. Acknowledging this risk of bias may be all that can be done at this stage, as some researchers such as Robson (2002, p. 172) claim that researcher bias is always present, as is respondent bias.

Can primary school breakfast clubs bolster learning and enhance well-being?

≡ TESS HUGHES AND CHRIS GIBBONS ≡

Abstract

The aim was to explore the relationship between children’s psychological well-being and daily breakfast club engagement in primary schools in Ireland. A quantitative survey method was employed using a staged correlational design with regression analysis. Parents and teachers (n=142) completed the Strengths and Difficulties Questionnaire (SDQ) (Goodman and Goodman, 2009) and a breakfast club engagement questionnaire. The analyses revealed that breakfast club attendance, as well as healthy eating and enjoyment at the club, was predictive of psychological well-being positive peer relationships and engagement in academic activities. This was especially the case among older children.

To date, this is the most thorough analysis of the impact breakfast clubs have on psychological well-being in Irish primary schools. These study findings suggest breakfast clubs can support one of the recommendations of the recent *Wellbeing Policy Statement and Framework for Practice* – that schools purposefully support children’s well-being and to include well-being in their School Self-Evaluation (DES, 2018).

Keywords: learning, psychological well-being, school, breakfast club, healthy eating



Introduction

Psychological well-being

Health is where individuals achieve their potential to enjoy mental, social and physical well-being (Department for Health, 2012) and mental health is a state of psychological well-being in which individuals realise their own abilities can manage life stresses and can work productively (World Health Organisation, 2014). The majority of children in Ireland have positive psychological well-being (Department of Health, 2012), however, by the end of primary school, almost one in three children will have experienced a mental disorder (Cannon et al., 2013). On 20 July 2018, Minister Bruton launched a new *Wellbeing Policy Statement and Framework for Practice for schools* (DES, 2018). Its focus is on well-being promotion, prevention and early intervention. One of its characteristics is that there are a wide range of curricular activities which purposefully support well-being and this follows one of its statements, in the Department of Children and Youth Affairs’ Plan (2014) in Ireland, that children are healthy with positive psychological well-being.

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Risk and protective factors of psychological well-being

The Guidelines for Well-being in Primary Schools identifies the different protective and risk factors on children's well-being (DES/HSE/DOH, 2015). Roffey (2016) pointed out that both can be experienced at home and in school, especially those schools with breakfast clubs can enhance protective factors and minimise risk factors. The *My World Survey* carried out by Jigsaw mental health support service for young people and University College Dublin (Dooley and Fitzgerald, 2012) indicated how just one supportive adult (e.g. a teacher) can significantly enhance a child's well-being and strengthen their resilience in the face of challenges at school and at home. Breakfast clubs offer an opportunity to build such protective factors by promoting positive peer and staff relationships within a secure and supportive climate. This bolsters a sense of school cohesion and identity. Children who feel disengaged at school or in their home life or who have experienced bullying are likely to get most benefit (Cooper & Jacobs, 2011).

Maslow's theory of human motivation

Maslow's (1968) motivational theory promotes a holistic approach to education. 'Deficiency' needs must be met first before 'being' needs. In the former, basic needs must be satisfied through sleep and nourishment and feeling safe. Next social and self-esteem needs must be met if the child is to achieve in learning (the 'being' need). The applications of Maslow's (1968) theory to promote children's psychological well-being at school are obvious. One in five children in Ireland, for example is going to school hungry and will find learning in class difficult (Crawford et al., 2016; O'Brien, 2015). Breakfast clubs in primary schools offer opportunities to have key needs met to put children in a strong position to learn.

Primary school breakfast clubs

Primary school breakfast clubs were designed as an initiative to provide a safe place for children to have a healthy breakfast before school starts (Foley, 2011; Murphy, 2016). They originally arose out of a need to address food poverty. Downes, Maunsell and Ivers (2010) reported that up to a fifth of pupils attending four different primary schools in Blanchardstown were too hungry to do their work in school. Also, this is consistent with broader results across Ireland, suggesting that many children were skipping breakfast before going to school (e.g. Callaghan and HBSC Ireland Team, 2010; Gavin et al., 2015). The Irish Primary Principals' Network stated that children who are hungry going to school cannot properly access the curriculum (O'Brien, 2015). It was such evidence that led to campaigns to promote the consumption of breakfast and to raise awareness of its benefits (Breakfast is Best, 2017; Carroll, 2016; Ryan, 2017). Growing evidence suggests that breakfast clubs are not just nutritionally beneficial but have direct benefits on psychological well-being, with children showing greater improved concentration and more focused learning and even improved social skills (Foley, 2011; HFFA, 2012; 2014). However, there are a relatively small number of studies to draw on and this study aims to add to this research literature.

There is considerable international research on primary school breakfast clubs (e.g. Children's Food Trust, 2017; Health Promotion Agency Northern Ireland, 2009; Shemilt et al., 2003), but only three studies have been conducted on primary school breakfast clubs in

Ireland (see Fitzgerald, 2006; Foley, 2011; HFfA, 2014) and this research did not look at the relationship between breakfast club engagement and children's psychological well-being. A Government policy report on improving health and well-being in Ireland recommended the evaluation of breakfast club initiatives (HFfA, 2014). This study aims to add to the research literature and to offer some initial evaluations. The key research question was: Can breakfast clubs bolster learning and enhance children's well-being in primary schools in Ireland?

An Irish study

Method

Participants included parents and teachers who completed questionnaires about children who attended 12 different, mainstream primary school breakfast clubs in Ireland as listed in *A Good Practice Guide for Primary School Breakfast Clubs* (HFfA, 2012). They included mixed gender and different class levels.

The design employed a survey method using a correlational design with the respondents' scores on the different measures compared.

The predictor variables included breakfast club engagement factors, such as: levels of attendance (how many days per week), healthy eating, enjoyment, pay or get it free, class levels, attend with siblings and/or friends and academic activities (HFfA, 2012). The criterion variables were overall psychological well-being (and its subscales: peer relationships, conduct, hyperactivity, emotional and prosocial behaviour) (Youth in Mind, 2016).

The measures included the Strengths and Differences Questionnaire (SDQ) questionnaire of psychological well-being along with a breakfast club engagement factors questionnaire.

Statistics and data analysis involved the IBM Statistical Package for the Social Sciences 22.

Ethical considerations for the research were approved by the ethics committee of the host university. Participation was voluntary. Confidentiality and anonymity were maintained throughout the study.

Results

Descriptive Statistics

The demographics included the 142 participants researched, 52.1% (n=74) female and 47.9% (n=68) male. Analysis of descriptive statistics showed that 46.6% (n=69) attended a breakfast club very often (3-5 days per week), 23.9% (n=34) attended sometimes (1-2 days per week) and 27.5% (n=39) attended rarely (less than one day a week). The majority were in fifth and sixth classes – 45.1% (n=64), while the rest made up the other classes: third and fourth classes – 33.1% (n=47), first and second classes – 14.8% (n=21), and junior and senior infants – 7% (n=10).

Breakfast club attendance was positively associated with psychological well-being,

Breakfast club attendance was a strong predictor of well-being: ANOVA and post hoc results between the “very often”, “sometimes” and “rarely” attended groups revealed that the first group reported the most positive well-being scores $F(139, 141) 196.78, p < 0.05$. The highest significant difference was between the “rarely” attended and the “very often” attended.

Breakfast club attendance, especially among older children was positively associated with psychological well-being.

A one-way analysis of variance showed that there was a significant difference between the four different class groups (junior and senior infants, first and second classes, third and fourth classes and fifth and sixth classes) in terms of well-being ($F(138, 141) 7.70, p < 0.05$). A post hoc analysis confirmed that the highest significant difference was between junior and senior infants ($M=44.60, SD=10.95$) and the fifth and sixth classes ($M=30.75, SD=9.64$), with fifth and sixth classes reporting better scores of well-being. Furthermore, there was a significant difference between junior and senior infants ($M=44.60, SD=10.95$) and third and fourth classes ($M=32.30, SD=10.58$) with third and fourth classes reporting better scores of well-being.

Breakfast club attendance, as well as healthy eating and enjoyment, was positively associated with psychological well-being and bolstered peer relationships and engagement in academic activities.

A series of hierarchical multiple regressions were performed to investigate the ability of the breakfast club engagement factors to predict levels of well-being. Correlations between predictor variables are identified in Table 1.

Table 1: Correlation between well-being and breakfast club engagement factors

Factor / Predictor	Overall SDQ of Psychological well-being
Attendance	0.83**
Healthy eating	0.55**
Enjoyment	0.50**
Class level	-0.36**
Pay for it	0.23**
Attend with siblings and or friends	0.24**
Academic activities	0.20*

Note: **Correlation is significant at the 0.01 level (2 - tailed).

*Correlation is significant at the 0.05 level (2 - tailed).

All the predictors were significant and were then entered into the regression analysis and Table 2 reveals the final parsimonious model.

Table 2: Regression coefficients of overall SDQ psychological well-being total

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig
(Constant)	6.92	2.60		2.66	0.010
Attendance	8.16	0.84	0.62	9.69	<0.001
Healthy eating	2.97	0.79	0.23	3.74	<0.001
Enjoyment	5.60	2.79	0.13	2.01	0.040

Dependent variable: Overall SDQ Psychological well-being Total

R squared = 0.64, Adjusted R squared = 0.63

The final model explained 63% of the variance in well-being scores. Obtained Beta values suggest that higher scores of breakfast club attendance, healthy eating and enjoyment accounted for the most variance and are predictors of well-being scores.

Discussion

Interpretation in terms of empirical evidence

This study explored the question: Can breakfast clubs bolster learning and enhance children's well-being in primary schools in Ireland? Results revealed that breakfast club attendance, as well as healthy eating and enjoyment at the club, were positively associated with psychological well-being. Moreover, they bolstered peer relationships and engagement in academic activities, especially among older children.

Breakfast club attendance was positively associated with psychological well-being. The biggest significant difference was between the "very often" and the "rarely" attendance groups. This is consistent with earlier findings (Department of Health and Health Service Executive, 2012; Foley, 2011; HFfA, 2014, Weare and Nind, 2011), however attending a club is just one of several factors that contribute to children's well-being. Personal factors such as cultural factors outside of the club environment are likely to be an influence (Nastasi and Borja, 2016). However, one can't rule out the possibility that the direction of the relationship might actually go in the other way i.e. that those children with positive well-being may be more likely to engage in a range of school curricula activities – like breakfast clubs – because of their well-being and because of factors that influence their well-being, such as the influence of their home life.

Breakfast club attendance, especially among older children was positively associated with psychological well-being.

The biggest significant difference on well-being was between the junior and senior infants compared to fifth and sixth classes, with fifth and sixth classes experiencing better levels of well-being. Recent research suggests how more than half of junior and senior infants were stressed in Irish primary schools (Wayman, 2016). Another interpretation could be that this is an early intervention and is now proving to be effective in the senior fifth and sixth classes and research corroborates this analysis (Harvey, 2014; National Behaviour Support Service, 2013; Institute of Public Health in Ireland and the Centre for Effective Services, 2016; Oireachtas Library and Research Service, 2012).

Breakfast club attendance as well as healthy eating and enjoyment as predictors of positive well-being

The fact that breakfast club attendance was the strongest predictor of well-being echoes earlier national headlines “breakfast clubs are starting in schools all over the country – resulting in better attendance and happier kids” (O’Halloran, 2014). This is with the following important caveat – that a child’s well-being is influenced by a range of other factors, beginning with the child’s school-home balance (Nastasi and Borja, 2016). These results suggest breakfast clubs are more than a place where food is provided (HfFA, 2012). Children’s well-being is directly related to attendance and to school performance exhibited through improved concentration, behaviour and learning in class (Foley, 2011). As well as a healthy breakfast, these clubs offer the child a sense of control through a predictable routine, the opportunity to interact with and build positive relationships with others; it is school but without the pressure of a more formalised class regime (Children’s Food Trust 2017; Department of Health and Health Service Executive, 2012; Foley, 2011; HfFA, 2014).

Earlier research found that healthy eating was one of the key predictors of better well-being levels (Benton, 2008; British Dietetic Association, 2018; Health Promotion Agency Northern Ireland, 2009). *The Nutrition Guidelines for Primary Schools in Ireland* state that research has shown that children benefit nutritionally by eating breakfast (Department of Health and Children, 2003). According to the Irish Primary Principals’ Network (O’Brien, 2015) and the *2014 Health Behaviour in School Children* (Gavin et al., 2015) one in five children goes to school hungry every day and hunger and malnutrition negatively impact on children’s mental health (Galler et al., 2012, Lukowski et al., 2010; O’Neil et al., 2014; Raine et al., 2014).

Another significant finding is that enjoyment at a club was one of the key predictors of positive well-being. This is in line with previous research (Fitzgerald, 2006; McGilloway et al., 2011; Portilla et al., 2014). Children are part of a club where they have a chance to meet their friends for breakfast before school and take part in academic activities in a positive social environment (HfFA, 2014).

Breakfast clubs bolstered peer relationships and engagement in academic activities

Many breakfast club engagement factors were also predictors on the SDQ subscales: peer relationships, conduct, hyperactivity, emotional and prosocial behaviour subscales. For the

peer relationship subscale, the highest predictor was attendance followed by class level, paying and healthy eating. Attendance and class level were discussed earlier. However, paying as a predictor only appears in this subscale. Research indicates that getting school food free while peers pay for it may sometimes cause stigma and hence peer relationship problems (Holford, 2012).

For the hyperactivity subscale, attendance, enjoyment and class level were all predictors. This is to be expected. Attendance has already been discussed. Research clearly indicates that if children are enjoying an activity they are more likely to pay attention (Portilla et al., 2014).

For the emotional subscale, predictors included attendance, healthy eating and enjoyment. Again, attendance is the main predictor and has already been discussed. Research suggests that attendance at school activities which the child enjoys can improve their emotional symptoms (e.g. see the National Behaviour Support Service, 2013). There is also evidence to support that healthy eating is directly related to improved emotional health (O'Neil et al., 2014).

For conduct subscale, key predictors included attendance, healthy eating and enjoyment levels. This corresponds with research that suggests that children who attend school activities that they enjoy are more likely to have fewer conduct problems (Institute of Public Health, 2016; Webster-Stratton et al., 2008). There is a multitude of research reiterating how healthy eating can help improve children's conduct (e.g. Benton, 2008; British Dietetic Association, 2017).

For the prosocial behaviour subscale, attending the club was the main predictor. Attending with friends and school staff involves social skills (Defeyter et al., 2010). However, the better their prosocial levels, the less likely they were to prioritise healthy eating. One interpretation of this is that children associate unhealthy food with celebrations and social situations (Mollen et al, 2013; Salvy et al, 2012). So, breakfast clubs are not just nutritionally beneficial but have direct benefits on psychological well-being with children showing greater concentration and more focused learning, and even improved social skills.

Strengths and Limitations

This study had a number of strengths and limitations. First, the sample size ($n=142$) was sufficient to enable a robust, statistical analysis. It was representative of primary school children from the different class levels who attended breakfast clubs.

Most research on breakfast club engagement including previous research in the Irish context is qualitative (Fitzgerald, 2006; Foley, 2011; HfFA, 2014). The SDQ is a qualitative, dimensional measure of psychological well-being (Goodman, 2001; Goodman et al., 2010, Muris et al, 2003).

The questionnaires were completed about the children's well-being retrospectively by their parents and teachers. This has the benefit of gaining insights in response to variables the children may not fully grasp (e.g. linked to self-esteem and well-being), but it also introduces a potential bias in relying on third party responses. This study involved 4-12 year-olds and it would not have been possible for the younger children to complete it themselves.

However, there is arguably scope to develop a measure, using more simple language, to which the older primary school children may be able to respond.

A different approach would be to use qualitative research including semi-structured interviews or asking the participants to fill in a 'live' diary response. This electronic diary approach has been shown to provide reliable reporting (Jones, 2011). It is a procedure that offers a potential solution to the limitations associated with answering questionnaires retrospectively.

Conclusions

To sum up, breakfast club attendance, the healthy food available and enjoyment at the club were positively associated with psychological well-being improved peer relationships and engagement in academic activities. This pattern was stronger for older children. Furthermore, the recent *Well-being Policy Statement and Framework for Practice* for primary schools recommended curricular activities which purposefully support children's well-being (DES, 2018). To date, this is the most thorough analysis of the impact breakfast clubs have on psychological well-being in Irish primary schools. This study adds to the research literature and offers some initial evaluations.

Recommendations

These findings suggest breakfast clubs can implement one of the recommendations of the recent *Well-being Policy Statement and Framework for Practice* – that schools purposefully support children's well-being and to include well-being in their school self-evaluation (DES, 2018). So, one recommendation would be to roll out breakfast clubs across the school sector nationwide. For schools considering starting one up, it would be important to emphasise the informal nature of the breakfast clubs which empower children and teachers to interact more freely, and that they provide an opportunity to nurture a school identity and community and build peer relationships.

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Emotional health informing preventative mental health strategies

Childhood emotional health has been suggested as the most powerful predictor of life-satisfaction in adulthood (Layard, Clark, Cornaglia, Powdthavee and Vernoit, 2014). A recent meta-analysis revealed that schools in which social and emotional learning programmes were conducted led to a significant improvement in social and emotional skills, attitudes, behaviour, and academic performance for pupils (Durlak, Weissberg, Dymnicki, Taylor and Schellinger, 2011). Despite these programmes aimed at promoting adolescent mental health, such mental health programmes have not been standardised across the Republic of Ireland or Northern Ireland.

Mental health in schools

Kutcher, Venn and Szumilas (2009) assert that schools must play an important role in prevention, early identification, and intervention of mental health issues. The ability to reach a large number of adolescents simultaneously is cost effective, and allows the integration of mental health discussions with other health topics. However, many teachers in the United Kingdom (UK) post-primary schools report feeling inadequately prepared to manage their students' mental health requirements (Rothi, Leavey and Best, 2008). Fraser (2010) emphasises that teachers are very competent in recognising learning or behavioural problems but struggle to identify students who internalise symptoms of anxiety, depression or other mental health issues. Additionally, Froese-Germain and Riel (2012) found that 68% of teachers disclosed that they had never received any professional training to aid them in identifying or coping with a student who has mental health issues. Limited time and lack of resources were also cited by teachers as a major concern (Trudgen and Lawn, 2011). Despite this, 97% of teachers expressed the view that it was imperative to have these tools to help them recognise and understand their students' problems. Wei and Kutcher (2014) demonstrated that by facilitating interventions for teachers, these interventions can become a powerful tool in the identification of mental health issues in their students and help link students to services.

Similarly, Rowling, Whitman and Biewener (2009) reported that over 80% of principals agreed that emotional health, mental health and well-being are important for students' academic success. The principals also indicated that they wanted their teachers to undergo more training in the areas of teaching emotional and social learning skills, and effective prevention strategies. Schools are responsible for most referrals of adolescents to mental health services (Rowling et al., 2009). Therefore, the teachers' role in adolescent mental health promotion and intervention must be emphasised.

Mental health provision in Republic of Ireland and Northern Ireland schools

Social and personal health education (SPHE) is taught in the Republic of Ireland to every adolescent up to the junior certificate in order to raise adolescent understanding and awareness of general well-being and positive mental health, build resilience, and to equip adolescents with adequate coping skills. The Department of Education and Skills (2013) reported that SPHE was effective at teaching adolescents how to recognise and understand general health issues but less effective (up to 47%) at teaching life skills such as coping

strategies. Emotional health was the worst-rated section overall, as only 53% of students strongly agreed that SPHE helped them to understand their feelings and emotions, raising a question with regard to the practical effectiveness of the SPHE programme.

Schools are experiencing negative consequences from the economic downturn. Numbers of special needs assistants (SNAs), guidance counsellors and resource hours have been drastically reduced (Cradden, 2014), leading to a 59% decrease of counselling available in schools, whilst 168 guidance counsellor roles were withdrawn (McLaughlin, 2015). However, up to 66% of withdrawn posts from 2012 will be restored in September 2017 (Department of Education and Skills, 2017), suggesting an acknowledgement of the necessity of these resources for adolescents. Recently, a mental health awareness initiative programme entitled: *“Student mental health: Whose business is it anyway?”* was introduced to post-primary schools in Ireland, aiming to encourage teachers to be mental health promoters, but was reticent on their role and boundaries. Additionally, a well-being programme will be introduced in September 2017 for junior cycle post-primary students (National Council for Curriculum and Assessment, 2017). This includes 300 hours of timetabled engagement over a three-year period. It is envisaged this will be delivered primarily through the core subjects of civil, social and political education (CSPE), physical education, SPHE and guidance. Each individual school will design and implement their own well-being programme tailored to their needs, where all staff share the responsibility for supporting students' well-being. However, this has not been introduced as a module in teacher training.

To ensure that teachers are equipped to detect and intervene when a student is experiencing an emotional or mental health issue, it has been strongly recommended that mental health training is incorporated into the postgraduate certificate in education curriculum (Bostock, Kitt and Kitt, 2011), particularly as mental health promotion has a beneficial impact on children (Department for Education and Skills, 2001). However, it is imperative that any programmes implemented in schools include a definite structure, clear and concise guidance (removing the risk of differing interpretations) and that staff have adequate resources and training. Without this, initiatives may have disappointing results and result in mistrust by school staff, adolescents and their families (Humphrey, Lendrum and Wigelsworth, 2010).

Objectives of the current study

The current study aimed to examine the attitudes of post-primary school teachers, principals and teacher training lecturers (TTLs) towards the inclusion of emotional and mental health awareness as part of their training. Hence, the research questions were to determine whether educators believe teachers have the capacity to take on the role as a mental health promoter in terms of ability to recognise mental health issues in their students and time available. Furthermore, the current study investigated who should be responsible for intervening in relation to emotional and mental health, and what educators deemed the ideal approach to be in schools. Consequently, a qualitative methodology was employed in order to elicit the educators' personal experiences, thoughts and beliefs and to expand current knowledge in the field.

Method

Design and participant sample

One focus group and eight semi-structured interviews were conducted in the current study. A focus group was conducted with teachers (n=4; all female). Four semi-structured interviews were conducted with TTLs (female=3) and four semi-structured interviews were conducted with principals of post-primary schools (female=2). All participants were currently employed and represented ten educational institutions.

Interview schedule

Specific topics which emerged from the literature were developed into questions. These included the areas of knowledge of mental health, understanding of student well-being, willingness to engage with students with emotional or mental health issues and beliefs regarding their responsibility to intervene. Three interview schedules were composed to allow for educator role disparities, as all questions were similar but included some variation to take account of the role the participant held.

Procedure

Every post-primary school in six counties in the west of Ireland and all third-level institutions in Ireland who offer the degree in education or the professional masters of education programme were invited by letter to participate. Consequently, 12 volunteers were sent an information letter which explained the rationale for the study.

A mutually convenient time was arranged to conduct the semi-structured interviews outside of work hours. The semi-structured interviews were conducted on the campus of the education facility that the interviewee worked in. The interviews ranged from 20 to 40 minutes with the average interview lasting 30 minutes.

All post-primary teachers who responded to the letter of invitation were provided a list of five possibilities for time and date of the focus group. The most popular option was chosen. Participants were notified of this by email and their attendance confirmed. The focus group was held in local hotel conference room during the summer holiday period. The teachers' focus group (TFG) was conducted in 39 minutes.

Written informed consent was obtained from all participants and a debrief sheet was provided at the close of the semi-structured interview or focus group. The semi-structured interviews and focus group data were recorded on a digital device. All data were collected from February until June 2015. Ethical approval was granted from Ulster University Research Ethics Committee (REC/12/0322).

Data analysis

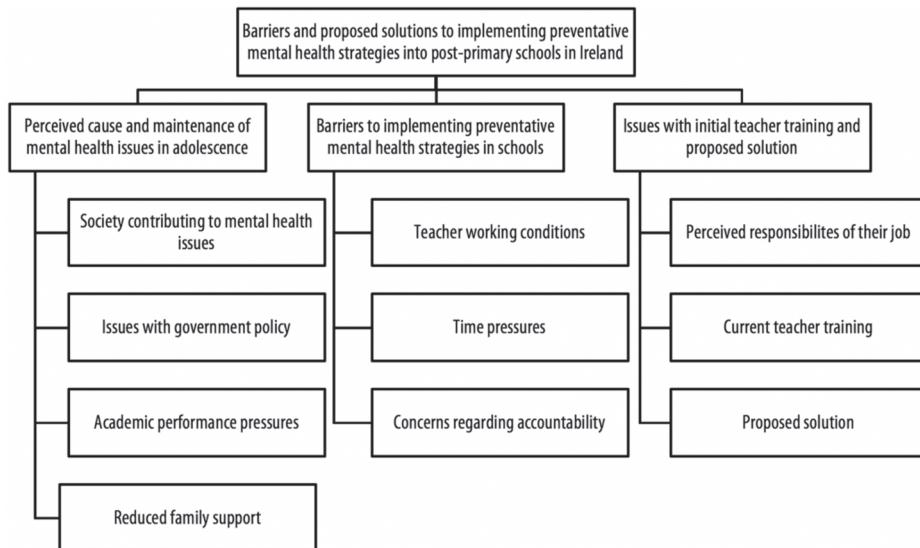
All semi-structured interviews were assigned a pseudonym and were transcribed following interpretative phenomenological analysis guidelines, examining the individuals lived experiences and how they made sense of these (Smith and Osborn, 2003). This procedure progressed through several stages involving note-taking, repeated reading of transcripts, deriving emergent themes, connecting themes and checking the themes against the

transcripts. The superordinate themes were supported in all transcripts, there was a pattern across cases and the themes were ordered by importance. The use of the triangulated method increased the validity of the findings through cross-verification across the educators.

Findings with discussion

Three superordinate themes emerged from the data: (1) perceived cause and maintenance of mental health issues in adolescence; (2) barriers to implementing preventative mental health strategies in schools; and (3) issues with ITT and proposed solution, each with subsequent subordinate themes as illustrated in Figure 1, below.

Figure 1: The superordinate themes and subsequent subordinate themes which emerged from the data



Superordinate theme 1: perceived cause and maintenance of mental health issues in adolescence: "... it is the single major impacting issue on students' performance in school."

Factors contributing to the cause and maintenance of mental health issues in adolescence included society, issues with government policy, academic performance pressures and reduced family support.

All educators recognised the abundance of current mental health problems in schools and acknowledged that these problems need to be addressed:

Since becoming principal I'd say it is the single major impacting issue on students' performance in school... I mean we're not trained psychologists or counsellors... it's becoming... part of your work every day. If somebody has a problem... you have to suspend what you are doing to deal with that young person." (Joan, principal).

The comments above are consistent with previous literature suggesting that teachers do not receive adequate professional training (Froese-Germain and Reil, 2012). Educators agreed that issues originate and are proliferated by a variety of different layers of society and their reciprocal relationship with the adolescent, including society, government policy, families, communities and schools. Applying general strain theory (Hay, Meldrum and Mann, 2010) to this idea, the layers referred to by the educators could be considered as strains upon the adolescent, which may be contributing to or exacerbating poor mental health and emotional well-being. Consequently, schools are crucial in prevention, early identification and intervention of mental health issues (Kutcher et al., 2009).

SOCIETY CONTRIBUTING TO MENTAL HEALTH ISSUES: "WHEN SOMETHING HAPPENS IN SOCIETY, SCHOOLS WILL FIX IT."

Educators deemed societal issues as the cause of mental health problems and they perceived pressure from society to repair this damage: "when something happens in society, schools will fix it" (Joan, principal).

The adolescents' inability to cope with stressors was believed to have an effect:

"we're seeing a generation who have grown up differently and are less equipped for disappointment... it hits them harder' (Joe, TTL).

The educators reported willingness to be involved in society-wide health promotion, but expressed frustration and anger that schools often adopt much responsibility for dealing with these issues:

"teachers are expected to do absolutely everything under the sun... we've kind of decimated our mental health services... it would be wrong to think that you could resolve what is a really huge societal problem in the classroom, given that every other support in the country have been pulled away." (Liz, TTL).

This opinion supports a previous review of SPHE provision in schools in Ireland, which identified the possibility that societal concerns or experiences may contribute or exacerbate adolescent mental health issues (Department of Education and Skills, 2013; Hay et al., 2010). Therefore, teaching adolescents to recognise and cope with their physical and mental well-being is crucial to society-wide health promotion, and thus should be a society-wide responsibility.

ISSUES WITH GOVERNMENT POLICY: “IT’S NOTHING TO DO WITH TEACHING... YOU ARE NOT EVEN GIVING ANY TIME TO THE KIDS YOU JUST FEEL IT’S UNPRODUCTIVE.”

The educators were disappointed and frustrated with the decline in government assistance, particularly the reduction or removal in guidance counsellor hours and the lack of statutory services available. Educators reported having to manage situations with no specialist input:

“one of the most retrograde and insidious things that have happened in schools is the... downgrading of the counselling and guidance services... we’ve a school with 1033 pupils, the equivalent to a small village... to think that the counselling services are off radar, that’s saying something fairly awful about us as a society.” (Mark, principal).

Thus, school staff report feeling vulnerable and abandoned, sometimes having to be proactive to ensure the safety of students: “we pay for a counsellor for some of our students... because we just see someone in crisis and they are not being seen.” (Kate, principal). This corresponds with the other opinions that teachers were disillusioned by government and policy makers as they were not provided with the time or resources to make viable changes (Rothi et al., 2008). However, many of the withdrawn posts from 2012 were due to be restored in September 2017 (Department of Education and Skills, 2017). It is yet to be seen if this has improved the situations in schools.

ACADEMIC PERFORMANCE PRESSURES: “SOME OF THE EXAM STUDENTS... CRUMBLE.”

Academic pressures which arise in schools can create or amplify mental health problems: “there is a really strong focus on exams in the Irish system and... it’s hard not to pay attention to that. From the point of view of students, teachers and parents.” (Liz, TTL); “Our education system is not enabling students to grow either emotionally or socially. They become very competitive.” (Sue, TTL); “Some of the exam students do change... they crumble.” (TFG).

As grade attainment and extra-curricular achievements are becoming increasingly important for academic progression and success (Hay et al., 2010), and therefore has an impact upon adolescent mental health and well-being, it is imperative that the SPHE initiative (Department of Education and Skills, 1999) is maintained, improved, with also the possible addition of initiatives. This is to facilitate and empower adolescents with the skills required to understand and monitor their own mental health and well-being, while also providing sources of contact for any adolescent who may be distressed.

REDUCED FAMILY SUPPORT: “THEY DON’T HAVE THE FAMILY NETWORKS AND FAMILY STRUCTURES.”

Changing family structure was discussed as a cause and sustaining factor in the prevalence of mental health issues in Irish adolescents: “They don’t have the family networks and family structures.” (Sue, TTL). Some participants alluded to parents impeding their child’s ability to learn from their mistakes, to build resilience, or to cope with failure:

“Children have very little resilience and very little coping skills. Even if it’s only for the simple things that they have forgotten their PE uniform... mum or dad... they’ll come in with it, so that the child doesn’t have... the consequences... being accountable, taking responsibility for what you can... not being afraid of consequences and learning from that.” (Kate, principal).

This example coincides with experiential learning theory (Kolb, 2015) as the child is learning from the adult that instead of taking responsibility for their actions or inactions, that their parent will address any issues for them. This may lead to adolescents having poorly developed coping mechanisms and resilience, as they have not yet had the opportunity to learn from their experience of addressing issues independently.

The educator’s socio-ecological perspective quoted above, regarding the cause and maintenance of mental health issues concurs with the World Health Organisation (2013) opinion. It advocates the responsibility of mental health promotion, protection and recovery to individuals, their communities (including schools) and society, proposing that mental well-being should be embedded in all aspects of human interaction. While all educators acknowledged their role in this wider collective responsibility of mental well-being, the burden of expectations that the educators experience from every facet of society frustrated and disappointed them.

Superordinate theme 2: barriers to implementing preventative mental health strategies in schools: “the government... develop these initiatives as a knee jerk reaction... suicide rates have gone up, so we put a programme into schools.”

Factors contributing to the barriers to implementing preventative mental health strategies in schools included teacher working conditions, time pressures and concerns regarding accountability.

The educators acknowledged the initiatives available to schools however, many believed that these initiatives were reactive responses to mental health issues rather than proactive health promotion, which resonances previous findings (Humphrey et al., 2010): “there are so many initiatives... many strategies in place at the minute.” (Mark, principal). “Sometimes the government... develop these initiatives as a knee jerk reaction... suicide rates have gone up, so we put a programme into schools.” (Joan, principal).

Sometimes we operate in fire brigade tactics... we’re up there in the danger... rather than actually back down here... making sure that the people downstream are ok and... they are not getting to crisis stage. (Kate, principal).

TEACHER WORKING CONDITIONS: “THERE IS A LOT OF NEGATIVITY IN OUR STAFF AT THE MINUTE.”

Supporting previous literature (Humphrey et al., 2010), cynicism was cited as a barrier for trained teachers to delivering mental health initiatives as part of CPD to their colleagues: “I

wouldn't blame a lot of teachers getting cynical... here's the latest initiative now, this month, I wonder what we'll have next month?" (Mark, principal); "I know they are not... going to be comfortable enough giving it..." (Ed, principal).

This was corroborated by the TFG who acknowledged an uninviting atmosphere for delivery of these initiatives to their colleagues: "there is a lot of negativity in our staff at the minute...you're actually frowned upon by doing anything extra like that ..." (TFG). This supports previous research by Kidger et al. (2010), as teachers who perceived disinterest in emotional well-being work from colleagues were reluctant to engage with it.

TIME PRESSURES: "THERE'S NEVER TIME... ALLOCATED FOR THE STAFF TO SIT DOWN AND SAY WELL THIS IS WHAT I'VE LEARNT AND... PASS ON THE INFORMATION."

Time constraints were highlighted by educators to be the foremost obstacle to implementation of mental health initiatives: "training days, there's never time... allocated for the staff to sit down and say well this is what I've learnt... pass on the information." (TFG). One principal noted the dilemma of selecting the most valuable initiative to the individual school:

If it's done it will be... at a cost to something else... all the initiatives are very worthy... they merit implementation, but we are not good at giving schools the tools... either physical resources or personnel resources or the most valuable of all the time resource to implement... everything bogs down at the implementation gap. (Mark, principal).

Teachers highlighted if a student approaches them it can difficult to find time to accommodate them and were afraid to tell the student to return at a more suitable time: "when I was speaking to the student it was in my own personal time. I had to do it after class... they might feel that they are pushed away" (TFG). The TFG emphasised that often those who have extra responsibilities such as year head, tutor, or guidance counsellors were not assigned extra time to perform these duties and their own time must be used: "they don't really get the time to go and actually deal with them... it's... in their own free time. Which people don't really have... and they (the students) are losing out... the guidance counsellor is fully... booked up."

Nonetheless, one TTL insisted that all school staff should always have time for students in distress and that using time to address issues may have long-term benefits:

You always have the time... if you enter teaching for the right reasons then you would never not have the time to deal with something serious... by dealing with mental health issues they may actually be ultimately reducing their workload. They might have happier students, less classroom management issues." (Joe, TTL).

These findings could be related to previous literature highlighting the reduction in support and resources available to educators and in schools (Cradden, 2014; McLaughlin, 2015), and possibly an increase in stress for educators.

CONCERNS REGARDING ACCOUNTABILITY: “I CAN’T LET THIS GO BECAUSE... I DON’T KNOW WHAT IS GOING TO HAPPEN.”

Accountability was identified as a barrier to the implementation of mental health strategies in schools. Most principals believed their teachers were open to attending to student mental health issues: “in this school... they don’t have a problem with it... they’ll talk the child down, they’d reassure them, they’d pass it on.” – (Kate, principal). Whereas the TFG reported feeling nervous when approached for support even when they had assured students of their availability: “the end of the class... a girl approached me. I nearly dropped... she asked me something... you can get yourself into a situation where you are not comfortable.” (TFG).

One teacher discussed an incident where a student confided in them but there was no specialist available for a week. Similar to Mazzer and Rickwood (2015), the responsibility of feeling accountable for this student’s well-being was distressing: “I can’t let this go because... I don’t know what is going to happen or how someone is going to react.” (TFG).

Several principals recognised the volume of work involved in a student disclosure and staff members’ hesitation to be involved, however, believed it could be within a teacher’s scope to deliver low level interventions or workshops: “I can understand if there’s a number of them that are afraid... its easier not to hear things anymore... there is so much work involved now with reporting... it could be developed.” (Ed, principal).

However, other principals stated that teachers should not be responsible for teaching these skills: “It shouldn’t just be the school... that have to do that... teachers are teachers... that’s not what they got into teaching to do.” (Joan, principal).

Educators agreed that teachers should create an open and safe learning environment where students feel comfortable disclosing issues to them but that a teacher should not manage the student without specific training: “teachers should be... skilled in being able to listen but also know boundaries... they are not therapists... they have the skills of knowing what they need to take further... knowing where that boundary is.” (Cynthia, TTL).

Therefore, although many principals and TTLs were confident in teachers’ awareness of their students’ needs, the teachers themselves were worried about the responsibility involved with disclosure.

Superordinate theme 3: Issues with initial teacher training (ITT) and proposed solution: “the role of the teacher is changing, it’s not like it was years ago.”

Factors contributing to issues with ITT and the proposed solutions included perceived responsibilities of their job, current ITT and proposed solutions.

The evolving role of a teacher was acknowledged by educators who alluded to teacher’s current responsibilities in contrast to their own teacher training: “the role of the teacher is changing, it’s not like it was years ago... you walked into the classroom and you walked out of the classroom.” (TFG).

The educators further discussed what role teachers have in relation to their students’ emotional or mental health issues considering their perceived responsibilities of the job and specific training afforded, supporting previous recommendations to incorporate mental

health training into the postgraduate certificate in education curriculum (Bostock et al., 2011).

PERCEIVED RESPONSIBILITIES OF THE JOB: “THEY DON’T REALISE THAT THEY COULD HAVE A HUGE CONTRIBUTION TO... THEIR EMOTIONAL AND MENTAL HEALTH.”

The debate as to whether teachers should be able to recognise or intervene with their students’ mental health issues was a contentious issue. Most educators believed teachers have responsibilities to support students: “I think everybody is... the whole community of a school is.” (TFG) and “every teacher should be equipped to deal with that one scenario where a person might really need help or someone to talk to.” (Joe, TTL).

Coinciding with research by Askeff-Williams and Cefai (2014), most of the TFG agreed that they: “would like for students to come to me. I’d hope that if there was a student that was in distress... that they would.” (TFG).

However, not all educators agreed that teachers should be able to recognise a student with mental health issues, which is similar to findings from research by Fraser (2010): “there is no way they should be able to... even noticing someone is unwell can be easy or hard... being able to identify triggers... that can’t fall within the job of a teacher... we are not qualified to do that.” (Liz, TTL).

However, principals highlighted that teachers were often unaware of the positive effect they can have on their students:

Sometimes, teachers... don’t give themselves the clap on the back for the amount of confidence they can build and the amount of rapport they can build with students. (Kate, principal).

Whatever subject it is, they feel that that’s their contribution to this child’s life... they don’t realise that they could have a huge contribution to... their emotional and mental health... the kids really look up to them. (Ed, principal).

One TTL highlighted that if teachers believe mental health promotion was outside their remit and they did not receive any grounding in it during teacher training then: “they won’t be seeking out continued professional development relevant to mental health.” (Cynthia, TTL). This supports Rothi et al. (2008) findings that some teachers were averse to initiatives as they believed that mental or emotional health training caused confusion regarding the role and function of teachers.

Lending support for previous research findings, the educators have highlighted the importance of training so that educators feel equipped and supported in relation to addressing adolescent mental health issues as otherwise educators are hesitant to engage in this (Kidger et al., 2010), but also the importance of having this responsibility included in teacher training from the offset (Bostock et al., 2011).

CURRENT TEACHER TRAINING: “UNLESS IT HAPPENS IN INITIAL TEACHER EDUCATION IT’S NOT REALLY GOING TO HAPPEN PROPERLY.”

Many TTLs acknowledged that their student teachers did not undertake any training in student mental health promotion, recognition or pathways to proceed other than to direct it to a year head or tutor: “we do not have so much on their students’ mental health...” (Sue, TTL) and “at the moment we don’t really address it specifically...” (Joe, TTL).

However, one TTL insisted their students received training in this area, which supports recommendations by Bostock et al. (2011): “they would get specific inputs particularly... mental health of youth and well-being... barriers and enablers to mental health... they would get more... in terms of recognising difficulties and pathways to support...” (Cynthia, TTL). Skills taught included: “Basic listening, non-judgemental skills... identify resources... who they talk to... in terms of signposting...” (Cynthia, TTL).

Supporting Trudgen and Lawn (2011) findings that teachers’ recognition of issues was subjective and without any formal knowledge or training the TFG admitted they were bereft of this input during ITT. However, the TFG were in favour of student mental health being addressed within the M. Ed. programme: “I think it would be good... the masters of education now having a module on it... you’d be learning yourself... it’s mutually enriching for both (TTL and student).”

The TFG also suggested that addressing this in ITT would be constructive especially with the course extension recently: “unless it happens in initial teacher education it’s not really going to happen properly... it has to be embedded... in a formal way in... programmes. So the professional masters of education is a good opportunity.”

PROPOSED SOLUTION: “HOW WOULD YOU DEAL WITH THIS SITUATION... NOT JUST THEORETICAL.”

All of the principals were cautiously in favour of a module being introduced within ITT as they did not want the burden of expectation and feared being abandoned further by services: “there’s a partial responsibility... there’s an onus on all of us... I would like to see that included but... not because... it is seen as the role of the teacher to do this, it’s just an add on that will help you if you find yourself in this situation... I would hate to think it’s going to be another thing that is lobbed on top of the teacher.” (Kate, principal).

For effective implementation, educators deemed it crucial that materials are delivered in a specific way. The TFG and TTLs suggested the introduction of a practical, rather than an academic module would be more beneficial: “a module, not a lecture on it... real life... how would you deal with this situation... not just theoretical.” (TFG) and “there’s lectures input around that... there’s group discussion and small role plays... in relation to that.” (Cynthia, TTL). However, educators were adamant that if a teacher was to confront these issues in schools, significant adjustments are necessary: “if they want... societal issues to be addressed in schools they will have to configure the school day a little bit different... time away from academia.” (Mark, principal).

Implications and Future Recommendations

The current study enhances previous research in other countries in relation to teachers' perceptions by adding another layer of understanding of principals and TTLs attitudes and beliefs. The findings of the current study imply that the current structure where teachers attend training courses and are expected to deliver the content to their colleagues on their return is not functioning to its full potential. Many educators cited time restrictions, cynicism or disinterest from other staff members as being a barrier to this. Perhaps the Department of Education could introduce and evaluate a pilot module delivering the current initiatives they have devised in teacher training rather than for continued professional development, as that model of learning did not seem to be effective for the participants of the current study. Should training continue without change, specific time needs to be allocated for teachers to deliver this information to their colleagues.

The current study also suggested that teachers feel overwhelmed with increased responsibilities of adolescent mental health coupled with the reduction of specialist staff available both within schools and the external statutory services. Therefore, reinstatement of the specialist services trained in emotional and mental health to schools should reduce the stress on teachers and principals and hopefully improve the long-term well-being of the students.

Strengths and Limitations

The purposive sampling method may have led to selection bias in the current study, however, a wide geographical spread of participants was invited and subsequently participated in the study. Consequently, the sample was reasonably diverse in terms of a qualitative study in Ireland. Although the focus group was smaller than intended, it is believed that data saturation was reached as no new themes or codes emerged (Guest, Bunce and Johnson, 2006).

Conclusions

The current study is the first of its kind to interview teachers, principals and TTLs of teacher training programmes in the Republic of Ireland and Northern Ireland, around issues relating to the mental health (including barriers and solutions) of adolescents in Ireland. Key findings emerged in this study indicating that the educators believe that the development and maintenance of mental health issues in adolescence is multi-factorial and therefore requires a wider systemic approach to addressing the issue, including society, community and family in addition to school. Teachers feel anxious, ill-equipped and poorly resourced in terms of time to cope with mental health issues as they arise daily in school. The teachers themselves proposed a solution and suggested that the introduction of a module into ITT would be beneficial. However, some educators are also cautious about this due to concerns relating to imposed accountability and responsibility, in addition to their teaching roles. Hence a well-governed and balanced approach is required.

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