An appropriate curriculum for 4–5-year-old children in Northern Ireland: comparing play-based and formal approaches

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This paper reports on an investigation into the quality of the learning experiences for 4–5-year-old children in Northern Ireland schools in the context of the debate about play-based and formal approaches to learning and teaching. Detailed observations were carried out in 70 Year 1 classes: 38 in traditional Year 1 classes where the Northern Ireland National Curriculum is being delivered, and 32 in Enriched Curriculum classes, where a more developmentally appropriate, play-based and child-centred curriculum is being piloted. The quality of the learning experience in each class was assessed using a structured observation schedule, i.e. Walsh and Gardner's *Quality learning instrument*. Overall the Enriched Curriculum appears to be providing 4–5-year-old children in Northern Ireland with a higher-quality learning experience. The children are given more opportunities to act independently, are engaged in more challenging activities and are more learning disposed, and they show higher levels of emotional, social and physical well-being. The findings are discussed in terms of what constitutes an appropriate curriculum for this age group.

Keywords: 4-5-year-olds; Effective pedagogy; Play; Learning experiences; Northern Ireland; Early years curriculum

Introduction and background

An appropriate curriculum for the 4–5-year-old child has been the subject of debate for several years. Many theorists, practitioners and policy-makers have different views about how young children learn and develop. Put simply, there are those who advocate a play-based approach until around the ages of 6 or 7 and those who prefer a more formal approach, based on fostering academic skills from the outset of a child's education (Guimarães & McSherry, 2002).

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Those who espouse the so-called formal model argue that, in order to raise educational standards, children should be taught the skills of reading, writing and arithmetic at an early age (Brophy, 1982; Gersten, 1986; Turner, 1990, 1997; Woodhead, 1999). Defenders of this position, such as Alexander *et al.* (1992), argue that teachers need to demand more of their children, reproving child-centred programmes as 'hopelessly unrealistic' (s. 32:110) and topic work as lacking any "educational rationale" (s. 9:20). Thomas (1994) provided an insight into the stance taken by many such advocates of formal approaches:

No matter how far one takes informality or child-centredness, there is simply no point in children coming to school unless they are learning something. Learning to read, write and figure will enable children to become independent citizens and to contribute to the society in which they live, playing some part in changing it for the better. (p. 32)

Play-based advocates take a different stance. They believe that young children's thinking and learning is qualitatively different from that of adults. For this reason, it requires a curriculum that is commensurate with their age and developmental status (Blenkin & Kelly, 1996; Gura, 1996; David, 1996). Supporters of the play-based argument contend that the relatively prescriptive curriculum of reading, writing and arithmetic not only detracts from children's enjoyment of school, and hence affects motivation, but also diminishes their experience of childhood (Elkind & Whitehurst, 2001). They emphasise that freedom to learn at their own pace and lack of pressure should characterise the learning environment of young children. According to this view, play and practical activity are a source of motivation for young children, providing a context for exploration and experimentation which, in their opinion, enhances rather than inhibits learning (Moyles, 1994; Bruce, 1997; Siraj-Blatchford, 1999).

The Northern Ireland context

Although the majority of early years settings throughout Europe have long adopted a more play-based and practical approach towards teaching and learning, a formal model of early years education has existed in Northern Ireland for many years. Since the Education Reform Order Northern Ireland (Great Britain. Statutes, 1989), children in Northern Ireland have been obliged to commence formal schooling in the school year of their fifth birthday (with no reception class). Consequently, some children begin formal schooling as early as four years and two months, obliged to follow the demands of the Northern Ireland version of the National Curriculum, which has been described as subject-based and assessment-led (Blenkin & Kelly, 1994).

This curriculum is divided into nine subjects. The content of each is defined within a programme of study and a set of attainment targets. English and mathematics have been given priority, as they are assessed at the end of key stage 1 (Year 4) and end of key stage 2 (Year 7). A selection process for grammar school entry, 'the Transfer Test', takes place at the beginning of Year 7. It concentrates on English, mathematics and science. Due to these assessments, there has been a

pressure downward towards the early years to focus heavily on literacy and numeracy. For this reason, it has been claimed that the Northern Ireland curriculum focuses too heavily and too early on academic achievement, detracting from the enjoyment of learning, lacking relevance and coherence for everyday life (Harland *et al.*, 1999).

In light of European practice and a review of early years research, the Northern Ireland Council for the Curriculum, Examinations and Assessment (CCEA) has been revising the existing Northern Ireland curriculum since early 1999, in an attempt to make it 'more explicitly relevant and meaningful to young people, the society and the economy' (CCEA, 1999, p. 4). One of their key goals is to ensure that the early years of schooling in Northern Ireland should become less formal in perspective, offering instead a more developmentally appropriate, play-based and child-led approach to teaching and learning, known as the Enriched Curriculum. As the CCEA (2003) state:

Children learn best when all areas of an integrated, carefully planned, curriculum are implemented informally using methodologies that are interactive, practical and enjoyable. Children should have opportunities to experience much of their learning though well planned and challenging play. (p. 7)

The Enriched Curriculum

The Enriched Curriculum is largely based on practices common in the successful European and South-East Asian models of early education. In such countries early years curricula tend to be influenced by constructivist and Vygotskian perspectives. They emphasise the importance of play, oral language and phonological awareness for the development of literacy, attention, concentration and memory skills, physical confidence and competence, and the children's ability to build social relationships and to co-operate with one another. Overall, the focus is on building self-esteem and children's belief in themselves as learners and on process rather than content (Mills & Mills, 2000).

Building on this viewpoint, the underlying philosophy and principles of the Enriched Curriculum are to (CCEA, NES & BELB, 2002, pp. 1–2):

- Provide a safe, secure and inviting learning environment where children feel valued and adults take time to listen to their views and opinions;
- Utilise every opportunity to promote children's self-esteem, confidence, independence, imagination and general well-being;
- Understand how children learn and what constitutes significant learning by considering learning preferences and being aware of children's uniqueness;
- Ensure that children have a positive attitude towards learning, instead of becoming frustrated, disillusioned and feeling 'failures';
- As far as possible, to teach at a pace suitable for the class as a whole and in dyad interactions, at a pace suitable for the individual child. Thus, the aim is to meet the needs of all children, by stretching the more able and supporting the less capable.

Aims and research design

Due to the changes currently taking place within early years education in Northern Ireland, both traditional and play-based curricula are being implemented and are available for study in very similar schools. This permits a ready comparison of formal and play-based models of education within Year 1 classes. The study reported in this paper set out to compare and evaluate the quality of the learning experience in 70 Year 1 classes, 38 traditional Northern Ireland Curriculum classes and 32 Enriched Curriculum classes.

Sample

The traditional Year 1 classes were selected through a random sampling procedure. Forty of 120 primary schools in the Greater Belfast area (excluding the Irishspeaking and Enriched Curriculum schools) were selected. A letter was sent to each principal, explaining the rationale for the study and seeking permission to observe a Year 1 class. Only two of the principals refused admission, one because their school was undergoing a general inspection and the other because the Year 1 class had a substitute teacher, leaving 38 schools.

All 32 Enriched Curriculum schools that joined the intervention since September 2000 were included. They constituted a volunteer sample who are participating in a longitudinal study known as the Early Years Enriched Curriculum Evaluation Project (Sproule *et al.*, 2005), of which this study is a part.

As detailed in Table 1, the two samples were comparable in terms of free school meals, locality, class size and pupil-teacher ratio. All of the Enriched Curriculum schools received additional funding of up to \pounds 5000 for play-based resources and all of the Year 1 teachers in these schools undertook a minimum of four days' training on delivering play and practical activities.

The Quality learning instrument (QLI)

The *Quality learning instrument* (QLI) is a classroom observation schedule that was used to evaluate the quality of the children's learning experience in each of the Year 1 settings. It was developed specifically for use in Year 1 and Year 2 classrooms and has been subjected to considerable validity and reliability analyses (Walsh & Gardner, 2005). Analytical work on the instrument is ongoing (see overleaf).

Sample	Average % of FSM	% of inner city schools in group	Average class size	Average P/T ratio
Enriched	30.1	41 (<i>n</i> =11)	24	19.1
Traditional	32.4	40 (<i>n</i> =15)	24	20.2

Table 1. Comparability between the two participating samples

General philosophy

According to Katz (1995), quality can be assessed in terms of four perspectives—i.e. the top-down perspective, the outside-inside perspective, the inside perspective and the bottom-up perspective. The top-down perspective, Katz explains, incorporates 'selected characteristics of the program, the setting, the equipment and other features' (p. 120). In this dimension, the quality of the learning experience is derived from a selection of structural features, and little emphasis is placed on the processes of learning and development. Katz further explains the outside-inside perspective of quality in terms principally of parental satisfaction and the inside perspective in terms of staff satisfaction. The bottom-up perspective of quality considers the way in which the programme is 'experienced by the participating children' (p. 120). It was this aspect of quality—i.e. how it might feel to be a child in the learning environment—that is the focus for QLI. Although an excellent way to evaluate the quality of a setting from the children's perspectives would be to ask the children themselves,¹ due to the children's learning processes was undertaken.

The QLI provides a structured assessment of the quality of many aspects of the children's learning experiences, challenging the pre-existing notion that the quality of learning environments can best be assessed in terms of immediate learning outcomes, context and teaching style. According to the QLI, the quality of an early years setting is determined by the way in which the learning and developmental needs of the main stakeholders—i.e. the children themselves—are being met within the affective, cognitive, social and physical context.

Theories of learning

The theoretical model underpinning the QLI is an experiential model of how young children learn and develop, drawing on the work of philosophers such as Dewey (1938): 'all genuine education comes through experience' (p. 25). Piagetian ideas are also inherent in this model of learning: it accepts that children's construct their own knowledge through interaction with the world around them. Further, children are not only perceived to learn in isolation, but in the company of others. Thus the experiential model of learning also draws heavily on the Vygotskian principle of social constructivism.

Indicators of quality

A number of key features of the experiential model of learning are intrinsic to QLI and help form the nine quality indicators against which children's learning experience in a classroom can be assessed. These quality indicators are namely *motivation, concentration, confidence, independence, physical well-being, multiple skill acquisition, higher-order thinking skills, social interaction and respect.* Each quality indicator is explained more fully in Table 2. The QLI takes into consideration the holistic and interrelatedness of young children's learning and development—i.e. the

Quality indicator	Definition		
Motivation	Children are interested in and inquisitive about their learning and show active signs of wanting to learn		
Concentration	Children are actively engaged in the learning process, not easily distracted and attentive for reasonable periods		
Confidence	Children feel secure and not under pressure in their learning environment and have confidence in their ability as learners		
Independence	Children have a degree of control over their own learning and behaviour		
Physical well-being	Children are happy, well behaved, appropriately nourished and physically at ease in their learning environment		
Multiple skill acquisition	Children are provided with an holistic learning experience, covering a variety of skills and knowledge within an appropriate context		
Higher-order thinking skills	Children are given the opportunity to reflect and synthesise about their whole learning experience, and in so doing, develop their powers of memory, listening, seriation and classification		
Social interaction	Children are encouraged to learn in the company of others and to get along with one another and with adults		
Respect	Children display a tolerance and respect for themselves, others and their environment		

Table 2. A definition of each quality indicator from the QLI

affective (confidence, physical well-being), social (social interaction and respect) and cognitive (multiple skill acquisition and higher-order thinking skills) domains, as well as the roots of children's learning dispositions (motivation, concentration and independence).

Unlike many well-known measures, such as the *Early childhood environment rating scale* (Harms *et al.*, 1998) and its later modifications, the QLI takes into consideration the whole triangle of interaction in the classroom—the children's actions, the teaching strategies and the role of the environment. Each of the three aspects is rated in relation to each of the nine quality indicators. Using a best-fit model each setting is rated against the QLI rubric—i.e. whether the collated evidence fits best into the high (i.e. 3) or low (i.e. 1) categories of quality as defined by the QLI, or in between (i.e. satisfactory=2).² The scoring matrix for the motivation indicator is presented in Table 3. Similarly, there are three dimensions for each of the nine quality indicators, giving 27 ratings overall.

When using the instrument to evaluate a setting, a non-participant mode of observation is adopted and time is spent observing the children's actions, the teaching strategies and the environment in relation to each quality indicator. The goal is not to record the actions of individual children, but instead to prepare a general account of the children's actions, the teaching strategies and the role of the environment for each quality indicator. For data collection, the QLI is not used as a checklist, but rather as a lens through which each classroom or setting is assessed. Observers are trained over several sessions in the use of the instrument, using discussion of underlying theory and videos in workshops.

Indicator	Children's actions	Teaching strategies	The role of the environment
Motivation	High (3): Eager to participate in activities; A degree of curiosity and inquisitiveness displayed; Signs of excitement energy and vitality; Enthusiastic gestures, e.g. clapping hands, jumping up and down, hopping on one foot; A degree of creativity and imagination shown	High (3): A variety of stimulating and age-appropriate activities on offer (e.g. practical tasks, games activities planned around the children's needs); Activities changed regularly; Adults show interest in children's activities; Participate and extend learning process when appropriate; Adults are cheerful and enthusiastic	High (3): Décor is colourful, bright and aesthetically pleasing; Variety of exciting areas available allowing for privacy and curiosity; Resources are in plentiful supply and are exciting and interesting to use; Stimulating outdoor equipment available; Facilities spacious, airy and attractive for the learner;
	Low (1): Apathetic and unenthusiastic; Constructive questions are seldom asked; Appears bored; Complete activity out of obligation rather than interest	Low (1): Uninteresting activities on offer; Activities are rarely changed; Adults rarely participate in children's learning; Adults display little overall interest	Low (1): Small, dull and lacking in character; Resources available but tend to be routine and uninspiring; No outdoor facilities; Unattractive environment

Table 3. An excerpt from the theme 'motivation' in the QLI

Analysis

For each dimension of the QLI, the three-point scale indicated Pearson chi-square as the appropriate instrument to illuminate group differences. For the total score, the greater variation available within both groups of classes allowed the use of a *t*-test.

Validity and reliability

From several perspectives, the QLI has been shown to be a valid and reliable instrument to use in early years settings (Walsh & Gardner, 2005). The QLI has proved to have face and content validity. Its design was embedded in early years literature and was developed during a series of observation studies in a number of Year 1 settings in Northern Ireland and kindergartens in Denmark (providing examples of play-based practice at that time). The content of its indicators were confirmed as appropriate by a panel of international early years experts and the placing of category boundaries was calibrated against their opinions. A Krippendorf's alpha test was conducted which showed a high level of inter-rater reliability on the nine scales among the experts (0.73-1.0) and among our 'trained' observers (0.69-0.89), figures which compare favourably with similar studies (e.g. Sylva & Siraj-Blatchford, 2001) using other scales such as the *Early childhood environment rating scale* (Harms *et al.*, 1998).

Analysis has also revealed that the scale has very high internal consistency. Cronbach's alpha is 0.94 for the total score over all nine indicators in 90 cases: it does not drop below 0.92 when single items are removed. Principal component analysis with either Varimax or Direct Oblimin rotation confirms the presence of a strong factor loaded on all nine indicators, with a secondary factor positively loaded on motivation, confidence, independence, well-being and social interaction and less strongly on the other four indicators. This validates the use of the total score as a useful general quality indicator.

Procedure

Teachers understood that each Year 1 class was to be observed for two full sessions that were considered to be 'typical'—i.e. the children were completing normal activities and not doing something extraordinary, for instance, going on an outing to a farm. The first day was spent recording the structure of the day and the second day on the structured classroom observation using QLI.

On the first day, the main activities of the children were observed and classified as adult-directed or child-initiated. Adult-directed activities are chosen solely by the teacher and are presented in a structured fashion—e.g. copying from the board, colouring-in exercises and alphabet practice. Child-initiated activities are selected by the children and are more practical and play-based.

The time spent on play-based, practical and written activities was also recorded. Play-based activities are those where children are free to choose from a range of play stations such as the house corner, sand, water and construction, and where the staff interact, as appropriate. Practical activities are structured by the teacher and involve little written work. Written activities are sedentary and teacher-led, and involve a substantial amount of written work.

On the second day the QLI was administered by the same observer, always in this order. Day 1 observations were about large 'chunk' activities that were relatively easy to observe and categorise. In this way the observer was better prepared to carry out the more in-depth observations required for QLI. Day 1 also enabled the observer to become familiar with the children, staff and setting. Observers were encouraged to record cameo accounts of instances that supported their QLI judgements.

Results

The structure of the day in each of the curriculum settings

The curriculum in all of the traditional classes could be described as being subject orientated, with emphasis placed on teaching the 3Rs (i.e. reading, writing and

arithmetic). Formal activities assumed priority throughout the day in the majority of classes where the main intention was to deliver aspects of the Northern Ireland curriculum. In 70% of the traditional Year 1 classes the school began with at least a 45-minute structured play session, often used by the teacher to hear individuals or groups of children read. These play activities were followed by more reading related/ writing tasks, which, in many cases, consisted of copying from the board, colouring-in or completing simple worksheets.

Generally a break of approximately 15 minutes was then taken during which the children ate a snack, went to the toilet and, if the weather permitted, played outdoors. The children then returned to a maths activity, which involved the completion of a worksheet. Letter instruction in the form of a phonics activity or handwriting exercise then followed. Lunch, lasting approximately 45 minutes, tended to take place at around 1.15 p.m. After lunch, the activities generally included listening to a story, watching television, participating in songs and rhymes or completing an unfinished activity.

The observations suggested that overall in the more traditional classes the children were expected to conform to a more traditional, school-like environment and a more formal style of classroom management. Observed deviations from this general routine of practice included children commencing work-related activities immediately in the morning without any play session or, in some cases, a short free-play session took place at the end of the day. Other observed activities included two physical education lessons, two religious education lessons and one science-related activity.

In the Enriched Curriculum (EC) settings, a more varied curriculum was delivered, where the activities appeared to be shorter in duration and more practical in design. In all of the classes the day began with play, during which the children had some degree of choice of activity. Both the teacher and classroom assistant supported learning during play. In all but two of the classes, play lasted approximately 1.5 hours. In 80% of the classes a plenary concluded the play, encouraging the children to reflect on the play activities they had completed. After playtime in the majority of the EC classes, the teacher read a story using a big book, focusing the children's attention on a particular reading skill. Break-time followed, wherein children had the opportunity to eat something and to play freely with their friends. In about half of the EC classes children then played outdoors, time being spent on developing children's gross motor skills. On returning to the classroom, the teacher focused the children's attention on practical mathematics: a mathematical concept was taught in a practical and playful manner—e.g. using a puppet, maths games or the computer. If time permitted before lunch, the teacher engaged with the children in some songs and rhymes.

After lunch in most of the EC classes, the focus was on shared writing. Unlike the traditional classes, where letter formation was prioritised, the aim in the EC classes was to encourage the children to write something down creatively, irrespective of handwriting technique (or in some individual cases, even scribed by the teacher). After spending approximately 30 minutes on writing, the day finished with a

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television programme, a story or further songs and rhymes. In about a quarter of the EC classes, there was a news time at the end of the day, during which the children got the opportunity to discuss something of importance to them.

Although every EC class did not follow this exact order, the structure of the day was organised, in some shape or form, around these activities. The structure of a 'typical' day in the traditional and EC classes is displayed in Figures 1 and 2 respectively.

Adult-directed versus child-initiated activities

The time spent on adult-directed and child-initiated activities was recorded in each of the Year 1 classes. Average time in minutes and the percentage of total time are presented in Table 4. On average, children in the traditional classes spent much more time on adult-directed activities than children in the EC classes.

Play-based, practical activities and written activities

The time spent on play-based, practical and written activities was also recorded. Average scores per type of Year 1 class are presented in Table 5. In the EC classes approximately 80% of the children's time on average was spent on more practical and play-based activity, whereas in the traditional classes written activities assumed priority, with 70% of children's time devoted to them.

The quality of the learning experience in the enriched and traditional contexts

In this section, we look at the measured quality of the learning experience in the Enriched and traditional classes, using the QLI. Figure 3 (indicators 1-9) show the distributions of Enriched (EC) and traditional classes between low, satisfactory and high categories within each of the nine themes. Chi-square values and significance levels are also shown, revealing that the EC classes were significantly superior on all nine themes and, in several cases, very significantly so. Further analysis of total scores reveals that EC classes were highly significantly superior overall compared with traditional ones (t=8.3, d.f.=68, p<0.000). Looking at the distribution of total scores in Figure 4, the difference between the two groups is evident. While some EC classes score as low as the mean for the traditional group, very few of the traditional classes come within reach of the performance of the majority of EC classes. Individual class-level data show that, although a very small number of EC classes scored poorly on one or two quality indicators, especially higher-order thinking skills, none of them had the low scores across many quality indicators seen in traditional classes. Looking at the detail in Figure 3, there are few EC classes in the low category. Apart from higher-order thinking skills and respect, where the picture is slightly more balanced, the performance of EC classes is markedly superior on the other quality indicators.



Figure 1. A 'typical' day in a traditional Year 1 class



Figure 2. The structure of a 'typical' day in an Enriched Curriculum Year 1 class

Further insights from cameos

The above results are further reinforced by evidence from a selected number of cameos taken from observers' notes. Cameo 1 provides evidence to support the higher scores for the EC on confidence, well-being, social interaction and respect, where children appear happy, secure and cooperative in their learning environment:

Cameo 1

After putting on their coats, children in EC setting 3 ran to an activity of their choice, whether it be riding a trike, using the climbing-frame and slide, walking on stilts, playing in the tent, writing with chalks or digging in the outside sandpit. Screams of laughter were overheard and smiling faces were observed. The teacher and classroom

	Child in	nitiated	Adult directed		
-	Mean	%	Mean	%	
Enriched Curriculum Traditional Curriculum	103.1 42.8	(43.7%) (17.8%)	132.9 197.2	(56.3%) (82.2%)	

Table 4. Average time (in minutes) spent on child-initiated and adult-directed activities

assistant observed and interacted with the children to ensure that they took that extra step or added that further tower to their sandcastle.

This hum of activity contrasted with the more school-like environment of the traditional classes, whereby the children seemed, at times, under pressure to complete tasks in a certain time and fashion. The effects are illustrated by William in Cameo 2:

Cameo 2

William had just returned from assembly when he explained to the teacher that he was really going to try his best today at his reading and he hoped the teacher would not shout at him if he made a mistake. He went on to stress that he had practised writing the letter 'W' many times at home the previous night and he would try his best not to make a squiggle in the middle.

The more play-based and child-centred approach of the EC seemed to appeal more to the children's level of interest and enthusiasm, as is evidenced in Cameo 3:

Cameo 3

In Enriched Curriculum setting 2 the teacher was focusing on subtraction. Using an illustrated number line and a puppet named Coco the Counting Clown, who was continually making mistakes. The children and the teacher worked together to ensure Coco landed on the right number. All the children, even the weakest, were extremely animated and forthcoming with their responses and seemed to grasp the concept with very little difficulty.

Such activity differed from the more routine and mundane practice of several traditional classes, which appeared to do little to activate the children's motivation or thinking. Cameo 4 portrays this more clearly:

	Play		Practical		Written	
	Mean	%	Mean	%	Mean	%
Enriched Curriculum Traditional Curriculum	75.8 42.8	(31.3%) (17.8%)	123.4 28.7	(51%) (12%)	42.8 168.5	(17.7%) (70.2%)

Table 5. Average time (in minutes) spent on play, practical and written activities



Concentration









Figure 3. Percentage of group (EC or traditional) by quality category for QLI quality indicators, 1-9













Figure 3. (Continued.)



Social interaction











Figure 3. (Continued.)



Figure 4. Percentage of group (EC or traditional), by QLI total score

Cameo 4

In traditional class (14) the teacher was explaining to the children how to complete their worksheet which involved writing a list of number 2s and drawing the appropriate number of apples in the box. The teacher asked the class as a whole, first, and then proceeded to write each answer on the chalkboard from which the children copied. She or the classroom assistant then held the hand of those children who had difficulty writing the number '2'.

Discussion

The overall aim of this study was to gain an insight into, and evaluate the quality of, the learning experience on offer in two contrasting curricula for 4–5-year-old children in a Northern Ireland context. A structured observation instrument known as the *Quality learning instrument* (QLI) was the main assessment tool. Analysis

shows that Enriched Curriculum (EC) classes significantly outperformed traditional classes on all nine themes of QLI and on total scores.

The findings support the picture of the EC, as a developmentally appropriate curriculum, where the majority of time is spent on play-based and teacher-initiated practical activities that tend to be short and varied in nature. In contrast, children in traditional classes were shown to have spent more time on teacher-directed activities and less time on free-choice play activities.

The higher-quality learning experience for 4–5-year-old children detected by QLI in EC classes is in tune with the findings of the BERA Early Years SIG (2003), which concluded that more play-based, practical environments, such as combined centres, nursery schools and classes, are considered to provide better learning experience for young children than the more school-like formal approach on offer in reception classes. The work of Sylva and Nabuco (1996) and Schweinhart and Weikart (1997) reinforces this thinking, indicating that early childhood programmes which are more constructivist in approach and encourage children to initiate and activate their own learning activities can ensure effective cognitive, emotional and social gains.

The particularly poor showing of the traditional classes on the QLI themes of motivation, independence and social interaction compared with that of EC classes highlights some of the pitfalls of a too narrow, formal curriculum for very young children. The written and more sedentary activities prioritised in the traditional classes appeared to suppress the children's overall level of motivation, and in turn concentration, as found by Harland *et al.* (1999) with 10–11-year-olds. Their research indicated that when children are engaged in more passive learning activities, the pupils are much more likely to refer to such tasks as boring and onerous. Claxton (2000) has emphasised the implications of being 'switched off' at an early age. He argues that enforced early formality damages children's 'learnacy'—i.e. their desire to learn and their ability to know how to keep on doing so.

Unsurprisingly, the observation studies revealed a large difference between the levels of independence encouraged in both curricula. The children's autonomous behaviour appeared restricted by the structured approach of the traditional classes, as compared to the choice and flexibility encouraged by the play-based environment of the EC classes. These findings are endorsed by the results of an OFSTED Report (1993) that emphasised that 'the over-directed nature of many infant classes removes the opportunity for children to develop their own initiative, independence and sense of responsibility, all of which are essential pre-requisites for ultimate achievement' (s. 10:26).

In relation to the current discourse of learning outcomes, standards and accountability within the field of education, many policy-makers appear particularly concerned about children's educational progress and achievement. The present observations revealed that the traditional environment, where in several cases children spent a large part of the day on routine, written tasks, such as colouring-in, appeared to do little to activate children's thinking and multiple skill acquisition. Bruce (1999) argues that keeping children busy in teacher-led activities does not allow the time for children's brains to become 'coordinated and reflective' (p. 39) and that preventing children from learning through play will result in 'educational failure' (p. 40).

The findings suggest, however, that a play-based environment is not always equated with higher cognitive challenge. Although still significant, the difference between the Enriched and traditional classes on higher-order thinking skills was less marked than on other quality indicators. Simply providing more play-based tasks did not in itself ensure more effective thinking. In most of the classes where the overall level of higher-order thinking skills was highest, observations suggest a better balance of play-based, practical and written tasks and a more equal distribution of time between child- and teacher-initiated activity. These findings support the work of Siraj-Blatchford and Sylva (2004), who suggest that the most effective early years settings for enhancing child development are those that provide and achieve this balance.

Furthermore, the observers' notes highlighted that play-based activity supplemented with appropriate interaction on the part of the adults—i.e. engaging in what Edwards (1998) describes as an 'intellectual dialogue' (p. 181)—is advantageous to the overall level of multiple and higher-order thinking skill acquisition. These findings are supported by Siraj-Blatchford *et al.* (2003) and Moyles *et al.* (2003), who suggest that play and practical activities can provide a high level of cognitive challenge when adult–child interactions take place that involve 'sustained shared thinking' (Siraj-Blatchford & Sylva, 2004).

Conclusion

The findings from this study indicate that the Enriched Curriculum offers 4–5-yearold children a higher-quality learning experience than that of the more traditional Year 1 curriculum. Unlike the latter, which focuses principally on the acquisition of basic skills, this study suggests that the Enriched Curriculum, a combination of developmentally appropriate, play-based and practical teacher-initiated tasks, provides a more appropriate curriculum for this age group. Our findings concur with the thinking of Claxton and Carr (2004), who argue that an appropriate learning environment for young children is one in which useful age-appropriate activities are available, interesting practical projects are carried out, teachers have high expectations of children, and children and adults work together as a team.

Our study suggests that the CCEA's proposals (1999, 2003) to make Year 1 practice more play-based and practical in orientation are in tune with what 4–5-yearold children in Northern Ireland require. Although this study adds significantly to our understanding of different early years curricula, there are certain limitations to its overall generalisability. Despite its rigour, the study is fairly small scale and particular to Northern Ireland, so further research is required. The Enriched Curriculum classes received substantial financial support and the teachers undertook additional training, which could have contributed to the superior performance of the EC classes. This could equally highlight, on the other hand, the need for such

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training for all teachers. Furthermore, multiple observers were used: although they were not told whether the classes were EC or traditional, it was found easy to tell the difference, even on casual observation. This might be seen as a source of bias, but one can argue that if a range of observers come up with the same results from a variety of settings, the findings are more likely to be valid.

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Notes

- 1. Further research is focusing on seeking the views of the young children, using a range of media such as digital cameras, puppets, etc. to capture their perspective of the quality of their learning environment. Details of this study will be published in a further paper.
- 2. The *Quality learning instrument* has been further developed more recently to enable scoring to take place on a six-point scale—i.e. 1=low and 6=excellent—initially using the same three categories, and then considering whether the quality is securely within a given category.

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