RESEARCH PAPER

Effective early childhood education programmes: case studies

Oli de Botton

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About the author

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About the report

This report is designed to provide some insight into the policy landscape and research base for early education programmes whilst at the same time disseminating practical tips for early childhood professionals. The full findings of the research project are available in the report *Effective early childhood education programmes: a best-evidence synthesis* by Bette Chambers, Alan Cheung, Robert E. Slavin, Dewi Smith, and Mary Laurenzano. The full report is available from the CfBT website **www.cfbt.com/evidenceforeducation**.

Section 1. Summary

"The most recent evaluation of Sure Start… highlights… no significant impact on language development."

There is considerable debate about what and how to teach young children.[1] Some favour a teacher-led, academic-focused approach whilst others argue for a child-centric and developmental one. This debate is important. The most recent evaluation of Sure Start (England's flagship pre-school programme) highlights that whilst the scheme is effective in improving health and social outcomes, there has been no significant impact on language development, an important pre-cursor to success at school (Belsky, J. and Melhuish, E., 2007). Analysis of other early intervention programmes around the world highlights similar concerns about literacy and communication skills (Darrow, 2009).

This review aims to establish evidence for policy makers and practitioners as they design and deliver early education interventions. To achieve this, impact studies for programmes targeted at three to five year olds in a group setting were systematically reviewed (quantitative). Then case studies of the six programmes which the review found to have strong evidence of effectiveness were developed (qualitative). The following report details the qualitative findings whilst also referencing key aspects of the quantitative evidence.[2]

Findings suggest that effective early education programmes:

- **Offered intensive support to practitioners to achieve full and faithful programme implementation.** This included one-to-one coaching and assessment from experts. Often support was designed to remediate the relatively poor pre-service training received by early years professionals.
- **Provided a planned curriculum** including suggested activities, lesson plans and schemes of work linked to specific learning and developmental objectives. Most also had assessment frameworks. Overall, teacher materials mirrored, both in level of detail and scope, support commonly available to teachers of older children.
- **Emphasised teacher-led practice supported by *structured*, child-chosen activities.** Strong practitioner input combined with purposeful and planned child-chosen sessions were key features of successful programmes.
- **Linked programme design and practice to academic research.** Most programmes underlined the precise links to academic research in their teaching materials. One programme under review was directly managed from a university and two others originated from Government-funded research grants.
- **Emphasised academic outcomes such as sound, letter and word recognition to prepare children for reading and writing.** However, practitioners used a variety of teaching methods to achieve this. Most used a combination of a blended whole language approach (i.e. using oral language, books and pictures to aid understanding and generate interest) with some distinct skill teaching (e.g. letter and phonemic awareness).

As a result of these findings policy makers should:

- **Implement programmes that focus on language and emergent literacy development, particularly for children from low-income backgrounds.** Evidence suggests that a focus on academic outcomes particularly benefited children from poorer backgrounds. Policy makers should implement the programmes with the strongest evidence of effectiveness in relation to academic outcomes.

[1] For the purposes of this paper 'young children' refers to children aged between three and five
[2] The quantitative review is available here in full: **http://www.cfbt.com/evidenceforeducation**

- **Support education programmes that are developed jointly by early years practitioners and academics.** This will promote practice that is both innovative and road tested whilst also increasing the evidence base about what works.
- **Work towards a further professionalisation of the early years workforce** by providing practitioners with bespoke support through coaching and consultancy, and by developing effective and planned curriculum models.

In addition, **practitioners** should:

- **Consider the balance both between child- and teacher-led activities and academic and development-focused practice.** The evidence from this review suggests that whilst a balance is always necessary, teacher intervention and exposure to academic material early on can lead to significant gains. This may be particularly beneficial for children who may not have access to academic material at home.
- **Consider using pupil- and cohort-level data from observations to plan interventions.** Effective use of assessment frameworks, such as England's Early Years Foundation Stage points system, can support a greater understanding of individual needs.

How to use this report

This report is designed to provide some insight into the policy landscape and research base for early education programmes whilst at the same time disseminating practical tips for early childhood professionals. Although it would be great if you could read the whole report, different sections may be particularly relevant for different groups of people.

For policy makers:

- Section 2 sets out the research background and some of the policy context around the world.
- Section 5 and the summary above provide an overview of the findings and recommendations.

For practitioners:

- Section 3 details the practical findings. All case studies are included in boxes.
- Section 3 also gives an overview of the different schools of thought related to early childhood education practice.

Section 2. Background

"Without the right support during the early years, class difference in language acquisition and child development become more pronounced and then increase with age."

2.1 The case for early intervention

Effective interventions targeted at young children improve their life chances. It is now well established that the quality of support children receive during the early years is strongly linked to the differences in health, education and economic outcomes amongst adults (Waldfogel and Washbrook, 2010, Camilli, Vargas, Ryan and Barnett, 2009; Chambers *et al.*, 2006; Coghlan *et al.*, 2009). There is also robust evidence to suggest that the right sort of early intervention is particularly beneficial for disadvantaged children (Karoly *et al.*, 1998; 2005; Carneiro and Heckman, 2003) and highly cost-effective (Heckman and Masterov, 2007).

The case for early support has come not just from economics and sociology but also from science. Scientists have demonstrated that between the ages of three and five (the focus period for this review) children are receptive learners, displaying increasingly complex social, emotional and cognitive capacities as well as problem-solving and pre-literacy skills. These capabilities form the essential building blocks for future academic and developmental progress. Therefore without the right support during the early years, class differences in language acquisition and child development become more pronounced and then increase with age (Duncan, G., Shonkoff, J.P. *et al.*, 2007).

Policy makers around the world have responded to this evidence by introducing a range of initiatives. In the Netherlands, for example, the school starting age has been extended down the age range to four and there is subsidised childcare for children from birth to age three (OECD, 2000). In England, Sure Start, introduced in 1999, has sought to bring together childcare, health advice, parent support and early education in a comprehensive service for young children and their families.

In fact, the evidence base is so strong that there is a considerable degree of political consensus around the need for structured and subsidised early childhood programmes. The task for policy makers is to find the right interventions to close the rich/poor gap before it widens. Here there is less agreement.

2.2 Approaches to early education

There are three separate but interlinked questions that have stimulated debate:

- In general, how much focus should programmes for young children place on education as opposed to care?
- What is the balance between an academic approach that covers areas such as literacy and language acquisition, and a developmental approach that covers emotional and social well-being?
- To what extent should activities be child directed or teacher led?

Naturally, these questions have been answered differently around the world with academics and practitioners drawing on different philosophical traditions. There are broadly two approaches.

Teacher-led, education-focused approach

Practice is characterised by centralised development of the curriculum and explicit learning expectations and outcomes. Curricula tend to be related to school readiness skills such as literacy and numeracy (Friendly, Doherty, and Beach, 2006). Practice also sees teachers rely more on direct instruction, and assessment focuses on children's achievements in meeting prescribed learning expectations (Miller and Almon, 2009). Teacher-led and education-focused

"Conversely, critics of the more directed approach see the EYFS as overly prescribed and potentially damaging to child development."

approaches are common in France, Australia and the United States (OECD, 2006) although there are of course differing traditions in these countries too.

Social pedagogic, child-directed approach

By contrast, social pedagogic or child-directed practices are more common in Scandinavian countries, New Zealand and Italy – although again there remains variation within these countries. These approaches adopt a broad developmental framework with curriculum decisions being made at a local level (OECD, 2006). Curricula are driven by the interests of the children within the context of their families and immediate communities. The focus is on developmental goals, play and interactivity with teachers and peers, and high quality of life for children in settings. In general curricula tend to have broad orientations, rather than prescribed outcomes. The acquisition of educational skills is perceived as a by-product rather than as the driver of children's experiences (Miller and Almon, 2009).

2.3 The 'English way'

Like other countries, pre-school education in England borrows from both traditions. On the surface, England relies more on teacher-led and education-focused practices. In 2008 the Government introduced the Early Years Foundation Stage (EYFS) for all children from birth to age five. The EYFS is a statutory, centrally defined, curriculum framework which sets out what children should be able to do at each age, with levels of demand growing as children get older. Six broad areas of learning are covered including communication, language and literacy; knowledge and understanding of the world; physical development; creative development; personal social and emotional development; and problem solving, reasoning and numeracy. These six areas lead to 13 assessment scales which are used to measure progress at age five.

However, the EYFS by no means excludes child-centred and developmental approaches. Many of the learning intentions in the framework are structured around well-being, particularly in the personal, social and emotional curriculum area.[3] The national regulator, Ofsted, which inspects all early years settings, highlights the need for children to direct their own experiences in order to become self-regulated and socialised youngsters (Ofsted, 2009). Consequently, although practitioners follow overarching learning objectives, child-directed approaches remain common (National Strategies, 2008).

Recent research conducted before and after the introduction of the EYFS also suggests that questions about which approach to employ are far from settled. A study into the Foundation Phase Pilots, which were carried out before the introduction of an early years curriculum in Wales, reported that some teachers struggled when trying to balance free play with adult intervention (Estyn, 2007). Estyn (the Welsh inspectorate) recommended that clear guidance be sent to teachers after reports emerged that some allowed children to 'play aimlessly'.

Conversely, critics of the more directed approach see the EYFS as overly prescribed and potentially damaging to child development.[4] They argue that age three is too early for education content to be introduced and that children will develop best when they are free to play and are not constrained by a prescriptive curriculum. Others have suggested that introducing reading and even pre-reading skills before the age of five is counter-productive for academic development (Reese, E., 2009). Campaigners often cite the example of Finland where formal education starts later (at age seven), but children appear to progress faster and do better at school (OECD, PISA, 2006).[5]

[3] e.g. 16–26 months, personal, social and emotional development: 'learn that they are special through the responses of adults to individual differences and similarities'
[4] http://openeyecampaign.wordpress.com/
[5] http://www.oecd.org/pages/0,3417,en_32252351_32235731_1_1_1_1_1,00.html

"Poor early education outcomes appear to be most pronounced in areas of the highest need."

Whichever approaches are employed, there remain concerns about the education-specific outcomes related to early childhood programmes both in England and around the world. Researchers from the Institute of Education found that literacy, language and communications standards had fallen when they undertook an evaluation of the Government's 'learning through play' strategy at the start of 2007 (Siraj-Blatchford, I., Sylva, K., Muttock, S. *et al.*, 2007). The latest evaluation of Sure Start suggests that there has been no significant impact on children's language development, despite positive health and social outcomes (Belsky, J. and Melhuish, E., 2007). Finally, an international meta-analysis of the effects of early childhood curricula found that interventions did not differ from their respective control groups on vocabulary development (Darrow, 2009).

Poor early education outcomes appear to be most pronounced in areas of the highest need. According to Ofsted, 10.8 per cent of nurseries in the 10 per cent most deprived areas in England were judged as inadequate. This compared to 5.3 per cent in the 10 per cent most affluent areas (Ofsted, 2009). This is particularly problematic considering that closing the academic achievement gap between rich and poor is harder to achieve as children get older (Feinstein, L. and Duckworth, K., 2006).

These concerns may be growing as subsidised childcare for working parents becomes increasingly available. In England for example, all parents of three and four year olds are entitled to 15 hours per week of childcare. There are also places available for two year olds with low-income parents. 75 per cent of all Swedish children between the ages of one and five take part in some form of subsidised group childcare (OECD, 1999). These demands are set to increase as governments, labour markets and individuals expect that work and family can happily co-exist. And as more taxpayer money is spent on provision, the need to secure improved outcomes becomes increasingly urgent.

2.4 This review

This review aims to support policy makers and practitioners as they design and deliver early education programmes. The goal is to help answer some of the pressing questions about what and how to teach young children. This review is also responding to an identified gap in the evidence base. The most recent Sure Start evaluation suggested that practitioners needed more guidance about what works (Belsky, J. and Melhuish, E., 2007).

To achieve this, impact studies for programmes targeted at three to five year olds in a group setting were systematically reviewed (quantitative). Then case studies of the six programmes which the review found to have strong evidence of effectiveness were developed (qualitative). Both quantitative and qualitative research was conducted in order to present a rich picture of evidence.

Methodology

The quantitative aspect of the review (which is published in full here at **www.cfbt.com/evidenceforeducation**) employed a form of best evidence synthesis. The Centre for Reviews and Dissemination (CRD) at the University of York conducted an exhaustive initial search to locate all studies that have compared alternative approaches to early childhood education from 1960 to the present day. Studies included valid measures of language, literacy, phonological awareness, mathematical, and/or cognitive outcomes that were independent of the experimental treatments.

The studies in the quantitative review compared children taught in classes using a given programme to those using an alternative programme or standard practices. Any early years setting that offered a regularly scheduled educational programme to a group of pre-schoolers, such as nursery classes or Sure Start centres, was included. It is important to note that the focus of the literature was on the effectiveness of programmes for young children at risk of school failure due to poverty.

A total of 40 studies evaluating 29 different programmes met the criteria for outcomes assessed at the end of pre-school and/or reception or kindergarten and were included in the review. Based on the extent of their impact in these studies, programmes were rated as having strong, moderate, limited or insufficient evidence of effectiveness.

The qualitative aspect of this study aimed to explore in detail all of the programmes which were highlighted as having strong impact. Field visits were conducted to see programmes in action and practitioners and programme designers were interviewed to establish common themes and lessons learned. Programme materials were also reviewed.

Section 3. Findings

"The quantitative review concluded that on academic outcomes at the end of nursery and/or reception (age six), six programmes showed strong evidence of impact."

The quantitative review concluded that on academic outcomes at the end of nursery and/or reception (age six), six programmes showed strong evidence of impact: *Curiosity Corner, Direct Instruction, ELLM, Interactive Book Reading, Let's Begin with the Letter People and Ready, Set, Leap!* The effects of these programmes were on language, literacy and/or phonemic awareness. For some of the studies the meaningful effects were seen only at the end of nursery (*Direct Instruction and Interactive Book Reading*), and for others positive effects were apparent at the end of reception (*Curiosity Corner, ELLM* and *Ready, Set, Leap!*). The case study work focused on these six programmes – all of which originated in the United States of America.

The sub-sections below aim to highlight the key aspects of these programmes, as well as where they share features and where they differ. At the end of the paper, some overall insights and recommendations based on findings are detailed.

3.1 Overview of programme features

The six programmes that showed strong evidence of impact fit into two categories: comprehensive curricula that provide practitioners with support for all aspects of provision, and targeted programmes that focus on one aspect of learning. Table 1 below highlights which programmes are comprehensive curricula and which are targeted programmes.

Table 1 – Programme categories

Comprehensive curriculum	Targeted programme
Curiosity Corner	*Direct Instruction*
ELLM	*Interactive Book Reading*
Let's Begin with the Letter People	
Ready, Set, Leap!	

The distinction is important to note because targeted programmes do not necessarily exclude other approaches being used to support pre-school education. Whilst *Direct Instruction* may be highly academically focused, it could be supplemented with additional curriculum material to emphasise social and emotional well-being. By contrast comprehensive curricula are designed to provide for the entirety of children's needs.

Despite these differences in structure, all the programmes under review shared some key features, which practitioners and programme designers considered crucial to success:

1. **All programmes offered intensive support to achieve full and faithful implementation.** Support was often provided by coaches, many of whom had worked with the programme over a number of years and were either former practitioners themselves or linked to university departments. Most coaches and teachers considered this level of support was particularly important in light of the relatively low skill requirements to become an early years practitioner in parts of the United States. Support included training courses before, during and after the school year, observations and one-to-one coaching.
2. **All programmes provided a planned curriculum.** Teacher support packages included suggested activities, lesson plans and schemes of work which were linked to specific learning and developmental objectives. In all cases, except *Direct Instruction*, weekly or

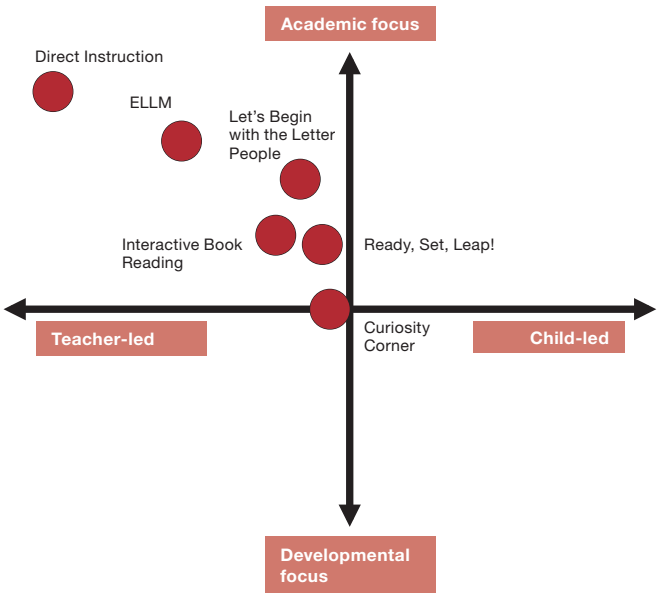
"Although most programmes were designed to deliver a balance of teacher- and child-directed activities, practitioner input was often strongly encouraged."

monthly themes guided activities, including class reading and structured play. Most also had assessment frameworks. Overall, teacher materials mirrored, both in level of detail and scope, support commonly available for teachers of older children in the compulsory sector.

3. **All programmes adopted teacher-led practices combined with structured and purposeful child chosen activities.** Although most programmes were designed to deliver a balance of teacher- and child-directed activities, practitioner input was often strongly encouraged. For example, in programmes where children were asked to select activities themselves, choices remained linked to the topic of the day or the week as planned by the teacher. Unstructured play was not a defining feature of any of the programmes.
4. **All programmes highlighted that their design and practice had been informed by academic research** and most even underlined the precise links in teaching materials. One programme, *ELLM* was directly managed from the University of North Florida and *Interactive Book Reading* and *Curiosity Corner* originated from federally funded research grants at Johns Hopkins University.
5. **All programmes placed an emphasis on academic skills such as sound, letter and word recognition to prepare children for reading and writing.** However, practitioners used a variety of teaching methods to achieve this. Apart from *Direct Instruction*, practitioners used a combination of a blended whole language approach (i.e. using oral language, books and pictures to aid understanding and generate interest) with some complementary distinct skill teaching (e.g. letter and phonemic awareness).

As highlighed above, most of the programmes could be characterised as employing planned and themed curricula and therefore elements of teacher-led practices. However, some programmes allowed for more child-centred activities than others. Equally, some placed a greater emphasis on academic skills such as language acquisition and literacy. Table 2 below provides an approximate overview of how child-centred and academic-focused the programmes were in comparison to each other (not an absolute scale). The programmes were plotted based on classroom observations, discussions with practitioners and a review of curriculum material. However it remains a subjective analysis and all programmes are discussed in more detail below.

Table 2 – Programme discussions



> *DI focuses mainly on sound and letter awareness and does not seek to contextualise skills with reading books and pictures.*

The following sections are structured around each programme's key features and their relative emphasis on teacher and child-led activities, and academic and developmental outcomes. The discussion also seeks to make reference to some of the over-arching questions highlighted at sub-section 2.2 above.

3.2 Teacher-led and child-directed approaches

The most teacher-led programme, *Direct Instruction* (DI), is perhaps the most controversial.

Some educators consider it too prescriptive and regimented, taking into account neither wider social and emotional objectives nor whole-language approaches (DI focuses mainly on sound and letter awareness and does not seek to contextualise skills with reading books and pictures). However results from the synthesis review suggests that the programme has positive impacts for children, particularly those from low-income backgrounds. Box 1 on page 14 provides an overview of the programme, including its key features.

The programme that perhaps provides the best contrast to DI is *Curiosity Corner* since it adopts a more child-centric approach. There is provision both for some relatively free play and some social pedagogical instruction. However there remain similarities with DI and there is still a considerable amount of teacher-led activity. See Box 2 on page 15.

Ready, Set, Leap! also takes a more child-centred approach than DI, with a greater emphasis on individual active learning, multi-sensory activities and social and emotional outcomes. However, it too retains a clear focus on the role of the teacher, with provision for some rigorous assessment procedures and academic content. See Box 3 on page 16.

3.3 Academic and developmental approaches

As highlighted above in Section 2, there is considerable debate about whether to emphasise academic or more developmental objectives in early childhood settings. One school of thought considers that children will learn quicker if they are happy, emotionally well supported and free to select the activities of their choice. Others argue that a more exacting focus on key learning outcomes such as language development and pre-reading skills is necessary to guarantee academic success later in life.

The case study evidence points to more support for the later approach. *Let's Begin with the Letter People* is an academic focused programme that adopts structured approaches to learning. Programme materials stress that between the ages of three and five, children are able to develop the crucial building blocks to academic success through a combination of whole class teaching and specific group activities. *Interactive Book Reading* also has a combination of whole class and group activities, scaffolding teachers' knowledge and classroom practices to develop oral language and pre-literacy skills. Specifically teachers read storybooks to children, highlight explicitly defined vocabulary, ask open-ended questions to encourage conversations and extend ideas and vocabulary to group activities.

The programmes however look at the acquisition of emergent literacy skills in different ways. *Let's Begin with the Letter People* focuses on specific letter recognition and repetition activities. See Box 4 on page 17.

Interactive Book Reading concentrates on the development of oral language and vocabulary, using stories to generate interest. See Box 5 on page 18.

Box 1: Direct Instruction (DI)

Bereiter and Englemann (1966)

DI is an explicitly teacher-led programme designed to support at-risk children with reading (and more recently mathematics). Originally targeted at reception level, it has now been extended up and down the age range. The programme is organised around a set of highly prescribed teaching strategies that involve small group (maximum 10) call and response, along with instant teacher correction of mistakes and repetition. DI does not cover background content knowledge or themes; rather it is a set of specific instructions for teachers and children.

The programme is carefully sequenced and children are tested at the beginning of (and throughout) the year to assess where they should start or whether they should skip activities. Children are taught in groups with similar scores and do not move to the next set of lessons until they have mastered previous ones. Coaches from the National Institute for Direct Instruction (NFDI) support practitioners with data analysis and ongoing assessment and instructional practices.

The scheme begins with sound recognition (phonemic awareness), then moves on to blending skills (i.e. bringing together sounds into whole words) and finally moves to word recognition and reading. Publicity for the programme suggests that for high-achieving children the journey from phonemic awareness to reading can take just six months during the reception year. However, for three to five year olds the programme focuses mainly on phonemic awareness, with children progressing faster if they are ready.

To give a flavour of the strategies employed, the description below highlights some teacher instructions for an early lesson on phonemic awareness:

Exercise 4: Introducing the new sound 'aaa' as in 'and'
(Teacher sits with students in front of him/her holding teaching book)

(a) (Touch the letter). Here's a new sound. My turn to say it. When I move under the sound, I'll say it. I'll keep on saying it as long as I touch under it. Get ready 'aaa'

(b) My turn again. Get ready (hold for two seconds) 'aaa'

(c) My turn again. Get ready (hold for two seconds) 'aaa'

(d) Your turn. When I move my finger under the sound, you say it. Keep on saying it as long as I touch under it. Get ready (hold for two seconds) yes 'aaa'.

(e) Again get ready (hold for two seconds) yes 'aaa'. Good saying 'aaa'.

In future lessons sounds are blended into words and children are asked to repeat and then 'say it fast', both individually and as a group, until all get it right. If mistakes are made the child is instructed to do the exercise again on their own. In fact the programme is so focused on 100 per cent success rates that it asks teachers to sit struggling children in front of them so they get the bulk of the teacher's attention.

The essence of the programme is based on modelling, repetition and constant consolidation. Only a small number of letters are introduced each week and the emphasis is on getting the basics right before moving on. The programme does not aim to be a comprehensive curriculum. The activities focus on a small part of provision and practitioners suggested that you could combine DI with other more freeing activities during the course of the day.

Nevertheless DI promotes a style of learning that is teacher driven and wholly focused on academic outcomes. Programme materials convey clearly: if you want children to be able to read, you need to expose them in a highly structured way to sounds, letters and words early and often. This is particularly important for children who may not have that kind of exposure at home.

Box 2: Curiosity Corner

The Success for All Foundation[6]

Curiosity Corner is a comprehensive curriculum for three to five year olds that covers academic and social aspects of development. Borrowing from a constructivist approach, the programme seeks to build on the legacies of different educational philosophies (e.g. John Dewey's 'immersive learning', Piaget's 'discovery learning' and Feuerstein's 'teacher intervention model'). Consequently, there are nine explicit domains which are covered in the schemes of work: emotional/personal, interpersonal, language and literacy, cognitive, creative, mathematical, science, social studies and physical. Weekly topic units touch on each of these domains and teachers can map their activities back to them.

In terms of approach, *Curiosity Corner* is a spiral curriculum with concepts and skills being repeated throughout the year. Unlike DI, where children do not progress with later lessons until early skills have been mastered, *Curiosity Corner* seeks to build knowledge through repeated exposure to concepts and practice using skills. Days and weeks are explicitly structured and routined and teachers receive detailed guidance about what they should be delivering and how. In particular, each day consists of the following:

1. **Greetings and readings**: The formal start of the day involves a daily message, often linked to the topic of the week. Children are gathered in a circle and may be asked to discuss the home-link activity from a previous day. [15 minutes]
2. **Clues and questions**: 'Curiosity the Cat' is a puppet used by the teacher to engage children in the weekly topic (e.g. food, names, animals etc.) In the case of the food unit on bread and butter the puppet asks children to guess what food is hidden in the teacher's bag with a series of clues. [10–15 minutes]
3. **Rhyme time**: The teacher leads children in a rhyme; in the case of the bread and butter unit this involves key words such as 'baker' and 'knead' and attempts to build word and sound recognition. [5–10 minutes]
4. **Learning labs**: This aspect of the day allows children to choose the activities they want to pursue. There is an 'art lab', a 'blocks lab', a 'dramatic play lab', a 'library and listening lab', a 'sand lab', a 'science lab' and a 'writing lab'. In each case activities are linked to the topic of the week (e.g. art lab involves drawing different types of bread in the bread and butter unit). The role of the teacher is to observe interactions, assess children's strengths and facilitate children's learning through scaffolded interaction. Children are asked to self-regulate, 'signing in and out' of activities to prevent overcrowding at certain labs. [50 minutes]
5. **Story tree**: The teacher reads a story linked to the theme and encourages children to engage using interactive reading techniques (e.g. asking children to infer meaning and predict). The same book may be repeated later in the week. [10–15 minutes]
6. **Outside/gross motor play**: This aspect of the day promotes gross motor skills, physical exercise and a focus on learning the thematic vocabulary and concepts through kinaesthetic experiences. [15–25 minutes]
7. **Question/reflection**: At the end of the day the children gather to review and synthesise what they have learned during the sessions.
8. **Home links**: Children are given a task to do at home designed to connect what they have learned at school with their outside experiences. There are also some take-home books for shared reading.

Designers and practitioners considered that three key aspects were crucial to the success of the programme: firstly, the highly structured nature of linked activities that promoted both independent and class learning; secondly, the supporting materials which included not only highly detailed lesson plans and suggested classroom layouts but also matrices for assessing levels of implementation of the programme; thirdly, the teacher observations and ongoing support throughout the year from the programme, targeted on the skills needed to implement the programme effectively.

[6] **http://www.successforall.net/Programs/curiositycorner.html**

Box 3: Ready, Set, Leap!

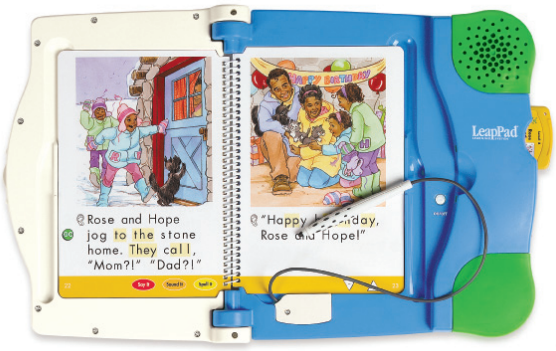
LeapFrog School[7]

Ready, Set, Leap!™, like *Curiosity Corner*, is an integrated and comprehensive curriculum that makes provision for child well-being as well as academic development, and weaves skill acquisition into group activities. The programme provides lessons such as those listed below, that are designed specifically to encourage social, emotional, physical, and cognitive development and children spend most of their day working in groups or on their own.

- Class Rules: Being Good and Kind
- I Feel Scared; I Feel Angry
- How I Grow and Change
- Being a Good Neighbor
- My Neighbor Has Feelings Too
- I Feel Happy; I Feel Sad

But perhaps the key feature of the programme is an emphasis on experiential learning to achieve academic outcomes. This is supported by technological components such as the 'Imagination Desk™', the 'LeapPad™' and the 'LeapDesk™' that aid self-regulated and child-centred activities. Programme materials highlight that academic outcomes are often best delivered through active learning.

More specifically, all technological components allow children to work individually or in groups to master early literacy skills such as letter recognition and sound awareness. They also promote self-assessment as components 'sound off' when children get aspects right. The 'LeapDesk™', for example, has removable letters which children can place in the right area and push down. The machine also has a 'talking' function so that children can gain sound and vocabulary awareness at the same time. Interviewees considered that the technological aspects both promote child-centred and individualised learning, and also cater for classrooms where practitioners may not yet be ready to deliver detailed learning schemes. A picture of the 'LeapPad™' is displayed below:



Despite this, there is still a considerable degree of teacher-directed activity in the programme. There are planned schemes of work and suggested activities, and the teacher's manual states: 'When you read well-worded phrases, repeat them. Have students repeat them. Say them in the voice of the character. Say them quickly and then slowly.' This appears to share similarities with some *DI* techniques.

There are also instructions about how to support assessment of emergent academic skills. Assessments are based on letter sounds, rhyming, blending etc. and children can take tests up to seven times a year. Teachers upload results onto the *Ready, Set, Leap!*™ system and use data to analyse how children are progressing and plan future learning experiences.

[7] http://www.LeapFrogSchool.com

Box 4: Let's Begin with the Letter People

Abrams Learning[8]

The *Let's Begin with the Letter People* approach is designed to instil letter and sound recognition through repetition, direct teaching and class reading. Specifically, 26 letter puppets that represent every letter of the alphabet are used daily to engage children's interest. Teachers introduce five to six letter puppets for each six-week unit and letters are carefully sequenced to allow groups of sounds to be developed at the same time. Rhymes and songs introduce puppets and their associated letters are repeated by the whole class together. Children are also asked to identify the hidden letter that is stitched into every puppet. To complement these activities, *Let's Begin with the Letter People* has its own assessment system which seeks to judge whether children are developing letter and sound recognition skills.

There are also books associated with each letter which are read together alongside repetitions and songs. An abridged version of a sample lesson plan, including a book reading, is detailed below:

Meet and Greet Mr. N
Objectives: develop oral language, build vocabulary, identify Mr. N's letter (N/n), participate in shared reading, listen and move to music.

Introductory activities: Before children arrive place Mr. N and his big book in the meeting circle. When the children are seated, greet Mr. N as though you have never seen him before:

> *'Hello there! Are you a new student? What is your name?'*

Mr. N. speaks very softly. Bring him to your ear in order to hear him. Then say:

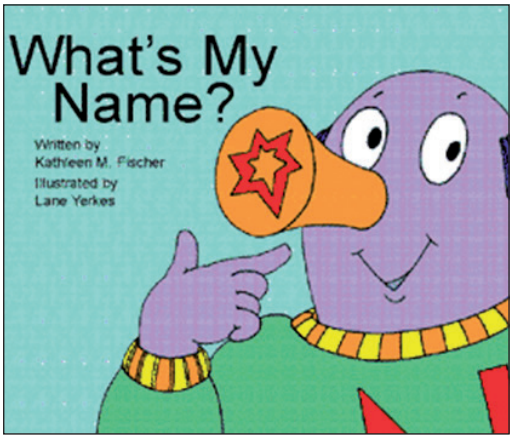
> *'He says he is a Letter Person and that this book will tell us his name.'*

Read a Big Book: Read the big book with the class and track the text, inviting children to examine and describe each illustration. Point out that the setting of this book is Mr. N's home. After the first reading, tap your head with your finger to demonstrate *'Let me guess.'* As you read, point to Mr. N's clothes, the noodles and Mr. N's noisy noise to assist comprehension. When you finish point out that Mr. N has a capital N on his front and a lowercase n on his back. Invite children to trace his letter with their fingers.

The lesson concludes with Nr. N's song which involves repetition of the letter and sound. As children become familiar with the song encourage them to sing 'ninny, nanny, nonny' with Mr. N.

A picture of Mr. N is highlighted below.

Let's Begin with the Letter People is a comprehensive curriculum and therefore focuses on other skills as well. Group work follows the specific letter-related activity and class reading. During group work, some children take part in play (within a select number of choices) whilst the teacher works with a small group on emergent writing skills. Gross motor development and snack time are also built into the programme.



Overall, *Let's Begin with the Letter People* is explicitly academic, seeking to extend children's formal learning down the age range. Practitioners commented that this was commensurate with increasing parental demand for high achievement, particularly in affluent areas where *Let's Begin with the Letter People* was observed in action. Interviewees were also keen to highlight that the academic nature of the programme helped to further professionalise and upskill the early learning workforce.

[8] **http://www.abramslearningtrends.com/lets_begin_with_letter_people.aspx?CategoryID=10**

Box 5: Interactive Book Reading

Wasik and Bond (2001) and *Wasik, Bond and Hindman (2006)*

Interactive Book Reading is one part of Johns Hopkins' Language and Literacy Project and is designed to promote early literacy through whole-class, interactive reading. (Other aspects of the Johns Hopkins project focus on different language features such as emergent writing and letter recognition.)

Interactive Book Reading essentially uses dialogic reading techniques that are familiar to many school teachers for older year groups. Children engage in class reading and the teacher encourages interactivity by posing open and closed questions before, during and after. The rationale behind the approach is to promote learning gains by enlivening the potentially passive activity of a teacher reading to the class.

Specifically, *Interactive Book Reading* highlights three components:

1. **Asking questions**: Before, during and after reading the teacher asks open-ended questions to provide children with the opportunities to use talk, language and vocabulary as well as reflect, predict, describe, react, recall and reinforce. Questions span a range of levels, engaging higher and lower order thinking skills. Some questions are more analytical whilst others are based purely around recall.
2. **Building vocabulary**: During class reading, the teacher takes the opportunity to define, recast, demonstrate and point to particular words (in some cases using props and pictures). The teacher identifies key words beforehand and stops and discusses them during reading.
3. **Making connections**: Teachers explicitly use the vocabulary from the stories and ask open-ended questions during group activities to promote the use of language.

In terms of practicalities, the designers suggested that shared reading can be done in small groups, as well as with the whole class, and can be led by teaching assistants. They also highlighted the need to use a wide range of books to engage all interests, including subjects that reflected the full diversity of children's backgrounds.

Overall *Interactive Book Reading* aims to develop oral language skills and vocabulary through contextualising children's interests in stories and related group activities, delivering significant improvements in language development for learners. Practitioners considered this approach in opposition to stand-alone techniques which place an (over-) emphasis on repetition and recall. Practitioners also considered that this approach was more beneficial to children in the long term since it generated a love of reading.

3.4 Targeting disadvantaged children

The final programme under review, *ELLM* (Early Literacy and Learning Model), is explicitly designed for children from low-income families. It is one of the programmes that have been selected by the state of Florida to support teaching in settings that are deemed to be at risk of failure. Designers and practitioners considered that *ELLM* was successful because it was predominantly teacher-led, data rich and innovative. See Box 6 below.

Box 6: Early Literacy and Learning Model (ELLM)

Florida Institute of Education at the University of North Florida

ELLM was developed to increase young children's opportunities to acquire the basic skills needed to become successful readers and learners. Like the EYFS in England, standards are age-specific, complement those for older children and cover both academic and non-academic areas (such as emotional and social well-being). The academic focus is perhaps more pronounced with accountability structures for settings linked to test scores on early reading and school readiness for five year olds. Consequently, *ELLM* was initially designed to focus on emergent literacy and this aspect remains the guiding principle for the programme. It has since been developed into a comprehensive curriculum (*ELLM Plus*) but this was not reviewed as part of the case study.

ELLM seeks to bridge the gap between what the state wants children to learn and what the system can deliver. It attempts to improve both literacy and pre-literacy learning activities for young children from disadvantaged backgrounds whilst at the same time building the capacity of practitioners to deliver high-quality literacy- and language-focused teaching.

Like other programmes described above, *ELLM* offers curriculum guides, lesson plans and practitioner support. The distinctive features of the programme are described below:

- ***ELLM* is literacy focused**. The literacy-focused curriculum builds on children's cognitive development through literacy across the curriculum even while teaching in content areas. Children's acquisition of important cognitive and social/emotional development is facilitated through interactions with supportive teachers who encourage children's curiosity, persistence and creativity.
- ***ELLM* maps all activities to state standards**. For example, one pre-kindergarten (PK) standard for three year olds is to 'write for the following different purposes: labelling and story writing'. *ELLM* provides activities and resources to achieve the standard. In this case the programme suggests a teacher-led group activity following on from a class reading of the book *Why Write?* This level of mapping is crucial as Florida has a strict accountability regime which sees settings given the equivalent of a 'notice to improve' if testing in reception shows children have not met expected standards. *ELLM* is one of a suite of curricula that 'low-performing providers' are expected to use in order to improve.
- ***ELLM* is rich in data**. In order to meet accountability standards when children enter compulsory schooling, the programme supports practitioners in pupil-level observations. These observations provide detailed data about the skill levels of individual children. The Florida Institute of Education also provides sampling data from across the cohort. This support allows practitioners to reflect on their work. For example, *ELLM* personalises letter and sound knowledge teaching to meet the needs of children in individual classrooms, focusing on letters that children have not yet mastered, clustering letters (typically five letters at a time), and providing initial and ongoing support through whole group, small group, and one-to-one teaching.
- ***ELLM* highly encourages the use of an intensive coaching model for practitioners**. Programme designers and setting principals highlighted that entry requirements for early years practitioners were relatively low in the state. Therefore, *ELLM* offers training and coaching based at the University of North Florida to support, assess and advise practitioners when implementing the programme. Designers highlighted that the support of setting principals was crucial, as without time for professional development, practitioner improvements were hard to secure.
- ***ELLM* seeks to close the gap between theory and practice in a nuanced way.** The team at the University is made up of academics and practitioners. The activities and objectives in the programme are therefore both carefully linked to the evidence and also heavily road-tested in settings. In fact guidance and activities are often changed and refined in light of what practitioners say.
- ***ELLM's* network of settings, practitioners and academics generates innovation.** As a result of working closely with a small group of settings, designers are able to have constant and iterative conversations with the front line. Good practice is therefore shared quickly and often. There is also space for innovation. One example is the practice of giving children plastic bracelets as they go home that include questions for parents to ask them.

Overall, *ELLM* is a highly structured, academic and teacher-led programme. And although designers eschew the label 'direct instruction' they consider there is a considerable degree of teacher intervention, particularly around pre-reading, oral language and sound and letter awareness. In fact, the programme is underpinned by a desire to expose poorer children to more words than they might otherwise get at home.

[9] **http://www.unf.edu/dept/fie/ellm-plus-home.html**

Section 4. Limitations

"… programmes were not all observed within a disadvantaged context."

Limitations related to the quantitative study are highlighted in that report (see **www.cfbt.com/evidenceforeducation**). They include the need for more evidence about the long-term impact of programmes and the fact that the review focuses primarily on academic and cognitive outcomes as opposed to social and emotional ones. The limitations of the qualitative research relate to the nature of observations and discussions which varied from setting to setting. Also whilst the quantitative research highlighted outcomes for children from low-income backgrounds, the programmes were not all observed within a disadvantaged context.

Section 5. Conclusions and recommendations

"There is a tremendous need for longitudinal, preferably randomised evaluations of pre-school programmes and practices in the UK."

The case studies detailed above, combined with the quantitative review, begin to sketch out a picture of the key components for success in early education. Despite their differences, all the programmes were balanced in favour of academic and teacher-led activities (whilst also supporting focused child-directed practice and developmental goals). In most cases, teaching practice for three to five year olds resembled teaching practice for older primary age children.

Successful programmes relied on strongly supportive networks and often one-to-one coaching and guidance. Evidence from the review and the final case study of *ELLM*, also suggests that innovation both in terms of programme design and delivery can support children who face challenging circumstances at home.

However, it could be argued that the improved outcomes in language and literacy (as demonstrated by these programmes) are a natural result of academic focused interventions. And the evidence does not suggest that these schemes will necessarily support wider developmental objectives. What's more, transferring programmes from one country to another might require a considerable degree of cultural and pedagogical accommodation (although not always).

Of course more research is necessary. There is a tremendous need for longitudinal, preferably randomised evaluations of pre-school programmes and practices in the UK. All but one of the programmes highlighted in the synthesis study were reviewed in the US, many in large urban areas. Only eight are available in the UK and most of them do not have evidence of effectiveness.

Nevertheless, in the light of the robust nature of the synthesis evidence and the detailed case study work, recommendations for policy makers and practitioners to consider are set out below:

For policy makers:

- **Implement programmes that focus on language and emergent literacy development, particularly for children living in poverty.** Evidence suggests that a focus on academic outcomes particularly benefited children from poorer backgrounds. Policy makers should also implement the programmes with the strongest evidence of effectiveness.
- **Support education programmes that are developed jointly by early years practitioners and academics.** This will promote practice that is both innovative and road tested whilst also increasing the evidence base about what works.
- **Work towards a further professionalisation of the early years workforce** by providing practitioners with bespoke support through coaching and consultancy, and by developing effective planned curriculum.

For practitioners:

- **Consider the balance both between child- and teacher-led activities and academic and development-focused practice.** The evidence from this review suggests that whilst a balance is always necessary, teacher intervention and exposure to academic material early on can lead to significant gains. This may be particularly beneficial for children who may not have access to academic material at home.
- **Consider using pupil and cohort level data from observations to plan interventions.** Effective use of assessment frameworks, such as England's Early Years Foundation Stage points system may support a greater understanding of individual needs.

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