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Abstract

This book is about extending good practice in curriculum development and supporting and sustaining the positive practices that characterise many early childhood settings. The curriculum cannot be seen in isolation and it cannot exist without a strong and well-developed framework of support, the social and institutional context in which curriculum 'happens'. To develop and deliver a sound curriculum the staff must be well informed about child development and culture and about subject knowledge and appropriate ways of 'teaching' young children so that all the children in their setting can access the curriculum. Time needs to be spent developing shared perspectives so that everyone is pulling in the same direction.

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CHAPTER 1

CRITERIA FOR DETERMINING QUALITY IN EARLY LEARNING FOR 3-6 YEAR-OLDS

Iram Siraj-Blatchford

A framework for the curriculum

This book is about extending good practice in curriculum development and supporting and sustaining the positive practices that characterise many early childhood settings. The curriculum cannot be seen in isolation and it cannot exist without a strong and well-developed framework of support, the social and institutional context in which curriculum 'happens'. To develop and deliver a sound curriculum the staff must be well informed about child development and culture and about subject knowledge and appropriate ways of 'teaching' young children so that all the children in their setting can access the curriculum. Time needs to be spent developing shared perspectives so that everyone is pulling in the same direction.

Staff need time to develop a shared understanding of children, curriculum, learning and the role of adults in supporting learning. Research on school improvement and effectiveness suggests that where staff had been involved in the development of guidelines for their school, there was likely to be school-wide consistency in guideline usage. Where staff had not been involved, however, there was likely to be variation, with school teachers (educators) tending to adopt individual approaches to the use of guidelines for different curriculum areas. Staff involvement seems to be related to a consistent school-based approach to curriculum (Mortimore *et al*, 1988). In my own research on settings, which deliberately incorporated a care and educa-

tion philosophy, it appeared to be important that staff working towards a quality curriculum pursued common understanding of:

- Curriculum knowledge
- Active learning through scaffolding and play
- Equal opportunities
- Family and community partnerships
- Primary educators/key persons
- Interactions with adults and peers
- Assessment, observation and record keeping
- Staff development
- Environment factors (resource constraints)
- Multi-disciplinary teams
- Management matters

(Siraj-Blatchford, 1995)

From time to time each of these aspects will need to be systematically reviewed if a shared philosophy among staff is to be developed. Many of these issues are dealt with more fully in the chapters that follow; for example, Chapter 2 deals in detail with planning and assessment. In this chapter, following a discussion of curriculum content I discuss the role of parents in supporting their children's learning. I focus upon the process of learning for young children and how educators can successfully support children in their learning.

A Desirable Outcomes *Plus* Curriculum

The Rumbold Report (1990) emphasised the importance of a balanced approach to knowledge and learning, based on those purposes previously identified in HMI publications on the education of 5-16 year-olds. It emphasised a balance between concepts, knowledge and understanding, attitudes and skills, within a framework based on subjects, resource areas, broad themes or areas of learning. The Rumbold framework also followed that outlined in the 1985 HMI discussion document (*The Curriculum 5 to 16*) and included the following areas of experience and learning:

- Aesthetic and creative
- Human and social
- Linguistic and literary
- Mathematical
- Physical
- Scientific
- Technological
- Moral and spiritual

To this list we can now add:

- Success, self-esteem and resilience
- Cultural identity

Success, self-esteem and resilience was added to this list by Kathy Sylva in the START RIGHT Report (1994) in response to research by Dweck and Leggett (1988) in the United States. The research emphasised the importance of 'mastery' learning dispositions in children's educational development. There is evidence that children who experience education through taking some responsibility for their actions and learning become more effective learners. They are learning not only the content of the curriculum but the processes by which learning takes place. In the final chapter of this book, Rosemary Roberts treats the important area of personal and social education as a curriculum area worthy of separate activities, planning and assessment.

Cultural identity has also been added to the above list and this is seen as a significant area of concern for curriculum development (Siraj-Blatchford, 1996). All children and adults identify with classed, gendered and racialised groups (as well as other groups) but what is especially significant is that some cultural identities are seen as less 'academic' than others (often by the staff and children). We already know that children can hold views about their 'masterful' or 'helpless' attributes as learners (Dweck and Leggett, 1988).

These views tend to be subject related and lead to underachievement in some areas of the curriculum. Children construct their identities in association with their perceived cultural heritage (Siraj-Blatchford, 1996). Recently we have heard a good deal in the press about boys' underachievement and certainly the results from the school league-tables suggest that some boys do underachieve in terms of basic literacy, but it is important to note that this is only certain groups of boys and not all boys. Working-class white boys and African-Caribbean boys are particularly vulnerable. Similarly, children from some ethnic minority groups perform poorly in significant areas of the curriculum while other ethnic minority groups achieve particularly highly (Gillborn and Gipps, 1997).

It is apparent that certain confounding identities, for instance, white/working class/male, can lead to lower outcomes because of expectations held by the children and adults. In asserting their masculinity, white working-class boys might choose gross-motor construction activities over reading or pre-reading activities. Similarly, some girls may identify more strongly with home-corner play and favour nurturing activities over construction choices. Class, gender and ethnicity are complicit here and the permutations are not simple but they

do exist and do lead to underachievement. Educators need to take an active role in planning for, supporting and developing individual children's identities as competent learners of a broad and balanced curriculum.

In the active construction of their identities, children distance themselves from 'others' (Siraj-Blatchford, Iram and John, 1998). The issue is therefore to show children that they are mistaken in associating these 'others' with particular areas of the curriculum. We have to extend children's identity as learners and break down the stereotypes. Boys need to disassociate literacy from 'girls' stuff, and be presented with strong masculine role models that value literacy. It is in this context that we can see the benefits of the current Government's new pilot scheme developed with the football Premier League. In partnership with the Government, local authorities and football clubs, study support centres are being established at Premier League grounds for the benefit of local children.

In contrast to the comprehensive list of subjects and cross-curricular dimensions listed above, the recent *Nursery Education: Desirable Outcomes for Children's Learning on Entering Compulsory Education* (SCAA/DfEE, 1996) includes only six areas of development:

- Personal and Social Development
- Language and Literacy
- Mathematics
- Knowledge and Understanding of the World
- Physical Development
- Creative Development

This is a limited and limiting curriculum, but probably necessary given that the curriculum was introduced because the Government wanted to improve educational standards. Although this may sound contradictory, it is not. If standards are to be improved they need to be measured in some way, and some areas of the curriculum lend themselves to measurement more than others. Unfortunately, the variation in training of early childhood educators, the combination of market-led provision of voluntary, private and state services and the lack of co-ordination between them has left us with uneven educational standards.

The rationale behind the Desirable Outcomes is to set a 'base-line' educational standard. In principle this should be applauded, and it is to be hoped that settings where training opportunities and resources have been poor will begin to raise their standards. At the same time no setting should feel strait-jacketed by the *Outcomes* curriculum. Many early childhood settings from a variety of provisions are already delivering a richer and more complex

curriculum than that outlined and implied in the Desirable Outcomes. It is essential that we hold on to the wider picture of curriculum quality and see the 'desirable outcomes' for what they are – an instrumental and limited base-line.

In this book we support the inclusion of all aspects of the former HMI curriculum with the addition of the two cross-curricular dimensions mentioned above. We therefore incorporate the Desirable Outcomes guidance for four year-olds. The curriculum presented here provides a more robust Desirable Outcomes *Plus* guidance to the curriculum that more closely reflects the depth and variety of good practice found in many settings. The fact that it is aimed at 3-6 year-olds means that the early stage of the National Curriculum is taken into account.

Cross-curricular themes such as personal and social education and gender equity have been recognised as significant curriculum initiatives in the development of all children (Siraj-Blatchford, John and Iram, 1995). In the early years curriculum the Schools Curriculum and Assessment Authority had asserted that the Desirable Outcomes can deliver these:

'Taken together, the six areas of learning also provide opportunities to address important aspects of children's spiritual, moral, social and cultural development'. (SCAA, 1996 p.4)

These areas are not a strength in many settings and their implementation requires a commitment to the development of equality of opportunity. It is imperative that we provide an environment that is welcoming, happy, safe and secure and that reflects the community it serves. The environment should be free from negative messages that are damaging to any individual regardless of their race, religion, language or culture (Clarke and Siraj-Blatchford, 1994).

The curriculum should offer a range of appropriate *breadth* and *balance* in subject matter and needs to be carefully planned to match children's abilities. Educators will need to ensure that the curriculum has *relevance* to the lives of young children – they often enter a setting assuming we know everything they do! Hence, we are familiar with questions from little children such as: 'You know my goldfish?' Getting to know the child's parents and the child (as described in Chapters 2 and 10) will help us to *differentiate* tasks, experiences and activities which extend each child's development and build on their interests and prior understandings.

Variety and *pace* in the curriculum are an important feature in 'teaching' young children. Due attention should be given to children's ability to con-

concentrate and persevere at particular tasks, and the range of choices in terms of materials and experiences will determine whether children remain motivated or become bored. Continuity and progression are two dimensions which are normally associated with the 'next stage' of education. With young children it is especially important to consider *continuity* and *progression* from the home; I will return to this under the section on the child's 'natural' curriculum. *Active* learning experiences in the context of a *combined* care and education philosophy will support children in their development of feelings as well as educational dimensions.

Parents supporting children's learning

Not only may the experience at home provide something not readily available in school but also it seems that the skills involved apply as much to the process of attention, perseverance, task performance and work organisation as to particular areas of knowledge. Learning how to learn may be as important as the specifics of what is learned. (Rutter, 1985)

The Education Reform Act (DES, 1988) identifies the role of parents as vital to the reform of schools and to the process of raising educational standards through their greater involvement in decision making and the governance of schools. Some research on parent involvement, for instance studies in reading and literacy development (Hewison, 1988; Hannon and James, 1990), suggest that children's educational development can be enhanced with long term positive effects. Researchers have investigated the reasons for poor reading scores among working-class children and some minority ethnic groups so that they can be improved.

Studies prior to the 1980s suggested that home background based on factors such as socio-economic advantage, parent attitudes and family size did relate to a child's achievement in reading scores. Hewison and Tizard (1980) studied a cohort of working-class children to find out which factors made the greatest difference in determining whether a child would learn to read. Whether the mother heard the child read regularly seemed to be much more important than the mother's competence in language or the child's IQ. Other studies have shown that educators' involvement in the home can make a positive impact on reading (Hannon, 1987) and early learning e.g. the High/Scope Perry Pre-school Study (Schweinhart et al, 1993).

If we accept that parents are their children's first teachers then it is likely to follow that learning outcomes will be more effective where there is some consensus and consistency between the home and the early childhood setting's approach to the child's learning (Jowett *et al.*, 1991; Long, 1992;

Epstein, 1988; 1991; Schaeffer, 1992). Positive partnerships with parents can be achieved when there is honesty and mutual respect and where we, as educators, develop strategies for sharing and show a willingness to negotiate. Educators must take the responsibility for building confidence and getting to know parents as people with a background and views which affect their everyday actions.

There are a number of reasons why it is important to involve parents in the daily life of an early years setting. Each child is an individual. Their language and culture shape their development. Parents can provide valuable information and insights about their children. Regular discussions with parents assist staff to become better informed about the child's needs. Parents have a contribution to make in planning the curriculum and might a significant contribution in working towards common goals for their children. The way we respond to parents deserves the same attention and effort as work with children. Each parent is an individual and their first priority is to their own child so it is unreasonable to restrict their involvement to supporting the whole group. Yet this is often the only condition on which educators accept their help.

Engaging with the child's 'natural curriculum'

Young children enter educational institutions with a great deal of knowledge and skills already in place. They have learnt many things at home and in their community environment. All children will have established their own patterns of learning which are developed during their 'natural' day-to-day experiences. We could call this their 'natural curriculum', a unique and ad-hoc programme they followed before entering pre-school. However, the processes by which children will have acquired this knowledge of the world around them will be very similar to the ones advocated in this book.

The key processes of learning will have been through play, watching adults and other children perform tasks, by partaking in real-life experiences and through talking about these experiences with others. Children enter the educational setting with a wealth of preferences and prejudices, and with knowledge and experiences associated with language, maths, science, technology and sociability plus other skills and information. The way children articulate and reflect upon this knowledge and experience will depend on the expectations held by those around them. In the home environment most children will have had (and continue to have) a rich experience embedded within cultural meanings that are familiar to them (Tizard and Hughes, 1984). How can the early childhood educators, whether in the context of a playgroup or a primary school classroom, build upon this learning?

The process of learning

For effective curriculum implementation in early childhood education (ECE) the context in which learning takes place needs to be highlighted. The importance of clear aims, careful planning, curriculum integration, and the centrality of play and interactions, has to be considered alongside the role of the adults, a strong partnership with parents, continuity and progression, observation, assessment and recording and the review cycle. The Rumbold report sets out another prerequisite for learning:

For the early years educator – how children are encouraged to learn – is as important as, and inseparable from, the content – what they learn. We believe that this principle must underlie all curriculum planning....

... educators should guard against pressures which might lead them to over-concentration on formal teaching and upon the attainment of a specific set of targets.

The understanding of learning underpinning this chapter is based upon principles of social constructivism drawn from both Vygotsky and Piaget but also conditioned by a cautious scepticism regarding any alleged *essential* or *natural* limitations to children's intellectual development. What this means in practice is that I accept Piaget's account of 'intellectual adaptation' as the most convincing model that has yet been put forward. Piaget describes a learning mechanism which involves children in the active elaboration of their own mental structures as they assimilate and accommodate new experiences. For Piaget, this learning machine was 'fuelled' by the affect of 'interest' and triggered by any form of 'disequilibrium' between experience and the child's prior knowledge and skill. Piaget also argued that the child's intellectual adaptation was as much an adaptation to the *social* environment as it was an adaptation to the physical and material environment. This provides a strong foundation for early years educational practice as it accounts simultaneously for learning and for motivation.

This latter part of his theory, which provides an account of the role of social factors in early childhood development has, unfortunately, been relatively neglected (DeVries, 1997). Piaget argued that adult-child relations influence every aspect of development and that affective and personality development are intimately related to intellectual and moral development. Perhaps most importantly, Piaget argued that reciprocity in peer relations provide the foundations for perspective taking and decentering. This suggests that *collaborative* play is exceptionally important for children. According to DeVries, Piaget proposed ways in which co-operative social interaction between chil-

dren and between children and adults function to promote cognitive, affective and moral development and as she says:

If Piaget was correct, then we need to reconsider the structure and methods of our schools from the point of view of long term effects on children's sociomoral, affective and intellectual development. (p16 *op cit*)

It is to Vygotsky that we are indebted for the foundations of our theories of teaching 'as assisted performance' (Tharp and Gallimore, 1991). Vygotsky defined what he referred to as the 'zone of proximal development' (ZPD) as:

...the distance between the actual developmental level as determined by individual problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (Vygotsky, 1978, p86)

The notion has now been popularly extended beyond problem solving to encompass performance in other areas of competence. The aims of teaching, from this perspective, are to assist children within this zone, providing the support and encouragement they require to perform successfully in areas that would otherwise be beyond them. The key challenge for educators becomes one of defining the limits of the zone, matching, or 'tuning' the support, or 'scaffolding' (Wood, Bruner and Ross, 1976), just beyond each child's current independent capabilities. Assistance within children's existing capability is wasted, while assistance beyond the limitations of the zone will be meaningless and potentially damaging to their self-confidence.

As DeVries argues, a great deal of work remains to be done to integrate Piagetian and Vygotskian theory but there can be little doubt that this is worth doing.

Putting together this book, the authors have shared the view that an appropriate curriculum for young children will be one determined with the needs and characteristics of individual and specific groups of children in mind. In adopting the social constructivist approach we are indicating our belief that children learn best when they are being supported by the adult or their peers in developing their individual capability. We also believe that children should be made aware of their learning and of the benefits to be gained from developing their experience in interaction with others. We therefore argue that the early years curriculum should be appropriate to young children's limited experience and to their current social and physiological development. But we also agree with Jerome Bruner that 'anything can be taught to any child in an intellectually honest way' so are cautious about any kind of inherent 'developmental' approach that emphasises what it is that children

'ought to be able to do' at a particular age or stage. Where this approach is adopted, those children who 'fail' to meet the criteria are often considered deficient in some way. Given the variety of experiences that young children bring with them in the early years, we regard these approaches as particularly inappropriate. We would therefore support educators in constructing an environment based on the view that children are active learners and in following the principles below:

Principles of active learning

- Provide children with experiential activities to assist learning of the curriculum
- Activities should be planned for particular groups of children (language, age, ability)
- Encourage and develop co-operative learning
- Stimulate problem solving based on direct observation of the local environment
- Work co-operatively with the parents and community
- Observe and assess the range of learning
- Develop social responsibility in children through classroom structure and negotiated rules
- Create an organised, attractive and exciting class environment

Adapted from Sylva and Siraj-Blatchford (1995)

In addition, any curriculum has to be well planned and based on sound, constructivist practice and delivered by adults who have themselves received sustained, high quality education (Philips, McCartney and Scarr, 1987). The Desirable Outcomes document is a guide to a baseline, so practitioners need not feel restricted as to the depth and content of the curriculum. Nor does it prescribe how practitioners should teach.

Recommended reading:

Moriarty, V. and Siraj-Blatchford, I. (1998) *An Introduction to Curriculum Development for 3-5 year-olds*, Nottingham: Education Now. This book is concerned with practitioners' responses to the Desirable Outcomes and argues for an integrated ECE service which combines care and education philosophies. Short and easy to read, it highlights good practice in key areas of the curriculum and parent involvement for any setting which considers itself as providing a curriculum for children under five.

The Early Years Curriculum Group produces some excellent material and the rather dated publication on *The Early Years and the National Curriculum* (1989) has some good advice for those working on curriculum with 3-6 year-olds.

Further details on Research Projects concerned with Quality in ECE in the UK:

Title: Effective Early Learning (EEL) Project

Principal Project Directors: Christine Pascal and Tony Bertram

Address: Worcester College of Higher Education, Henwick Grove, Worcester, WR2 6AT Tel/Fax: 01905 425681

Title: Quality in Diversity (QuiD) Project

Principal Project Director: Vicky Hurst for the Early Childhood Education Forum

Address: Quality in Diversity Project, c/o National Children's Bureau, 8 Wakley Street, London, EC1V 9QE

Title: Effective Provision of Preschool Education (EPPE) Project

Principal Project Directors: Kathy Sylva, Edward Melhuish, Iram Siraj-Blatchford and Pam Sammons

Address: Child Development and Learning, Institute of Education, University of London, 20 Bedford Way, London, WC1H 0AL. Tel: 0171 612 6219. Fax: 0171612 6230.

E-mail: EPPE@ioe.ac.uk

References

- Clarke, P. and Siraj-Blatchford, I. (1994) 'Working with Bilingual and Multilingual Families', National Children's Bureau Conference, Nottingham Unpublished paper
- DES (1988) *The Education Reform Act* London: HMSO
- Department for Education and Science, (1990) *Starting with Quality: A report of the committee of enquiry into the quality of educational experiences offered to 3-4 year-olds* (The Rumbold Report) London: HMSO
- DeVries, R. (1997) Piaget's Social Theory, *Educational Researcher*, Vol. 26, No. 2 March
- Dweck, C. S. and Leggett, E. (1988) 'A social-cognitive approach to motivation and personality', *Psychological Review*, 95, 2, pp. 256-273
- Epstein, J. (1988) 'Effective Schools or Effective Students? Dealing with Diversity' in Haskins, R., and MacRae, D. (Eds.) *Policies for America's Public Schools: Teachers, Equity and Indicators*. Norwood, New Jersey: Ablex, pp. 89-126
- Epstein, J. L., and Dauber, S.L. (1991) 'School Programs and Teachers Practices of Parent Involvement in Inner-City Elementary and Middle Schools', *The Elementary School Journal*, 91, 3, pp.289-305
- Gillborn, D. and Gipps, C. (1997) *Recent Research on the Achievements of Ethnic Minority Pupils* London: HMSO
- Hannon, P. and James, A. (1990) Parents' and Teachers' Perspectives on Pre-School Literacy Development', *British Educational Research Journal*, 16, 3
- Hannon, P. (1987) A Study of the Effects of Parental Involvement in the Teaching of Reading on Children's reading Test Performance, *British Journal of Educational Psychology*, 57, 56-72
- Hewison, J. and Tizard, B. (1980) Parental Involvement and Reading Attainment *British Journal of Educational Psychology*, 50, pp209-215
- Hewison, J. (1988) 'The long term effectiveness of parental involvement in reading: a follow-up study to the Haringey reading project', *British Journal of Educational Psychology*, 58, pp.184-190

- Jowett, S. and Baginsky, M. (1988) Parents and education: a survey of their involvement and a discussion of some issues, *Educational Research*, 30 (1)
- Long, R. (1992) Parent Involvement or Parent Compliance? Parental roles and school improvement, in Mertons *et al Ruling the Margins: Problematising Parent Involvement* London: University of North London
- Morlarty, V. and Siraj-Blatchford, I. (1998) *An Introduction to Curriculum Development for 3-5 year-olds*, Nottingham: Education Now
- Mortimore, P. Sammons, P. Stoll, L. and Ecob, R. (1988) *School Matters: The Junior Years*. Somerset: Open Books
- Philips, D.A., McCartney, K., and Scarr, S. (1987) 'Child Care Quality and Children's Social Development', *Developmental Psychology*, 23, 4, pp.523-543
- Rutter, M., Maughan, B., Mortimore, P., and Ouston, J. (1979) *Fifteen Thousand Hours: Secondary Schools and their Effects on Children*, Somerset: Open Books
- School Curriculum and Assessment Authority, (1997) *Looking at Children's Learning: Desirable Outcomes for Children's Learning on Entering Compulsory Education*, Middlesex: SCAA
- School Curriculum and Assessment Authority, (1996) *Nursery Education: Desirable Outcomes for Children's Learning on Entering Compulsory Education*, London: SCAA and DfEE
- Scott, W. (1996) 'Choices in Learning', in Nutbrown, C. *Children's Rights and Early Education*, London: Paul Chapman pp. 34-43
- Schweinhart, L.J., Barnes, H.V. and Weikart, D.P. (1993) *Significant Benefits: The High/Scope Perry Preschool Study through Age 27*. Michigan: High/Scope Educational Research Foundation
- Shaeffer, S. (1992) 'Collaborating for Educational Change: the role of parents and the community in school improvement', *International Journal of Educational Development*, 12, 4, pp.277-295
- Siraj-Blatchford, I. (1995) 'Combined nursery centres: bridging the gap between care and education' in Gammage and Meighan, *The Early Years: The Way Forward* Nottingham: Education Now
- Siraj-Blatchford, I. (1996) 'Language, Culture and Difference' in Nutbrown, C. *Children's Rights and Early Education* London: Paul Chapman pp. 23-33
- Siraj-Blatchford, I. and Siraj-Blatchford, J. (Eds.) (1995) *Educating the Whole Child: Cross-curricular skills, themes and dimensions in the primary schools* Buckingham: Open University Press
- Siraj-Blatchford, I. and Siraj-Blatchford, J. (1998) 'Race, reform and research in UK primary and pre-schools' a Paper presented at the *American Educational Research Association Conference*, San Diego, April 1998
- Sylva, K., and Siraj-Blatchford, I. (1995) *The Early Learning Experiences of Children 0-6: Strengthening Primary Education Through Bridging the Gap between Home and School* Paris: UNESCO
- Sylva K., in Ball, C. (1994) *START RIGHT: The importance of Early Learning* London: RSA, pp.105-107
- Tharp, R. and Gallimore, R. (1991) A Theory of Teaching as assisted Performance, in Light, P., Sheldon, S. and Woodhead, M. (Eds.) (1991) *Learning to Think*, London: Routledge
- Tizard, B. and Hughes, M. (1984) *Young Children Learning* London: Fontana
- Vygotsky, L. (1978) *Mind in Society: The development of higher psychological processes*, in Cole, M., John-Steiner, V., Schribner, S. and Souberman, E. (Eds. and trans.) Harvard University Press
- Wood, Bruner and Ross, (1976) The role of tutoring in problem solving, *Journal of Child Psychology and Psychiatry* 17(2) p 89-100