CHAPTER FIVE

Developing Play in the Curriculum

The first four chapters have provided a detailed exploration of play, drawing on multi-theoretical perspectives. The following chapters focus on improving the quality of play in practice, while continuing to make connections between theory and practice. There is much useful theory and practical guidance from research studies, but what really matters in educational settings are the theories, values and beliefs of practitioners, and their ability to build their personal knowledge and understanding through observation, discussion, reflection and ongoing professional development. This chapter examines how practitioners can make informed choices about curriculum design and pedagogical approaches in their settings, based on sound theories and principles. The approaches advocated here respect some of the tenets of the ideological tradition that we explored in Chapter 1, but at the same time provide a secure justification for play that is informed by evidence from research and curriculum models from other countries. This chapter explores five key themes: understanding the processes that link playing and learning; examining different curriculum models; exploring the plan–do–review approach to integrating child- and adult-initiated activities, designing a curriculum that incorporates play, and planning for progression and continuity. The following three chapters focus on the linked themes of developing a pedagogy for play, improving assessment practices, and enhancing practice through professional development.

PROCESSES THAT LINK PLAYING AND LEARNING

Practitioners can develop informed understanding of play through examining the processes that link playing and learning. This can be achieved by a critical analysis of children at play, which includes observing what is happening in play-learning contexts (behaviour, language, actions and interactions, use of tools, signs and symbols),

understanding the child as player/learner and reflecting on the quality of provision. By tuning in to play, practitioners can ensure that their provision is tuned in to the needs and abilities of all children in the setting. In addressing the following questions, we will refer back to the theories and research evidence explored in previous chapters, giving examples to illustrate key ideas:

- What is the child doing in the play activity?
- What is play doing for the child?
- What is happening inside the child's mind?
- What learning processes can we identify?
- How can we use this information to inform and guide our practice?

We have identified three levels that can be used to understand the relationships between play, learning and development. First, at a broad level, play is seen as contributing to the holistic development of the child, including the three domains of development – cognitive, affective and psycho-motor (Figure 5.1).

Macintyre (2001) describes how play-based activities contribute to children's learning in each of these domains, and integrate learning across the domains. She provides skills-based observational checklists and a developmental record to enable practitioners to track children's learning and identify areas of difficulty.

At a second level, we can look at play in relation to curriculum models: the Stepping Stones, the areas of learning in Foundation Stage, the National Literacy and Numeracy Strategies and the subject disciplines in the Key Stage 1 curriculum. Other curriculum models can be useful in informing and developing practice (Figure 5.2).

Play supports children's discipline-based learning, adding depth and detail to intended, possible and actual learning outcomes. Disciplined ways of knowing and understanding contribute to children's growing mastery of their social and cultural worlds. Skilled practitioners understand the important pedagogical idea that young learners can be introduced to complex skills and concepts as long as these are presented in appropriate, meaningful ways. Children actively seek knowledge and skills that are within and beyond their current level or zone, so that teaching and learning are co-constructive processes rather than a one-way flow.

- ***Cognitive:*** All the skills and processes involved in learning, thinking and understanding. Self-concept and identity, language and communication skills, positive attitudes and dispositions towards learning, developing mastery and control in learning. Developing different forms of intelligence – visual/spatial, kinaesthetic, aesthetic and creative, musical/auditory, linguistic, logical/mathematical, interpersonal, intrapersonal, physical, scientific/technological, intuitive/spiritual, social/emotional. Social and intellectual well-being.
- ***Affective:*** All the skills and processes involved in learning a repertoire of appropriate behaviours, making relationships, social interactions, expressing and controlling emotion, developing a sense of self, understanding the needs of others. Emotional well-being.
- ***Psycho-motor:*** All aspects of physical development including
  Fine motor skills – use of hands, fingers, feet, hand/eye, hand/foot coordination.
  Gross-motor skills – large body movements such as sitting, turning, twisting, balancing, controlled movement of head, trunk and limbs. Brain–body coordination, spatial awareness.
  Loco-motor skills – large body movements involving travelling and an awareness of space such as crawling, running, climbing, walking, hopping, skipping, jumping. Brain–body coordination, spatial and rhythmic awareness.
  Learning about the body, and gaining control of movement (body awareness). Communicating and expressing ideas through movement. Physical well-being.

FIGURE 5.1 DOMAINS OF DEVELOPMENT

- The four aspects of the Stepping Stones
- Foundation Stage areas of learning
- National Literacy and Numeracy Frameworks for Teaching
- National Curriculum core and foundation subjects
- High/Scope key experiences
- Te Whāriki: strands and dispositions
- Reggio Emilia: community, citizenship and creativity

FIGURE 5.2 CURRICULUM MODELS

At a third level, we can look at the cognitive processes that link playing and learning which are cross-curricular and cross-phase, summarized in Figure 5.3. These processes, skills and dispositions are essential to lifelong learning and playing, particularly as people need to adapt continuously to new technologies, and new opportunities for work and leisure. Looking across these three levels, play can be seen as an integrating mechanism, which enables children to move to and fro along the play-work

Cognitive processes and skills

- Attending, perceiving, observing, recognizing, discriminating, imitating, exploring, investigating, concentrating, memorizing, retaining, retrieving and recalling information, scanning for information, integrating knowledge and experience, categorization, classification, making connections and relationships.
- Making intelligent use of past experience to formulate a plan of action, reflecting on action, noticing causes and effects, using metacognitive skills and strategies – awareness and conscious control of one's own learning.
- Making choices and decisions, constructing knowledge, making sense.
- Communicating ideas, meaning, knowledge and understanding.
- Creativity, imagination, flexibility, making novel connections.
- Creating, recognizing and solving problems.
- Convergent and divergent thinking, practice, repetition, rehearsal, consolidation, retuning, accretion, mastery, interpreting.
- Communicating – through written and spoken language, gestures, mime, signs, symbols and artefacts.
- Making and testing hypotheses, predicting, innovating, combining, recombining, reasoning, extrapolating.
- Developing transferability, transferring knowledge and skills between similar and different contexts.

Attitudes and dispositions

- Curiosity and interest; motivation – intrinsic and extrinsic; open-mindedness, flexibility, engagement, involvement, enthusiasm, originality, creativity, independence, interdependence; willingness to take risks; ability to struggle, and cope with challenge and failure; perseverance, resilience, self-efficacy (can-do orientations).

Influences on learning

- Mood and feeling states; child health and family health; home and community cultures and experiences; parental pressures and expectations; social skills; learning environment – home, school and community; quality of relationships between children, peers and adults; child's and family's orientations to education, socio-economic status.
- Self-systems: self-concept, self-image, self-esteem, self-worth, self-efficacy.

FIGURE 5.3 PROCESSES THAT LINK PLAY AND LEARNING

continuum, and combine their real-world and play-world knowledge, skills and understanding.

As we have seen, learning and development depend on internal cognitive structures that are complex in their origins and subsequent evolution, and are intimately connected to children's social and cultural worlds.

Processes such as exploration, practice, repetition, mastery and revision are important in constructing, extending and connecting cognitive structures. Play activities enable children to impose some structure or organization on a task, make sense of their experiences and engage in ongoing rehearsal of these cognitive processes. Educators often express concern that children's play is sometimes repetitive but a closer examination may reveal subtle changes in play themes and patterns as children revise and extend what has previously been played at and played with. Where play is repetitive and stereotypical, the practitioner needs to find ways of stimulating new interests and ideas. Such interventions may be especially important for children with special educational needs who have the same rights to an appropriate curriculum that helps them to learn through well-planned play (Drifte, 2002; Macintyre, 2001).

The processes involved in playing and learning appear to contribute to building children's brain architecture: rehearsal and practice may lead towards pruning and editing existing connections in the brain, as well as making new connections. In play children develop exploratory as well as explanatory drives: they actively look for patterns, test hypotheses and seek explanations, leading to increased complexity in thinking, learning and understanding (Gopnik *et al*, 1999). These cognitive processes are socially and culturally situated and, through the subject disciplines, can become increasingly refined. For example, exploration and discovery are the building blocks of science: looking for patterns and relationships is fundamental to mathematics; imagination and empathy can lead to developing an informed historical imagination; technology and the creative arts involve planning skills as well as imagination, flexibility and spontaneity. Children's learning becomes increasingly focused through the distinctive methods of inquiry, key skills and conceptual frameworks which the subject disciplines represent. These disciplines provide learners with powerful tools for making sense of the world and incorporate distinctive, as well as interconnected, ways of learning. Although play is a process rather than a subject, many play activities provide opportunities for learning through the subject disciplines. As we argued in Chapter 2, children can be encouraged to develop playful orientations to learning (playing with ideas, rules, relationships, materials) within and beyond the subject disciplines.

These three levels provide a framework for curriculum design, which takes into account breadth, balance, differentiation, and progression and continuity across phases. The following example shows these processes in practice:

A Reception/Year 1 teacher was concerned about the early introduction of the Literacy Framework for Teaching, particularly the outcomes for writing and handwriting, and decided to carry out a small-scale action research study as part of a professional development module. She noticed that many of the children had difficulties with fine motor skills (especially boys). This affected their ability and motivation to write. Building on the research of a colleague on a previous module, she developed a 'fine motor skills carousel', which the children used for half an hour every morning. The carousel included different sensory and manipulative activities: threading and weaving; dough and Plasticine; tweezers and chopsticks for picking up small items such as beads and dried pasta shapes, with small containers to put them in; a washing-up bowl of water, with small scoops, spoons and egg cups. The activities were very popular with the children, and resulted in some tangible outcomes including: improved fine motor skills; concentration, engagement and motivation; persevering with challenge (especially becoming more accurate with tools), as well as satisfaction and pleasure. The teacher also noticed that these skills and dispositions transferred to adult-directed activities, especially writing, where previously reluctant boys became more motivated.

This example of evidence-informed curriculum development shows how the three levels described above can be integrated through play-based activities and can improve the quality of children's learning. The teacher also used her professional knowledge and experience to mediate national policy frameworks.

CURRICULUM MODELS

We have emphasized throughout this book that practitioners should use policy frameworks as a guiding structure rather than as a prescriptive straitjacket. This is a particularly important principle for children with special educational needs because they may need more time, more opportunities for practice and consolidation, and more finely tuned provision to support their learning. There has been much dissatisfaction with 'one size fits all' policy frameworks, with increasing interest in 'designer versions' of curriculum and pedagogy that are more in tune with children, local communities and the professional knowledge base within early childhood education. The curriculum that children experience

extends beyond policy frameworks, because it involves everything that they experience in the setting, including the way they are greeted, how the environment is organized, how they are expected to behave towards each other, how adults behave towards them, and what behaviours are encouraged, tolerated, ignored or banned. By developing their own 'designer' versions, practitioners can draw on a number of models which are described in this section. Each has different features that can be combined or adapted to individual settings. All integrate play-based, playful and creative approaches to teaching and learning. These models have evolved and continue to evolve over time, in response to research, new theoretical understanding and wider changes in society. As such, they are not set in stone, but are open to mediation and skilful adaptation.

TE WHĀRIKI CURRICULUM (NEW ZEALAND)

Te Whāriki (New Zealand Ministry of Education, 1996) is the first national curriculum statement for New Zealand, encompassing children from birth to five in the early childhood sector. It is a bi-cultural curriculum that reflects the cultural heritage, beliefs and traditions of Māori communities, and is relevant to the country's multi-cultural society. Te Whāriki is based on socio-cultural theories of learning and development, and aims to move the sector away from the individualistic approaches to developmentally appropriate programmes, towards recognition of the fundamentally socially constructed nature of learning, and the importance of knowledgeable others in the setting, home and community (Cowie and Carr, 2004; Jordan, 2004). The curriculum has been envisaged as a *whāriki*, or mat, which is woven from principles, strands, goals and learning outcomes. The four principles are:

- Empowerment: the early childhood curriculum empowers the child to learn and grow.
- Holistic development: the early childhood curriculum reflects the holistic way children learn and grow.
- Family and community: the wider world of family and community is an integral part of the early childhood curriculum.
- Relationships: children learn through responsive and reciprocal relationships between people, places and things.

- Well-being – *Mana Atua*: the health and well-being of the child are nurtured.
- Belonging – *Mana Whenua*: children and their families feel a sense of belonging.
- Contribution – *Mana Tangatta*: opportunities for learning are equitable.
- Communication – *Mana Reo*: the languages and symbols of their own and other cultures are promoted and protected.
- Exploration – *Mana Aotūroa*: the child learns through active exploration of the environment.

FIGURE 5.4 TE WHĀRIKI: STRANDS

The five strands are listed in Figure 5.4.

Within each strand there are a number of broad goals that relate to the overall learning environment, what the children learn and experience within that environment, and the ways in which practitioners make links between the home, community, the setting and other early childhood services.

The curriculum framework provides further specification of learning outcomes (knowledge, skills and attitudes) in the five strands, along with examples of experiences that help to meet these outcomes. Staff are encouraged to think critically about their overall provision and their everyday routines and practices in relation to how the outcomes are being achieved, and the overall quality of their provision. Each of the strands links with the learning areas and essential skills of the New Zealand Curriculum Framework for primary education. The curriculum provides a strong focus on children and their learning. Spontaneous and structured play are valued as key learning experiences. Curriculum planning is based on children's ongoing interests so that skills, knowledge and understandings are embedded in activities and experiences that reflect their cognitive, emotional and social concerns. Family involvement is encouraged through shared assessments across home and the setting, with family members contributing to children's documented learning stories (Carr, 2001a). The following vignette shows how these principles work in practice:

Vini, aged four, tells the teachers that his mother needs new slippers. He makes a pair for her (with much measuring and gluing and decorating), and when the teachers write this up their assessment emphasizes Vini's developing identity as a 'caring' and

thoughtful person. His mother contributes a comment to the assessment folder that adds a reference to the technical expertise that this work illustrated: she writes that the slippers Vini made were 'unbelievable in terms of thoughtfulness and technical perfection for a little child' (Cowie and Carr, 2004: 98).

The outcomes in Te Whāriki are broader and more process-oriented than those in the Curriculum Guidance for the Foundation Stage (CGFS) and Stepping Stones. For example, in the Exploration strand, children develop:

> Spatial understandings, including an awareness of how two- and three-dimensional objects can be fitted together and moved in space in ways in which spatial information can be represented, such as in maps, diagrams, photographs and drawings (New Zealand Ministry of Education, 1996: 90).

The outcomes are holistic in the sense that they transcend subject boundaries. In contrast, the Stepping Stones in the CGFS are more specific and hierarchical in terms of knowledge, skills and understanding within each of the discipline-based areas of learning. These two orientations reflect fundamental social and political assumptions about children and childhood, and about what early childhood education is for. In England, early childhood provision has been influenced strongly by instrumental approaches to learning, with an emphasis on school readiness, and providing a head start into literacy and numeracy. In order to ensure 'curriculum coverage', whole-school plans often include a rolling programme of topics. The socio-cultural orientation of Te Whāriki places more emphasis on the early childhood centre or classroom as a community of learners: learning is a co-constructive process that involves the child acting in context, with increasingly competent forms of participation (Carr, 2000, 2001a, b).

Building a curriculum around children's interests does not imply an individual approach. In Vini's slipper-making activity, the emphasis is on his individual interest. However, Carr (2001b) provides an example of collaborative interests that were stimulated by a hat-making activity. The activity took place in the construction area, which provided access to paper, card, cardboard boxes, scissors, staplers, glue, paint, rollers, brushes, pens and materials for collage. Children had free choice in using the materials and deciding what kinds of kinds of hats to make (for example, tiaras, birthday hats, sun visors, and hats for babies and cats). This open-ended activity created a problem space, or ZPD, for the

children. They persisted with difficulties, created and solved a wide range of technological problems, such as measuring, cutting, fixing, aligning and joining, drawing on support from peers as well as adults. Hat-making skills developed over a period of time, providing opportunities for tackling technological challenge and acquiring knowledge and skills in transformation, redefinition of function, representation and engineering. The context also afforded opportunities for social challenge and participation, and the acquisition of knowledge and skills in making and maintaining friendships. Carr's research demonstrates how these opportunities for learning were situated in the pedagogical framing of the play/learning environment, the materials and resources that were made available, the use that children made of the environment and the resources, and the existing knowledge, expertise and skills that each child brought to the activity.

In New Zealand, there are ongoing debates about 'interests versus skills', particularly with reference to children with special educational needs (Cullen, 2004), which reflects similar issues in the wider early childhood community. Within a predominantly interests-based approach, it is challenging for practitioners to identify specific learning needs of individual children. Within a predominantly skills/content-focused approach, too much atomization and specification of learning outcomes is equally problematic. If literacy and numeracy are privileged over other areas of learning, practitioners may neglect holistic approaches to integrating knowledge and experience (Adams *et al*, 2004). In creating their own designer versions, practitioners need to evaluate and combine both approaches. A common area of agreement across international contexts is a view of the child as competent, powerful and strong. This is also reflected in the Reggio Emilia approach, which has similar implications for curriculum organization.

THE REGGIO EMILIA APPROACH (NORTHERN ITALY)

This approach developed in Reggio Emilia in the years following the Second World War. From being unique to the area, this approach has gained international recognition and respect for its ethos, pedagogy and curriculum provision. Central to this approach is an image of the child, which is expressed eloquently by Lawrence Malaguzzi, the founder of Reggio:

> Our image of children no longer considers them as isolated and egocentric, does not see them as only engaged with actions and objects,

> does not only emphasize the cognitive aspects, does not belittle feelings or what is not logical and does not consider with ambiguity the role of the affective domain. Instead our image of the child is rich in potential, strong, powerful, competent, and most of all connected to adults and other children (Malaguzzi, 1993: 10).

The approach is founded on key principles (Edwards *et al*, 1993) about how educators view children. These principles are itemized in Figure 5.5.

The 'hundred languages of children' can be expressed in many different ways, using a wide variety of materials, tools and resources:

> Drawing, painting, mark-making, printing, writing, signs and symbols (including Braille and Makaton), dance, mime, drama, facial and body gestures, puppets, shadow play, plans, maps, buildings, designs, photographs, sculptures, blocks, construction materials, natural materials, computers and ICT . . . and many more.

The children engage in authentic activities with skilled assistants: for example, making a sculpture garden, growing fruit and vegetables, cooking, involvement in community projects. They learn to use tools correctly in order to support their skills, creativity and expression. The 'hundred languages' principle contrasts with the narrow focus on reading, writing and numeracy skills in the British system, and reminds us that children should be empowered to use all modes of representation and to engage themselves intellectually and emotionally in their work and play (Anning and Ring, 2004). The freedom to use different modes of representation is especially valuable for children with language and communication difficulties, and those with English as an additional language. Imagining 'a hundred languages' enables practitioners to think creatively about inclusion and involvement for all children.

SO WHAT CAN WE LEARN FROM THE REGGIO EMILIA PRINCIPLES? Practitioners in the UK who have visited Reggio settings are often impressed by the quality of the material resources, the design and layout of the spaces, the provision of art specialists and the quality of children's representations (Abbott and Nutbrown, 2001). The child-centred approach is neither woolly nor sentimental, because educators build on experiences and activities in ways that nurture the child's interests through relevant and meaningful curriculum content, and by encouraging different modes of representation. However, practitioners need to question the extent to which the Reggio experience can be generalized, and whether versions of good or effective practice can be built from the nuts and bolts of other models. By evaluating and reflecting critically on different models, practitioners can create their own designer versions, which are

The child as protagonist: children are strong, rich and capable. They have readiness, potential, interest and curiosity in constructing their learning. They use everything in the environment to help them. Children, teachers and parents are the central protagonists in the educational process.

The child as collaborator: children grow up in communities of practice which include *more* and *differently* knowledgeable others. Learning takes place in social contexts, using the resources (material and human) within the environment. How children learn, and how their identities are formed, are intimately connected with their social worlds.

The child as communicator: many different forms of symbolic representation are valued – written and spoken language, movement, drawing, painting, building, sculpture, shadow play, collage, dramatic play, music. These 'hundred languages' enable children to represent and communicate their thinking in different ways, including what they know, understand, wonder about, question, feel and imagine. An *atelierista*, or trained artist, enables these processes.

The environment as third teacher: the design of the learning environment (indoors and outdoors) supports educative encounters, communication and relationships. Specific learning spaces are provided, with equipment and materials which may change over time as projects develop. Choice and independence are encouraged through access to materials and the opportunities that children have to combine and explore. The environment is a motivating force in creating spaces for learning, and creating a sense of well-being and security.

Teachers as co-constructors: Teachers work collaboratively with children, developing and extending themes and interests. They work on short-term and long-term projects which are designed and planned collaboratively. Teachers interact in supportive ways, by listening, observing, talking and documenting children's learning journeys. In the *atelier*, or art studio, the children work with the *atelierista* on projects. By discovering children's interests and agendas, teachers can help them to make further discoveries in and about their environment.

Teachers as researchers: by developing collegial relationships, staff engage in continuous professional development, based on documenting and discussing children's progress and achievements. They draw on established theories and build their own working theories about their provision.

Documentation as communication: in common with Te Whāriki, documentation is shared with the staff, other adults in the setting, and parents. Documentation panels (displays) and books provide evidence of children's learning through photographs, representations, transcriptions of their language, and comments by practitioners. Documentation conveys information to parents about the overall provision, and the children's progress and achievements, and conveys to children that their work is valued.

Parents as partners: participation is actively encouraged, including two-way communication about the child's experiences. Parents offer ideas and suggestions to support the child's learning and development, and contribute their skills to the setting.

FIGURE 5.5 REGGIO EMILIA KEY PRINCIPLES

built on personal as well as shared principles and practices. Practitioners who are empowered will be able better to mediate the increasing standardization of curriculum and pedagogy that is imposed through policy frameworks. If we regard children as strong, competent and rich, it follows that practitioners should be seen in the same terms: to have the support and resources to provide a curriculum that supports children's richness, and that is informed by the professional knowledge of the community. Being strong in their principles, competent in their provision and rich in their professional knowledge may also help practitioners to resist pressures for inappropriate practices from politicians, colleagues, parents and the media.

THE HIGH/SCOPE CURRICULUM

The High/Scope curriculum originated in the USA and was based originally on Piagetian theories and developmentally appropriate principles about teaching and learning. Detailed guidelines describe curriculum content, planning, routines, and strategies for assessment and record-keeping. Various revisions have been carried out since the original version of the 1970s, with more emphasis being placed on socio-cultural theories and the proactive role of educators (Bredekamp and Copple, 1997). Curriculum content is based on key experiences, which represent the eight areas of learning listed in Figure 5.6.

Active learning is the foundation of the High/Scope approach: learning is initiated by the child. The curriculum is planned around children's needs, interests and ongoing cognitive concerns and can be adapted to different age groups and settings, to children with special educational needs and from different ethnic groups. Adult-directed activities are valued, and focus on teaching specific skills and knowledge across the eight areas, and

- active learning
- language
- representation
- classification
- seriation
- number
- spatial relations
- time

FIGURE 5.6 AREAS OF LEARNING IN THE HIGH/SCOPE APPROACH

providing resources to support children's interests. The approach incorporates plan–do–review, which involves children in setting their own goals and choosing their activities within a structured, well-resourced environment. Children carry out their plans individually, in pairs or in groups. This element of choice does not embody a *laissez-faire* approach because practitioners structure the indoor and outdoor environments to provide key experiences in the eight areas of learning, and to encourage as much independence as possible. The role of the practitioner is to facilitate learning, support the children's decisions and plans, and monitor their activity. The support should be tuned into what the children are doing but, at the same time, encourage challenge and extension.

There is an underlying assumption in this model that what children choose is what they need. However, feedback from practitioners suggests that some caution should be exercised here. Research has shown that some children repeat what is safe and known; they may not have the knowledge, confidence or expertise to use materials and resources differently, to try out new activities, and push their own boundaries (Bennett *et al*, 1997). They do not always have the social skills or confidence to join a group of players or engage successfully in more complex forms of play (Broadhead, 2004). In a socio-cultural model of teaching and learning, communities of learners co-construct learning through joint activity and guided participation, and responsive interactions based on the learner's activity. Practitioners need to have a clear idea about what areas of learning can be accessed through areas of play provision such as construction, role play, or sand and water. Drifte (2002) provides detailed guidance on ensuring that all the working/playing areas of the setting are accessible to children with special educational needs, thus supporting their choices and plans.

PLAN–DO–REVIEW (PDR)

In PDR activities, children are allowed to combine materials and resources according to their intentions. The PDR approach can be used effectively in practice (Bennett *et al*., 1997), and has the potential to provide an empowering curriculum model. Review time is seen as an important element of High/Scope where children come together to discuss what they have done, made or learned. They are encouraged to ask questions, share information and think about future extensions. When used effectively, review time can encourage the development of metacognitive skills and processes. At its worst, it can degenerate into a repetitive, tedious ritual.

The effectiveness of review time depends on the size of the group and the practitioner's expertise in guiding the discussion, modelling questions, prompting and praising, and encouraging children to engage in out-loud thinking about their learning and activity.

Julie Fisher (2002) draws on the underlying theory and principles of PDR, and provides detailed guidance on how practitioners can teach essential skills and competences. Many practitioners report that Fisher's book has become their 'bible' because it is both pragmatic and aspirational in terms of developing approaches that value children's play and self-initiated activity. Some of the key ideas are revisited here, with the recommendation that readers refer to Fisher's work for more detail.

FISHER'S GUIDANCE ON PDR

What does the teacher plan?

- What does each child need to know now? (concepts/skills/knowledge/attitudes)
- How is this best learnt? (differentiation = activity/process/outcome/grouping)
- What support does the child need?
- How can I include the spontaneous interests of the children?
- Which activity will be teacher-intensive?
- Are other activities planned so that the children can be independent learners?
- What kind of support/intervention do the other activities need?
- Have I planned to revise both teacher-initiated and child-initiated activities?

What can the child plan?

- What work do I want to do today?
- What work do I need to do today?
- In what order shall I do my work?
- With whom shall I work?
- What resources/equipment do I need?

- What do I want to do with my finished work?

How can children be involved in making decisions?

Involving children:

- gives opportunities for real-life problem-solving
- encourages them to maintain something that they have planned
- enables them to have an element of control over their own learning environment
- leads to the development of organization as a life skill
- gives them a sense of responsibility/self-esteem
- encourages cooperation and collaboration between them and adults
- enables the teacher to see things from the children's perspective.

Children can be involved in planning and arranging:

- the use of space
- the naming of work areas
- the selection of resources
- the categorizing of resources
- the sorting of resources
- the labelling of resources
- the location of resources
- designing and mounting displays.

Children can be involved in:

- selecting themes and topics
- designing role-play areas
- designing outdoor play areas
- designing props and resources for play
- planning research and investigations

- planning PE sessions – use of apparatus
- deciding how to represent their ideas and outcomes of activities
- managing some of their time
- planning to follow their own interests
- identifying pairs or groups for collaboration
- school councils
- negotiating rules and sanctions
- monitoring the implementation of rules and sanctions
- identifying problems and generating solutions
- taking responsibility for their behaviour
- taking responsibility for using and clearing away resources.

Reflecting on planning and implementation . . .

- What can each child tell me about himself/herself as a learner?
- What does each child already know/understand?
- What learning skills and strategies does each child use?
- How does each child work with others?
- What is the child interested in?
- Have I planned to observe teacher-intensive, teacher-initiated and child-initiated activities?
- Have I planned to involve the child in self-assessment?
- What is the focus of my assessment of the teacher-intensive task?
- Will I observe or participate?
- Have I identified the evidence on which to base my assessments?
- What strategies have I established for recording unplanned observations and conversations?

- How will I use all the evidence collected to inform future planning?

In order to be implemented successfully, the PDR approach involves teaching children the tools for thinking and learning, helping them to use metacognitive skills and strategies, and assisting transfer across contexts. Planning in collaboration with others helps to develop social and communicative skills; in mixed age groups, older children can act as models of planners, doers and reviewers. Ideally, PDR should be implemented throughout a school so that children develop increasing levels of competence and mastery, building incrementally on 'can-do' orientations to learning.

WHAT PLANNING SKILLS DO CHILDREN NEED TO LEARN?

- Speaking and listening in a group.
- Understanding the concepts of planning and making decisions.
- Being able to implement a plan.
- Selecting and knowing how to use materials and resources.
- Acting independently and collaboratively.
- Asking for assistance from peers and adults.
- Specifying the assistance needed to implement a plan or carry out a sub-task.
- Paying attention to the activity.
- Creating, identifying and solving problems.
- Remembering how the plan was carried out.
- Reflecting on action – raising and answering questions.
- Representing knowledge and experience in different ways.
- Processing information and communicating the meaning and purpose of an activity.
- Using conscious awareness and control of learning processes.
- Making and sustaining relationships with peers and adults.

interacting, participating, listening, observing, responding, directing, redirecting, demonstrating, modelling, questioning, praising, encouraging, advising, guiding, suggesting, instructing, imparting new knowledge, diagnosing, extending, discussing, reflecting, prompting, enriching, assisting, mediating, explaining, enabling, . . .

FIGURE 5.7 PEDAGOGICAL STRATEGIES

Originally the High/Scope model was designed for an adult:child ratio of 1:8, so implementation with larger groups can be problematic. Practitioners who have experimented with PDR have reported that planning with large groups takes up too much time (up to 20 minutes) and often results in children becoming restless. Some have reported that they use small planning groups on a daily basis so that during the course of a week all children are able to experience greater choice, autonomy and independence (see Amanda's story in Chapter 8). Practitioners need to give support for children's planned activities, drawing on appropriate pedagogical strategies such as those in Figure 5.7.

Practitioners are sometimes unsure about how to use review time constructively so that children can feed back what they have been doing in their self-initiated activities, including play. Reviews can be carried out in different ways:

- 'in the moment' reviews, in response to a child's immediate success, challenge, problem-setting or problem-solving
- at the end of a session, either within a small group (with key workers, classroom assistants or other helpers) or feeding back to a larger group
- at the end of the day
- at the end of a week
- at the beginning/end of a topic (for example, brainstorming and mind-maps).

Plan–do–review serves important purposes for children and practitioners:

- Children can value their own and others' work.
- Children can develop a sense of agency and mastery because they make decisions, identify and solve problems as they arise.

- Practitioners can shift the balance of power in classrooms, enabling children to take responsibility for their own learning.
- Practitioners can build some of the curriculum around children's self-identified interests.
- Practitioners can use review time to understand what and how children are learning, and plan further provision accordingly.
- Practitioners can value the learning that arises from children's own interests and motivation.

The PDR approach can be integrated successfully with the learning outcomes defined in the policy frameworks. For example, in the Stepping Stones, Becoming a Competent Learner includes finding out about people and the environment, and being resourceful. Becoming a Skilful Communicator involves describing, questioning, representing and predicting, and sharing thoughts, feelings and ideas, so that children are increasingly aware of their own competence and capabilities. In the Key Stage 1 curriculum, PDR is integral to design and technology, and to citizenship education. Children can also design their own tasks and problems in literacy (for example, writing a play script for a well-known story) and numeracy (planning menus and food to celebrate Diwali).

KNOWLEDGE BASES FOR TEACHING AND LEARNING

This brief review shows how current international trends emphasize the importance of the practitioner's role, and the complexity of the knowledge bases that underpin their practice. Practitioners need a good understanding of the structures of the subject areas of the curriculum – the concepts, skills, tools for enquiry and investigation, and ways of thinking and reasoning. They also need to understand the cross-curricular nature of teaching and learning, how connections can be made, and what connections children make through their own activities. Although practitioners may prefer to view the curriculum as integrated from a child's perspective, they can plan and evaluate activities in terms of the subject areas. Professional knowledge encompasses shared as well as individual values, principles, visions and beliefs that influence the ethos of the setting, and everything that happens there. For example, the belief that children are powerful learners underpins the High/Scope, Te Whāriki and Reggio Emilia approaches and influences the quality of the learning

environment, the children's experiences and activities, and the quality of relationships. Envisioning children as powerful learners enables practitioners to support children's choices and decisions, as well as nurturing and stimulating their learning. Professional knowledge is not static: skilled practitioners reflect critically on their planning, provision and children's learning journeys, and are willing to improve their practice. They use evidence from their own evaluations, from their peers and from research studies to support development. Although settings differ widely in their aims and orientations, the practical ideas outlined in this chapter can be adapted and applied by all practitioners so that they can create 'designer versions' rather than a 'one size fits all' approach to their practice. The following section focuses on integrating play into the curriculum, building on these ideas.

CURRICULUM DESIGN

All curriculum models reflect a set of beliefs and values about what is considered to be educationally and developmentally worthwhile in terms of children's immediate needs, their future needs and the wider needs of society. Knowledge is not value-free. The models described here give status to different funds of knowledge, ways of coming to know, and modes of thinking. Practitioners make informed decisions about curriculum content, and how that will be presented to young children through adult- and child-initiated activities. They also need to be aware of how the curriculum is received and interpreted. Play itself does not constitute a curriculum, but should be an integral part of the curriculum because it provides potential spaces for learning and development. So how can practitioners support good-quality play?

PEDAGOGICAL FRAMING AND STRATEGIES

The twin concepts of pedagogical framing and pedagogical strategies are helpful for thinking about how practitioners can support child- and adult-initiated play. *Pedagogical framing* involves making informed decisions about the structure and content of the curriculum (see Figure 5.8).

Within this overall structure, practitioners use a wide range of pedagogical techniques and strategies which support learning, such as working and playing alongside children, observing and assessing, introducing new themes and ideas, and demonstrating skills (MacNaughton and Williams, 1998). Curriculum design should be based on a co-construction of practitioners' intentions and children's intentions (Figure 5.9).

Planning: Defining aims and objectives, including planned and possible outcomes in play. Building on previous outcomes from play.

Organization: Indoor and outdoor environments: space, resources, time, daily routines, activities, what adults do, what children do.

Implementation: The ways in which adult-initiated activities and tasks are presented in order to support intended and possible learning outcomes and build on previous learning experiences and interests. The ways in which adults allow time for and follow play and child-initiated activities.

Assessment, documentation and evaluation: Understanding patterns of learning, interests, dispositions. Identifying learning outcomes from adult- and child-initiated activities. Documenting learning in order to provide a feedback loop into planning. Using evidence from all adults in the setting to evaluate the quality and effectiveness of the curriculum.

FIGURE 5.8 PEDAGOGICAL FRAMING

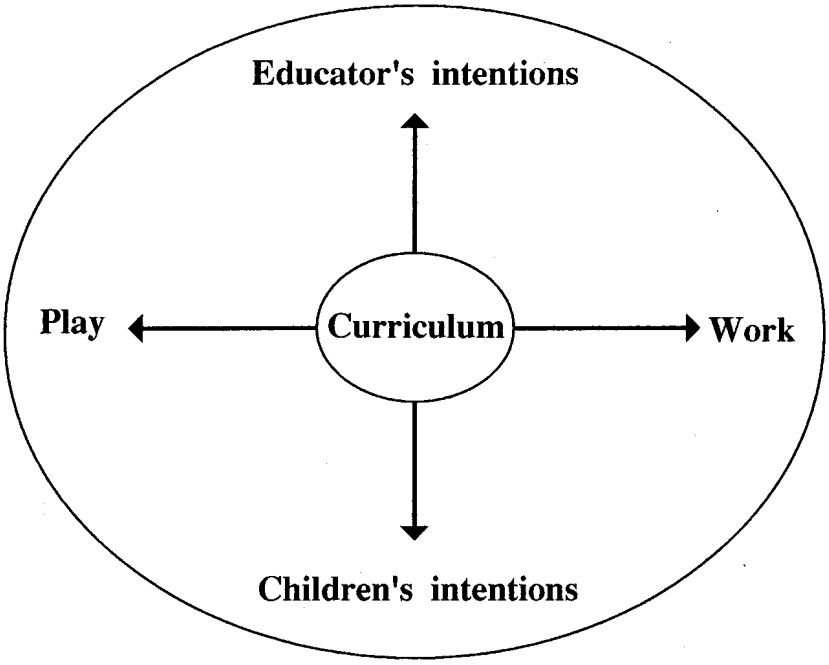


FIGURE 5.9 CO-CONSTRUCTING THE CURRICULUM

At the planning stage, practitioners frame aims and intentions, which can be long-, medium- and short-term. Pedagogical framing does not put the adult in control of everything that happens in the setting. In a co-

constructive curriculum, practitioners' intentions can include responding to children's intentions and meanings as well as allowing for unplanned developments. At the organization stage, practitioners decide how the learning environment (both indoors and outdoors) will be set out, what resources will be available, where they will be located, how much choice children have, and whether materials and activities can be combined. How the day, or session, is structured also influences the amount of time available for play. At the implementation stage, practitioners decide where and how they will spend their time, which should allow opportunities to follow children's own learning journeys. This approach was exemplified in Chapter 4 in the two examples of Hogwarts Wizard School (Joanna Cook) and the Fire Station (Sheena Wright). Cook (2003) describes a continuum between adult- and child-initiated activities. For example, in science, the children learned how to make an electrical circuit using leads, batteries, bulbs and crocodile clips. The teacher's input focused on scientific and technological skills, knowledge and understanding. In their role play, the children decided to make illuminated magic wands. The teacher responded to these ideas by supporting children in using and applying their new skills in a play-based problem-solving context.

Awareness of children's intentions can only come about through a curriculum model that encourages them to express their intentions and follow their own learning journeys. Practitioners should be sensitive to the meanings that children communicate in their play and use these to inform the next cycle of planning. Practitioners therefore need a dual perspective which involves understanding the meaning of play activities in the 'here and now' and deciding what are the next significant steps. In practice, this dual perspective may shift the emphasis more towards short-term planning so that the curriculum is responsive to learners and supports co-constructive planning (as in the 'magic wands' example). Children's interests and ideas may also form the impetus for planning a short topic or informing adult-initiated activities. Such an approach can be enabling and empowering for children and practitioners, particularly where there is a continuum between work and play, and between adult- and child-initiated activities.

THE PLAYING–LEARNING ENVIRONMENT

Practitioners should create an environment that supports unity between playing, learning and teaching, and ensure access and inclusion for all children. This involves taking into account human (children and adults)

as well as material resources, and the relationships between them. The quality of material resources available, where they are located and how they can be used influence the quality of children's learning experiences. For example, in a day-care setting, the practitioners had a rotating pattern of resources that were put out for the children on a daily basis. The children could not choose other resources or move them from one area to another. After attending an in-service course, the leader of the setting realized that they were constraining children's learning opportunities. She acknowledged her own 'obsession' with tidiness, and was concerned about the mess that would be created, and how long it would take for the adults to tidy everything away. Following some staff development work, the practitioners decided to allow the children more freedom to choose their own resources and use them in different areas (using the PDR approach). They were taught to take responsibility for tidying up and taking care of the resources. By monitoring these new approaches, the practitioners identified the richness of children's symbolic activity and their creativity. Combining small-world resources with large construction equipment extended the children's imaginative play: they were more likely to create scenarios with hollow blocks (towns, zoos, parks, space ships) and act out stories with play people. Small construction equipment was used in many different ways in role-play activities: Cuisenaire rods became chips in the cafe; small blocks became gold and jewels in the pirate ship; play people were used in the sand and water trays in dramatic scenarios of flooding, burying, drowning, getting lost and being rescued. Thus the changes made in this setting afforded new opportunities for playing and learning, which also extended the cognitive and emotional richness of the children's activities.

THE CONCEPT OF AFFORDANCE

Carr (2000) uses the concept of *affordance* to describe the relationship between the learner and the setting. Affordance refers to the:

- perceived and actual properties of resources in the environment (objects, artefacts and tools)
- how these are used (this links with the idea of *tools for use*)
- how these might be used (this links with the idea of *tools and use*)
- how these may help or hinder learning.

This concept links with the socio-cultural theories outlined in Chapter 4. Carr (2000) discusses the importance of the 'more knowledgeable/competent other' in teaching children how to use the tools and resources of the community, providing children with optimum levels of challenge as they become more experienced and more expert in their use of resources, and considering the accessibility of resources (whether resources encourage individual or collaborative activities, and whether they can be used by children across the ability range). In the Reggio Emilia approach, the specialist practitioner (*atelierista*) helps children learn how to use authentic 'tools of the trade' in, for example, design, architecture, planning and a wide range of arts and crafts. The underpinning philosophy is that children should have access to 'high affordance' resources and learning opportunities. Following a visit to Italy, Parker (2001) describes how she used familiar resources (overhead and slide projectors) in different ways to support children's learning. These resources afforded opportunities to support and extend children's thinking, creativity with representation and mark-making, and particularly their language: talking, exchanging ideas, reflecting on home-based experiences, making connections between areas of learning, and playing with words and concepts. In the hat-making activity described earlier in this chapter, Carr (2001b) demonstrates the importance of children having access to good-quality tools and resources, including scissors that cut, and glue that sticks. Practitioners also need to understand how they can extend the affordance of activities and resources for children with special educational needs in order to support access and inclusion (Macintyre, 2001; Sayeed and Guerin, 2000; Drifte, 2002). Drifte (2002) outlines how the affordance of everyday resources may need to be changed or extended. For example, Dycem mats can be used in the role-play area and tabletop activities to provide a secure, non-slip base. Some musical instruments can be hung on the wall so that children with physical difficulties can hit them using one hand. Visual props and puppets can be used to dramatize stories and encourage children's role-play activities.

Learning environments that have high-affordance tools, artefacts and materials can support children's skills and abilities as they become real-world mathematicians, designers, artists, technologists and scientists. Therefore children need

- to learn how to use resources safely, correctly, and with increasing competence
- time to play with resources so that they learn to use them in creative ways

- time to create their own problems and challenges
- tools and resources that are varied, of good quality, and are maintained or replaced regularly (for example, blunt scissors).

The following sections provide some practical examples of pedagogical framing and strategies in early childhood settings, and demonstrate how practitioners can create unity between playing, learning and teaching. The examples are also related to the subject areas and learning objectives of the curriculum frameworks, but at the same time illustrate the connectedness of children's experiences and activities.

PLAYING WITH LITERACY The links between play and literacy development have become more clearly established in recent years, and there is strong support in theory for planning literacy-rich play environments (Marsh and Hallett, 1999; Marsh and Millard, 2000; Roskos and Christie, 2000). Play integrates speaking, listening, reading and writing and provides contexts for meaningful literacy practices. Children use a wide variety of literacy-related skills, concepts and behaviours in their play and show interest in, and knowledge of, the many functions and purposes of print. When engaging in playful literacy, children are not just pretending to read and write; they are acting as readers and writers. This is a fundamental distinction which enables children to see the meaning and relevance of such activities. In Vygotskian terms, they are behaving ahead of their actual level of development, so that their competence is both situated in the present and anticipates future progress. In acting more competently, children also develop their confidence, as the following example shows.

Abigail (age four) loved reading. In this episode she demonstrated her knowledge about the functions of print, how books work, and her interpretation of learning contexts both in and out of school. She sat on a stool with a favourite 'Meg and Mog' book and announced to her grandma, mother and aunt that she was going to read the story. Because they were chatting she said, in a teacher voice, 'fingers on lips', and didn't start until they were all quiet. When her aunt put her hand down, Abigail said sternly, 'I don't remember telling you to take your finger off your lips. Put it back.' She read the title of the book and asked her audience what they thought the story was about. She held the book the right way up and turned the pages in sequence. On each page she asked

questions such as 'And *where* are Meg's shoes? Are they *on* the bed? Are they *under* the bed? What do you think is going to happen next? Will Mog fall *off* the broomstick?' She picked out the words 'Meg' and 'Mog' by recognizing the capital M, but did not differentiate between them. She followed the words from left to right with her finger, and pointed at specific parts of the picture when asking questions. Abigail was behaving as a reader; she reproduced a schooled version of literacy by emphasizing the prepositions, using a teacherly voice. She was also demonstrating playful enjoyment of sharing books in a social context, making connections between learning at home and school.

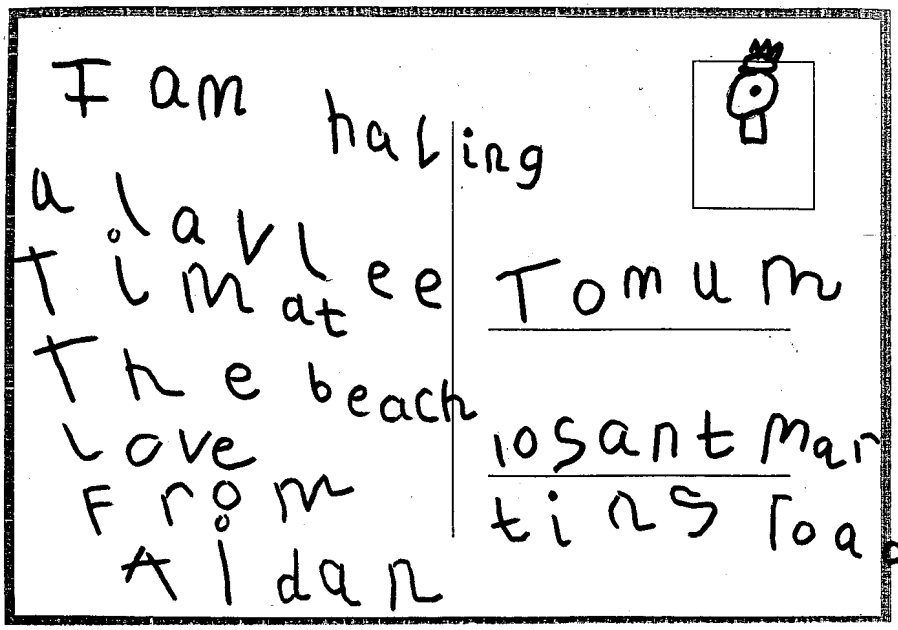
Play, pretending and language are symbolic activities that support and share many characteristics with the development of reading and writing. Socio-dramatic play can be a particularly rich context for literacy development because of the connections between story-making and telling, and symbolic activity. The following example shows how a Year 1/2 teacher created a continuum between adult- and child-initiated activities, using a co-constructive approach which incorporated plan–do–review:

Nicola decided to develop the children's role play through stories. The children chose *Where the Wild Things Are* by Maurice Sendak, and wanted to divide the role-play area into two sections – one for the protagonist Oliver's house and one for the Wild Things' house. The children planned the area, making or bringing in props and resources. They made up names and characters for the Wild Things and represented their ideas through writing, drawing and painting. They extended the story by projecting themselves into different roles and scenarios and making up adventures. They talked and wrote about imagining the reaction of their parents to their absence, or what would happen if they brought home a Wild Thing to live with them. Salah described how he would teach him good manners and not to eat the cat. Jelika planned to make her own puppet, which she took home every day, and involved her family in writing stories and scripts that she shared with friends. One group made up a menu of Wild Things food, and then planned a party, which involved many mathematical activities. The children also used geographical literacy: they drew maps of the land where the Wild

Things live, and the routes from their homes. They acted out their stories in the role-play area, which the teacher extended in dance and drama sessions (moving and acting in the characters of the Wild Things, acting the 'wild rumpus'). In the writing corner, materials and resources were always available for free writing. The children made books to record their stories, which became a shared resource for the class. As the children's interests developed, the teacher provided stories and poems about mythical creatures and lands, which reflected the multi-cultural community. Teacher-directed and child-initiated activities were continuously integrated along a work–play continuum, with children having lots of opportunities for representing their ideas in different ways. The range of activities enabled all children to be included and to participate according to their abilities.

This example demonstrates how role play can count as authorship because children co-construct play frames, scripts and texts. Although this authorship is not of the formal, written kind, it nevertheless shares common features of plot, characterization, sequencing, scripting and editing the dialogue and interactions to direct the course of the play (Hall and Robinson, 1995). Such narratives are often complex, novel and detailed; children interweave reality and fantasy, drawing on their social and cultural worlds. Play narratives can be inspired by stories (both fact and fiction) that adults tell to children, as well as stories that children invent. Booth (1994) describes some of the essential qualities of drama and role play:

- sharing the creations of their imaginations
- using story elements to structure their ideas
- creating new worlds of meaning
- communicating meanings explicitly to others
- stimulating lateral thinking
- playing out problems and possibilities
- inventing, elaborating and extending themes
- combining experience and creating knowledge



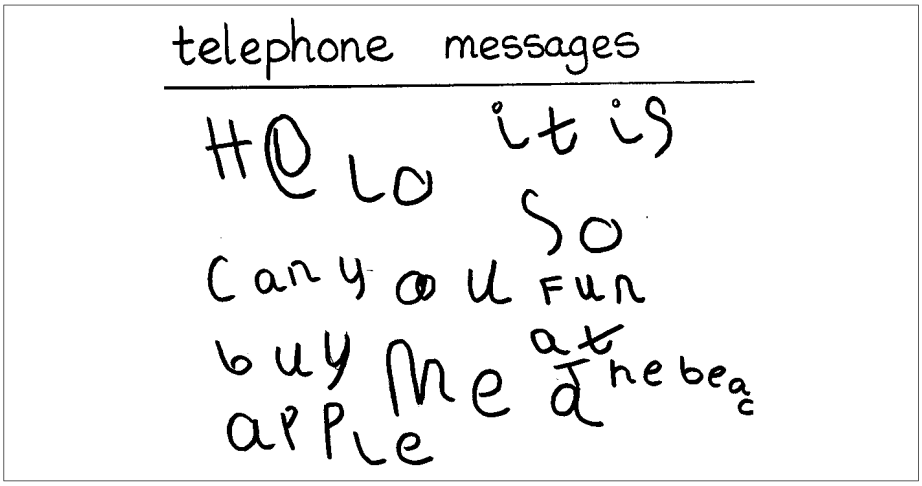
- gaining new experiences
- making connections between written and spoken language.

These qualities are not mere by-products of play, but are situated within play, as the following example (Attfield, 1992) shows:

> Jerry and Joanna (both aged seven, Year 2) wanted to make up a story for television. Initially they learnt about cartoon drawing in the context of their favourite Walt Disney films. They decided to write the narrative for their story and draw the pictures to sequence the plot. The story integrated elements from adventure and fairy stories with cartoon characters, and showed a good understanding of plot and sequence in a condensed form. The children developed the story to perform as a play for the class. They wrote lists of the characters, drew cartoons to show the development of the plot, and used speech bubbles for the dialogue. They combined play with authentic activity – the children were behaving as if they were scriptwriters. They also changed the characters and story lines, occasionally challenging some of the gender stereotypes in Disney films.

Linking play and literacy involves imaginative planning, varied resources, and engaging with children to give their literacy status, provide an appreciative audience, and support their developing skills and confidence. Practitioners can extend children's understanding of the literacy events which take place in real-world contexts. For example:

- writing a menu
- reading a recipe
- filling out cheques, signing receipts
- reading brochures and filling out booking forms in a travel agency
- drawing maps and plans of journeys
- drawing plans for buildings, parks, playgrounds
- designing cards, posters, badges, clothes, book covers

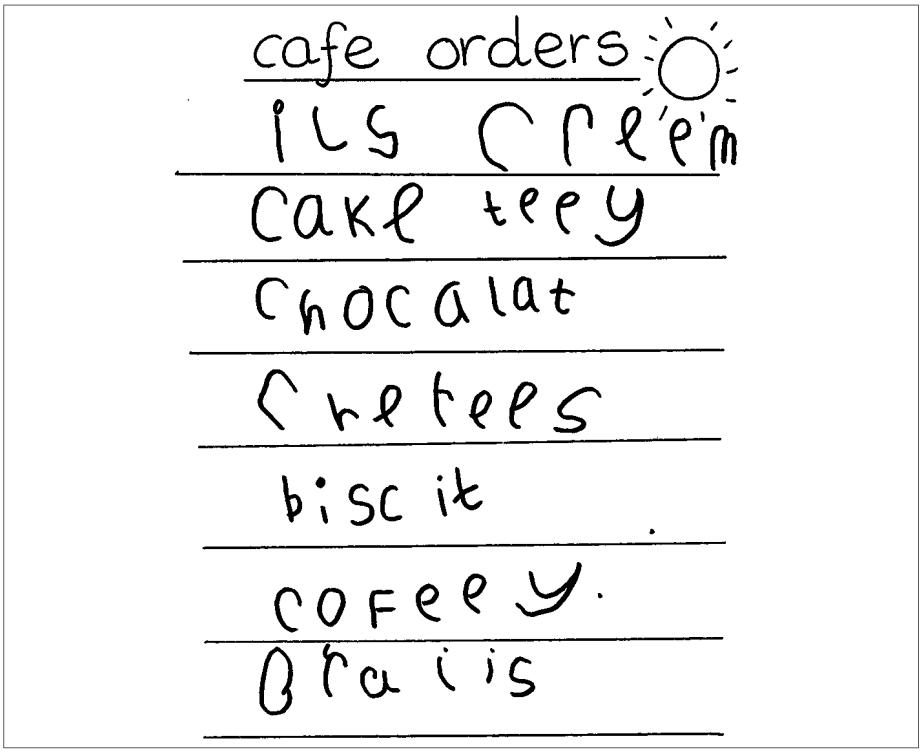


- developing comic strips and story boards (drawing and writing)
- using websites and other ICT.

Marsh and Millard (2000) provide a wealth of examples which remind practitioners of the importance of using children's popular culture in the classroom, including comics, magazines, websites, computer games, television and films, and popular music. For example, they argue that comics can provide a wealth of opportunities for supporting playful approaches to literacy, such as:

- analysing story structure
- understanding characters and how they change over time
- identifying playful uses of language such as puns, alliteration, assonance and onomatopoeia
- being critical of texts – identifying and challenging stereotypes
- making links between comics, websites, games, and other 'spin-off' products.

For children with special educational needs, Drifte (2002) recommends providing books with different textures and/or incorporated noises that are activated by buttons, and that integrate different communication systems such and Braille and Makaton. Provision that has breadth and relevance to children's lives helps them to engage in reading and writing



for a variety of purposes in authentic situations. Playing their way into literacy provides powerful stimuli for learning.

PLAYING WITH NUMERACY Children become real-world mathematicians by participating in everyday practices in different contexts – home, community and school. The amount of mathematical knowledge children have on entry to school is a strong predictor of their future progress. Before they start school, many children demonstrate a range of mathematical knowledge and competences, but this richness and complexity is not always recognized in pre-school and school settings. Children invent their own strategies that enable them to solve a variety of addition and subtraction word problems. They also develop their own systems for representing their calculations such as tallying and idiosyncratic notations (Worthington and Carruthers, 2003). These strategies are often evident in play contexts as children encounter problems and develop their own solutions (Peters, 1998).

Practitioners can build on children's invented strategies and create contexts in which they move through different stages of representation, learn the interrelationships among ideas, and link their own informal strategies to the more formal symbol system of mathematics. Like all the

subject disciplines, mathematics has its own discourse – ways of thinking, reasoning, problem-solving; methods, rules, and procedures. Children's success in solving mathematical problems depends on their embeddedness in familiar, everyday practices and related discourses. Exploration and discovery are integral to children's mathematics (what does mathematics do?): the more formal teaching of rules and routines enables children to think creatively within the discipline and helps them to solve problems independently and collaboratively (what can I do with mathematics?).

The policy frameworks for the Foundation Stage, Numeracy and Key Stage 1 mathematics validate creative and playful approaches. Play activities can provide a range of contexts for integrating mathematics into everyday practices that children encounter in and out of school, as the following example shows (Attfield, 1992):

> Seven-year-old Toby enjoyed mathematical problems. In a role-play area resourced as a cafe, he pretended to be a waiter, using his mathematical knowledge to take money and give change. He was able to add and subtract mentally, worked out change from 50 pence, and added amounts up to £2.05p. He was particularly interested in adding up the money at the end and solving other money problems as they arose, such as: sandwiches are 10 pence each, so how many can Helen have for 30 pence? In another example, Sally was playing as the assistant in the toy shop, with Oliver helping her to take the money and give change. A long queue of customers formed so Oliver asked them to make two queues, saying 'I can serve them quickly . . . my Mum gets cross if she hangs around.'

Toby used formal rules and routines, combining abstract thinking with concrete experience in a playful context. The imaginary setting provided opportunities for authentic mathematical activities. In the next example (Attfield, 1992), Mary and Peta construct a Lego-Technic™ battery-controlled car using a plan. Their play integrates skills and knowledge in maths, science and technology:

> After the girls constructed the car they decided to follow the teacher's suggestion of making a ramp and comparing how far the car would travel on a flat and sloping surface. This involved

comparing, estimating, counting and predicting. Teacher extension supported the girls in measuring and comparing the distances travelled by the car. The activity was observed by peers, who suggested using different lengths of ramps. This led to an investigation of different materials for the ramps, and whether this made any difference. Mary understood the concept of a fair test, insisting that they let the car go rather than pushing it, and the concepts of forces and energy: 'you don't have to have batteries to make it move'. She also noticed cause and effect: 'The Bauspiel ramp is too short. It crashes at the bottom because it's too steep. We need something longer.' It was decided to extend this activity on future occasions by making different vehicles and testing them for speed and distance travelled.

Play experiences can provide open-ended opportunities for children to use and apply their knowledge, skills and understanding across the curriculum (see Chapter 7, Helen's and Vernon's play).

PLAYING ACROSS THE CURRICULUM These principles can be applied across other subject areas of the curriculum. The following examples show some creative pedagogical approaches that enable continuity between work and play, and playful opportunities for children to learn skills, dispositions and knowledge.

Playing with ICT

Hannah had a degree in media studies: she was keen to use her skills in her mixed-age class (Reception, Years 1 and 2), and wanted to improve her provision for ICT. The project was animals; a visit was planned to a local farm, and the children decided that they wanted to bring in their pets. She videotaped the visits from the children's pets so that they had a record of the discussions, which often involved family members. The children were interested in the camera and wanted to learn how to use it. Hannah was surprised at how competent and responsible they were, and supported their idea for a 'Pet News' programme. This involved turning the role-play area into a TV studio, with children acting as reporters on the latest pet news. They wrote news scripts and carried out interviews with children and family members. The project encouraged high levels of motivation because the children were engaged in authentic activity.

The older children provided more expert models of literacy and language for the younger children, so there was much peer interaction and co-construction, as well as support and enrichment from Hannah. The children used a wide repertoire of social skills, including allocating roles, sharing ideas, organizing presentations, and learning from each other about caring for pets.

Playing with History

Julie, a newly qualified teacher, worked in a small rural school, which was planning centenary celebrations that involved the whole school in the theme of the Victorians. Julie did some research in the school's old log books and discovered a story about a strict teacher who was rather harsh with the children, but also very poor at spelling. The records showed that the teacher was subsequently sacked for her spelling (but not for her harsh punishments of the children). This story provided the impetus for some teacher-directed role play with a Year 1 and 2 class. Julie prepared her children for the role play by telling them the story of the teacher, and asked the children to come dressed in costume for a Victorian school day. She hired a Victorian costume from a theatrical shop, and began the day in role. She carried out hand and nail inspections, and planned her lessons based on rote learning and drill, with the children using old slates and chalk. She wrote some incorrect spellings on the board, which the children spotted. The head teacher, also in role, came into the classroom and sacked Julie for her poor spellings. At this point some of the children were a little unsure about the distinction between reality and fantasy and wondered whether they would get their teacher back.

PLANNING FOR PROGRESSION AND CONTINUITY

While there is clear validation for play in the Foundation Stage, there remain concerns about the transition to more formal approaches in Reception and Year 1, and the lack of continuity in curriculum and pedagogy (Adams *et al*, 2004). In a study of progression and continuity, Wood and Bennett (2001) found that in nursery classes, children had long periods of time in which to engage in play and self-directed activities.

In Reception classes, time for play was reduced significantly as children were introduced to the Literacy and Numeracy Strategies, often from the beginning of the school year. By Year 1, there was very little time for play as teachers struggled with content overload from the policy requirements. Just as children become more skilled in their play, opportunities for play are restricted. Policy-makers assume that young children need more challenging work, whereas research shows that they also need more challenging play.

The examples given throughout this book indicate that children's play preferences change and develop alongside their developing skills, knowledge and dispositions. Hughes (1991) identifies the major developments beyond the pre-school phase. The child's thinking becomes more orderly, more structured and more logical. Play becomes more realistic and rule-oriented and reveals a developing need for order, a need to belong and a need for industry. Children's play involves more cognitive activity (*epistemic* play – what does this do?) as opposed to sensory exploration and physical manipulation (*ludic* play – what can I do with this?). Children build knowledge about play and become increasingly skilled as players. As their play skills develop, they use abstract forms of thinking: in Vygotsky's terms, action arises from ideas and symbols rather than from concrete objects.

In their need for order, children show increasing levels of competence in how they organize, structure and perform in their play-based activities (see examples in Chapter 7). They may become less dependent on an adult for support because they are more confident about sharing ideas, allocating roles and defining rules within a group. In terms of the need to belong, older children orientate towards peer-group affiliations and away from the family unit. Increasingly they construct their identities in relation to their peers and enjoy demonstrating skills, expertise and talents, which define their status:

> The peer group is a major socializing agent in middle childhood. It is from their peers, not from parents or teachers, that children learn about the nature of childhood. Peers will teach children quite effectively, and sometimes very harshly, about social rules and about the importance of obeying them and establish a moral order which may differ from that established by adults (Hughes, 1991: 100).

Hughes (1991) states that the developing need for industry is apparent in children's work and play: they need to be productive, to achieve a sense of mastery and a feeling of accomplishment. These attitudes and dispositions are related to their social status because play can bring either

positive or negative validation from peers. Play and work can be congruent as children work hard at their play, showing concentration, perseverance, determination and attention to means and ends. Developing conscious awareness of their skills and abilities leads to greater control of processes and outcomes so that play provides contexts for expressing their ideas, choices and intentions. Broström (1999) argues that older children demonstrate a growing awareness of the purposes of play, which influences its content and complexity. There is a gradual shift from play with objects to play that is more structured and rule-bound, and involves taking on a role. Where older children engage in socio-dramatic play, they are more likely to spend time negotiating the plot and story line, defining roles and directing the action. They gradually progress from spontaneous, unconscious actions towards more structured, conscious actions: their play becomes more like a performance that often incorporates well-rehearsed themes, rituals and actions. Broström (1999) argues that adults can be involved in planning the collective fantasy in order to support children's extended play skills. This involves helping children to organize the play environment, supporting the chosen theme with appropriate props, and interacting with children on their terms. Frame play can be constructed around children's 'real world' experiences, stories, films and popular culture.

Older children also enjoy games with rules such as board games and, increasingly, computer games where they compete against a partner or a character. They enjoy the success of winning, because this contributes to their self-esteem and status in their peer group. Increasingly, children's identity becomes defined by what they think they are good at, and what they are perceived to be good at by their peers. This can be observed in the context of rule-bound games such as football or chess, which demand specific skill and expertise. In an increasingly consumer-oriented society, children's identity is also defined by what they own. For older children, hobbies and interests often structure their play: these may be centred on collections of toys, games or spin-off products from the latest film and television characters. Children build collections of toys and other items that define their social status and can be used in bargaining and exchanges with their peers.

Children (and adults) do not outgrow play but their preferred modes of play change as they develop their skills and competences as players. Therefore, planning for progression in play needs to be considered within and beyond the Foundation Stage. The activities and experiences provided should continue to reflect a balance between adults' and children's

intentions. For example, older children enjoy the chance to compete with adults and peers in rule-bound activities (such as board games), but may need assistance from a more knowledgeable other to master the rules and conventions. In constructive play, there are many opportunities for progression. Much of the constructive equipment now available is technologically sophisticated and, in some cases, can be linked to computer programs. Such equipment can continue to integrate playfulness and industriousness as children learn to use their skills and knowledge to solve complex problems and extend their creativity and imagination. Children draw increasingly on disciplined ways of knowing and reasoning so that play continues to provide contexts for extending and integrating subject matter knowledge.

Children's rates of development vary significantly, as do their abilities and preferences. Planning for progression in play should take into account differentiation for children with special educational needs (Macintyre, 2001; Wall, 2003). Play/learning environments, both indoors and outdoors, need to be designed to promote the optimum development of children's abilities. For example, Peter had cerebral palsy and had difficulty controlling his body movements. His physiotherapy programme included a lot of repetitive tasks to improve control and coordination. The teacher designed a variety of activities that supported Peter's development, providing adult assistance where necessary, and enabling Peter to plan some of his own activities, especially on the large equipment which he enjoyed. Peter was supported by specialist equipment, such as grippers for pencils and brushes, and Dycem mats to secure objects and materials, which enabled him to engage in writing, drawing, constructive and small-world play. Peter's message to his Nan (Figure 5.10) indicates that he was acting as a reader and writer, and understood writing as a form of communication.

Jenny was partially sighted and needed a sensory-rich play environment. Additional sensory activities were planned, and new resources were made or ordered (for example, sandpaper letters and numerals, fluorescent paints and crayons, and different tactile materials in play trays). The teacher reorganized the nursery layout to create more space between the furniture, and added additional spotlighting to the book corner. In both these examples, all the children in the setting benefited in their social skills: they learned to play considerately with Peter and Jenny.

By developing informed understanding of the relationship between play, learning and the curriculum, the status of play can be extended beyond

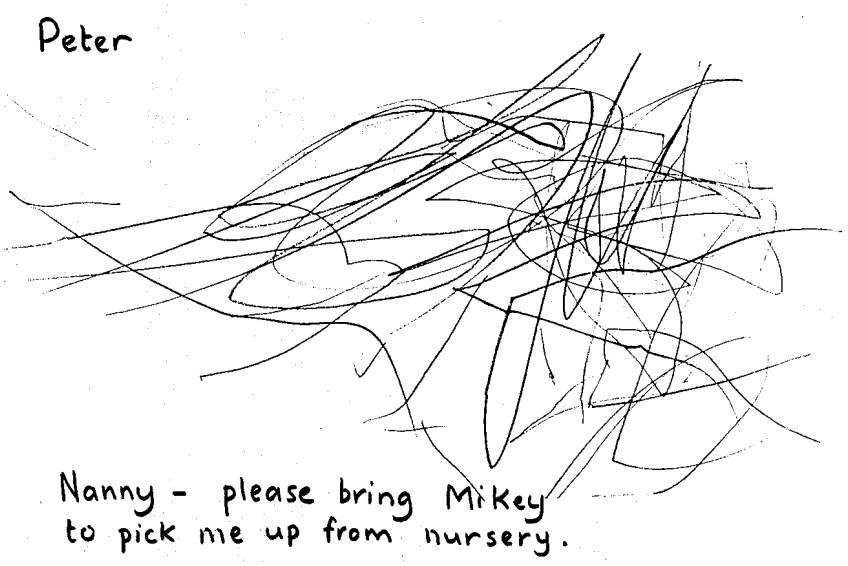


FIGURE 5.10 'NANNY, PLEASE BRING MIKEY TO PICK ME UP FROM NURSERY'.

the pre-school years and can continue to provide powerful contexts for both teaching and learning. To summarize, children need:

- time, space, and varied, good-quality resources
- a curriculum which is culturally diverse and relevant, includes a wide variety of play experiences and a balance between teachers' and children's intentions
- appropriately matched activities and experiences with opportunities for hands-on and brains-on activities
- opportunities for practice, mastery, consolidation and transferability
- opportunities to perceive relationships between areas of knowledge and experience
- the support of more knowledgeable others – peers and adults
- opportunities to make connections between learning and experiences at home and school
- opportunities to develop confidence and self-esteem

- to play considerately with others, and take care of their playing/learning environments
- to be valued, listened to and taken seriously
- to play and work alongside skilled, knowledgeable educators.

The following chapter examines how practitioners can develop a pedagogy of play, which links their pedagogical framing, with pedagogical techniques and strategies.

FURTHER READING

The following books provide a good theoretical underpinning for children's learning in the curriculum areas, as well as practical guidance for practitioners. Drifte (2002), Macintyre (2001) and Wall (2003) are strongly recommended for helping practitioners to ensure access and inclusion for children with special educational needs.

Drake, J. (2001) *Planning Children's Play and Learning in the Foundation Stage*, London, David Fulton.

Drifte, C. (2002) *Early Learning Goals for Children With Special Educational Needs: Learning Through Play*, London, David Fulton.

Fisher, J. (2002) *Starting From the Child?* (2nd edition), Buckingham, Open University Press.

Macintyre, C. (2001) *Enhancing Learning Through Play: A Developmental Perspective in Early Years Settings*, London, David Fulton.

Pound, L. (1999) *Supporting Mathematical Development in the Early Years*, Buckingham, Open University Press.

Rodger, R. (1999) *Planning an Appropriate Curriculum for the Under Five's*, London, David Fulton.

Wall, K. (2003) *Special Needs and the Early Years*, London, Paul Chapman.

Webster-Stratton, C. (1999) *How to Promote Children's Social and Emotional Competence*, London, Routledge.

Whitehead, M. (1999) *Supporting Language and Literacy Development in the Early Years*, Buckingham, Open University Press.