



Early Literacy and Numeracy

Self-Guided Learning Package

This resource was developed by Community Child Care (CCC) with funding provided by the Australian Government Department of Education, Employment and Workplace Relations under the Inclusion and Professional Support Program (2008-12).

The Inclusion and Professional Support Program is funded by the Australian Government Department of Education, Employment and Workplace Relations.

About Self-Guided Learning Packages

Self-Guided Learning Packages can be completed in your own time and convenience and offer an alternative to attending training sessions. This package aims to develop skills and knowledge that will be valuable to you in providing quality education and care programs. Packages are often used for professional development by staff teams, networks and other groups of children's services professionals. You can work through the package with colleagues by reading the package together, discussing the information and collaborating to complete the one assessment task.

Gowrie Victoria Leadership and Learning Consultants are available to support you while working through the package. Feel free to phone or email if you require any assistance completing the tasks within the package. Phone 1800 103 670 (freecall) or (03) 9347 6388 or email psc@gowrievictoria.org.au

Early Literacy and Numeracy

You have chosen to complete the Early Literacy and Numeracy package. The aim of this package is to assist the learner to understand the importance of developing early literacy and numeracy skills in young children. The learner will explore approaches to planning that encourages literacy and numeracy skill development and reflect on ways to implement these ideas in practice.

Introduction

The power of play is the most useful tool for literacy and numeracy learning

Educators working with children aged from birth to five years need to recognise this age group's unique stage of development. The way young children take in information, make sense of things, understand and learn is not the same as for children of older ages. Promoting opportunities for children to explore, be exposed to and participate in literacy and numeracy is an important part of the early childhood years.

Understanding what literacy and numeracy is and what it looks like is an important first step for the early childhood educator. Literacy and numeracy is much more than the narrow view that many in the community have, of writing, reading and counting or recognising numbers and reciting the alphabet. In fact, literacy and numeracy is far broader and richer than that definition and is in just about every aspect of life. The most common approach to adult-child interaction is scaffolding. Scaffolding in its simplest form refers to the way an adult supports learning. The adult can take on three different roles during learning: the adult may model concepts to children; the adult may work together with a child on something; or the adult may encourage the child to do or demonstrate the concept on their own. (Fleer and Raban 2007)

No one theory can describe children's literacy learning. A variety of theories are needed to take account of the complexities of children from diverse cultural and linguistic backgrounds growing up in a range of social and cultural contexts. (Jones Diaz et al, 2001). Young children in early childhood services come from a wide range of diverse backgrounds and speak more than two hundred languages and dialects. These children are developing early literacy in languages other than English. Literacy as a practice is more accurately described as multiple literacies within people's local, social and cultural contexts.

A broad view of literacy recognises that there are many diverse pathways to English literacy. A socio-cultural view of literacy is multicultural and multilingual and recognises that the home lives of children and the early experiences that children have, provide a strong foundation for later English literacy development (Clarke, 1999, Clarke, 2001).

It is essential to consider the diverse home backgrounds and lifestyles of children, including Aboriginal and Torres Strait Islander children, children in rural and remote communities, and children living in poor socioeconomic circumstances. All take part in a variety of literacy experiences.

The Early Years Learning Framework has a specific emphasis on play based- learning and recognises the importance of communication and language (including literacy and numeracy) and social and emotional development. Here is just one definition of literacy and numeracy that helps to widen our view of what it might mean to be 'literate'.

'Literacy is the capacity, confidence and disposition to use language in all its forms. Literacy incorporates a range of modes of communication including music, movement, dance, storytelling, visual arts, media and drama, as well as talking, listening, viewing, reading and writing. Contemporary texts include electronic and print based media. In an increasingly technological world, the ability to critically analyse texts is a key component of literacy. Children benefit from opportunities to explore their world using technologies and to develop confidence in using digital media.'

'Numeracy is the capacity, confidence and disposition to use mathematics in daily life. Children bring new mathematical understandings through engaging with problem solving. It is essential that the mathematical ideas with which young children interact are relevant and meaningful in the context of their current lives. Educators require a rich mathematical vocabulary to accurately describe and explain children's mathematical ideas and to support numeracy development. Spatial sense, structure and pattern, number, measurement, data argumentation, connections and exploring the world mathematically are the powerful mathematical ideas children need to become numerate.' (EYLF, 2009, p. 38)

The terms, *'purposeful, flexible, dynamic, analysis, and creative'*, are significant in understanding that early literacy and numeracy must involve a rich range of learning opportunities that provide experiences for children to be *'creative'*, *'to think'*, and that these experiences must be *'meaningful'* to the child.

The most significant strategies to promote early literacy and numeracy are through play

Self Help Question 1

Before reading the rest of this package consider your own views of literacy and numeracy. What are your views, what views do you see demonstrated in the community and what views you think families hold of early literacy and numeracy?

Literacy and numeracy: what it isn't

During the early childhood years, particularly from birth to aged five, young children need exposure to literacy and numeracy in everyday life experiences. Brain research highlights the need for early stimulation and exposure to key concepts related to literacy and numeracy. However, early stimulation does not equate to *'formal reading and writing'* at the age of two!!! This is a mistake often made.

Therefore, it is important to clarify what literacy and numeracy **is not** so that inappropriate practices are not used with young children.

Literacy and numeracy for young children is not:

- Stencilled letters
- Counting practice at group times
- Writing practice

- Formal recognition of shapes and colours
- Reciting the alphabet
- Pasting pre drawn letters or numbers

Often, early childhood educators feel pressured from families or others to provide literacy and numeracy with young children in ways that are inappropriate. This is often because families want to see their children 'learning' and acquiring literacy and numeracy skills. One of the challenges for the early childhood educator is to provide early literacy and numeracy for young children in ways that reflect their stage of development as well as to articulate to families what the appropriate literacy and numeracy actually is for children of different ages.

'Oral language' a significant aspect of early literacy

Literacy begins with exposure to oral language at birth. The first social experiences that parents, brothers and sisters, and other family members have with the new baby are the foundations of literary development. The early language play includes: making sounds and babbling, interactive games such as 'peek-a-boo', listening and joining in songs, playing finger games and rhymes, listening to stories, looking at picture books, enjoying pretence play, scribbling, drawing and painting (Milne, 1994).

Literate behaviours involve a variety of symbolic thinking activities. Children's early literacy experiences include drawing, modelling, building, digging, painting, scribbling, listening, talking, pretending, oral language recognition and use, block and toy play, dramatic play, dressing up, and various print mediums as well as all kinds of reading and looking at books.

For the development of early literacy children need exposure to a wide range of oral language such as:

- Speaking
- Conversation
- Chatting
- Listening to others
- Having fun with language
- Making up stories
- Being told stories
- Nonsense rhymes and jokes
- Songs, poetry and finger plays

The environment needs to promote opportunities for oral language in a range of ways and for a good deal of time during the program. Educators, who sit, listen and chat with children, rather than rushing around the room never having a conversation, are supporting this development. There are many strategies that can promote rich oral language experiences.

For example:

- Dramatic play for children over two years where they can dress up, act out roles they have seen, pretend play and make up roles. Props such as telephones, walkie talkies and microphones are useful too. This play can occur outdoors and indoors and be an integral part of every day for children.
- Having fun with language: one to one songs with children as they are on the swing or digging in the sandpit. Singing songs that relate to what they are doing, making up rhyming words and making up different words for nursery rhymes children will find amusing. Children aged between 3 and 5 particularly enjoy changing the words to familiar songs and rhymes.
An example is:

*Humpty Dumpty
Humpty Dumpty sat in the chair
While the barber cut his hair,
He cut it long
He cut it short
He cut it with a knife and fork*

- Reading to individual children, inviting them to say some of the words, books with repetitive text such as - Hairy McLarey from Donaldson's Dairy - are an example, where the children will start to remember the words and feel as if they are reading it themselves with you.
- For younger children, books such as 'Spot' and picture board books help children to recognise symbols and pictures and provide the opportunity to repeat words.
- For older children providing a range of experiences to include technology, reading material ,card games, photography , construction etc
- Adults modelling language and conversation between themselves i.e. with other educators and with families
- Educators ensuring that they use correct grammar and speak in sentences when with children i.e. avoiding incorrect words such as 'doggy' and using 'dog'.
- Educators modelling particular words when children are playing. For example at block play words such as, "you are putting one on the top, or underneath, or on the side. These elements of language are also known as 'positional language' and introduce children to literacy and elements of numeracy at the same time.

Self Help Question 2

List some play based experiences that would encourage the use of oral language in an early childhood program for children aged between three and five years

List some ways educators could promote oral language with young infants and toddlers through their interactions and activities provided

Written Language

Written language is about providing children with opportunities to recognise symbols, to have stories written about their work or experiences, to be surrounded by print and language in the learning environment. For example, providing menus in a pretend restaurant, following recipes in a cooking experience or putting magazines in a waiting room as part of dramatic play.

Numeracy and Literacy, what it might look like through a play based approach

A play-based curriculum emphasises that children in the early years take in information through open ended play based experiences with a hands on approach. The play-based curriculum reflects a hands-on approach to learning where children both indoors and outdoors are surrounded by opportunities for play which promote literacy and numeracy.

The pasting table is an example of how children aged between three and five can experience a rich range of learning experiences including literacy and numeracy:

The child, in the first instance, has to make a decision to go to the pasting table. That in itself is no mean feat when you are only 4 years old and perhaps one of many in a group. To get to the pasting table, a child may have to pass by a number of distractions and may notice that there are already a number of children already working in that area. After making the decision and finding a place at the table, and negotiating their space around the table alongside others, the child then commences to make a series of decisions about their pasting.

The child's thinking is often observed by early childhood educators through the self-talk that young children sometimes use. It goes something like this *"I think I'll start with the big box over there". "I want a little one on the top for the chimney" or, "I want a round one for the wheel. I will put one on the side and one underneath."*

As the child pulls out meters of masking tape, (as they love to keep pulling it) you often hear the words, *"It's not long enough, I need more"*.

You can hear the rich language practice and the demonstration of literacy and numeracy as the child talks about concepts including, the shape of the wheel, the length of masking tape, the position of the chimney, the size of the box etc.

Encourage families to develop children's concepts in their first or home language by talking to them at home or describing what they see when they are taking their children out.

Providing a range of play experiences can promote literacy and numeracy skills.

Skills underpinning literacy and numeracy include:

- Reasoning
- Classifying
- Grouping
- Sorting
- Recognising
- Distinguishing
- Symbolising
- Representing

A range of materials, natural, waste or purchased, can provide a broad scope for promoting literacy and numeracy skills in the early childhood program.

Examples include:

- Shells, leaves, seed pods or stones
- Water in troughs, tubs or containers
- Sand outdoors in a sandpit or indoors in troughs or trays
- Outdoor climbing equipment such as obstacle courses
- Wooden blocks both small and large
- Dress-ups and dramatic play equipment

Self Help Question 3

List some experiences that provide opportunities for numeracy learning through play for children aged two to five and indicate some of the numeracy concepts that may be explored through those experiences

Some specific examples for promoting literacy and numeracy through dramatic play

Children have many opportunities to be exposed to literacy and numeracy concepts in dramatic play. Setting up a range of different dramatic play experiences is one of the most effective ways to help children recognise symbols and practice their thinking skills and oral language all at the same time.

Examples of dramatic play that promote literacy and numeracy:

A post office

- Writing letters
- Posting letters
- Talking about what they might want to say or who they might wish to write to
- Looking at stamps
- Collecting and sorting stamps
- Using pretend money
- Wrapping and weighing parcels to post

A shop

- Making a list of what to buy
- Collecting empty boxes with writing on them to sell in the shop
- Making and using pretend money
- Sorting and classifying goods for sale
- Using a cash register and telephone

A restaurant

- Making a menu
- Making a shopping list
- Looking at recipe books
- Mixing and measuring ingredients
- Cooking
- Setting a table
- Taking orders
- Talking about different food they like/dislike

These examples don't expect children in early childhood to be able to read or write, but provide a play based, non-threatening way by which children are exposed to these skills and concepts and can act them out.

Self Help Question 4

Describe a dramatic play experience that could be set up for children aged between two and five that would promote literacy and numeracy. List the sorts of materials and resources you would provide

Identify some of the literacy and numeracy skills that could be promoted through this experience

Literacy and numeracy outdoors

A common view is that literacy and numeracy should be indoor-based learning using worksheets. As has been discussed in this package, literacy and numeracy relates to a wide range of learning experiences. These include outdoor experiences.

Examples of outdoor literacy and numeracy include:

- **Obstacle course**
This provides opportunities for oral language, gross motor and fine motor skills as well as modelling what is known as 'positional language' – words such as under, over, through, between, inside, outside, on top, underneath, across, up, down.
- **Digging patch**
Concepts include the texture of the mud or dirt, amounts of water in the digging patch, height of soil, colour of dirt, and depth of the holes that may be dug.
- **Gardening**
There are many opportunities for literacy from creating signs for newly planted seedlings to descriptive language about plants and for numeracy from placing one seed per hole to measuring plant growth over time.

Self Help Question 5

List some other outdoor experiences that would promote literacy and numeracy.

Describe each experience, listing the equipment and materials you would use and include some of the literacy and numeracy skills that would be promoted.

Literacy and numeracy from birth to 2 years

At times adults cannot imagine that babies and toddlers are also acquiring literacy and numeracy skills. A key developmental milestone at this young age is the acquisition of language, communication and comprehension. This is also occurring in the home languages of children from culturally and linguistically diverse backgrounds. Adults often joke about how many two year-olds recognise the famous 'golden arches' of McDonalds as their family drive past. This is in fact a demonstration that young children start to recognise that symbols reflect and represent meaning from a very young age.

One of the most important elements of early literacy and numeracy at this stage in development is to ensure that educators are speaking to children, modelling correct grammar and language. This includes providing opportunities for children to maintain and develop their first languages. Playing songs, reading simple stories to individual children, reciting nursery rhymes and singing lullabies are all important to the beginnings of early literacy. Also, early numeracy is supported by repeated sequences such as getting ready for bed, sharing descriptive numeracy language such as "more water" and informal games involving number such as counting toes.

The care environment for babies and toddlers must include time and opportunities for them to engage with the educator.

Some strategies include:

- Holding the infant so they can watch your face when talking
- Singing and holding or rocking them at the same time
- Providing music in the background at times for adults and children to respond to
- Providing materials in languages other than English
- Introducing nursery rhymes indoors or outdoors
- Playing together e.g. reading books, simple games, building with large blocks, rolling balls
- Displaying posters with pictures of things that children and adults can explore together
- Using routines for one on one time together

Self Help Question 6

Consider some of the ways which young children between birth and two years like to engage with an adult.

List some strategies that may help the educator promote language and communication

Literacy and Numeracy: helping parents understand what it is

As mentioned earlier, many people in the community expect literacy and numeracy to reflect formal and structured reading and writing practice for young children. Early childhood educators can help families and others in the community value the power and medium of play as a major means for promoting and exposing children to literacy and numeracy.

Listed below are some strategies educators can undertake to help families understand what English literacy and numeracy is in these early years and some strategies families may be able to take with them for use at home.

- Share with families examples of the pasting table or the block corner and how much numeracy and literacy is happening through those experiences and interactions.
- Actively promote the terms literacy and numeracy in the program and then provide practical examples:
 - Example: Numeracy = classifying = use of leaves to sort and group
 - Example: Literacy = recognition of symbols = a shop in the dramatic play area
- Use posters and pamphlets around the service that provide examples of where the literacy and numeracy is in the program both indoors and outdoors.
- Don't be afraid to use the terms literacy and numeracy, but ensure you are using the definitions that expand those things far beyond the narrow view of reading and writing.
- Encourage families to make up nonsense rhymes and words and songs with their children in English and where relevant in their own languages
- Encourage families to sit together for a meal and hold a conversation without the TV being on at the same time.
- Support families to understand the benefit of maintaining the first language and developing literacy and numeracy in their own languages.
- Encourage families to read or tell stories to their children from very early ages.
- Encourage families to model reading themselves in front of their children.

Self Help Question 7

Consider what your original view of literacy and numeracy was before reading this package. List some of the significant changes and challenges for you in promoting literacy and numeracy for this age range

Conclusion

'Early literacy development does not simply happen; rather, it is a social process, embedded in children's relationships with parents, grandparents, extended family members, siblings, teachers, caregivers, friends and the wider community' (Clarke, 1999, p.1).

Literacy and numeracy are part of everyday life. Walking along a street and noticing the traffic lights, the leaves on the ground, the shapes and colours of cars. Literacy and numeracy is meant to be a meaningful and relevant part of everyday life for young children. We want them to build positive messages and attitudes about literacy and numeracy. We want them to participate in rich play learning experiences that support and promote literacy and numeracy and all other aspects of their learning and development.

The challenge for the early childhood educator is to provide a rich range of opportunities that do not use formal and structured literacy and numeracy, but expose children to the key aspects of literacy and numeracy through a play based medium.

References and Resources

- Beecher, B & Arthur, L, 2001, *Play and Literacy in Children's Worlds*, Primary English Teaching Association, Newtown, NSW
- Bredenkamp, S & Copple, C, eds, 1997, *Developmentally Appropriate Practice in Early Childhood Programs*, NAEYC, Washington DC, USA
- Clarke, P, 1999, *Early Literacy*, *Clearing House, Journal of the Free Kindergarten Association*, Issue No.35, November 1999.
- Clarke, P, 2001, *Literacy Development in bilingual children in the early years*, Victorian Association TESOL and Multicultural Education Journal.
- Department of Education Employment and Workplace Relations (2009). *Belonging, Being & Becoming: The early years learning framework for Australia*. Barton, ACT.
- Department of Education Employment and Workplace Relations. (2010). *Educators Belonging, Being & Becoming: Educators' guide to the early years learning framework for Australia*. Barton, ACT
- Department of Education Employment and Workplace Relations. (2010). *My Time, Our Place: Framework for school age care in Australia - Draft for consultation*. Barton, ACT
- Department of Education Employment and Workplace Relations. . (2010). *The Early Years Learning Framework in Action: Educators' stories and models for practice* Barton, ACT
- Department of Education and Early Childhood Development. 2009). *Victorian Early Years Learning and Development Framework: For all children from birth to eight years*. Melbourne, Vic
- Fleer, M & Raban, B, 2007, *Early childhood literacy and numeracy: Building Good Practice*, Commonwealth of Australia
- Jones, E & Reynolds, G, 1992, *The Play's The Thing Teacher's Roles in Children's Play*, New York Teachers College Press, New York, USA
- Jones Diaz, C. et al., 2001, *Literacies, Communities and Under 5s*. Department of Education and Training and NSW Department of Community Services, Sydney, NSW.
- Hohmann, M., Banet, B. & Weikart, D, 1979, *Young children In Action: A Manual for Preschool Educators*, Highscope, Ypsilanti, ML, USA.
- Milne, R., 1994, *Emerging literacy in the first five years*, National Language and Literacy Institute of Australia (3 January).
- Milne, R., 2000, *Marketing Play*, FKA Children's Services, Melbourne

Assessment Task

1. Design a poster for families and educators defining and illustrating in at least five points what literacy and numeracy is for babies to five year olds. (Attach poster to assessment task)
2. Observe a group of children for a period and list five instances where you noticed developing literacy and/or numeracy skills. Describe what the child was doing at the time
3. List and discuss ten experiences commonly found in an early childhood program that promote elements of literacy and or numeracy
4. Prepare five records of observations of play, then identify the literacy and numeracy elements reflected in each of the play observations
5. List five examples of language supporting numeracy and an experience for each that would promote it outdoors
6. List three examples of what an educator could do one-on-one with a child under the age of two years to promote language development
7. Reflect upon your own learning in this package. List five new strategies you will be able to implement to develop early literacy and numeracy with children from birth to five years