Chapter 3:

The View of the Child

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Guiding Principle: The Child

Children learn in a variety of ways, and teachers value their many ways of understanding and constructing knowledge. Children come to school with their own experiences, social relationships, and abilities, are naturally curious, and are constantly learning.

Each child is on his or her own developmental path, and a group of same-aged children can be at different developmental levels that reflect individual characteristics and experiences of the children and their unique family and community environments and contexts. Teachers honour children as active participants in their own learning, and so offer them many opportunities to choose and direct their play experiences.

Thinking about Child Development

Some educators describe the guiding principle for this chapter as *developmentally appropriate practice (DAP)*. Developmentally appropriate early learning—whether in a child care program, nursery, Kindergarten, or other Early Years classroom—is child-centred, reflects family and community contexts, and encourages meaningful partnerships between teachers and each child, his or her family, and allied *early childhood development (ECD)* educators. Knowing about the way young children develop and learn helps us to be developmentally appropriate in our approach. Using a developmentally appropriate approach to Manitoba's Kindergarten curriculum helps teachers to differentiate instruction and engage young learners in their Kindergarten experience.

The *CMEC Statement on Play-Based Learning* (found in Chapter 2) reminds us that "learning through play is supported by early years experts," including many of the most influential

The DAP Debate

Some educators criticize the influence of a Westernized view of children's development on early childhood education practices, noting that other cultures may describe their children's development in other terms or value milestones other than those identified by many of the well-known names in child development theory. Since the early 1990s, active and important debates in the field of early education have tried to deconstruct the individualist nature of child development as the central construct in early childhood education, problematize the dichotomy between what is appropriate versus inappropriate in our practices, and draw in a wider variety of critical, feminist, post-structuralist, and decolonizing theories, research, and methodologies. This reconceptualization has an impact on our thinking about our educational purposes, our teaching practices, our approach to curriculum, and what we value about children's learning.

While no single theoretical perspective can ever fully describe all children and their learning, reflective teachers draw from multiple perspectives and practices to understand more fully the specific learning needs of individual and groups of children in their classrooms. This chapter addresses some powerful theoretical influences on and approaches to our early childhood practices.

child development theorists and the latest brain researchers. To offer young learners developmentally appropriate experiences, educators should begin with reflecting about the brain research and about the child development theory and research that have contributed many important insights into how young children learn. Keep in mind that recent research has shown children do *not* pass through discrete pervasive stages of development with defined starts and stops. Within broad developmental stages, children show concurrent and continuous incremental changes. Knowing this, you will observe a range of variation in developmental patterns and timelines in your classroom. Use developmental stages or benchmarks to guide your expectations and use what you know about the individual children to guide your curriculum planning.

Brain Research

"... the early years of child development set the stage for learning, behaviour and health throughout the life cycle" (McCain and Mustard 153).

In recent years, our understanding of how brains develop has grown tremendously. Some concepts from the brain research are important for teachers to know.

Thanks to advances in research in the neurosciences and biological sciences, we now know that a young child's ability to learn in Kindergarten is strongly influenced by the neural wiring that took place in the early years of life. From birth through about age three years, over 700 new neurons form in the child's brain each second (Center on the Developing Child, "Brain Architecture"). If a child lacks adequate socio-emotional, physical, cognitive, and language stimulation during the early years, neurons can be permanently lost.

Think of the building blocks of brain architecture as our genes (what we are born with), and our experiences as the lives we lead. Our earliest experiences build brain architecture; the ability for the brain to reorganize and adapt (its plasticity) is greatest in the first years of life and decreases with age (McCain, Mustard, and Shanker).

The back-and-forth process between parent and baby (or between teacher and student) is fundamental to the wiring of the brain, especially when children are young: "Serve and return interactions shape brain circuitry" (Center on the Developing Child, "Serve and Return"). Serve and return exchanges are also needed for children to regulate their emotions and develop language, gross motor skills (such as learning to sit, stand, and walk), and fine motor skills (such as learning to hold a pencil and tie shoes).

For some children, persistent stress in the absence of protective adult support is toxic; it can derail healthy development and have long-term harmful effects (Center on the Developing Child, "Toxic Stress").

Play helps develop the "whole" child by sculpting the brain; in fact, it is the instrument that most powerfully develops the child's executive functioning—the part of the brain that helps children to make decisions and regulate their own behaviour.

Child Development Theories and Approaches

An overview of some powerful theoretical influences on and approaches to our early childhood practices follows.

Attachment Theory

Attachment theory is the joint work of John Bowlby and Mary Ainsworth and is a widely accepted view of the emotional bond between infants and primary caregivers. It describes the intense emotional relationships and bonds humans share with one another. Attachment relationships can be described in broad terms as either *secure* or *insecure*, depending on the nature of the child's regulating behaviours.

"Maintaining a degree of proximity to attachment figures is one that goes the whole way through from infancy to old age"
— Mary Ainsworth
(Davidson Films, Inc.).

Variations in Attachment Practices

"Although the attachment relationship is universal, parents' attachment beliefs, values, and practices differ around the world. There is an increasing number and increasing diversity of immigrants and refugees coming to Canada from countries where attachment practices may differ from those which are dominant in Canadian health and social service milieus. When serving immigrant and refugee families it is important to consider whether the variation in their attachment relationships is based on differing beliefs and values related to parenting, as well as different goals for each stage of a child's development" (St. Joseph's Women's Health Centre 22).

"Refugee families incur many different types of stressors in the course of the phases prior to flight, those of flight, and resettlement. Multiple and varied negative life events and traumas, such as those experienced by refugee families, may give rise to negative changes in attachment between children and their parents" (Stauffer 150).

Attachment begins when babies receive the consistent nurturing needed for their survival and serves as the model for future relationships. When caregivers are responsive, accessible, and consistent in their ability to provide a protected and secure environment, children learn to trust and bond—that is, to attach. They develop an inner working model or set of expectations about the availability of attachment figures, their likelihood of providing support in times of stress, and the interaction of the self with those figures. The model becomes a guide or a template for all future close relationships children develop with peers, early childhood teachers, and future work colleagues, spouses, and even their own children (Berk 421).

When children have not developed a prior secure attachment with key family members, they do not learn to see the world as a safe place, and therefore it may be more difficult for you to develop a bond with those children during Kindergarten. They may be less trusting of adults in general and less sure that their needs will be met or that your classroom is a safe place to be. Attachment has an impact on children's self-efficacy (their belief that they can successfully do the work of Kindergarten) and self-esteem, which are vitally important to future success. Kindergarten children with attachment difficulties may struggle academically

Children benefit from warm, sensitive, and caring environments that help them feel safe.

because, unlike their securely attached peers, they are unsuccessful at attaching to you and may be fearful of you. They may lack confidence about their ability to learn, and do not use you as their secure base from which to venture into the world of learning. While many Kindergarten children demonstrate peer competency, some unattached children may demonstrate resistant or aggressive behaviours.

All children will benefit from the work you do to create warm, sensitive, and stable environments. You can read more about this in Chapter 5.

Cognitive Development Theory

Child development theorist Jean Piaget described how children "actively construct knowledge as they manipulate and explore their world" (Berk 20). This theory supports the idea that children benefit from the chance to engage in hands-on learning and is at the heart of the constructivist movement that has so greatly influenced early childhood education. When considering a developmentally appropriate curriculum, teachers recognize that play "enables children to progress along the developmental sequence from the sensorimotor intelligence of infancy to preoperational thought in the preschool years to the concrete operational thinking exhibited by primary children" (Bredekamp 3). Piaget calls the processes by which concepts are changed *assimilation* and *accommodation*. The child fits knowledge into a cognitive structure that is already formed (assimilation) and changes a structure to make it possible to include new knowledge (accommodation). These processes are the basis for learning throughout life.

"Each time one prematurely teaches a child something he could have discovered himself, that child is kept from inventing it and consequently from understanding it completely" (Piaget 715).

According to Piaget, the child cannot internalize new elements in the environment until perceptual ability is well developed. Until the brain is able to organize and reorganize the messages it receives, the child cannot make use of the perceptions that the sense organs may provide. Growth in perception and in the organization of cognitive structures depends on developmental processes. Early childhood, therefore, should be a time of rapid growth in the formation of both precepts and concepts, since future learning will be built on the structures developed in the first seven years. Educational principles that have emerged from Piaget's work include an emphasis on discovery learning, sensitivity to children's readiness to learn, and acceptance of children's individual differences. All these principles are discussed further within this document.

Piaget theorized that as the brain develops and children's experiences expand, they move through four broad stages of development: sensorimotor, preoperational, concrete operational, and formal operational (Berk 21). Piaget's early stages of learning are identified in the following table. Please note, however, that the stages extend through adolescence to adulthood.

Piaget's Early Stages of Development

Age Range	Stage	Characteristics
Birth to 2 years	Sensorimotor	Babies use their senses and growing abilities to move to explore the world and to "act" upon it. They invent ways of solving sensorimotor problems through trial and error, such as sucking on a nipple to make milk flow, pulling a lever to make the music start, or putting objects in and out of containers.
2 to 7 years	Preoperational	Preschoolers use symbolic but often illogical ways to think about the world, and their actions are becoming internalized. Language continues to develop and children may represent an object with a word or an image. Symbolic or make-believe play begins. The children do not fully understand rules, and the ability to conserve* may be emerging. * The understanding that certain physical characteristics of objects remain the same despite changes to their outward appearance.
7 to 11 years	Concrete operational	The reasoning shown by school-age children becomes more logical, flexible, and organized. They master the concept of conservation, can classify objects, and can seriate along a quantitative dimension, such as length or weight. However, they are not yet thinking in abstract terms.

Socio-cultural Theory

In his constructivist approach to understanding children's learning, Lev Vygotsky described cognitive development as a socially mediated process. He theorized that many cognitive processes and skills are socially transferred from "more knowledgeable others" (such as teachers and parents, but also peers) to children. Key concepts that influence our teaching approach include *scaffolding*, whereby we build upon what the child already knows or what the child can already do on his or her own. You can read more about scaffolding in Chapter 4.

Scaffolding

The concept of scaffolding is a linguistically appropriate teaching approach for EAL students. Recognizing the importance of home languages and literacy experiences and building on these in the classroom is a fundamental strategy for teaching English and new concepts in English (Chumak-Horbatsch).

"Play . . . creates the zone of proximal development of the child. In play, the child is always behaving beyond his age, above his usual everyday behaviour; in play, he is, as it were, a head above himself. Play contains in a concentrated form, as in the focus of a magnifying glass, all developmental tendencies; it is as if the child tries to jump above his usual level" (Vygotsky 102).

The *zone of proximal development (ZPD)* concept, introduced by Vygotsky, refers to the cusp of a child's emerging skills. While tasks within this zone may prove too difficult for a child to handle alone, with coaching and support from "more knowledgeable others," the child can perform the tasks successfully. In fact, "the fundamental way in which a child's higher mental functions are formed is through mediated activities shared with an adult or more competent peer" (Sparling 47).

The intentional teacher, therefore, encourages the child to stretch a *reasonable* amount to acquire new skills, abilities, or knowledge by ensuring goals are both challenging and achievable (Copple and Bredekamp, *Basics of Developmentally Appropriate Practice* 5). According to Vygotsky, make-believe play is a unique ZPD in which children try out a variety of challenging activities and acquire many new competencies that are mediated by the language of a more knowledgeable other. Kindergarten teachers ensure that they promote socio-dramatic play and allow ample time for this more advanced make-believe play form to unfold. Vygotsky-influenced teachers offer children many assisted discovery experiences, helped along by peer collaboration and the arrangement of cooperative learning experiences. (For more information, see Chapter 5.)

John Dewey and the Progressive Movement

"I assume that amid all uncertainties there is one permanent frame of reference: namely, the organic connection between education and personal experience" (Dewey, *Experience and Education* 12).

One of the most important influences on modern education was John Dewey, who is often referred to as the father of progressive education. He promoted the idea of experiential learning to engage children's physical, emotional, and mental aptitudes fully and to create opportunities for deeper understandings. He was the first to include Kindergarten teachers as an important part of his vision for a reformed education system for America. Dewey "imagined early learning settings as places for the creation of a community of inquiry where adults and children actively 'research' the world, co-constructing knowledge and understandings together" (Association of Canadian Deans of Education 1).

Constructivist Theory

"For whether one speaks to mathematicians, or physicists or historians, one encounters repeatedly an expression of faith in the powerful effects that come from permitting the student to put things together for himself, to be his own discoverer" (Bruner 22).

Jerome Bruner described the way children construct new ideas or concepts based upon prior knowledge. He stressed that learning is an active process and that children are active problem-solvers and capable of exploring "difficult subjects." He also emphasized the social influences on development. The educational philosophy described as the "spiral curriculum" emerges from his influence, as he described the way children revisit basic ideas over and over, building upon them and elaborating to the level of full understanding and mastery. Bruner valued discovery learning, recommending a learning environment that encourages children to explore a predetermined problem. Instructional support guides the learner to make a series of discoveries that lead to a predetermined goal. This approach is often used in science and mathematics learning.

Ecological Systems Theory

"Learning and development are facilitated by the participation of the developing person in progressively more complex patterns of reciprocal activity with someone with whom that person has developed a strong and enduring emotional attachment and when the balance of power gradually shifts in favour of the developing person" (Bronfenbrenner 60).

Urie Bronfenbrenner asserted that human development is influenced by factors operating at different "systems levels" within a broad ecological structure. As such, everything in a child and his or her environment affects how the child grows and develops. As illustrated in Figure 3.1, the child who exists at the *microsystem* level is affected by all the concentric systems that surround the child (Berk 28), including

- the immediate family, the neighbourhood, and the child care centre or school (the *mesosystem*)
- parental workplaces, friends and neighbours, extended family, and the community in which institutions and services are located (the *exosystem*)
- the policies and protocols of governments and employers that influence family decisions, and the values and laws of the province or country (the *macrosystem*)

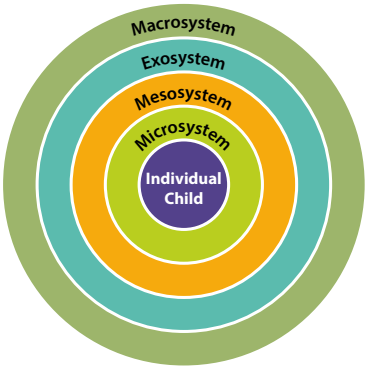


Figure 3.1:
Levels of Ecological Systems Theory

Manitoba's child-centred policy focus is an example of how changes at the macrosystem level have had a major influence on the lived experiences of the youngest citizens of our province. When Kindergarten teachers actively engage with families and other allies in related early childhood development sectors (the mesosystem) to create seamless transitions for children and to align their curricular approaches, children are the beneficiaries. (This approach is discussed further in Chapter 10.)

Social Learning (Cognitive) Theory

"... knowledge is probably gained ... through social comparison of success and failure experiences. Children repeatedly observe their own behaviour and the attainments of others" (Bandura 421).

Canadian psychologist Albert Bandura reminded us about the important role vicarious learning plays in the way children learn. According to Bandura, vicarious learning is the process of learning to copy or model the action of another through observing another doing it. Children's ideas about gender roles or their use of aggression as a means to an end in order to achieve their goals can be attributed to imitation. Children identify with the model, which may be another child or an adult, and take on behaviours, values, or beliefs as expressed by the model. Bandura states that children's beliefs about their own efficacy develop as they watch others engage in self-praise and self-blame, and so gain feedback about the worth of their own actions (McLeod).

The Montessori Approach

"I do not think, I observe" (Montessori).

The Montessori approach was founded by Maria Montessori, the first female physician in Italy. She worked with disadvantaged children in Rome to hone her theories on child-driven, self-motivated learning and human development throughout the lifespan. The Casa dei Bambini (Children's House) opened in 1907, and was the first truly child-centred space for children, including novelties of the time such as child-sized furniture. She argued that when children are free to choose from a rich and intentionally "prepared" learning environment, their development is optimized. The Montessori approach is a constructivist model that emphasizes children's independence, discovery learning, long uninterrupted blocks of work time, and the use of specialized Montessori learning aids. To Montessori, "teachers are part of the prepared environment; their roles, beyond providing didactic learning materials, are to act as advisors or guides and serve as catalysts of learning rather than as deliverers of information" (Estes 150). Today, there are Montessori preschools around the world. In Manitoba, most are licensed early learning facilities that may also offer Kindergarten.

The Reggio Emilia Approach

"The child is made of one hundred languages" (Malaguzzi, as cited in Edwards, Gandini, and Forman, *The Hundred Languages of Children* 3).

The Reggio approach has become a growing influence on current thinking about early childhood education. Reggio Emilia is the name of a Northern Italian community with a well-developed early childhood philosophy that has inspired teachers around the world. Loris Malaguzzi, the founder of the movement, described his image of the child as "rich in potential, strong, powerful and competent and, most of all, connected to adults and other children" (Malaguzzi 10).

The Reggio approach emphasizes children's inherent right to be respected and valued for themselves, and recognizes their curiosity and open-mindedness to all that is possible. Reggio-inspired teachers

see children with exceptional learning needs as having "special rights" rather than "special needs." The approach focuses on symbolic representation, and young children are encouraged to express themselves through "multiple paths and all their 'languages', including the expressive, communicative, symbolic, cognitive, ethical, metaphorical, logical, imaginative and relational" (Edwards, Gandini, and Forman, *The Hundred Languages of Children* 7). The Reggio-inspired notion of the hundred languages of children is a metaphor that highlights the many ways of expressing our thinking and our feelings, using many modes to represent our experiences. In addition to talking and writing, the hundred languages might include building with blocks, creating with wire and clay, painting, acting, dancing, singing, and more.

Crucial features of this constructivist approach include the active engagement of parents in the development and management of early childhood services. A cornerstone is for children and adults to participate as citizens in a community. The role of the teacher is as an enthusiastic learner and researcher rather than the expert who imparts knowledge to students. Reggio-inspired teachers believe that children are capable of making a hypothesis, constructing a theory, and knowing who and when to ask for collaboration and help to resolve their problems. As such, Reggio-influenced teachers help to facilitate, guide, extend, and provoke children's learning using a project-based approach.

The learning environment (described in more detail in Chapter 5) has a special role in Reggio-inspired classrooms "where it is understood that the environment should support the work and the interest of the children without constant adult guidance and intervention. The children work in the spaces . . . and build their stories there" (Wurm 40). In these spaces, teachers and children "are co-constructors of knowledge . . . [and] embrace the total learning experience—both process and product" (Estes 158).

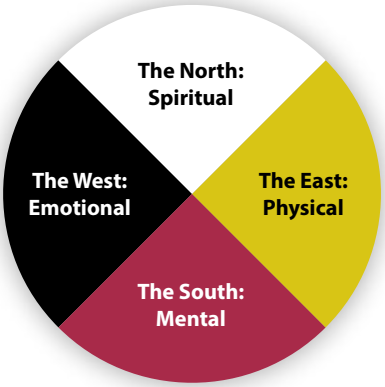
Indigenous Perspectives on Child Development

Indigenous people of Canada have an inclusive, strength-based traditional saying to describe child development: *All children are the gift of the Creator.*

Indigenous concepts of child development (similar to Bronfenbrenner's Ecological Systems Theory) are based on a holistic approach to health:

> Most Aboriginal people believe wellness is achieved through the balance of body, mind, emotion, and spirit. Holistic health incorporates the physical, mental, emotional and spiritual needs of the individual, family and community. Things become holistic when all of the dimensions of the whole being are considered. We may address each dimension individually but must realize they are all connected. Each part enhances, supports and affects the other. Each of these dimensions consists of wellness factors. The range of individual wellness is reflective of how each of these factors is addressed. We use this concept to understand Aboriginal child wellness. Some Aboriginal groups may not use the concept of the wheel; however, the idea of holistic wellness is common to all Aboriginal people. (Best Start Resource Centre 19)

This holistic approach is represented in Figure 3.2 by the four directions of the Aboriginal Child Wellness Wheel.* The four quadrants of the circle represent the following developmental domains:



Physical—includes motor development, sleep, body weight, nutrition, medical care, and physical environment

Mental—includes cognitive and language development

Emotional—includes social and emotional development, including self-confidence and a sense of belonging

Spiritual—includes the child's relationship to self, family, nation, land, animals, and the spirit world

Figure 3.2: Aboriginal Child Wellness Wheel*

* Source: Best Start Resource Centre. *A Sense of Belonging: Supporting Healthy Child Development in Aboriginal Families*. Toronto, ON: Best Start Resource Centre, 2011. 19. Available online at <http://beststart.org/resources/hlthy_chld_dev/pdf/aboriginal_manual_rev4.pdf> (16 Dec. 2014). Adapted with permission from the Best Start Resource Centre.

A Developmentally Appropriate Approach

The theoretical foundation to developmentally appropriate practice is that teachers focus on the whole child—that is, on the child's mind, body, feelings, and the social context. Developmentally appropriate practice is not a curriculum itself, but rather a pedagogical approach grounded in the research on how young children develop and learn, as well as evidence-based practices about educational effectiveness. This approach promotes the idea of meeting young children where they are developmentally as individuals and as part of a peer group, and with a full appreciation of each child's contexts for living and growing: family, religion, ethnicity, race, socio-economic level, or other variables that may be having an impact on the child in our classrooms.

Developmentally appropriate practice (DAP)

> calls upon the teacher to make sure that the daily activities and environment provide engaging, learning experiences for every child in the classroom. . . . [In] a DAP classroom, a teacher's nurturing disposition is welcomed but is not enough. Instead, this loving of children should act as the spur that pricks the sides of the teacher's intent to make the professional decisions necessary for the education and guidance of children, both as individuals and as a group of learners—decisions based on age, individual, and cultural appropriateness. This professionalism is key to best practices in the classroom. It is what makes teaching young children an awesome challenge and wondrous privilege for the DAP intentional teacher who every day manages an active mix of child-guided and teacher-guided learning experiences to bring fun, joy and wonder to each child's early learning development. (Mesrobian)*

Fun Joy Wonder

* Source: Mesrobian, Joyce. Review of *Developmentally Appropriate Practice in Early Childhood Programs*. 3rd ed. Ed. Carol Copple and Sue Bredekamp. *Chicago Metro for AEYC*. Web. <www.chicagometroaeyc.org/files/pdfs/DEVELOPMENTALLY-APPROPRIATE_PRACTICE.pdf> (4 Apr. 2013). Used by permission of Chicago Metro AEYC/chicagometroaeyc.org.

Reflection: Your Developmentally Appropriate Kindergarten

What does your developmentally appropriate Kindergarten look like? How and when do you do the following?

- help children to integrate new learning with prior knowledge and experiences through extended explorations and project work
- involve children in hands-on experiences with other children, adults, and materials in the learning environment
- emphasize opportunities for language development and emergent literacy and numeracy experiences that include reading to children in school and encourage the extension of these activities at home
- involve and welcome parents to share information about their children, become engaged in their children's learning, and participate in classroom learning (as families feel comfortable)
- differentiate instruction to offer a balance of small-group, large-group, and individual learning activities
- assess students' progress through close teacher observation and systematic collection and documentation of students' work
- develop children's social and emotional skills, including self-regulation, pro-social skills, and conflict-resolution strategies

Meeting Learners' Needs for Development and Success*

EAL learners will progress at different rates through the stages of development outlined in the Early Years EAL Acquisition Continuum, depending on factors such as

- educational background and prior learning experiences
- personal characteristics, learning styles, and ability
- the nature of the EAL program supporting them
- confidence and motivation
- linguistic distance between their first language and English
- socio-cultural distance between home culture and Canadian culture
- extent of support from home and the community

English language proficiency and knowledge of Canadian culture are fundamental to learner success. The education system must respect and value an individual's first language(s) and culture and recognize the importance of the continued use of the first language(s). Learning is enhanced by the judicious use of two or more languages. To facilitate learning, learners should see their literature and cultural experiences reflected in the classroom.

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* Source: Manitoba Education. *Manitoba Kindergarten to Grade 12 Curriculum Framework for English as an Additional Language (EAL) and Literacy, Academics, and Language (LAL) Programming, June 2011 Draft*. Winnipeg, MB: Manitoba Education, 2011. Section 1, 1.12, 1.20. Available online at <www.edu.gov.mb.ca/k12/cur/eal/framework/index.html> (7 July 2014).

Developmentally Responsive Teaching

According to the National Association for the Education of Young Children, child development principles should form the theoretical orientation to our pedagogical approach (*Developmentally Appropriate Practice in Early Childhood Programs*). Kindergarten children are generally developing rapidly and concurrently across all their domains. Your awareness of these growth patterns allows you to seize opportunities to foster children's development. It is not the Kindergarten teacher's responsibility to teach reading, writing, and mathematical skills per se. Rather, consider how you provide a rich environment in which children have many opportunities to build friendships, talk to one another, regulate emotions, use writing materials, explore their curiosity, pretend, read, and count while they play. How do you guide them through those opportunities?

Intentional teachers devise a variety of interesting and challenging learning experiences to integrate the acquisition of numeracy and literacy competencies into their play-based approach to teaching. Some children develop special interests and reach out for symbolic learning at an early age. For those children who begin to read and to work with numbers, additional planning is required in order to offer learning experiences in their zones of proximal development. These learning activities should continue only as long as the children have these particular interests. Be ready to recognize and accept individual learning patterns and characteristics. Your most important role is to recognize and provide learning opportunities for each child.

"Play" Experiences

In many situations, young children in poverty, in isolated environments, or in refugee camps will have limited or quite different "play" experiences. In such cases, they learn by "working" with other children and adults as they help garden, collect water and wood, cook, herd, hunt, and engage in many other work activities. Sometimes play is introduced in these work activities through singing, storytelling, and other forms of "play."

The child's learning comes through play: "Play contributes to the emotional, intellectual, physical, social and spiritual development of the child in ways that cannot be taught through instruction" (Zigler, Singer, and Bishop-Josef vi). As children develop more sophisticated ways of perceiving and conceptualizing, you will need to enhance and enrich your Kindergarten learning program. Didactic or rigid mechanical teaching of skills that disregard the child's interests or developmental levels has no place in a developmentally appropriate Kindergarten. Kindergarten teachers know that "play nourishes every aspect of children's development. It forms the foundation of intellectual, social, physical, and emotional skills necessary for success in school and life" (Canadian Council on Learning 2). Developmentally appropriate teaching strategies influence learning environments, curriculum, family involvement, and assessments. As such, their use enhances each child's potential and educational possibilities. You can read more about this in Chapter 4.

Nurturing Curiosity and Creativity

Children who are becoming increasingly aware of the wonder and complexity of their world have many questions to ask and are capable of posing their own hypotheses, creating their own theories, and carrying out their own investigations with the support of teachers, families, and peers. When adults do provide answers, these answers should be intellectually honest, but stated in terms that children can understand. The child who is asking about lightning, for example, may have seen the flash of a short circuit and be satisfied that these two phenomena have much in common. That child may be more satisfied, however, if the teacher gets batteries and wire from the school science supplies and works with the child to create a "jumping" current.

When you see a child showing an interest, respect it, support it, and extend it. The child is a learner, but so are you, and together you can co-construct meaning. Value the learning that is inherent in relationships, recognizing the socio-cultural nature of learning. Value small-group interactions where children can see, hear, and listen to one another. Within the small group, children can better negotiate, collaborate, play, and exchange ideas. You can read more about the importance of the social environment and the benefit of small learning centres in Chapter 5.

Because young children are just beginning to learn how to organize and interpret information, they can hold contradictory explanations and not be troubled by them. They are also apt to cling to an old erroneous explanation even when offered a new one. It is necessary to offer explanations that can be built on by accommodation, rather than ones that inhibit future learning.

It is sound pedagogy to help children carry out simple investigations or to give them appropriate pictures or resource materials to enable them to find their own answers. *Children who do not receive some response to their important questions generally give up asking them*. Blocking their natural curiosity seriously impedes future learning. Curiosity must then be re-stimulated by a persevering teacher.

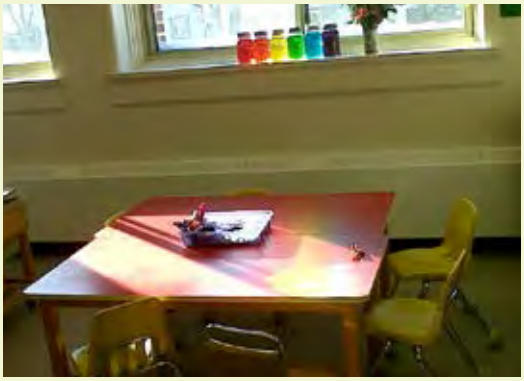
Creativity can be defined as "being able to think or express oneself in an original manner." Each child receives sensory stimulation and organizes this information in unique ways. Children who have their ideas ignored or ridiculed generally cease to be creative and try to produce what they believe the teacher expects. A child who feels secure that the teacher will accept, understand, and praise fledgling efforts will continue to be creative. The young child is not ready for consistently logical thinking. You can foster creativity by encouraging the child to think in ways that do not require logic or realistic viewpoints.

As children develop into divergent thinkers, they may freely express their ideas in inventions, visual art forms, music, and literature. Do not stifle the childlike thinking that may appear to be illogical. While logic is a powerful tool for learning, creativity is the source of original ideas and can add joy to life. Creativity needs encouragement and stimulation, but it also needs protection. The child who grows up able to be creative when creativity is needed, and logical when logic is necessary, develops into a powerful thinker.

With *provocations*, intentional teachers thoughtfully plan which toys, furniture, and other learning materials they will have in their classrooms. You can specifically arrange materials in response to children's interests, to stimulate their thinking and to create an environment in which explorers and investigators are supported. You can read more about this in Chapters 4 to 6.

The Rainbow Provocation

During an exploration about colour and tint, children dripped food colouring into jars of water, predicting how many drops it would take to get to the desired hue, and tracking their results. The next day, their teacher carefully placed the jars onto a sunny windowsill. When the children arrived, they were thrilled to see the jars acting like a prism, creating rainbows across their classroom. This provocation took the children in a new direction related to learning about rainbows, reflection, and refraction. (See Chapter 4 for more information about provocations.)



The sunlight shines through the jars filled with coloured water, creating rainbows in the classroom.

Learning about Differences

Children are not born with prejudice "wired" into their brains. They may develop prejudice as a result of their experiences in their homes, the community, schools, and society in general. Many educators feel that young children are bias-free. Often teachers think of children as being "colour blind" or "difference blind," but young children do see, hear, and feel "difference." It is important to recognize that *seeing, hearing, or feeling difference is not the problem, but the values or meaning attached to the perceived differences and how they influence behaviour may be problematic.*

Prejudices are preconceived ideas about people that are perceived as being different due to a number of characteristics, such as skin colour or "race," religion, culture, gender, abilities, appearance, language, sexual orientation, religion, or social status. Research suggests that young children begin developing attitudes about various groups in society as early as age three or four (Bergen; Wagenaar and Coates; Fowler; and Kang and Inzlicht). While such prejudicial attitudes are not yet deeply entrenched or hardened in young children, they become more difficult to change as children grow older.

Young children learn prejudice through living in and observing a society where prejudice and discrimination exist, influenced by what people around them think,

say, and do through association, reinforcement, and modelling. Children learn prejudice as they become aware of negative attitudes about the differences they see reflected in their classrooms, in their community, or in the media and larger society. Research suggests that young children are especially susceptible to developing and holding prejudices through instruction, as they may have limited personal experiences that counter the prejudices and more limited ability to make personal judgments that diverge from dominant stereotypes (Augoustinos and Rosewarne).

Through the messages they receive in the world around them, young children may learn to associate a particular ethnic or cultural group with things such as poverty, crime, violence, limited intelligence, or other negative attributes. Young children will "reproduce" these messages through frequent exposure and through reinforcement of the messages by significant others, such as when peers or older siblings laugh along at a derogatory or humiliating comment or "joke." Conversely, social learning theory suggests that the adults who surround and interact with young children can help *prevent the development of prejudice.*

Countering prejudice can become a primary challenge in your classroom. As you learn about the children in your classroom, focus on teaching them about positive elements of equality and diversity. Children are influenced by their own experiences, so it is not enough for teachers and parents to talk about these issues. You need to create situations and environments that foster positive experiences among children from all backgrounds (Kang and Inzlicht), gently challenging, confronting, and disrupting children's misconceptions. You can read more about this in Chapter 9.

Young Children and Identity Formation

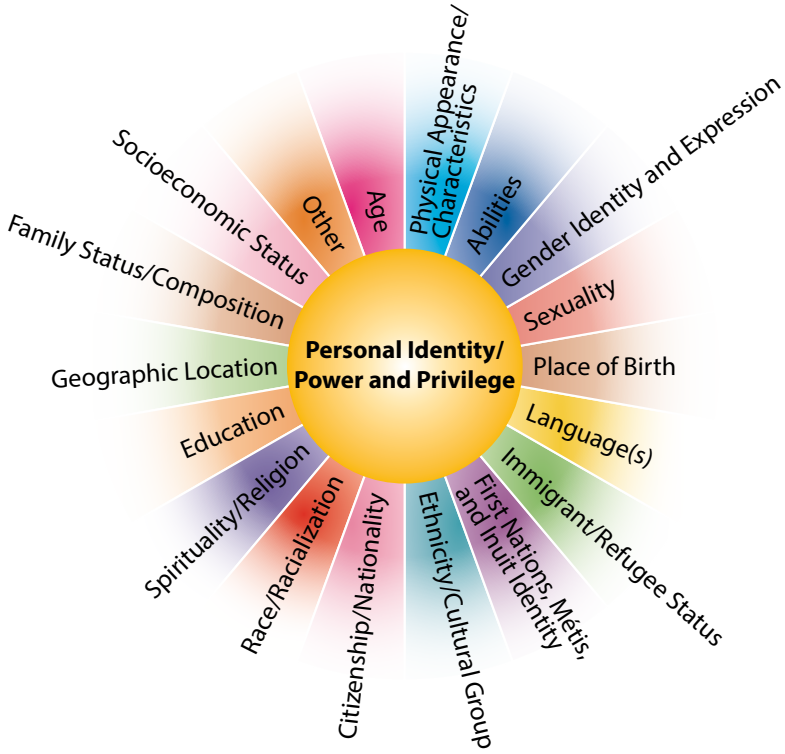


Figure 3.3: Identity: Power and Privilege

As illustrated in Figure 3.3, we all hold multiple identities, with ethnicity, class, gender, language, religion, political beliefs, and so on, helping to define who we are. Not all elements of our identity have the same force, however, and their relevance changes with our personal and social conditions and contexts. These dimensions of identity and group belonging have important connections to power and privilege in society and are far from neutral. For example, the language someone speaks and even the accent someone possesses may have a significant impact on how others see that person and on the privileges given or not given because of the values attached to that specific language or accent.

At school entry, young children already bring with them an initial sense of their

identity—who they are and to which groups they belong. Their sense of identity will continue to be shaped by their experiences in school, at home, in the community, and in the broader society.

Social Exclusion and Child Development

"Social exclusion affects Canadian children by the time they reach kindergarten, since some children are more 'ready for school' than others. These differences are not randomly distributed in society but follow a predictable, systematic pattern. As one looks across the socioeconomic spectrum from the children of the wealthiest and most educated families, to those from the middle, to those from families with the least income and education, an increasing proportion of children are vulnerable in terms of readiness for school: intellectually, socially, emotionally, and physically. This pattern, wherein risk increases in a stepwise fashion as one descends the socioeconomic ladder, is known as a 'gradient.' The gradient in child development is an important aspect of social exclusion because, once established, it tracks across the life course. Those who enter school in a vulnerable state will tend to be less healthy, experience lower levels of well-being, and be more likely to end up in socially marginal positions as life unfolds" (Hertzman).*

* Source: Hertzman, Clyde. *Leave No Child Behind! Social Exclusion and Child Development*. Perspectives on Social Inclusion Working Paper Series. Toronto, ON: The Laidlaw Foundation, May 2002. 1. Available online at <www.cccabc.bc.ca/res/pubs/pdf/hertzman.pdf> (17 Nov. 2014). Reproduced with permission.

Children's sense of self and their perceptions about themselves will be shaped by how others see them and the values others attach to these aspects of identity. When children learn and are continually exposed to negative concepts and views, or are discriminated against because of the groups with which they are associated, they often develop negative self-concepts and face social exclusion.

Vignette: Focusing on Anti-bias Practices and Social Justice

A teacher describes an opportunity to teach children about cultural differences:

> I try to be as straightforward as possible. The most recent question in our . . . class was about Ajay's turban. Some children thought he was a girl because his hair is up, and then they questioned why he wore "the little cloth." I told the children their new classmate was a boy, and it was part of his Punjabi culture to wear his hair like that. We taught the children the proper name for his headdress—*dastaar*. Ajay gradually gained the confidence to answer some of the children's questions himself. (Chu 86)

Developing Literacy and Numeracy

Early numeracy and early literacy are key priorities for the Manitoba government, and their importance to children's school experiences is well recognized by many school divisions. How do these important life skills develop in young children? Literacy and numeracy learning arises in authentic and socio-cultural contexts, ideally with the attention and support of caring, collaborating, co-inquiring and intentional adults.

Some children's prior literacy or numeracy experiences may look very different from those we offer (and value) in our classroom environment. For example, parents may read newspapers in their own language, not English, and may read to their children at home using books written in their language. While some families make grocery lists before they head out for their family shopping excursion, others visit food banks and bring home whatever is available. In some households, the grandmother may do the grocery shopping while the family members are at work and at school, so that children may have limited opportunity to be in the grocery store, but may frequently listen to the grandmother's account of traditional recipes, and help measure ingredients and prepare meals. In some cases, children may play video games alongside an older cousin, and while they can predict the pattern built into the game and thus know how to advance to the next level, there is not a book to be found in the house.

The varied circumstances that have shaped our culturally diverse students (e.g., immigration, education, or economic factors) influence how they and their families perceive their world; how they communicate their thinking, understanding, and learning; how they make meaning; how they build their identity and their relationships with their community; and what they do with what they know. Thus, each family views and perceives literacy and numeracy in different ways. An idea that is central to this thinking is that *different* is not an educational deficit but an educational asset. The child's identity is influenced by home language, culture, and way of being, and you can support your students best by celebrating and building on their home language and cultural perspectives (Gottlieb and Ernst-Slavit 11). For example, traditional art forms such as songs, beadwork, dance, and oral storytelling may differ from the art commonly found in many Manitoba schools, but should be valued and may be used as bridges into school literacy and numeracy practices.

Of course, our own personal experiences, perceptions, and values influence our expectations of children and their families regarding communication, thinking, and relationships, and they influence what we believe children should be able to do with what they know. We may have to check our own biases and commit to learning more about our students and their home experiences. We do this through observing the children while they are playing and learning, and through talking with their families to find out what languages they speak at home, what their household practices, cultural values, and norms are, and how these factors contribute to the development of their children's literacy and numeracy.

Listening and Speaking

Prior to arriving at school, a child's language growth is entirely dependent on what people say to the child—how often they talk with the child, what they talk about, in what dialect or language, and in what way—whether gentle and explaining, or directive and imperative. During their preschool years, almost all children acquire the sounds and structure of the local dialect. This occurs through interactions with parents, caregivers, siblings, and the community. Whatever unique version of language a child possesses, oral language is a personal and valuable resource. Virtually all children acquire complex and abstract systems of language without direct, explicit instruction.

Cultural and Language Programming

Schools that include cultural and language programming for their First Nations, Métis, and Inuit children capitalize on a powerful positive practice supported by current literature. This is also true for other cultural and linguistic groups. Be aware that children whose first language is Cree or Ojibwe may not hear certain sounds in the English language (e.g., /v/), as they do not exist in their first language.

It generally takes from one to three years for EAL learners to acquire basic communication skills in English. Learners go through stages of EAL acquisition. Your knowledge of these stages will help you to provide appropriate language learning opportunities.

Entry to school places big demands on a child's existing language skills as new experiences unfold and conversations move into new territory—new relationships, objects, properties, activities, and information require that language will grow to include ways of talking about them. As a result, vocabulary will increase and language structures will expand. As a speaker and a listener, in instruction and in play, the child learns more about language. Through opportunities to communicate with new adults and other children, the child learns more about speaking and listening every time conversation takes place. Language development is essential to learning, and plays a crucial role in the later development of successful readers.

You can learn about a child's language—his or her ability to communicate and to engage in conversation—through observation. You can also extend a child's language through intentional planning for situations in which real problems that need real solutions are encountered, and planning for two or more children to work and talk together about their problems in flexible small groups. The key is to be aware of the importance of fostering a wide range of language use and to be a good observer. You can read more about intentional strategies to support children's language development in Chapter 4, about the English language arts curriculum in Chapter 8, and about collaborations with parents and other professionals such as speech-language pathologists in Chapter 10. Refer also to *Listening and Speaking: First Steps into Literacy* (Manitoba Education, Citizenship and Youth).

Growing Readers and Writers in Kindergarten

Literacy Instruction

Literacy instruction for EAL students incorporates

- letter and word level knowledge
- instructional comprehension strategies to model and scaffold the comprehension process (e.g., supporting text with pictures, using bilingual books, activating prior knowledge)
- frequent opportunities to practise (Barone and Hong Xu)

Consider how children have learned to speak. Without direct teaching or drilling, children have expertly learned to produce the right sounds, organized in an extremely complex way, to express an infinite number of ideas. They have done much more than just mimic. They have learned to express their own thoughts in sentences that they themselves create. This has not been a simple development; similarly, there will be nothing simple about how children learn to read and write.

Children are all so different. They arrive in your classroom having come from different environments where they learned different things through their prior personal experiences. Children's identities as readers, their knowledge and experiences, their curiosity, their imaginations, and their unique ways of perceiving themselves and the world around them are strengths for you to use as a foundation for their learning.

As a teacher, you will need to be able to see each learner as unique, sensitively observing as each child reacts and responds to text and takes up new ideas. Children have an opportunity in a Kindergarten classroom to become part of a community of inquisitive learners.

When a Child Reads

When children come to school, they will already know something about the world of print from unique environments, and you will find it worthwhile to value that knowledge. Children who have listened to stories being told, and who can retell stories in their own way, also have a big advantage. However, if those kinds of experiences have been limited, there is opportunity in the Kindergarten classroom, through one-to-one interaction or in small-group or whole-group settings, to make up for limited prior opportunities.

Just as children are complex, so is reading: "Reading is the transfer of meaning from one mind to another through the medium of written language" (Butler and Clay 7). This definition does not clarify how either mind works to accomplish the transfer of meaning, but if we think about the receiver of the message (i.e., the mind of the reader), we can begin to think about how complicated and variable this process might be.

A child who learns to read Arabic or Hebrew will learn to read from right to left; a young reader of Chinese will read from top to bottom, rather than across the page from left to right.

Learning requires effort, and the effort must be perceived as worthwhile for the learner. Learning should be joyful and have benefits for the individual. Your role as a teacher is to facilitate and differentiate learning for the individual child. Facilitating learning will require systematic observation, a variety of approaches, and sensitivity to the emergence of reading and writing competencies within each child in your class. There will be differences between children for many different reasons, "but there is one aspect of this development that [you] can influence and foster; [you] can provide appropriate opportunities for the child to learn" (Clay, *An Observation Survey*, 2013, 10).

Reading involves four aspects of language that occur simultaneously:

- **Messages expressed in language:** Usually the language found in books differs from the conversational language used in classrooms and homes. While conversational language will continue to grow in complexity of meaning and syntax with experience, children's ears will also become attuned to the language found in books if they have frequent opportunities to hear it.
- **Conventions used to record printed language:** Reading involves knowing about conventions such as the directional rules, spacing, punctuation signals, change of speakers, surprise or emphasis, and questions. When children begin to learn about print, they need to know the "rules of the road"—which way to go and what the signposts signal.
- **Visual patterns in print:** Reading involves visual patterns such as groups of words, parts of words, clusters of letters, and single letters. Individual "pieces" may be challenging to understand and difficult to fit into a meaningful context. Children need to learn how to look at print, and many teachers use a whole-part-whole approach as they support their young readers. For example, we know from experience that if we can first see the complete image for a jigsaw puzzle, we have a framework and valuable information we can use to fit the pieces together. This is true for readers, too. Since it is easier for the mind to grasp the "whole," begin with a whole story. Then, offer children instruction as needed. For example, how do the words children already recognize and know fit together into the whole story? How do new and unfamiliar words fit in? How do clusters of letters come together to represent sounds in those words? What letters that children already know make up those words? Once the new word is known, put it back into the whole story and enjoy it together. Beginning and ending with the whole story, or sentence, or word helps children to make sense of a small piece being highlighted during your brief detour in the "lesson."

- **Listening to language:** Reading involves listening to language, hearing the breaks between words, and hearing the sounds within a word. This is not easy, and having difficulty is not strange. If you think about the challenges you may have had in hearing the individual sounds in a four-part musical harmony, you can understand how difficult it might be for a child to hear the sounds within words.

Once children understand that the "message" to be taken from reading, embodied in language structure, is the "whole," the "parts" will make sense. That is why reading and telling stories (both fiction and non-fiction) is so important. Once this concept is clear to the individual child, experiences that draw attention to the phrases, words, and letters will fall into place more easily.

Two girls read together.

Stanovich wrote about the "Matthew effects in reading." The more opportunities a child has to work with reading books and writing messages, the greater the number of positive experiences with patterns of language and experiences of letter-sound relationships are possible, and the more likely it will be that the child will be a keen reader. That is why it is not unusual to find children asking for favourite stories to be reread again and again (sometimes many more times than one might expect). Repetition helps build up experiences and provides opportunities to attend to more of the detail, to notice new aspects previously overlooked, and to link up what is already known to new thinking (what Piaget calls *accommodation* and *assimilation*).

Changes in a Young Reader

The following table illustrates some of the observable behaviours teachers may see in young children as they think and problem solve while reading.

Observable Behaviours in Children's Reading*

The behaviours and changes you may see while children are reading may include the following. These possible changes from simple to more complex are NOT stages, and are not listed in terms of sequence of emergence or priority.

When children are starting school, you may observe that they

- tell a story that could be in the print
- match a page-by-page "reading" with the book
- pay attention to forms and patterns in print
- try some analysis of pictures and print
- enjoy some arrangements of signs in print (e.g., their name, !, ?, **bold**)
- pick out one or two words (lapsing sometimes)

When those experiences are comfortable for children, you may observe that they

- pay attention to shape, size, position, and patterns in print
- search their oral language to find a "best" way to express the pictures
- have some knowledge of direction (left to right and top to bottom) and order on the page (this may be insecure)
- usually attend to the left page before the right
- try to use language appropriate to a book
- point to print, trying to match word by word

As children begin to negotiate their way around books, they

- will orient the book and the direction of reading much more automatically
- approach print word by word in reading
- know that print carries the message
- attend in a focused way to some easy-to-see and -hear "parts" of the print—phrases, words, letters
- show awareness that oral language is closely related to print
- know that the picture gives some (but not all, and sometimes extra) information that will be found in print
- try to read simple story texts
- understand the concepts of first and last parts—of a story, a book, a line, a word

Some children become proficient with these emergent factors and gradually are able to use them together to

- work across print, using oral language and meaning as a guide while they look word by word—this may temporarily sound laboured and slow because they are working to match what they see with what they say
- begin to notice discrepancies when an error occurs and may self-correct
- select the "next words" often based on oral language knowledge and an expected order based on anticipated meaning
- read in short phrases sometimes
- pay attention to punctuation and visual features in print
- gather up concepts about print, gain more letter knowledge, and demonstrate this in attempts in writing

All children may hesitate while reading, pondering the letters or a cluster of letters when encountering a new or unusual word from time to time. What is important is to give them the opportunity to think about how to solve the problem for themselves.

* Adapted with permission from the following source: Clay, Marie M. "Table 1: Hypotheses about possible progressions in acts of processing occurring in early reading and writing for tentative and flexible discussion." *Change over Time in Children's Literacy Development*. Auckland, NZ: The Marie Clay Literacy Trust, 2001. Pages 84–85.

Your Role as Teacher

You are likely thinking about all the opportunities you can create when reading to children, sharing the reading of a big book or a chart, and reading with individuals and small groups. After first enjoying a wide variety of genres of written text with children, you can follow up by pointing out print concepts or modelling your own thinking aloud.

Children will gradually come to understand how print works. They may find it challenging or easy. They may begin to control only a few items, or they may control many complex concepts. They may begin by inventing, shift to copying, and then begin to construct deliberately for themselves. When assisting children's reading efforts as they learn to work with text (as with oral language development), the adult's role can be to encourage children to do what they can independently, to support and co-construct with them on some parts, and to do some of the task for the children. This will be an ever-changing mixture of interactions, which you will shift as the children change. What children know will change from simple to complex, from slow to fast, and from inconsistent to well known and flexible. Keep in mind that every time you talk with children about reading, you place value on it, regardless of what you say. Valuing children's efforts is continuous, individual, personal, and powerful.

A Child's Development as a Writer

From three to seven years of age, children begin to build a foundation for growth as readers and writers, and this forms the basis for what follows in formal education. Writing is one of the ways in which children explore their understanding of the world and their understanding of themselves. Learning to write and learning to read are two sides of the same coin, each contributing greatly to the other.

Purposeful writing allows the children in your classroom to learn to use language to explore meaning and then to communicate those understandings. Writing can be used to tell the stories that are important to them, to coax or influence others, to communicate joys or sorrows, to rage, to delight, to praise, to comment, to remind, to celebrate, to make requests—to do a multitude of things!

Some ways you might encourage children to engage in writing are to

- record events (e.g., lists, diaries, commentaries, autobiographies, letters, research notes, meeting notes, letters or notes to family or friends, transcriptions, reports, family history)
- explain (e.g., charts, recipes, brochures, captions, instructions, character sketches, definitions, excuses, game rules, handbooks, textbooks)
- persuade (e.g., advertisements, invitations, signs, placards, warnings, book covers, reviews)
- invite a response (e.g., questions, complaints, invitations, lost and found notices, notes, requests, wanted notices)

Forming Intentions

Learners write best on topics they "own," and this is true for the young children in your classroom. This does not always mean they have selected their topics without help from you or from a stimulus; however, it does mean they will have something to say in their own voice about their subject, which is the best purpose for writing.

You will likely find that Kindergarten children will draw a picture about something they know or something they have done, and may make some tentative first attempts to write about it. You can increase the likelihood for spontaneous writing while children play by providing writing tools such as clipboards and pencils in a variety of places in the classroom so children have more opportunities to experiment with drawing and writing. What matters most is what the individual child thinks and feels. You may wish to keep a list of each child's topics, referring to it as his or her "personal topics" list.

Children can write about many things that are going on in the classroom and outside. Topics to write about may come from what children have seen, talked about, heard, and read. The opportunity to explore their own ideas for a topic by talking with you, their peers, other adults, and their own family to find out what others think and to clarify their own thinking is of paramount importance for children. Be prepared to accept that a learner's topic choice may be a better idea than the one you yourself may have suggested. By empowering children to recognize the value of their own interests and experiences, they learn to choose their topics for themselves, retain ownership of their writing, and have a purpose for writing.

"Writing floats on a sea of talk"
(Britton 164).

Getting It Down

As emergent writers, children's attempts to write may be little more than a few purposeful scribbles on a page. However, when you demonstrate, share the task, and talk about what you are thinking and doing as you write, children quickly become eager to try it for themselves. Every attempt is one step closer to a more conventional representation and needs to be encouraged and celebrated. One of the most important words children first show an interest in recording is their own name. This may not be a simple task, but it is a critical statement of identity and its meaningfulness to the child should not be underestimated.

The child has written random letters.

Children grow as writers at their own rate, making leaps, and possibly moving back to an earlier way of recording. You will find they are responding to opportunities, guidance by others, and feedback on what they have shown they are able to do so that their next learning step makes sense to them.

Early on, children may use some letters, or some letter-like symbols, or even numerals to represent their message. The marks may not yet have sound-letter relationships and may be strung together in a

The child has the beginning and middle sound "RKK" (rocket).

A child in a French Immersion Kindergarten can spell "Cooper" because her dog is important to her. This picture shows her dog Cooper coming for a visit to Kindergarten.

The child has written the first letter and/or key sound of each word in his sentence. (I got my picture taken.)

random way. However, children may demonstrate an understanding that language can be written down and that it moves from left to right and top to bottom on a page. There may be a mix of upper- and lower-case letters, and some of the symbols may be repeated many times. It is clear that children do not need to know all the letters and sounds before they begin to write.

Soon, children begin to grasp the idea that when writing in English, letters have sounds that represent the sounds in words, and they will use easy-to-hear and easy-to-write letters at first. Gradually, more of the consonant framework will be recorded along with some easy-to-hear vowels, and spaces between words will appear more consistently.

An individual child will use some words frequently, and these words become the child's own personal bank of high-frequency words. Examples of common words are *is*, *here*, *look*, and other words with important meanings, such as the child's name, *mom*, *dad*, and the name of a favourite pet. When children have a passion for a topic, they can become very interested in writing some words connected to their passion, such as *hockey*, *shark*, and *birthday*. There may be some overgeneralization of spelling patterns, but words will begin to look more and more conventional as the child becomes increasingly aware of words in print, once again an example of the reciprocal nature of writing and reading.

As children write, you will notice they will begin to monitor the production of their messages and their representation of words. This self-monitoring will often lead to a child making a change in what he or she has written. Sharing what has been written with an adult, another child, a parent, a small group, or perhaps even the entire class is a wonderful way to validate a child's efforts. The child may seek input from others and look for suggestions for improvement, or may just want to celebrate the accomplishment. Self-composed messages that link to day-to-day activities and classroom conversation have high emotional value, compared to dictated tasks or messages drawn from the teacher's mind. The goal is to have the child wanting to write again and to write more tomorrow. Children will engage in learning how to do something, do it better, do it faster, link it up to something, and prepare for future independent use. Writing involves thinking, problem

solving, and communicating, which are much more complex than just learning about sounds and letters.

Your Role as Teacher

Some teachers wonder whether we need to teach "proper" letter formation as part of children's growth as writers. While the English language arts curriculum does include learning outcome 4.2.3 *Enhance Legibility*, the Kindergarten curriculum does not emphasize teaching for correct letter formations, but rather having children learn to represent their ideas in a variety of ways.

As an observant teacher, you will be able to create many opportunities to explore writing with children and guide them through learning experiences that foster individual growth. When you encourage conversation about writing, children will engage in ways that foster their unique interests, individual competencies, and sense of self-confidence. Many teachers recommend "sharing the pen." They refer to the strategy known as *interactive writing*, which lets teachers and children work together to create a meaningful group text and to develop group ownership through their dialogue with teachers and each other. Some children may require you to model how to write an individual letter, while others can independently write a letter for each sound they hear in words. Some may contribute complete words, or read the completed text aloud. Your informal assessment of where children are at in their writing is based on your observations. You can then make informed decisions about how to differentiate your instruction in a developmentally appropriate way, based on your knowledge of child development, the needs and strengths of individuals and your group, and what is most meaningful and relevant to them (Hall).

Teachers, however, do have a role in stressing letter formation:

> There are two things which have been considered important in early reading and writing that could become neglected in [a classroom that fosters the creative urge of the child to write down his or her own ideas]. Teachers have often found it necessary to guide children manually and verbally in forming letters, calling for an approved sequence for starting and forming letters. This motor activity is sometimes seen by teachers as necessary for emphasizing the distinctiveness of somewhat similar letters such as *m* and *n*. If this is important, and it certainly is for a few children, then it might be overlooked in a creative writing program. But this need not be so. (Clay, *Observing Young Readers* 208)

In meaningful context (such as someone else needing to read the student's work), you can talk together about letter formation and give many opportunities for the children to write. Clear demonstrations with some simple coaching language that explains your approach will help most children succeed. Spending energy on completing commercial worksheets is often a waste of time and money. Children need a model and a little guided instruction and then time to practise on their own. As you write, be mindful of your own role as model during your shared and guided writing. Describe your own efforts at writing (down, down, across) and informally share the tips children will absorb seamlessly. (See Appendix B: Language Prompts for Movement Patterns to Form Letters).

Honour children's individuality by differentiating your instruction and keep your focus on an active, holistic, and play-based approach to learning, with many authentic and personally relevant reasons to write in all areas of your classroom. Ensure there are tools for writing at your block centre, at the dramatic play centre, near the sand table, and even outdoors. These playful opportunities help reinforce children's image of themselves as writers. For those children whose fine motor skills are still developing, more worksheets will only frustrate and not really help. Instead, encourage the refinement of coordinated motor skills needed to grasp a pencil or crayon through playful intentional experiences that involve the hand muscles, such as beading, turning nuts onto bolts, picking up small pompoms with tweezers, placing coins into a piggybank, lacing cards, and so on.

When children can freely write down their own messages and stories on paper, without being required to spell correctly or have neat handwriting, they gain a better understanding of the real purpose of writing (Sulzby).

Growing Mathematicians in Kindergarten

Some teachers may think that children begin school with no prior knowledge about mathematics. However, research confirms that at school entry, children have already developed an intuitive sense of numeracy and basic concepts of arithmetic, such as adding and subtracting, gained through their real-life experiences with quantities, patterns, shapes, and relationships. For example, while a child entering Kindergarten may not yet formally represent knowledge as 1 + 1 = 2, the child will understand that one dolly placed beside another in the play centre crib means she or he now has two. As an intentional teacher, you will take a developmentally appropriate approach to supporting children's numeracy learning, understanding that learning about mathematics is an active and constructive process. You will also understand that "since all children will demonstrate a developmental progression in the understanding of foundational mathematical concepts, teachers need to assess the level of development of each child, plan activities that are appropriate for that child, and decide when and how to intervene if the child has difficulties solving a problem" (Ontario Ministry of Education, *The Full-Day Early Learning–Kindergarten Program* 21).

When children begin Kindergarten, they may have a basic understanding of numbers. Children may be able to rote count to at least 10 or 20 and may understand one-to-one correspondence. Of course, there will be variation in the range of children's numeracy skills, especially early in the school year. These are neither gender based nor the result of low socio-economic status (Copley 8). Rather, they are typically the result of the kinds of prior opportunities children have had to think about, talk about, and play with numbers at their child care centres and with their families. Those who had more chances to engage in numeracy activities when they were younger are more prepared to face numeracy activities now that they are in school (Canadian Child Care Federation, and Canadian Language and Literacy Research Network 6).

Children collaboratively build a tall tower out of Unifix cubes.

From age five to seven, many children demonstrate rational counting. They may know that counting means assigning one number word to each object (one-two-three . . .), showing they understand one-to-one correspondence. They know that the final count number indicates the number of objects in a set (cardinality). From approximately age five to eight, children demonstrate strategic counting when they count on from a given number. Counting back may be more challenging for young learners, and they may need many opportunities to practise counting back from different numbers. Strategic counting will later help children to develop addition and subtraction concepts (Manitoba Education and Advanced Learning, *Kindergarten Mathematics* 4).

Your Role as Teacher

Children learn best when developmentally appropriate learning experiences are connected and integrated in a holistic way. As children engage in play, they have the perfect context within which to explore and manipulate mathematical ideas. As you plan learning experiences for your students, think about what you already know about their development across all the domains, because the most successful learning experiences are those based on your understanding of each child. Offer learning experiences that are squarely positioned within children's respective zones of proximal development. Remember that young children are constructing their "mathematical understanding in different ways, at different times, and with different materials. [Your] . . . job is to provide an environment in which all children can learn mathematics" (Copley 9).

You can provide many opportunities for Kindergarten children to engage with early numeracy concepts. As they explore open-ended materials such as blocks, sand, water, and clay, they are learning about volume, mass, spatial relations, and more. As they count and sort loose parts such as buttons, beads, and coins, they learn more about classification and enumeration. Through their "active participation in mathematics investigation, including problem solving and discussions, children develop their ability to use mathematics as a way of making sense of their daily experiences" (Prince Edward Island Department of Education and Early Childhood Development 90). While children explore and discover, you are introducing and extending

mathematics vocabulary and creating developmentally appropriate play opportunities for children to play with and practise their mathematical learning.

Reflection: Building on Children's Experience and Knowledge

How do you build on children's experience and knowledge, including their family, linguistic, cultural, and community backgrounds, their individual approaches to learning, and their informal knowledge?

Summary

Chapter 3 provided an overview of important theories and approaches to guide developmentally appropriate teachers, with a special focus on how young children develop literacy, numeracy, and identity concepts. You will read more about these ideas in subsequent chapters, beginning with Chapter 4.

Continue Your Learning

For more information about the development of children's language, see:

Manitoba Education, Citizenship and Youth. *Listening and Speaking: First Steps into Literacy: A Support Document for Kindergarten Teachers and Speech-Language Pathologists.* Winnipeg, MB: Manitoba Education, Citizenship and Youth, 2008. Available online at <www.edu.gov.mb.ca/k12/cur/ela/list_speak/> (1 Dec. 2014).

For more information about the Early Years EAL Acquisition Continuum, see:

Manitoba Education. *Manitoba Kindergarten to Grade 12 Curriculum Framework for English as an Additional Language (EAL) and Literacy, Academics, and Language (LAL) Programming, June 2011 Draft*. Winnipeg, MB: Manitoba Education, 2011. Section 4a. Available online at <www.edu.gov.mb.ca/k12/cur/eal/framework/index.html> (7 July 2014).

For more information about the development of mathematics, see:

Manitoba Education and Advanced Learning. *Kindergarten Mathematics: Support Document for Teachers.* Winnipeg, MB: Manitoba Education and Advanced Learning, 2014. Available online at <www.edu.gov.mb.ca/k12/cur/math/k_support/index.html> (11 Dec. 2014).

For more information about early childhood education, see:

Reconceptualizing Early Childhood Education. Home Page. <www.receinternational.org/index.html> (3 Oct. 2014).

For more information about developmentally appropriate practices, see:

Phillips, Eva C., and Amy Scrinzi. *Basics of Developmentally Appropriate Practice: An Introduction for Teachers of Kindergarten*. Washington, DC: National Association for the Education of Young Children, 2013.

For more information about intentionality, see:

Epstein, Ann S. *The Intentional Teacher: Choosing the Best Strategies for Young Children's Learning.* Rev. ed. Washington, DC: National Association for the Education of Young Children, 2014.

For more information about brain research, see:

Center on the Developing Child at Harvard University. Home Page. <http://developingchild.harvard.edu/> (16 Dec. 2014).