

Chapter 1

Child
development:
Approaches to
learning

Karen Swabey

Learning objectives

After reading this chapter you should be able to:

- Describe the domains of development.
- Understand how the domains of development are relevant to three stages of the lifespan (early and middle childhood, adolescence).
- Identify key milestones for the domains of development for three stages of the lifespan (early and middle childhood, adolescence).
- Identify some theories of development.
- Understand how the theories of development are relevant to learning.
- Identify a range of approaches to enhance learning.



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Introduction

physical domain
'biological change, [includes] changes in the body itself and how a person uses their body' (Hoffnung et al., 2010, p. 5)

cognitive domain
'involves changes in methods and styles of thinking, language ability and language use, and strategies for remembering and recalling information' (Hoffnung et al., 2010, p. 5)

psychosocial domain
'is about changes in feelings or emotions as well as changes in relations with other people' (Hoffnung et al., 2010, p. 6)

An understanding of child development is essential if optimal learning is to be achieved. As a future educator of children, you will be concerned with how children learn and how you can optimise this learning for each individual in your classroom. As you gain an understanding of the domains of development – **physical, cognitive** and **psychosocial**, and their relevance to various stages of the lifespan (early and middle childhood, adolescence), you will see how important it is to be aware of the milestones of development, as this can assist you in planning and delivering developmentally appropriate lessons. In addition, an understanding of some theories of development and their relevance to learning, and knowledge of a range of approaches to learning that enhance development, will also assist you in teaching primary school children most effectively. Gaining knowledge about child development will enable you to set realistic expectations, recognise appropriate and inappropriate behaviours, and respond appropriately.

This chapter presents the domains of development that link to relevant stages of the lifespan (early and middle childhood, adolescence), then developmental theories, followed by application to practice.

Domains of development

The three main domains of development are physical, cognitive and psychosocial. It is critical for future teachers to develop knowledge about the students they will teach through these three domains. The seminal texts in the field of *human development* delineate these three domains as the key ones: Crandell, Haines Crandell and Vander Zanden (2009); Dacey, Travers and Fiore (2009); Hoffnung et al. (2010), Papalia, Wendkos Olds and Feldman (2009); and Peterson (2010). However, some authors separate these domains into more explicit areas of development; for example, Papalia et al. (2009) use eight domain areas – physical, neurological, cognitive, language, emotional, social, self/gender/identity and moral, while Peterson (2010) uses seven domains to describe developmental changes – physical, neurobiological, sensorimotor, cognitive, social, emotional and personality. This chapter discusses the three core domains for ease of discussion. The definition (see left panel) for each of these three domains shows how all of the other domains, as delineated by both Papalia et al. and Peterson are included in the three main domains.

Physical, cognitive and psychosocial development

The domain of physical development is related to biological change, which includes changes in the body as well as how a person uses her or his body, brain, sensory

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capacities, motor skills and health (Hoffnung et al., 2010; Papalia et al., 2009). The domain of cognitive development involves changes in methods and styles of thinking, language and strategies for remembering and recalling information, and is comprised of learning, attention, memory, language, thinking, reasoning and creativity (Hoffnung et al., 2010; Papalia et al., 2009). The domain of psychosocial development is about changes in feelings or emotions and relations with other people (Hoffnung et al., 2010).

Linked to the three domains are milestones. Milestones are skills or age-specific tasks that most children can do at a certain age range. Table 1.1 indicates the key milestones for the physical, cognitive and psychosocial domains for students aged between 2 and 18 years. The importance of knowing these milestones is to be able to identify children who may be at risk of not reaching their learning potential. If teachers become aware of children not reaching certain milestones, they can engage appropriate resources to assist them, if they think it necessary. If some children do not meet all age-related milestones it is not necessarily a problem, as some children are simply slower to reach certain milestones than others. What is important is that teachers keep an eye on how the children in their class are progressing against milestones. If there is a long time between onset and acquisition; for

Table 1.1: Selected milestones of development

| STAGE/AGE | DOMAIN | | |
|---------------------------------|---|--|---|
| | PHYSICAL | COGNITIVE | PSYCHOSOCIAL |
| Early childhood (ages 2–5) | <ul style="list-style-type: none">• Climbs stairs• First throw of a ball• Creates simple drawings• Is learning to write• Dresses self with help | <ul style="list-style-type: none">• Vocabulary grows• Enjoys dramatic play• Understands symbols• Understands fractional qualities | <ul style="list-style-type: none">• Selects preferred playmates• Develops gender-role awareness• Develops racial awareness |
| Middle childhood (ages 6–12) | <ul style="list-style-type: none">• Runs skilfully• Is able to throw objects at targets• Special skills (e.g. riding a bicycle) | <ul style="list-style-type: none">• Solves problems• Is able to read• Is able to write• Develops memory | <ul style="list-style-type: none">• Forms friendships• Prefers being with own gender |
| Adolescence (ages 12–18) | <ul style="list-style-type: none">• Undergoes puberty• Experiences growth spurts | <ul style="list-style-type: none">• Demonstrates some abstract thinking• Develops adult-like interests | <ul style="list-style-type: none">• Develops interest in sexual relationships (for most)• Develops interest in dating (for some)• Obtains first job |

Adapted from Hoffnung et al. (2010) and Papalia et al. (2009)

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example, if a child has not acquired the milestone before the end of the age range, and if this occurs with more than one milestone, then it may be prudent to get the student assessed.

Developmental theories

What is a theory? Why do we need to know about theories of development? Why are they important to teaching? Answers to these questions underpin this section.

A ‘theory’ is defined by the *Collins English Dictionary* (2009) as an explanation for phenomena – a reason for which things exist or occur. It is important to understand the developmental theories in order to understand how and why children grow, learn and act as they do, as well as to explore how the theories underpin practice. Through exploring developmental theories, an understanding, explanation and prediction of behaviours that occur throughout the lifespan can be acquired.

Similar to the domains of development, there are seminal theories that guide an exploration of human development. These theories are evolving as new evidence enhance the original beliefs. However, there is substantial difference between human development texts as to which theories they support. Crandell et al. (2009) describe six theoretical perspectives: psychoanalytical, behavioural, humanistic, cognitive, ecological and sociocultural. Dacey et al. (2009) also describe six perspectives: psychoanalytical, psychosocial, cognitive, cultural, behavioural and contextual. Hoffnung et al. (2010) present five perspectives: psychodynamic, behavioural, social cognitive, cognitive and contextual. Papalia et al. (2009) also present five perspectives: psychoanalytical, learning, cognitive, contextual and evolutionary/sociobiological. Peterson (2010) presents four perspectives: psychoanalytic, cognitive/developmental, classical learning and social-learning. Additionally, a number of the texts that deal with human development across the lifespan present adult-oriented, theoretical perspectives but these are not part of the discussion in this chapter. Many of the perspectives noted above are similar but use different terminology; for example, Freud’s psychodynamic perspective is also known as ‘psychoanalysis’. Hence, as all texts name the following three theories, they are reviewed in relative detail: psychodynamic/psychoanalytic, behavioural and cognitive. A statement is made about contextual theory, as a number of the cited texts also express interest in this perspective.

Psychodynamic/psychoanalytic perspective

The original theory of psychodynamics was Sigmund Freud’s psychoanalysis, but the psychodynamic perspective as a whole includes all theories that were based on his ideas; for example, those by Jung (1875–1961), Adler (1870–1937) and Erikson (1902–1994) (McLeod, 2007a). Freud changed our belief about development in humans, stating that we develop a sense of identity as a result of social, emotional

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and cultural experiences. He believed this occurred because human functioning is based upon the interaction of drives and forces within the person, particularly our unconscious drives and forces between the different structures of the personality. His theory was pre-scientific, and many psychologists were highly critical of his beliefs as they considered them to be bizarre or ridiculous; nonetheless, Freud made a valuable contribution to the field. A student of Freud, Erik Homburger Erikson (1902–1994) developed a theory in this perspective that gave greater importance to the sociocultural environment than the unconscious sexuality aspect of Freud’s theory. Erikson’s theory was based on eight possible conflicts: basic trust versus mistrust; autonomy versus shame and doubt; initiative versus guilt; industry versus inferiority; identity versus role confusion; intimacy versus isolation; generativity versus self-absorption; and integrity versus despair.

McLeod (2007a) articulates several basic assumptions that underpin this psychodynamic/psychoanalytic perspective and that affect development, since they elicit a range of behavioural responses:

- Behaviour and feelings originate in the unconscious.
- All behaviour has a cause/reason.
- Different parts of the unconscious mind are in constant struggle.
- Our behaviours and feelings as adults are rooted in our childhood experiences.

What does this perspective mean for human development? Freud believed in the importance of the early years in development and the importance of the unconscious on behaviour. These two concepts continue to be influential in development psychology. From a critical perspective, Freud’s analysis of human behaviour is deemed to be unscientific and not generalisable to the wider population, as his evidence was based on a few specific case studies (Eysenck, 2004).

To ground the psychodynamic/psychoanalytic perspective within the teaching realm, investigate the extent to which the unconscious is involved in learning through Applied Learning Experience 1.1, which describes such an activity.

Applied Learning Experience 1.1
Psychodynamic approach

Teaching and learning activity

- In pairs, try free association. Each person feeds his or her partner 10 words; the partner says the first thing she or he thinks about for each word. Use an audio recording (discuss ethics first) to find some examples of what responses might have come from the unconscious (the individuals must identify that) and a brief explanation.

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- Provide feedback to whole group. Check if any responses refer to early years issues (again, discuss ethics before feedback to whole group).

Question: What does this activity enable your class to discover about their learning?
Adapted from Active Teach Psychology (2008)

Behavioural perspective

To explain how we all often act the same when confronted with similar situations, the behavioural perspective places a great deal of importance on the influence of the environment. This perspective is also based on the belief that behaviour is best explained by observation. There are a number of slightly different categories to this perspective – classical, methodological and radical – and all three perspectives believe that observation is highly important in understanding how humans learn. John Broadus Watson (1878–1958) and Burrhus Frederic Skinner (1904–1990), two of the best-known exponents of the behavioural perspective, are criticised for not acknowledging the importance of cognitive and biological factors in explaining behaviour. Skinner was particularly interested in observing what was happening in a classroom and then linking those observations to implications for teaching and how teaching could be improved (Roblyer, Edwards & Havriluk, 1997).

Albert Bandura's (1925–) social learning theory enhanced the behaviourists' ideas about change in human behaviour as he extended aspects of their perspective by including the following key elements:

- Behaviour can be observed in terms of responses to certain stimuli.
- Behaviourism assumes that we are born as a 'blank slate', or *tabula rasa*.
- Environmental factors, rather than genetic or biological differences, make humans behave differently from each other. (Psychologist World, 2006–11).

The behavioural perspective, which is often teacher-centred, is also called 'direct instruction', or 'explicit teaching'. In other words, the teacher delivers structured lessons that the students must follow. Strategies in this perspective include lectures, copying notes, learning by rote and watching demonstrations. Applied Learning Experience 1.2 describes an activity that requires the student to respond to a stimulus, and a reward (getting the correct response and achieving a score) is acquired on successful completion of the task. This is an example of direct instruction as it involves watching a demonstration to complete the task. Many teachers use this form of instruction to assist student learning. The teacher's role in this activity is to ensure all students have enough time to respond to the stimulus.

Applied Learning Experience 1.2
Behavioural approach

Teaching and learning activity: Matching pictures

This is a drill-and-practice activity for early childhood. The activity requires the teacher to develop a set of cards that displays a number of pictures and words on separate cards.

A set should contain a total of 35 cards, making 105 combinations. Figure 1.1 is an example of matching pictures. The object of the activity is to select the picture that matches the word. The student is supposed to match the picture of the bird to the word ‘bird’.

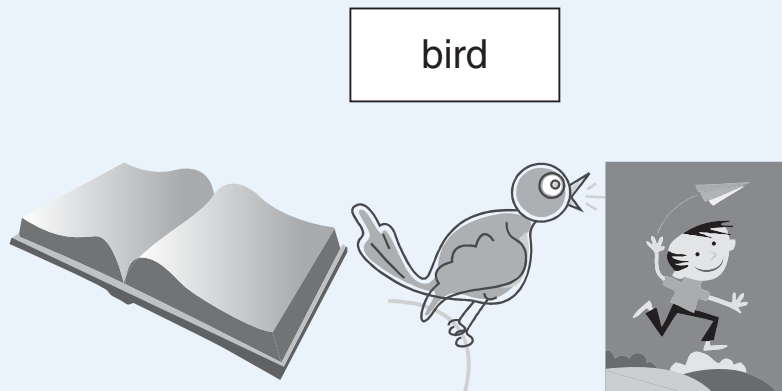


Figure 1.1
Question: Which domains, milestones, theories and stage does this activity involve?
Adapted from Chen (n.d.)

Cognitive perspective

This perspective developed due to a disillusion with the behavioural perspective as a sole explanation for behaviour; the focus on observation without acknowledging the importance of internal processes. It became known as the cognitive-behavioural perspective. Psychologists from the cognitive perspective study cognition, which is ‘the mental act or process by which knowledge is acquired’ (McLeod, 2007b, para. 3). They believe that behaviour is processed both internally and externally, and can be explained in terms of how the mind operates. Work by educational philosopher John Dewey (1859–1952) and educational psychologists Jean Piaget (1896–1980), Lev Vygotsky (1896–1934) and Jerome Bruner (1915–), among others, were important in the development of this perspective. The best-known theorist linked to this perspective is Piaget, who developed the theory of cognitive development stating that humans acquired intelligence as we developed more sophisticated cognitive

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structures, by passing through four stages: sensorimotor, pre-operational, concrete operational and formal operational (Hoffnung et al., 2010). During the sensorimotor stage (birth–2 years), children explore the world through movement and their senses. They are highly egocentric during this stage; that is, self-centred and unable to see another person’s point of view. The pre-operational stage (ages 2–6) sees language developing but logical thinking being a problem. Piaget believed children’s egocentrism diminishes during this stage. In the concrete operational stage (ages 7–11), mental operations develop and logical thinking becomes apparent. Abstract or hypothetical thought can occur during the formal operational stage (12 years and older). Vygotsky’s work is often classified outside of the cognitive perspective; some consider his work to be better known as a cultural (Dacey et al., 2009), sociocultural (Crandell et al., 2009) or contextual (Hoffnung et al., 2010) theory. Vygotsky’s concept, the ‘zone of proximal development’, is interpreted as meaning that when a child’s learning is scaffolded, it is possible to observe whether she or he is able to learn the concept. Alongside scaffolding, these concepts allow children to operate in a social context in which they may develop to the best of their ability.

What does this perspective mean for human development? Much of Piaget’s work has been criticised, particularly his underestimation of children’s cognitive abilities. Additionally, Vygotsky’s work did not elaborate on the details in relation to his ‘zone’ and how this affects children at different developmental levels, but, again, similar to Freud, Piaget’s and Vygotsky’s works provided us many good ideas about how children think. As children grow older they acquire greater and increased cognitive capacity.

The cognitivist method is student-centred. In other words, the students find out for themselves, in a self-directed way. Strategies include case studies, research, discussions, self-assessment and presentations. Applied Learning Experience 1.3 shows how the cognitive perspective can be used in your teaching. The teacher’s role in this activity is to provide the ‘anchor’ and the problem, which should be related to the unit of work being undertaken in the class at the time this activity is used.

Applied Learning Experience 1.3

Cognitive approach

Teaching and learning activity: Anchored instruction

The anchored instruction approach is an attempt to help students become more actively engaged in learning by anchoring instruction around an interesting topic. The learning environments are designed to provoke thoughtful engagement that helps students

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develop effective thinking skills and attitudes that contribute to effective problem solving and critical thinking.

Principles of anchored instruction:

- Learning and teaching activities should be designed around an 'anchor', which is often a story, adventure or situation that includes a problem or issue to be dealt with that is of interest to the students.
- Instructional materials should include rich resources students can explore as they try to decide how to solve a problem (e.g. interactive video programs).

Question: Why is student engagement so important to learning?

Adapted from Chen (n.d.)

Contextual perspective

Similar to other theories this, too, is known by other names: 'developmental contextualism' or 'developmental systems theory'. According to Hoffnug et al. (2010), the exponents of this theory are Richard M. Lerner (1938–) and Urie Bronfenbrenner (1917–2005). Some texts place these theorists into different categories. For example, Dacey and colleagues (2009) place Bronfenbrenner's bio-ecological model into its own category; however, as the details become clear, it is simply a different way of explaining the same theory.

The contextual perspective states that development of the individual occurs within a set of interrelated systems comprised of the individual within his or her sociocultural, community and family environments. That is, development is influenced by context and can be understood in all contexts. An individual assists in shaping her or his own development through interacting with all of the environments within which that individual operates.

What does this perspective mean for human development? It makes us aware of just how many influences there are on our development.

From a teaching perspective, teachers must start their teaching with real-life contexts and weave these contexts into every stage of the teaching and learning process, rather than teach skills and knowledge separate from their context and hoping that learners will know how to transfer what they have learned to life outside the classroom. Applied Learning Experience 1.4 describes four environments teachers deal with on a regular basis, and gives us an idea of what is required to ensure these environments can operate contextually. This Learning Experience is to explain in greater detail the environments the teacher can use to induce learning.

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Applied Learning Experience 1.4

Contextual approach

Teaching and learning activity: Designs for learning environments

Learner-centred environments

Effective learning begins with what learners bring to the environment; this includes cultural practices and beliefs, as well as knowledge of academic content. Evidence shows that learners use their current knowledge to construct new knowledge and what they know and believe at the moment affects how they interpret new information.

Assessment-centred environments

Students’ thinking must be made visible, and feedback must be provided on an ongoing basis to give them the opportunity to revise and improve the quality of their thinking and understanding. The kinds of assessment chosen should reflect their learning goals.

Activity: In a unit of work, the teacher sets a range of different tasks, which accumulate to become the students’ overall result; each assessment item is able to be resubmitted.

Knowledge-centred environments

The ability to think and solve problems requires that knowledge of a subject area be accessible and linked to current understanding. Designs for subject-area study should help students learn with understanding rather than promote the acquisition of disconnected sets of facts and skills.

Activity: The teacher provides problems to be solved, related to a unit of work that is relevant to current issues.

Community-centred environments

The learning environment should promote a sense of community. Classroom norms should encourage students to learn from one another and support each other’s improvement. Learning in school should be connected with outside learning activities.

Activity: The teacher provides a problem that requires students to engage with someone in their class or someone in the community.

Question: Why do different environments enhance students’ learning?

Adapted from Bransford, Brown and Cocking (1999)

While other theories and perspectives are presented throughout human development texts, the four main ones have been described. Each theory, in its time, has had an influence on teaching practice but later has been found wanting. However, all have contributed to our understanding of how children develop. Table 1.2 summarises the main aspects of each of these theories.