



school resources, the consequences of actions, the nature of a task, the use of reinforcement or punishment or both, other people, group dynamics and the actual physical size of a classroom can all affect learning according to social cognitive theorists (Nagel, 2013a; Snowman et al., 2010; Woolfolk & Margetts, 2013). Consequently, the environment, behaviour and individual characteristics such as cognitive and emotional factors influence and are influenced by one another and form a model that Bandura (1986) refers to as triadic reciprocity or what others call the triadic reciprocal causation model (Snowman et al., 2010; Woolfolk & Margetts, 2013).

The work of Bandura and other social cognitive theorists has had, and continues to have, an impact on our understanding of behaviour and learning in an educational context. One of the most important considerations derived from this work and highlighted by Bandura is an assumption that people, and not environmental forces, are the predominant cause of their own behaviour (Snowman et al., 2010). According to Bandura (2006), 'people are self-organising, proactive, self-regulating and self-reflecting. They are not simply onlookers in their behaviour. They are contributors to their life circumstances, not just products of them' (p. 164). This places a great deal of emphasis on many aspects of development and highlights the importance of the learner in any educational context. The final orientation to be explored in this chapter complements this view.

SOMETHING TO
THINK ABOUT
1.3

THE NEEDS OF TEACHERS

The social environment of a classroom and school is not only important in terms of student development and learning but also is an important consideration in terms of teacher performance and well-being. Schools are places where human interaction is central to teaching and learning and the work of Bandura (2006) and others is not only important for considering pedagogy, student outcomes and student welfare but also significant when considering teacher welfare. For example, teachers are among the highest white-collar

- professionals in self-reported work-related stress; such stress is often a major contributing factor to teacher burn-out (Johnson et al., 2005). There has been a great deal of research into stressors present in the teaching environment, highlighting a number of contributing factors, including class size, high-stakes testing, challenging student behaviours and school management structures to name a few (see, for example, Ballet & Kelchtermans 2009; Montgomery & Rupp, 2005). Aside from the potential health issues associated with burn-out, it is also evident that as teachers burn out, their tolerance, relationships with others and concern and care for their students decline along with associated lowering of outcomes in terms of student achievement (Black, 2001; Cozolino, 2013). Interestingly, just about every correlate of teacher burn-out links directly or indirectly to the negative effects of social and emotional disconnection, suggesting that future teachers would benefit greatly from training that includes a strong emphasis on the social and emotional skills required to succeed personally and as a teacher (Cozolino, 2013). It is important for future and current teachers to constantly ensure they take care of their own well-being and hierarchy of needs within the social milieu that exists when working with young minds in an educational context.

Ask yourself...



- 1 In your experiences as a student, have you encountered any teachers who may have appeared to be burnt out? Conversely, did you engage with teachers who seemed to have an endless supply of energy and enthusiasm? What do you think might have been contributing factors to each and within particular contexts?
- 2 A number of studies have shown that teachers who experience more positive emotions related to their work are more resilient, intrinsically motivated and better able to cope with the demands of their job. What strategies, if any, do you have to deal with stress and foster your own resilience? What might you be able to do with students to build positive emotions in your classroom?

Constructivist orientations to learning

Not too dissimilar to some of the other orientations presented above, constructivist orientations to learning (**constructivism**) share a number of related perspectives and theorists. Dewey, Montessori, Steiner, Piaget and Vygotsky are historical influences within aspects of this orientation to learning (Martinez, 2010; Merriam et al., 2007; Snowman et al., 2009). One leading theorist has gone so far as to describe constructivism as 'a vast and woolly area in contemporary psychology, epistemology and education' (von Glaserfeld 1997, p. 203). Perhaps the woolliness in this area stems from a variety of perspectives that have been labelled constructivist and, while there does not appear to be one easily defined constructivist theory, the simple underlying premise for constructivists is that learning is a process of constructing meaning; it is how people make sense of their experience (Merriam et al., 2007). Beyond that premise there are significant differences among constructivist

Constructivism
A theory of learning whereby individuals construct knowledge and meaning from their experiences.

theorists as to the role of experience, the nature of reality, what knowledge is of interest and whether the process of making meaning is primarily an individual or social one (Steffe & Gale, 1995). The distinction between whether a person constructs their learning and understanding through a social process or as an individual is an important one. This dichotomy has seen the emergence of the two most prominent versions of this orientation: *cognitive constructivism* and *social constructivism*.

COGNITIVE CONSTRUCTIVISM

Cognitive constructivism focuses on the individual and the role of cognition in accommodating new information in existing conceptual frameworks or schemes. The overlap with a cognitive orientation to learning is fairly self-evident and may be considered an extension of Jean Piaget's work. Indeed, some view Piaget as a constructivist and perhaps the most important originator of cognitive constructivism (Martinez, 2010). Within this branch of constructivism, making meaning relies on an individual's cognitive capacities and abilities, whereby meaning is constructed via the individual's previous and current knowledge structure; learning is the product of an internal cognitive activity; and learners actively construct knowledge and understanding (Merriam et al., 2007; Nagel, 2013a). In an educational context, this orientation suggests that learning is accommodated through providing experiences that 'induce cognitive conflict and hence encourage learners to develop new knowledge schemes that are better adapted to experience. Practical activities supported by group discussions form the core of such pedagogical practices' (Driver, Asoko, Leach, Mortimer & Scott, 1994, p. 6). It is significant to note that, while cognitive constructivism focuses on the individual, classrooms that embody such practices are recognised as places where individuals are actively engaged with others as they attempt to understand and interpret phenomena for themselves and where the 'teacher's role is to provide the physical experiences and to encourage reflection' (Driver et al., p. 7). This stands in contrast to the theoretical foundations of social constructivists.

SOCIAL CONSTRUCTIVISM

Social constructivism also focuses on the construction of meaning but emphasises the use of *cultural tools* (for example, language, mathematics, diagrams, approaches to problem solving) as a fundamental influence on making meaning. Social constructivists often refer to the learning process as a form of negotiating meaning, given the links between one's cultural tools and the necessity of engaging socially in talk and activities about shared problems or tasks (Merriam et al., 2007; Snowman et al., 2009). For social constructivists, making meaning is a dialogic process and, while a learner's cognitive capacities are important, it is the cultural tools at learners' disposal that shape learning through authentic, real-life activities to create common or shared understanding of some phenomenon (Nagel, 2013a; Snowman et al., 2009). The works of the Lev Vygotsky and Jerome Bruner are often associated with this orientation. Briefly, Vygotsky viewed learning as an activity socially mediated through

the symbols and language of a culture, while Bruner advocated a discovery approach to learning via the use of problem solving (Krause et al., 2010).

Although cognitive and social constructivists emphasise different aspects of learning, they are not completely incompatible. In his description of constructivist epistemology, Windschitl notes that 'learning is an act of both individual interpretation and negotiation with other individuals' (2002, p. 142). Each approach does not deny the value of the other and all forms of constructivism understand learning to be an active, rather than a passive, endeavour (Merriam et al., 2007). In an educational context, learners are viewed as self-regulated and active participants in their learning and active 'constructors' of meaning through individual and group endeavour. For constructivists a fundamental consideration is the student, and so too is the fostering of positive student–teacher relationships.

See Chapter 4 for a detailed look at the work of Vygotsky and Bruner.

CONCLUSION

It should be apparent that the orientations to learning noted in this chapter maintain important considerations in terms of all aspects of educational endeavour. It should also be apparent that the divergence of ideas found within each orientation posits a degree of legitimacy in views of learning as being complex and multifarious (Claxton, 1999). Generations of teachers have drawn their insights from the theories and theorists noted throughout this chapter and many continue to do so. Importantly, we should never assume learning to be a simple, taken-for-granted notion of the daily interactions between teachers and students in schools. Nor should teachers or those training to be teachers assume that they have learnt all they need to learn about learning once they take charge of a classroom. As noted in the Introduction of *Understanding Learning and Development*, neuroscience has made great strides into the discipline of education and our understanding of human development while also providing teachers with new understandings of learning. Chapter 2 continues this journey into understanding learning by exploring the important links between human development and learning.

CHAPTER SUMMARY

This chapter opened with the question 'what is learning?' This approach provided you with an opportunity to look at learning as both a product and process and draw an understanding of the differences between each. This led to an exploration of the subtle differences between teaching and learning and a brief history of each in Western school settings, underpinned

by the claim that some current practices of 'education' do not align well with a number of theories of learning, particularly as they relate to contemporary students. In order to support such a claim a number of prominent orientations, or theoretical perspectives, of learning were presented. It is important to reiterate that there is a vast number of theories of learning; those that have been explored represent a select group that, to date, have and continue to have prominence in educational practice. Various aspects of behaviourist, cognitive, humanistic, social cognitive and constructivist orientations to learning are likely to play a part in your career as a teacher and a broad overview of each was offered to assist in your development as a teacher.

Implications for Teaching

As noted early in the chapter, many generations of students experienced a factory-line approach to being educated. For many years students were viewed as *tabula rasa*, a Latin term meaning 'blank slate', and the role of a teacher was to fill that empty void with the knowledge that was deemed important at the time. From the 1970s onward, researchers began to articulate aspects of learning as a process as much as a product. Concurrently, the advent of technology which has given rise to an age of seemingly endless information calls into question the need or actual possibility of pouring a continuing exponential growth of information and/or knowledge into the heads of students. For some researchers and theorists there is still a worrying trend, at a systemic level, to perpetuate a factory model through the continued use of standardised testing and many other artefacts of twentieth-century schooling. The issues with standardised tests are covered in Chapter 10 but foreshadowed here as an example of something you may have personally experienced and might now question as a valid mechanism for determining any degree of learning. Indeed, one important question for you to continually reflect on in your personal practice is 'am I teaching the way I was taught?'

This question is an important one; like standardised tests, it is explored in more detail in Chapter 10 under the term 'apprenticeship of observation' (Lortie, 1975). At this stage, after working through this chapter, it is important to keep this phrase in mind as you explore the following questions.

Ask yourself...



- 1 After working through the chapter, has the definition of learning that you were asked to write at the beginning of the chapter changed? If so, how?
- 2 Given your experiences as a student, have there been times when you felt your learning was enhanced or optimised? If so, under what conditions did this occur?

PRACTICAL ACTIVITIES

- 1 *While on practicum*, document the methods used to determine when or how learning has occurred. List all of these in one of two columns in a table under the headings 'Product' and 'Process'. Is one column larger than the other and, if so, what does that indicate to you? Could you design different ways to determine what, if any, learning has occurred?
- 2 *While on practicum*, jot down any examples of particular theoretical approaches to learning that you observe during the course of your practicum. Are some theories more apparent than others? Do some approaches resonate better with your own beliefs about learning and, if so, how might you engage with such approaches as a teacher?

STUDY QUESTIONS

- 1 What are the five broad theoretical orientations presented in the chapter? Note the main focus of each.
- 2 What is the difference between positive and negative reinforcement? List some examples of each in a classroom context.
- 3 What are the five levels of the Maslow's hierarchy of needs? List some ways in which you might be able to help students meet basic and psychological needs at school.
- 4 Social learning theory is important in terms of behaviour and learning. What does this theory mean for you as a future teacher and potential role model for your students?
- 5 What are the primary differences between cognitive constructivism and social constructivism? Provide examples of each in relation to educational and pedagogical contexts.

FURTHER READING

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- Tokuhama-Espinosa, T. (2011). *Mind, Brain, and Education Science: A Comprehensive Guide to the New Brain-Based Learning*. New York: W.W. Norton.

VIDEO LINKS

Crash Course: *The Bobo Beatdown—Crash Course Psychology #12*

<https://www.youtube.com/watch?v=128Ts5r9NRE>

A succinct clip highlighting the impact of Albert Bandura's work on our understanding of behaviour and learning with a look at interesting learning concepts associated with his work.

Study.com: *Constructivism: Overview and Practical Teaching Examples*

<http://study.com/academy/lesson/constructivism-overview-practical-teaching-examples.html>

A concise look at constructivism and its application within classrooms.

WEBLINKS

Center for Innovation in Teaching and Learning <http://cte.illinois.edu/resources/topics.html>

A useful website with a number of links to theoretical and practical resources and ideas for the classroom.

Framework for 21st Century Learning <http://www.p21.org/our-work/p21-framework>

Although it is based in the United States with a view to enhancing educational structures and practices there, this site offers resources and ideas for engaging learners through contemporary understandings of learning, society and culture.