

# **Strategic Application of Human Development Applying Positive Psychology**

## **The Principles of Developmental Psychology**

### **6.1 Introduction**

Life-span developmental psychology is the field of psychology which involves the examination of both constancy and change in human behaviour across the entire life span, that is, from conception to death (Baltes, 1987). Developmental psychologists are concerned with diverse issues ranging from the growth of motor skills in the infant, to the gains and losses observed in the intellectual functioning of the elderly. The goal of study in developmental psychology is to further our knowledge about how development evolves over the entire life span, developing a knowledge of the general principles of development and the differences and similarities in development across individuals.

The range of topics comprising the study of modern psychology is vast, and encompasses sub-areas as diverse as social psychology, comparative psychology, the study of learning, neuropsychology, abnormal psychology, and cognitive psychology. However, the study of development is possible within each of these areas. Thus, in one sense, developmental psychology can be thought of as an approach that one takes to the broader study of psychology (Buss, 1995).

This lesson focuses on a narrower portion of the life span, specially, on the time development between conception and adolescence. This area of study is known as the study of child development. By studying the earlier forms of behaviour and the changes which behaviour undergoes, we can gain a better understanding of the 'end product', that is, adult behaviour. While this text does focus specifically on children's development, the wider principles of lifespan developmental psychology (which we discuss shortly) apply equally to this area as they do to the study of development across the life span.

### **6.2 What is Development?**

When we speak of development, to what, in fact are we referring? One frequently used definition refers to development as patterns of change over time which begin at conception and continue throughout the life span. Development occurs in different domains, such as the biological (changes in our physical being), social

(changes in our social relationships), emotional (changes in our emotional understanding and experiences), and cognitive (changes in our thought processes). Some developmental psychologists prefer to restrict the notion of development only to changes which lead to qualitative reorganizations in the structure of a behaviour, skill or ability (Crain, 2000). For example, Heinz Werner (1957) argued that development refers only to changes which increase the organization of functioning within a domain. Werner believed that development consisted of two processes: integration and differentiation.

Integration refers to the idea that development consists of the integration of more basic, previously acquired behaviours into new, higher level structures. For example, according to Piaget (1952), the baby who learns to successfully reach for objects has learned to coordinate a variety of skills such as maintaining an upright posture, moving the arm, visually coordinating the position of the hand and the object, and grasping the object under an integrated structure called a scheme. New developments build on and incorporate what has come before.

Differentiation refers to the idea that development also involves the progressive ability to make more distinctions among things, for example, learning to adjust one's grasp to pick up small objects (which requires the use of the fingers and fine motor control) versus larger objects (which only require closing the hand around the object and less fine motor control).

Werner defined development as a combination of these two processes of integration and differentiation; he saw development as a process of increasing hierarchical integration and increasing differentiation. Of course, Werner's view of development is by no means universally accepted within developmental psychology. Many developmentalists argue that anything which evidences change over time is relevant to the study of development (Crain, 2000). Thus, this debate remains a tension within the study of human development.

### **6.3 Principles of Life-Span Development**

Paul Baltes (1987) has articulated a set of principles which guide the study of human development within a life-span framework. Baltes argues that these principles form a family of beliefs which specify a coherent view of the nature of development. It is the application of these beliefs as a coordinated whole which characterizes the life-span approach. In this lesson, although we focus on development in children, we will take a life-span approach to the study of development.

The first of the principles which Baltes (1987) discussed is the belief that development is lifelong. This belief has two separate aspects. First, the potential for development extends across the entire life span: there is no assumption that the life course must reach a plateau or decline during adulthood and old age. Second, development may involve processes which are not present at birth but emerge throughout the life span. Development is also multidimensional and multidirectional. Multidimensionality refers to the fact that development cannot be described by a single criterion such as increases or decreases in a behaviour.

The principle of multi-directionality maintains that there is no single, normal path that development must or should take. In other words, healthy developmental outcomes are achieved in a wide variety of ways. Development is often comprised of multiple abilities which take different directions, showing different types of change or constancy. Another principle of development is the belief that development involves both gains and losses. According to Baltes, any developmental process involves aspects of growth and decline. For example, formal schooling increases a child's knowledge base and develops their cognitive abilities but also restricts their creativity as they learn to follow rules defined by others. These two aspects of growth and decline need not occur in equal strength, and, moreover, the balance between gains and losses can change with time.

A fifth principle articulated by Baltes (1987) is that development is plastic. Plasticity refers to the within-person variability which is possible for a particular behaviour or development. For example, infants who have a hemisphere of the brain removed shortly after birth (as a treatment for epilepsy) can recover the functions associated with that hemisphere as the brain reorganizes itself and the remaining hemisphere takes over those functions. A key part of the research agendas in developmental psychology is to understand the nature and the limits of plasticity in various domains of functioning.

The sixth principle states that development is also situated in contexts and in history. Development varies across the different contexts in which we live our lives. For example, social and rural environments are associated with different sets of factors which have the potential to impact on development; understanding how development differs for individuals within these two settings requires an understanding of the differing contexts. Development is also historically situated; that is, the historical time period in which we grow up affects our development. Finally, Baltes suggests that the study of developmental psychology is multidisciplinary. That is, the sources of age-related changes do not lie within the province of any one discipline. For example, psychological methodologies may not

be appropriate for understanding factors that are sociological in nature. Rather, an understanding of human development will be achieved only by research conducted from the perspective of disciplines such as sociology, linguistics, anthropology, and computer science.

#### **6.4 Contextualism in Developmental Psychology**

As we have seen, Baltes (1987) stressed the importance of contextualism to the study of life-span development. In order to create a coherent framework for understanding contextual influences, Baltes proposed a three-factor model of contextual influences on development (Baltes, Reese, & Lipsitt, 1980). The first factor is normative age-graded influences. These are the biological and environmental influences that are similar for individuals in a particular age group. Examples of *normative age-graded influences* are events such as puberty or the entry into formal schooling. A second type of influences is what Baltes referred to as normative history-graded influences.

These are biological and environmental influences associated with historical periods in time which influence people of a particular generation. For example, the effects of World War II on much of the world's population or the changes in the structure of government experienced by the people of the Soviet Union during the 1980s would constitute examples of normative history-graded influences.

Non-normative life events are unusual occurrences that have a major impact on an individual's life. The occurrence of these events is relatively unique to an individual and is not tied to a historical time period. Moreover, the influence of these events often does not follow a typical developmental course. Being struck with a major illness or losing a parent in childhood are examples of this kind of contextual influence. It is important for developmentalists to recognize that explanations of behavioural development are likely to be complex and require consideration of the wide variety of possible influences on a given individual's development.

#### **6.5 Chronological Age in Developmental Psychology**

The variable which is most often studied in developmental psychology is age. Chronological age, the time that has elapsed since a person's birth, is found in many developmental studies. Chronological age is commonly examined in developmental research because performance on any given task strongly co-varies with age. For example, in the study of child development, we find more often than not that older children perform at a higher level than younger children on a given task or that older children use immature strategies less often than do younger

children. However, what do age effects mean to us? Are we any better off for knowing that older children score better on a test than younger children? It is very important to recognize that chronological age does not cause development, but simply reflects the fact that we have existed for a certain amount of time. In other words, age is a proxy variable (Hartmann & George, 1999).

By proxy variable, we mean that chronological age stands in for other developmental processes we have not measured. When we find a difference between age groups on some variable, all we can say is that there is a performance difference between age groups; what causes the difference is not known unless specific measures are included. Age differences are only a small part of what developmental psychologists examine. The real interest lies in examining what mechanisms cause developmental change and, thus, performance differences between age groups.

## **6.6 Continuity and Discontinuity**

An important question which continually confronts the researcher in the study of child development is how to best characterize the nature of developmental change. There are two contrasting positions on developmental change. According to those who hold to the first position, development is best viewed as a continuous process. That is, development is conceived of as a process of the gradual accumulation of a behaviour, skill, or knowledge.

On this model, development proceeds in a smooth and orderly fashion, with each change building on previous abilities. In contrast, those who hold to the second view would suggest that developmental change is best characterized as discontinuous in nature. These theorists suggest that behaviours or skills often change qualitatively across time, and that new organizations of behaviours, skills, or knowledge emerge in a rather abrupt or discrete fashion.

The notion of a stage of development is central to discontinuous views of development. A stage of development can be thought of as a particular organization of the child's knowledge and behaviour that characterizes their development at a particular point in time. The movement to a new stage of development means that a qualitative reorganization of previous knowledge or behaviour has taken place. For example, Piaget (1952) believed that between 7 to 11 years of age, children's thinking could be described as concrete, in that it is closely tied to the nature of the objects with which they interact. In contrast, during adolescence, thinking becomes more abstract; it is less bound to particular objects and takes into account the possible or hypothetical. It should be clear that these two

positions development viewed as a continuous process or as a discontinuous process describe development in quite different ways; ways that on the surface are seemingly difficult to reconcile with one another. Siegler (1998) has argued that whether a particular aspect of development appears to be continuous or discontinuous in nature depends largely on how we choose to examine development.

When we examine the change in a given behaviour at large intervals (e.g., yearly) or in different age groups such as 4- year-olds and 8-year-olds, development will tend to look very discontinuous or stage-like. If we plotted the level of development of some skill over time, the developmental function might look like a staircase, with periods of little change followed by abrupt shifts in the level of performance. In contrast, if we were to examine the behaviour more closely, at smaller intervals, we might find that development took on a much more continuous character.

That is, increases in the level of performance would be seen to occur gradually, with no abrupt shifts. We would also find that there is great variability in the methods or strategies that children use to solve problems. Siegler's (1998) own work on children's learning in the domain of mathematics shows that children often use a variety of strategies in their attempts to learn how to add together two numbers. Because learning to decide which strategies work best takes some time, the shifts between the use of different strategies is a gradual process. If we plotted the development of strategy use for addition problems, Siegler claims we would obtain a picture quite different from the staircase model just described. Instead, we would see what he calls 'overlapping waves' of development. The waves occur as the variability in strategy use gradually peaks and declines while the overlap between the waves reflects the fact that children use multiple strategies at the same time.

Sternberg and Okagaki (1989) have suggested that the attempt to characterize development as uniformly continuous or discontinuous has the appearance of an unanswerable question, being based on a false presupposition. Instead, Sternberg and Okagaki suggest that a better question to ask is: 'What are the sources of continuity and discontinuity in development?' In their view, 'either or' debates are misleading: development has both discontinuous and continuous aspects and the real question for developmental psychologists is to find out how these differing aspects arise in the course of development.

## 6.7 Stability and Change

Another issue which is of importance to developmental psychologists is the issue of stability versus change. Simply put, we can ask whether development is best characterized by stability (for example, does a behaviour or trait such as shyness stay stable in its expression over time?) or change (could a person's degree of shyness fluctuate across the life span?). Studies of children have often revealed impressive stability over time in aspects of development such as the attachment bond to their parents (e.g., Sroufe, Egeland, & Kreutzer, 1990) or in personality (Caspi & Silva, 1995). Of course, there is evidence which suggests a contrary view, that change is both possible and indeed, is likely under the appropriate conditions. For example, research on children's temperament (e.g., Thomas & Chess, 1977) raises the possibility that our inherited predispositions to react emotionally in certain ways can be altered by our environment, particularly by the attitudes and behaviours of their caregivers.

*An important aspect of the debate on stability versus change has to do with the degree to which early experiences play a formative role in our later development. Freud was one of the first psychologists to emphasize the critical nature of our early experiences for our later development. In Freud's view, how we resolve our sexual and aggressive urges is strongly tied to the nature of our personality as adults. Similarly, Erik Erikson (1963) believed that how we dealt with key issues such as the development of a warm, caring relationship with our parents or the ability to think and act autonomously were important determinants of later developments (although unlike Freud, Erikson made a greater allowance for the different contexts in which children develop).*

These early theories of human development as well as a great deal of later research suggest that there is a highly stable quality to our development and that early experience is crucial to this stability. In contrast to this position, researchers who have focused on adult development such as Baltes (1987) have emphasized that we are malleable throughout the life span and that later experiences are very important to whether development shows stability or plasticity. Baltes has argued that too little attention has been focused on the aspects of development that support change, and has proposed a methodology for the study of behaviour across the life span which tests the potential for change in behaviour.

One study that has examined the effects of early experience on children's social, physical and cognitive development was conducted by British psychiatrist Sir Michael Rutter and his colleagues. Rutter (Rutter, and the English and Romanian Adopter Study Team, 1998) examined the psychological and physical

development of Romanian orphans who were adopted into British families after the fall of the Ceaucescu regime in Romania. These Romanian orphans were reared in extremely poor conditions in their native country. As a result, a large proportion of these children showed severe problems including mental retardation, growth deficiencies, and major health problems. The records of the institutions provided data on how long and at what age they had been placed into the institution. As a result, Rutter et al. were able to examine whether the degree of children's recovery from these early experiences was affected by how long they had been institutionalized.