UNIT 5  DIFFERENT PERSPECTIVES IN CHILD DEVELOPMENT

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5.1 INTRODUCTION

We all have personal experience with development and are interested in understanding behaviour of our own, our parents, children and friends. But, it is sometimes difficult to understand as to why some of us behave and act in a particular way and others in a different way. Among the captivating questions we shall address in this Unit are: How do environmental influences shape human development? How do children change physically and mentally as they age?

This Unit will help you to find answers for the above questions and thus make you understand the reasons for different ways children behave as they grow up. We shall begin our discussion by explaining the concept of human development. Having acquainted with the concept of development, you will then study different perspectives in child development. This Unit establishes the basis for the subsequent Units in Block 2 by providing a brief introduction to different perspectives in child development. It also presents some ways that you might use knowledge about children to promote positive development. Finally, this unit addresses you, as a teacher/prospective teacher, to mould your own perspectives while interacting with children based on the underpinning of various perspectives. Hope that you will enjoy reading this Unit and will use the knowledge gained in your classroom.
5.2 OBJECTIVES

After going through this Unit, you should be able to:

- define the concept of development;
- discuss the various perspectives in child development;
- explain the biological perspective in child development;
- examine the life-span perspective in child development;
- analyze bioecological perspective in the context of child development;
- discuss cognitive and socio-cultural perspectives of child development; and
- apply the knowledge of various perspectives in child development while dealing with children.

5.3 DEVELOPMENT: THE CONCEPT

In Unit 4 you have studied about the terms growth and development and how each differs from the other. Now, you know that development describes the growth of human beings throughout the lifespan, from womb to tomb. It refers to qualitative and quantitative changes in child’s growth. Development entails many changes which fall into four broad domains- (i) physical development, (ii) cognitive development, (iii) psychosocial development, and (iv) moral development. You will study these changes in detail in Unit 6. In brief, you may explain development as a series of overall changes that occur in an individual due to the interaction between biological and environmental factors.

5.4 DIFFERENT PERSPECTIVES IN CHILD DEVELOPMENT AND THEIR EDUCATIONAL IMPLICATIONS

There are various ways to analyze and understand human behaviour. A variety of perspectives in child development can be utilized when studying as to how individuals think, feel, and behave. What we know about child development is grounded in various perspectives on development. Different perspectives on development explain behaviour as well as predict behaviour that can be observed.

Let’s consider the following illustration:

Case 1: Three and a half year old Nitha has started trying to dress herself each morning. She regularly wears her shoes on the wrong feet, and puts on her frock inside-out. When someone comes for her help, Nitha gets angry and shouts, “No! Me do it!”

Why does Nitha behave this way?

Is her behaviour related to her age, individual temperament, family relationship or rearing pattern?

When you try to find answers to these questions, you have to think in various perspectives as the way developmental psychologists do. They attempt to understand and explain the behaviour that occurs in our lives. Different developmental perspectives have been developed to explain the various aspects of human development. You can read some of the major perspectives given in figure 5.1.
Fig. 5.1 Different Perspectives in Child Development

From the above figure, you have seen that there are different perspectives by which the development of a child can be studied. These perspectives describe and explain human development. They offer divergent lenses through which we understand the developmental phenomena. In the next sub-section, we shall discuss the following perspectives:

- Biological Perspective
- Life-Span Perspective
- Bioecological Perspective
- Cognitive Perspective
- Socio-cultural Perspective

5.4.1 Biological Perspective

Let’s begin our discussion of perspectives with the biological perspective. In the development of psychology, physiology plays a major role and hence this perspective is known as biological psychology. Sometimes, it is named as biopsychology or physiological psychology due to the emphasis on the physical and biological bases of behaviour. In biological perspective we look at how genetics influence different behaviours or how damage to specific areas of the brain influence behaviour and personality of an individual. It assumes that human behaviour and thought processes have a biological basis. In this perspective, human problems and actions are looked at and perceived in different ways.

For example, aggression has been viewed in different perspectives by different psychologists. Psychoanalysts viewed aggression as the result of childhood experiences and unconscious urges. Behaviourists perceived aggression as a behaviour shaped by reinforcement and punishment. The biological perspective, on the other hand, look at the biological roots that lie behind aggressive behaviours. They might consider genetic factors or the type of brain aberration that may lead to display of such behaviour.

We shall discuss some viewpoints related with biological perspective. There are two viewpoints-(i) Maturation viewpoint of Arnold Gesell and (ii) Attachment viewpoint of John Bowlby and Mary Ainsworth. Let us discuss each viewpoint in detail.
5.4.1.1 Maturation Viewpoint

Gesell was one of the first psychologists to systematically describe children’s physical, social and emotional behaviour through a quantitative study of human development. He was a strong proponent of the maturational viewpoint of child development. According to maturational viewpoint, all children go through the same stages of development based on the maturation of their brain and body. This includes everything from the changing ability to grasp objects in infancy to the changing way in which children acquire or collect objects. You might have noted that development follows an orderly sequence and that the biological and evolutionary history of the species decide the order of this sequence. This viewpoint has been criticized as it did not acknowledge individual and cultural differences in child development. He created a foundation for subsequent research that described both average developmental trends and individual differences in development. Based on this viewpoint, a normative approach for studying children was initiated. According to the normative approach, large numbers of children at various ages are observed and a typical ‘age’ or ‘norm’ for achieving various developmental tasks is determined.

Educational Implication of Maturational Viewpoint

We can see the impact of the maturational viewpoint of Arnold Gesell in school readiness of children and in early childhood classrooms. According to maturational viewpoint, readiness is seen as a phenomenon that happens ‘within the child’. Though, we know that all children follow same stages of development, there will be differences in rate of development due to genetic make-up.

Another area where maturational viewpoint had its impact is in early childhood classrooms. It states that children are considered not fit for reading until they had a mental age of six and a half years (Morphett & Washburne, 1931). Consequently, in some preschool and kindergarten, readiness activities were developed for children who were not ready to read yet. This theory is partially responsible for the establishment of kindergartens and pre-schools.

5.4.1.2 Attachment Viewpoint

Next, we will examine attachment theory which was first proposed by John Bowlby and later on by Mary Ainsworth. Before going into the details of this viewpoint let us consider the following case:

**Case 2:** Roby, aged 11, attended special school from an early age due to serious speech impediment and behavioural difficulties. His parents, despite their own limitations caused by childhood and social deprivation, had over a long time, been interested in his development. They had attended school functions, taken him on annual holidays and paid particular attention to his health. All these positive features of Roby’s life gradually disappeared when his parents started open hostility about the child. When his father left, he tried to maintain contact but suffered for that, to the extent that he ran away from his angry mother to stay with his father. He, then, repenting on his action returned to his mother, but again started feeling love towards...
father. Roby’s teachers found some changes in him: he could not concentrate; he was the last to leave school playground; he was totally unreceptive to the speech therapy provision in his education. His intellectual achievements within the classroom ceased.

How did Roby’s interest in studies disappear?

What kept Roby away from developing close relationship with his parents later on?

In what ways teachers can help Roby?

These questions might have arisen in your mind while going through this case. You can discuss with your friends about these questions. The above case throws light on the importance of stable parent-child as well as teacher-child relationship. Subsequent paragraphs, deal with the details of attachment viewpoint and attachments needed during childhood and adolescence stages.

Attachment theory was first formulated by British psychiatrist John Bowlby(1907-91), and later on elaborated by his colleague, Mary Ainsworth, an American developmental psychologist. The theory of attachment focuses on the importance of the early parent-child relationship in developing desirable social, emotional and cognitive development in children. You may describe attachment as a strong affectional tie that binds a person to an intimate companion. You know that family is the first place where a child learns and experiences attachment. The quality of the relationship between parent and child is important in further growth and development of the child. Attachment starts in infancy and lasts throughout the life-span. For most of us, the first attachment we form, around 6 to 7 months of age, is to a parent. In rare cases, the first care-givers may be siblings or any other relatives. As studied in Unit 2, in diverse growing up contexts, there will be differences in attachment between caregiver and child. The primary caregivers are responsible for moulding the character and personality of the child. The mother has some kind of bond to the child naturally because she carried her/him in womb for 9 months whereas the father has to establish a bond after the child is born. On the basis of the interactions with caregivers, infants build up expectation about relationships in the form of **internal working models** that aid to process social relationships. **Internal working model** means the cognitive representations developed within the child about herself/himself and others. Securely attached infants will form internal working models reflecting their love seeking bond towards others. Secure attachment is theorized to be an important foundation for psychological development later in childhood, adolescence, and adulthood. On the contrary, insecurely attached infants subjected to abusive or neglectful care may develop inside a feeling of rejection by everyone and consider others as unreliable. Insecure attachment is theorized to be related to difficulties in relationships and problems in later development.

Ainsworth’s most important contribution to attachment theory is the ‘Strange Situation’, a well-known procedure for measuring the quality of an attachment. It consists of eight episodes that are depicted in the table 5.1.

<table>
<thead>
<tr>
<th>Episode</th>
<th>Events</th>
<th>Attachment Behaviour Observed</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Experimenter leaves parent and infant to play</td>
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<td>2.</td>
<td>Parent watches while infant plays</td>
<td>Consider parent as secure basis</td>
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</tbody>
</table>
### Table 5.2: Attachment Classification and Developmental Outcomes

<table>
<thead>
<tr>
<th>Type of Attachment</th>
<th>Main Idea</th>
<th>Possible Developmental Outcomes in Children</th>
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</table>
| Secure attachment           | Relationship in which infants have come to trust and depend on their mothers | • High social competence  
• Maintain warm, trusting and long lasting relationships with others  
• Better school adjustment  
• More positive perception of self |
| Resistant/Ambivalent attachment | Relationship in which, after a brief separation, infants remain angry and are difficult to console | • Frequent conflict between parents and adolescents  
• More likely to be pampered by teachers  
• More likely to be victims at school  
• Anxiety disorders |
| Avoidant/Dismissing attachment | Relationship in which infants keep away from parents when they are reunited following a brief separation | • Difficulty with emotional closeness  
• Less socially competent  
• More likely to be victims at school  
• More likely to be rejected by teachers |
| Disorganized/Disoriented attachment | Relationship in which infants do not understand what’s happening when separated and later reunited with their mothers | • Problems with integration of identity  
• Exhibit substantial aggression  
• Self-injury  
• Conduct disorders |


The above table shows the gradual increase in the level of stress infants experience as they react to the approach of an adult stranger and on the departure and return of their caregiver. Ainsworth further classified four types of quality of attachment on the basis of an infant’s pattern of behaviour across the eight episodes. Read the following table:
From the table 5.2 you have understood that quality of attachment in childhood has greater impact in later stages of life. You have seen children who are respectful and closer and some who misbehave with you. We all are conversant with some parents complaining that their children in adolescence show less attachment towards them and more to their peers. As the peers have the same mind set as that of adolescents, their relationship becomes stronger. Attachment relationships provide the foundation of social learning.

Just like infants, adolescents need security and support of parents to become independent and self-sufficient individuals. Sometimes you may observe that adolescents who enjoy secure attachment relationships with their parents generally have a stronger sense of identity, higher self-esteem, greater social competence, better emotional control and less behavioural problems. The next section will elaborate on how attachment is important in school context.

**Educational Implication of Attachment Viewpoint**

As the child grows up, s/he starts mingling with the outside world. Schools may be considered as the first social system outside the family where children develop attachment towards peers and teachers. That’s why a school is considering as a ‘home away from home’. You might have dealt with adolescents who express some kind of behavioural problems especially while dealing with teachers and peers. Let us go through this case.

**Case 3:** Sneha became part of boarding school at the age of seven and her parents left abroad with the second child. In her infancy stage, her parents failed to fulfill her needs. Now she is admitted to a boarding school and a fear of abandonment develops in her mind. She shows distrust in the classroom. She shuts down emotionally and freezes out at something sad or infuriating. She dislikes timetable routine in the boarding school and started misbehaving with her friends and teachers. She used to express that her parents went with her younger brother as she is an ‘unwanted child’.

What is Sneha’s problem? What type of attachment her parents gave to her? Though her parents provide money for her studies, why does she still feel as an unwanted child? What would be your response if you would be Sneha’s class teacher?

From Sneha’s case we may conclude that a secure environment is needed in fostering of a child. With a secure sense of self, children will be able to share with their teacher and their peer group. They consider the teacher acting as the substitute attachment figure. They believe that interactions with adults will be affirming of their own worth. This frees them to take risks and tolerate frustrations in the learning process.

However, children with attachment difficulties will typically show distrust in the classroom which may manifest as lack of concentration. Attachment awareness in schools is needed to resolve the issues involved and to support children with attachment difficulties, thereby help improvement in behaviour and overall well-being of both children and staff. Though the teacher cannot be a mother of a child, they can act as a surrogate of the child. It is also necessary to understand the psychosocial and learning needs of their children.

It is a common belief in psychology that “nature gives parents a baby; the end result depends on how they nurture it. Good nurturing can make up for many of nature’s mistakes: lack of nurturing can trash nature’s best effort” (Harris, 1998, p. 2). Now let us discuss the life-span perspective.
Check Your Progress 1

Notes: (a) Write your answer in the space given below.

(b) Compare your answer with the one given at the end of the unit.

i) How does maturational viewpoint differ from attachment viewpoint in their explanation of child development?
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5.4.2  Life-Span Perspective

The perspectives of child development discussed so far have paid little attention to the adult years of the life-span. While examining the modern perspectives, we could realize that they emphasize the importance of viewing human development as a life-long process. If development continues from conception to death, the science of development consists of the study of those changes and continuities which the life-span perspective takes into consideration. It is not related to a specific area of development (for example, psycho-social) or age period (adolescence) rather, it attempts to understand the development of an individual throughout the life within a changing socio-cultural context. Think of yourself as an infant, as a child, as an adolescent and an adult and imagine how those years influenced the kind of individual you are today. Let us now explore the concept of life-span development and its importance in understanding development of an individual, and also discuss various sources of contextual influences. Before entering into the details of life-span perspective, let us reflect on the following questions:

- How does our understanding of the world grow and change throughout our lives?
- How do our personalities and relationships develop through the entire span of life?
- How does achievement motivation of a child vary from childhood through adulthood?

The above highlighted questions emphasize that a life span perspective is essential in order to get responses. According to the life-span perspective, human development is multiply determined and cannot be understood within the scope of a single framework. It is a field of study that examines patterns of growth, change and stability in behaviour that occur the entire life-span. We all know that no single stage of a person’s life (such as infancy, early childhood, later childhood, adolescence, adulthood and old age) can be understood apart from its origins and its consequences. To understand a specific stage, the interplay of social, environmental and historical changes must also be considered. In the next section we will discuss a model developed by Paul Bates and his colleagues.

5.4.2.1  Selective Optimization with Compensation Model (SOC)

Paul Baltes and his colleagues developed a model named Selective Optimization with Compensation Model (SOC) wherein an interaction between three processes, i.e., selection, compensation and optimization are depicted. Selection processes serve to choose goals, and life tasks, whereas optimization and compensation lead to enhancing chosen goals. For example, older musicians may reduce the number of
pieces they play (selection), rehearse them more often (optimization), and sing them in a lower key (compensation). This way they continue their music concerts. Take another example, suppose a child’s ambition is to become a doctor, among the various careers s/he has opted for the profession of a doctor (selection) based on her/his interests and aptitude. S/he has to work hard to score good marks in science subjects (optimization). If s/he lacks current scientific knowledge will do additional readings to increase the knowledge in new scientific areas (compensation). Here you can see that for achieving desired ambition, the child acquired and applied goal-relevant means and practise goal-relevant skills. The basic assumption of the selective optimization with compensation (SOC) model is that the three processes form a system of behavioural action that generates and regulates development and aging.

By becoming older, individuals select from a range of possibilities due to two reasons—i) Elective selection and ii) Loss based selection. Elective selection occurs when one chooses to reduce one’s involvement to fewer domains as a result of new tasks. For example, during 10th class, students drop out of some social organizations because of more time required for her/his studies. Loss based selection occurs when one reduced involvement in some other activities as a result of expected losses in personal or environmental resources. Or it refers to restructuring of one’s goal hierarchy by emphasizing on the most important goal. Compensation means the use of alternative methods when the earlier preferred methods lost its effectiveness. It is different from selection in the sense that selection refers to choice of goals whereas compensation refers to choice of methods. For example, a visually impaired student who loses her/his ability in reading may compensate in reading by using Braille system.

The last process is optimization which refers to the application of methods adopted to achieve selected goals. Optimization involves minimizing losses and maximizing gains. The focus of optimization is on the best match possible between one’s resources (biological, psychological, and socio-cultural) and one’s desired goals. As individuals cannot achieve optimal outcomes in everything, development becomes an active process of selecting the right goals and sometimes compensating to achieve the desired goal.

5.4.2.2 Characteristics of Life-Span Perspective

Life-span development expert, Paul Bates and his colleagues provide many of the main approaches to human development based on this perspective. They highlighted the following features of life-span perspective as follows:

<table>
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<tr>
<th>Key Features</th>
<th>Main Idea</th>
<th>Example</th>
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| • Development is a life-long process | • It rejects the traditional notion that childhood is the main period of development  
• No age period dominates development  
• Development is best seen in the context of the whole life-span | Spiritual development      |
| • Development is multidimensional | • At every age mind, body, interest, emotion and relationship change and affect one another. Development occurs at various dimensions such as physical, psycho-social, cognitive dimensions  
• Each dimension has various components | Memory, Thinking, Intelligence, Information processing, attention are some of the components of cognitive dimension. |
**Growing Up: Infancy to Adulthood**

<table>
<thead>
<tr>
<th><strong>Development is multidirectional</strong></th>
<th><strong>Development is characterized by lifelong plasticity</strong></th>
<th><strong>Development is the result of multiple causation</strong></th>
<th><strong>Understanding development requires multiple disciplines</strong></th>
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<td>- Different capacities show different patterns of change over time. Development involves both growth and decline. In one’s life time, some dimensions expand and others shrink.</td>
<td>- Plasticity refers to the capacity to change in response to positive or negative environmental influences. One’s capacity is not predetermined. Through practice many skills can be improved. Plasticity continues into later life that aging process is not fixed but rather can be changed considerably depending on the individual’s experiences.</td>
<td>- Human development is the product of many interacting causes. It can be either internal and external forces or both biological and environmental. Some experiences are common to all at similar ages, others are common to people of a particular generation and still others are unique to the individual.</td>
<td>- Human development is influenced by various aspects ranging from biochemical reactions to historical events. Hence the study of human development is more interdisciplinary. Psychologists, sociologists, anthropologists, biologists, historians etc. have something to contribute to unlock the mysteries of development throughout life-span.</td>
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<td><strong>Development involves both gain and loss</strong></td>
<td><strong>Gain and loss are intertwined during every phase of the life span. Baltes states that gain inevitably brings with it loss of some kind, and loss brings gain. Gain and loss occur jointly.</strong></td>
<td><strong>Influence of family and schools on the social development of child</strong></td>
<td><strong>Influence of heredity and environment on the intellectual development of child</strong></td>
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<td><strong>Development is contextual</strong></td>
<td><strong>All development occurs within a context such as family, orphanage, school, peer groups, cities, neighbourhoods and so on. Each of the contexts is influenced by historical, social, political and cultural factors. As result of changes, contexts exert three types of influences-(i) normative age-graded influences, (ii) normative history graded influences and (iii) nonnormative life events. (i) Normative age-graded influences imply commonalities and experiences shared by individuals within a given age-range. (ii) Normative history graded influences are impacted by ideological, demographic and other social context variables. Nonnormative life events are unusual occurrences that affected an individual’s life.</strong></td>
<td><strong>Behaviour of a child reared in a dysfunctional family is different from that of a child grown up in a normal family.</strong></td>
<td><strong>As children gain command over language, they lose their ability to use ‘babble sounds’.”</strong></td>
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5.4.2.3 Educational Implication of Life-Span Perspective

The major contribution of life-span perspective in the field of education reflects in the concept and goals of education. Traditionally, you may define the goal of education in terms of either normative or differential views of individual development. You may know that a normative pattern of development has led to the focus on developmental tasks. On the contrary, the focus on individual differences emphasizes on differentiation and individualization of educational objectives. But in life-span perspective, both normative and differential developmental patterns that take place in various sociocultural contexts are taken into consideration. Moreover, educational goals must be responsive to social change and education can also direct the nature of such change. Through this perspective, the role of education that helps individuals to acquire the generic skills for adapting and optimizing their development in relation to social change and future change is possible.

Another area where this perspective has contributed is in instructional methodology. Individual differences in almost every type of intellectual capacity increases throughout one’s life-span. Here lies the importance for individualized instruction in education. Open and distance learning which caters most to the needs of adult learners has taken into account the aspect of individual differences and the instructional methodology to be used. Based on the life-span perspective, your role as a teacher is to be a facilitator instead of director of learning. When society and teacher determine education of children, it is children’s freedom to decide the method of learning. You may feel that how developmental changes in the children across the life-span focus the need for developmentally appropriate classroom. It is a classroom where children can initiate their own learning and meets the needs of each child by providing materials that are age appropriate, individually appropriate, and culturally appropriate. This perspective also underlines the need for qualitatively different types of training for teacher trainees working with different age groups. In order to facilitate and optimize the development of learners, it is necessary to provide varying educational opportunities. In short, through the life-span perspective the concept of education broadens beyond the traditional concept of education.

Activity 1

Describe an event in your development that differs from your parent or grandparent when s/he was your age. Using key features of life-span perspective, explain this diversity in development.

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5.4.3 Bioecological Perspective

Consider this case:

Case 4: Thara is a teacher working in a junior high school in a rural area. She received all her education from urban institutions. She faced difficulties in managing her classroom. Observing children's behavioural patterns towards teachers as well as peers, she felt that it was tough to handle these children. Her colleagues told that these children come from various socio-economic background and diverse nurturing contexts such as single-parent
family, extended family, nuclear family, orphanages etc. Most of the children are first generation learners. Some children are aggressive in nature and some short-tempered. Her first year was tough. Being constantly alert in preparing various activities, showing attachment to children, meeting parents and conducting remedial classes after school hours demanded lot of time and energy on her part. She tried to understand their family background. She found that parents deliberatively disengaged from children’s learning process at home either due to lack of education or interest. She implemented group activities in the classroom to arouse interest in children and paid more attention in developing their reading and writing skills. She convinced parents to take interest in their children’s studies.

Here, we find that Thara is a teacher with bioecological perspective in the development of her children and in their learning process. She tried to understand her children and their background. She interacted with children, parents and fellow teachers. From her understandings she derived some common developmental needs and competencies such as secure relations with teachers and caregivers, get control over one’s own behaviour and individual differences among children. You cannot understand the life course of a child without understanding how that child interacts with her/his environment. In the 1970s, Urie Bronfenbrenner (1917-2005) developed the ecological viewpoint to explain how all aspects of the environment affect the child and in turn how the child affects her/his environment. The word ‘ecology’ describes how living things fit in with their environment. Later, it is renamed as bioecological model of development as it emphasizes how biology and environment interact to produce development. This model provides a scheme for understanding how different social processes influence development in different periods. In bioecological viewpoint, human development is inseparable from the environmental contexts in which a child develops. It considers that all aspects of development are like the threads of a spider’s web, so that no aspect of development can be isolated from others. Bronfenbrenner divided the environment into the four levels as shown in figure 5.3.

**Fig. 5.3: Bronfenbrenner’s Bioecological Model of Development**

Bronfenbrenner proposed that individuals grow and develop within a nested set of influences that is classified as the microsystem, mesosystem, exosystem, and
macrosystem. The **microsystem** is the immediate environment in which the child lives in. We know that the primary microsystem for a child is the family. The developing child may also experience other microsystems such as day care centre (crèche) or grandmother’s house, neighbourhood environments, etc. You would agree with us that interactions with immediate environment have an effect on the growing up of the child. Microsystems really influence development. The more encouraging and nurturing these relationships and places are, the better the child’s growth will be. Furthermore, how a child acts or reacts to these people in the microsystem will depend on how they treat her/him in return. You have realized the importance of family, day care centers, peer groups, schools and neighbourhood environments on child development.

The **mesosystem** consists of the interrelationships or linkages between two or more microsystems. Microsystems themselves are connected to create the mesosystem. For example, a marital conflict in the family (one microsystem) could make a child withdraw from teachers and friends in the school (a second microsystem) and as a result her/his experience there become less intellectually stimulating. Take another example that a child’s parent or caregiver (one microsystem) takes an active role in her/his schooling such as participating in parent-teacher meetings (a second microsystem) and enquiring about the progress of the child, this will help to ensure the overall growth of the child. Thus, you have come to know that mesosystem provides linkages across microsystems, because what happens in one microsystem is likely to influence others.

The **exosystem** refers to social settings that a child may not experience directly but that can influence her/his development. For example, if a child’s parent lost job that may have negative effects on the child as she/he may feel difficulty in paying fees and purchasing other items. On the other side, a promotion of parent with hike in salary may have a positive influence on the child reassuring the ability to meet her/his educational needs.

The ** macrosystem** is the largest cultural context in which the microsystem, mesosystem and exosystem are embedded. It consists of cultural norms that guide the nature of the organizations and places that make up one’s everyday life. A mother, her workplace, her child and the child’s school are part of a larger cultural setting. For example, the macrosystem in India includes the ideology of democracy and individual freedom which affect the growth of the child as a responsible citizen. The macrosystem evolves over time and each posterity may develop in a unique macrosystem.

In addition to the microsystem, mesosystem, exosystem and macrosystem, Bronfenbrenner introduced the concept of the **chronosystem** (‘chrono’ means time) to obtain the idea that changes in people and their environment occur in a time frame. We cannot study development in a static stage; we must use a video camera and understand how one event leads to another. For example, societal events like economic depressions, social policies, wars and technological breakthroughs change individual development while individuals, in turn, affect the course of history. (Modell & Elder, 2002).

You might be thinking how to analyze a problem using Bronfenbrenner’s biocological model. For example, suppose you have come across that most of the teenagers are using alcohol in your school how might you intervene in each of Bronfenbrenner’s environmental systems? Thinking of the family and peer group microsystems in which adolescents develop, you could provide an alcohol prevention programme to students, parents or caregivers. In the case of mesosystem, you could use students who are peer leaders to convince victimized students to keep away from alcohol. You could also conduct alcohol-free social events at school to reduce the alcohol usage menace.
Considering the exosystem, the government policy that no liquor shops should be established close to the educational institutions (for example, the ruling of Madras High Court that no liquor shops could be established around school campuses and a minimum distance of 100 metres is required in case of location of liquor shop from the school) might be effective. Finally, you may conclude that the real source of the problem lies in the macrosystem (culture) that tolerates drinking among adolescents especially in the Indian context of reducing the age for alcohol drinking from 21 to 18 years, a community campaign against alcohol consumption could be conducted.

5.4.3.1 Educational Implication of Bioecological Perspective

From bioecological viewpoint, environment influence development by providing opportunities or setting constraints in children’s everyday activities. You may agree that the contribution of nature and nurture cannot be separated easily as they are part of a dynamic system and has dire implications in various contexts like family, school, media and the wider community. You have studied that how this perspective focuses on the importance of understanding a child, not on her/his own but within a macro context evolving through a time frame. It emphasizes that children are affected by family members and friends and indirectly by social systems such as neighbourhoods and religious institutions which, in turn, are affected by the beliefs and heritage of one’s culture. In case 4, teachers like Thara may reflect on her classroom environment the message that a child is being raised in different socio-economic backgrounds. Such a teacher may also continue her partnership with child’s family and other teachers by engaging in frequent dialogues about this topic.

It is necessary for caregivers and schools to provide long-term relationships to the child. In learning process, it is the duty of teachers to know each child in his/her microsystem, thereby linking to the mesosystem. This ecological perspective serves as a basis for understanding the development of social competence in preschoolers. Instead of looking at single variable like socio-economic status or family stress as predictors of children’s social competence, it examined a nested array of variables that would influence social competence. Such variables are individual characteristics, family characteristics, teacher behaviour and classroom climate. The issues among adolescents which you will study in Unit 9 of Block III should be comprehended in terms of bioecological perspective instead of treating them as individual issues.

Another contribution of bioecological perspective is the application of theory to policy, action research, and making change happen. The ecological belief that all levels of society impact human development is involved in framing social policy and programmes at all levels of government. This perspective has practical applications in work with children and with adolescents. It expresses that the environment of the child, the community setting of the mother or childcare institutions and the political structures within which they are living are all relevant when considering programmes to protect and improve children’s development. This perspective makes us to understand that the development of children in one culture or one group within a culture may not apply equally to children in other societies or cultural groups. In short, it is better to conclude that a child is not merely an outcome of development but a shaper of it.

Check Your Progress 2

Notes: (a) Write your answers in the space given below.
          (b) Compare your answers with the one given at the end of the unit.
          i) Match each statement with the correct level of the ecological system that is given in bracket.
          (microsystem, mesosystem, macrosystem, exosystem, chronosystem)
<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Statement</th>
<th>Level</th>
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<tbody>
<tr>
<td>a.</td>
<td>A parent attends parent-teacher meeting to know the progress of the child</td>
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<td>b.</td>
<td>The number of employed parents who send their children under the age of 3 to creche has increased recently when compared with earlier days.</td>
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<tr>
<td>c.</td>
<td>A parent lost a job that made him to re-plan his expenditure.</td>
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<tr>
<td>d.</td>
<td>A child’s preschool teacher taught her/him to sing ‘twinkle twinkle little star’.</td>
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<tr>
<td>e.</td>
<td>In India, a male (government servant) is entitled to avail 15 days paternity leave during wife’s confinement.</td>
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ii) What are the five levels of ‘ecology’ that influence child development according to Bronfenbrenner?

5.4.4 Cognitive Perspective

Case 5: When 3-year old Faizal is asked how rain drops look like, he answers “it looks like tear drops”. When his 11 year-old sister, Amina is asked the same question, she replies: “the shape of raindrops is based on their size. If it is small, it is spherical in shape and if it is large, the shape gets distorted until it breaks into smaller drops.” And the answer of their cousin Bushra, studying meteorology in graduation, includes a discussion on the shape, surface tension of water and air pressure pushing on the falling raindrops.

A developmentalist using cognitive perspective will analyze the above answers in terms of one’s degree of knowledge and understanding or cognition. The cognitive perspective is concerned with the development of a person’s thought processes. It looks into how we think and interact with the world. We have noted in the above case that children’s construction of knowledge changes over time. In the cognitive-developmental perspective, we will discuss three approaches related with cognitive development. They are:

- Piagetian Approach or Cognitive Developmental Approach;
- Information-Processing Approach; and
- Developmental Cognitive Neuroscience Approach

5.4.4.1 Piagetian Approach or Cognitive Developmental Approach

Famous cognitive psychologist, Jean Piaget proposed an important theory of cognitive development. This perspective focuses on how children construct their understanding of the world as they pass through four stages of cognitive development through assimilation (responding according to existing schemas) and accommodation (modifying a schema to fit new information). Each of these age-related stages consists of different ways of thinking. Each stage represents a fundamental change in how children understand and organize their environment. In Piaget’s words, it is said that ‘Children think differently from adults’. A child’s cognition is qualitatively different from one stage to another as shown in the following table:
Table 5.4: Piaget’s Stages of Cognitive Development

<table>
<thead>
<tr>
<th>Stage</th>
<th>Approximate Age</th>
<th>Features</th>
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<tbody>
<tr>
<td>Sensorimotor stage</td>
<td>Birth to 2 years</td>
<td>Infants gain knowledge of the world through their senses and motor skills.</td>
</tr>
<tr>
<td>Preoperational stage</td>
<td>2 to 7 years</td>
<td>Children begin to use words and numbers to represent aspects of the world through her or his perspective.</td>
</tr>
<tr>
<td>Concrete operational stage</td>
<td>7 to 11 years</td>
<td>Children begin to think logically about concrete things but have difficulty in understanding abstract concepts.</td>
</tr>
<tr>
<td>Formal Operational stage</td>
<td>11 years and beyond</td>
<td>Adolescents think about abstract and theoretical concepts; use logic to find creative solutions to problems.</td>
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From case 5, you have read the various responses given by children in different age groups regarding the appearance of rain drops. By using the cognitive perspective, developmental researchers try to explain how children and adolescents process information and how their understandings affect their behaviour.

The criticism levelled against Piagetian perspective is that his theory perceives cognitive development as discontinuous. You have read how Piaget presented the four distinct stages in which the quality of cognition differs from one stage to the next. However, in the view of developmentalists, growth is considered as a continuous process. They have put forward another perspective known as the information processing approach which we will discuss in the next paragraph.

5.4.4.2 Information-Processing Approach

Information-Processing approach traces the ways individuals manipulate information, monitor it and strategize about the information. As this approach is built from Piagetian research, it is also known as Neo-Piagetian approach. It explains how the thinking process of children develops through childhood and adolescence. Unlike children, adolescents develop a larger capacity for processing information enabling them acquire more complex knowledge. Like computers, human cognition also consists of mental hardware and mental software. Mental hardware consists of cognitive structures, including different memories where information is stored; whereas mental software includes organized sets of cognitive processes that assist individuals to complete specific tasks. For example, if a student wants to do well in an examination, s/he must encode the information during reading, store it in memory, and then retrieve the necessary information during the examination.

Let us understand how this approach explains thinking process during childhood and adolescence stages. It is similar with the advancements made in personal computers. Compare the computers built a decade ago with that of modern computers. The modern computers have better hardware and software. Likewise, older children and adolescents have better hardware and better software. You may get more vividness when you observe that older children easily solve mathematics problems better than younger children who rely more on calculators. An important aspect of development is to learn good strategies for processing information. In the
next paragraph, we will examine the third approach, i.e. Developmental Cognitive Neuroscience approach in detail.

### 5.4.4.3 Developmental Cognitive Neuroscience Approach

The goal of developmental cognitive neuroscience is to know how brain function gives rise to mental processes such as logical thinking, reasoning, and vision. This approach looks at cognitive development through the lens of brain processes. ‘Developmental cognitive neuroscience’ is an interdisciplinary scientific field devoted to understanding psychological processes and their neurological bases in the developing organism. It examines how the mind changes as children grow up, interrelations between that and how the brain is changing, and environmental and biological influences on the developing mind and brain’ (Wikipedia, the free encyclopedia). The two main principles around which this approach revolves on are:

- Different information-processing operations are performed at different brain areas; and
- A cognitive performance consists of breaking down the overall task into component information processing activities and determining the area of brain that performs the activity.

From the above principles, we may notice a brain-based approach in studying the mental operations. This approach has taken into account the neurological activity that underlies thinking, reasoning and other cognitive behaviour. For example, consider the interrelation between motor skills and visual-motor coordination that requires high cognitive functions which attains maturity by late adolescence. We see children suffering from Attention-Deficit Hyperactivity Disorder (ADHD), a developmental disorder that affects both cognitive and motor functioning. In many children with cognitive developmental disorders, movement deficits are evident. More research is underway on dyslexia, specific language disorder and autism. Interaction of genetic and environmental factors during development is another area of concern of developmental cognitive neuroscience psychologists. Thus, this approach studies how the physical brain and nervous system along with other intangible factors lead to patterns of thought and behaviour.

When we go through the Piagetian information processing and developmental cognitive neuroscience approaches, we may see that they do not take into account the socio-cultural context in which development takes place. Though socio-cultural perspective comes under the category of cognitive perspective, we will discuss this perspective in detail in the forthcoming paragraphs.

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**Check Your Progress 3**

**Notes:**

(a) Write your answer in the space given below.

(b) Compare your answer with the one given at the end of the unit.

i) How information-processing approach and developmental cognitive neuroscience approach are differing from each other?

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5.4.5 Socio-Cultural Perspective

Socio-cultural perspective emphasizes the role of culture and social interaction in the process of child development. Lev Vygotsky, the propounder of socio-cultural perspective, focuses that a child’s thinking does not develop in a vacuum but rather is influenced by the sociocultural context in which s/he grows up. Vygotsky believed that the development of memory, attention and reasoning includes learning to use the language, mathematical systems and memory strategies that is prevalent in a society. Thus, it is clear that each culture provides its members with certain tools of thought. The ways in which individuals in various cultures passed information to posterity is embodied in various languages; thereby shape thoughts. Hence we may say that thinking varies across social and historical contexts.

The collaborative strategy that is used in classrooms with which you are familiar is developed from this socio-cultural perspective. In this strategy, knowledge is not generated from within the individual but rather is constructed through interaction with other people who have different thought processes and who belong to various cultures. When Piaget considered children as independent explorers, Vygotsky tended to see them as social beings who develop their minds through their interactions with parents, teachers, and others as scaffold.

Check Your Progress 4

Notes: (a) Write your answer in the space given below.
(b) Compare your answer with the one given at the end of the unit.

i) What role does culture play in child development?
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5.4.5.1 Educational Implication of Cognitive Perspective

Piagetian perspective on qualitative development had an important impact on education. We may note that many educational programmes are now built upon the belief that children should be taught at the level for which they are developmentally appropriate. Piaget’s theory has been applied in many ways—from the creation of innovative learning toys for children to the ways teachers plan lessons. Beyond this, a number of instructional strategies have been derived from Piaget’s work that includes providing a supportive environment, utilizing social interactions and peer teaching.

Information-processing approach has great implications in teaching and learning process especially for students with learning and behavioural problems. As a teacher or prospective teacher, you could modify your teaching-learning environment to facilitate the attention of students through various meta-cognitive strategies. You could use various teaching skills to retain information for a long time active in working memory. This approach also led to the development of Atkinson and Shiffrin model of memory which is similar to computer analogy. According to this model memory, information is processed in a series of steps. Memory has three distinct stages such as sensory memory, short-term memory and long-term memory. The developmental cognitive neuroscience approach opened new window into normal and abnormal development. It suggested different types of treatment in abnormalities which is useful for handling children in an inclusive set up.
The socio-cultural perspective focuses on the role of culture and environment in defining the readiness of child for schooling. It rejects the notion of considering readiness as something ‘within the child’ and as external evidences of learning. It considers that readiness for schooling is shaped by the family members and people in communities. In this viewpoint, you can see that the responsibility of readiness for schooling shift from the child to the community. However, under this viewpoint, the readiness may differ from one community to the other.

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<th>Check Your Progress 5</th>
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<td><strong>Notes:</strong> (a) Write your answer in the space given below.</td>
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<td>(b) Compare your answer with the one given at the end of the unit.</td>
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<tr>
<td>i) Explain the educational implication of cognitive perspective in child development</td>
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5.5  LET US SUM UP

From the above paragraphs, you might have learned about the various perspectives in child development. Each of the perspectives portrays different ways of explaining human development. Biological perspective studies the physical basis of human behaviour. Life-span perspective examines the pattern of growth and change in behaviour that occur the entire life-span. Regarding cognitive perspectives, a person’s thought process is taken into consideration. In bioecological and sociocultural perspectives, you have seen how ideas about development have originated according to environment and culture. After understanding the essence of each theory, you may conclude that no single theory provides a complete explanation of all aspects of development. Our understanding of child development has changed and will continue to change, as we go through one perspective to the other.

5.6  UNIT-END EXERCISES

1. Using an example from a ‘child growing up in orphanage’, use Bronfenbrenner’s bioecological model to describe relevant features which have influenced her/his development.

2. Which of the theories do you consider more appropriate to explain your own development? Why?

3. How do any two of the perspectives discussed in this unit explain the development of children?

GLOSSARY

**Multiply determined:** Something that is caused by more than one factor or event.

**Schema:** A cognitive framework that places a concept into categories and associations.

**Reinforcement:** A response to a behaviour that causes that behaviour to happen more.
Punishment: Administering a negative consequence or taking away a positive reinforcement to reduce the likelihood of an undesirable behaviour occurring.

Scaffold: Refers to an adult who helps the child to construct knowledge by providing guidance and support.

Metacognition: Awareness or analysis of one’s own learning or thinking processes (Merriam-Webster, 2012).

5.7 ANSWERS TO CHECK YOUR PROGRESS

1. Refer section 5.4.1.1 and 5.4.1.2

2. i) a. Mesosystem
   b. Chronosystem
   c. Exosystem
   d. Microsystem
   e. Macrosystem

   ii) Microsystem, mesosystem, macrosystem, exosystem and chronosystem

3. Refer section 5.4.4.2 and 5.4.4.3

4. Refer section 5.4.5

5. Refer section 5.4.5.1

5.8 REFERENCES AND SUGGESTED READINGS


