

***Essentials Of Life-span Development (Canadian) 1st
edition Santrock Solutions Manual***

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Essentials of Life-Span Development, 1st Canadian Edition
Instructor's Manual

Chapter 1: Introduction

Learning Objectives

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

Learning Objective 3: Describe the main theories of human development.

Learning Objective 4: Explain how research on life-span development is conducted.

Overview of Resources

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Review	✂️Classroom Activity 7: Critical-Thinking Multiple-Choice Questions and Answers ✂️Classroom Activity 8: Critical-Thinking Essay Questions and Suggestions for Helping Students

A Selection of Resources Available in Connect

Title	Activity Type	Learning Objective
Nature/Nurture Debate	Concept Clip	1.2: Identify the most important processes, periods, and issues in development.
Continuity and Change	Video	1.2: Identify the most important processes, periods, and issues in development.
Bandura's Social Cognitive Theory	Concept Clip	1.4: Explain how research on life-span development is conducted.
Naturalistic Observation	Interactivities	1.4: Explain how research on life-span development is conducted.
Research Methods for Studying Infants	Video	1.4: Explain how research on life-span development is conducted.
Conducting Research on Adolescents	Video	1.4: Explain how research on life-span development is conducted.

Intelligence Research	Video	1.4: Explain how research on life-span development is conducted.
Correlations	Concept Clip	1.4: Explain how research on life-span development is conducted.
Correlations	Interactivities	1.4: Explain how research on life-span development is conducted.
Independent and Dependent Variables	Concept Clip	1.4: Explain how research on life-span development is conducted.
Designing an Experiment: Dependent and Independent Variables	Interactivities	1.4: Explain how research on life-span development is conducted.
The Scientific Method	Interactivities	1.4: Explain how research on life-span development is conducted.
NewsFlash: Ethics in Gender Related Experiments	Newsflash	1.4: Explain how research on life-span development is conducted.
Ethical Issues in Studying Infants	Video	1.4: Explain how research on life-span development is conducted.

Resources

Polling Questions

1. Pretend you are a psychologist interested in researching the impact that grandparents might have on the psychosocial development of their grandchildren. Which of the following methods of data collection do you believe would be most appropriate to employ?
 - a. observation
 - b. survey & interview
 - c. case study
 - d. correlational
 - e. **all**
2. Which of Bronfenbrenner's systems do you believe is exemplified by the influence of social media on a teenager?
 - a. microsystem
 - b. mesosystem
 - c. exosystem
 - d. macrosystem
 - e. **all**

Lecture Suggestions

Lecture Suggestion 1: Traditional Versus Life-Span Approach to the Study of Development

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

The purpose of this lecture is to explore the *traditional approach* to the study of development as compared to the *life-span approach* and to help students recognize the value of examining changes that occur in adulthood. Using information found in Figure 1.1 (“Human Life Expectancy at Birth from Prehistoric to Contemporary Times”) of the text, present the average life expectancies of two individuals: one who was born in 1900 and one who was born in 2013. Discuss, in general, the changes in these individuals’ lives that would be emphasized using the traditional approach to studying development. Contrast this with the life-span approach. Point out that childhood and adolescence cover approximately one-half of the life of the individual born in 1900 versus only one-quarter of the life of the individual born in 2013. Introduce the characteristics of the life-span perspective.

Using the following work of K. Warner Schaie, a pioneering psychologist who helped to create the life-span perspective, highlight the fact that development does not cease in adulthood:

Thought and Cognition

Adolescence	Acquisition	Knowledge, skills, and information are gained with minimal concern for importance or direct application.
Young Adulthood	Achievement	Knowledge, skills, and information are used to achieve specific goals. Thoughts and cognition tend to be focused and intense.
Middle Adulthood	Responsibility	Thoughts and cognition broaden to encompass long-range goals for both the individual and the family unit.
Late Adulthood	Reintegration	Thoughts and cognition are used to search for meaning in one’s life.

Lecture Suggestion 2: The Concept of Development and Interaction

Learning Objective 2: Identify the most important processes, periods, and issues in development.

One of the ways in which life-span development psychology is distinct from other areas in psychology is that it focuses on a special kind of behavioural and psychological change. Developmental change is said to be different from other types of change such as learning and maturation. To introduce this topic and stimulate discussion regarding this issue, have students generate ideas about what development involves. Use these ideas to demonstrate the difference between development, learning, change, and maturation.

Give a lecture that explores the nature of developmental change, its causes, and what distinguishes it from other types of change. Although there are different views about what characterizes developmental change, consider these four features: (1) it is orderly; (2) it is relatively long-lasting; (3) it produces something that is new or qualitatively different from what was present earlier; and, (4) it results in superior functioning. Elaborate and exemplify each of these points with brief descriptions of material that you will cover in the course. Motor development is an excellent vehicle, as are Piaget's theory and material on language development.

After characterizing development, discuss some causes of development. Consider these possibilities: (a) heredity; (b) biological maturation; (c) psychological change; and, (d) environmental forces. Then address the question of whether any one of these causes is more important than any other. Introduce the concept of interaction as a way to understand development. Useful examples include phenylketonuria, language development, Vygotsky's theory of the zone of proximal development, the concept of critical period, gene interactions—in fact, virtually any developmental topic.

Lecture Suggestion 3: The Concept of Stage in Life-Span Development Psychology

Learning Objective 3: Describe the main theories of human development.

Developmental psychology uses the term life-span development to encompass all of the development that occurs from birth throughout life. Life-span development covers all stages of development and progress from the birth of a person to his death and is studied in a variety of ways. However, development can be broken down into three major components that can overlap at times:

- Biological—development of body, the processes and changes that occur
- Cognitive—mental processes and developments that occur, including problem solving, logic, reason, and imagination/creativity
- Psychosocial—development and changes in emotions, personality, and social interactions

The concept of stage has long been used in life-span development psychology. It appears in the earliest developmental theories and continues to be used in modern theories. However, the concept is frequently misunderstood and misused and is often the subject of controversy and debate. For example, Piaget's theory has been criticized on the grounds that cognitive development at all levels proceeds more continuously than his theory suggests. Give a lecture that begins with an overview of the historical uses of the concept of stage. A starting point might be Hall's idea that the stages of development represent various stages of evolution. This can be followed by a brief description of the stages identified by Gesell. These examples will clearly establish the strongest meanings of the concept and probably also provide clear criticisms of the concept. Next, distinguish various uses of the concept. These might include (a) description, or a handy way to summarize developmental events typical of given points in the life span; (b) metaphor, which chiefly involves applying analogies (which may be misleading) to periods of life ("adolescence is the spring of life"); and, (c) genuine theoretical statements, which indicate that there are definite periods of development characterized by the emergence of qualitatively different types of thinking or behaving.

Flavell (1971) stated that four criteria are essential to the concept of a developmental stage. Briefly, they are (a) qualitative change, (b) that movement from one stage to the next involves simultaneous changes in multiple aspects of the child's behaviour, (c) that the transition between stages is rapid once it begins to occur, and (d) that the changes (e.g., behavioural and physical changes) that indicate the next stage form a coherent pattern. After discussing this, give examples of contemporary uses of the stage concept (e.g., Kohlberg's stages of moral reasoning). You may want to draw on various theories of social cognition that

extensively use the concept. Other possibilities include stages of motor development, emotional development, or newer theories of cognitive development. If time permits, you may wish to examine the extent to which a particular theory meets or violates Flavell's criteria or exemplifies one of the three ways in which the stage concept is used.

Sources:

Flavell, J. H. (1971). Stage-related properties of cognitive development. *Cognitive Psychology*, 2, 241–453.

Ross, D. (1972). *Stanley Hall: The psychologist as prophet*. Chicago: University of Chicago Press.

Thelen, E., & Adolph, K. E. (1992). Arnold L. Gesell: The paradox of nature and nurture. *Developmental Psychology*, 28, 368–380.

<http://www.ck12.org/definition/lifespan-development.html> (02/29/ 2012)

Lecture Suggestion 4: Applying Uri Bronfenbrenner's Theory

Learning Objective 3: Describe the main theories of human development.

Give a lecture on Uri Bronfenbrenner's ecological theory, and engage students in a discussion about how victims of the 2011 earthquake off the Pacific coast of Tōhoku will be impacted in their development. This was an undersea earthquake of 9.0 magnitude which took place off the coast of Japan on 11th March, 2011. Or consider how people of Fort McMurray have been impacted by the fire of 2016, or the residents of Ottawa and Montreal coped with the floods of 2019.

Begin by explaining the various systems—microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Then, apply examples of those systems to the non-normative events. Ask students for their input and try to apply the theory to different socioeconomic groups.

For instance, the microsystem, the setting in which the victims live. The earthquake triggered powerful tsunami waves in Miyako in Tōhoku's Iwate Prefecture. The earthquake moved Honshu east and shifted the Earth on its axis. There was extensive structural damage in north-eastern Japan, including heavy damage to roads and railways, fires in many areas, and a dam collapse. The tsunami caused a number of nuclear accidents, primarily the level 7 meltdowns at three reactors in the Fukushima Daiichi Nuclear Power Plant complex, and the associated evacuation zones affecting hundreds of thousands of residents.

For the macrosystem, the culture in which they live is a factor in resilience of the earthquake victims. How will living in that culture impact their development?

The chronosystem, the time in which people live and the sociohistorical circumstances, is central to a discussion of the earthquake victims. In dealing with the chronosystem, discuss how long the effects of the earthquake will last. Will this be something people get over in a couple of years? The answer to that depends, too, on the microsystem as well as individual factors.

The Internet has numerous resources for your use to refresh your memory on the earthquake and its aftermath.

Sources:

http://en.wikipedia.org/wiki/2011_T%C5%8Dhoku_earthquake_and_tsunami

http://en.wikipedia.org/wiki/List_of_earthquakes_in_Japan

Lecture Suggestion 5: Important Topics Concerning Research Methodology

Learning Objective 4: Explain how research on life-span development is conducted.

The purpose of this lecture is to increase students' awareness of different types of research methods and the challenges associated with them. An excellent resource for this lecture is the McGraw-Hill *Annual Editions Research Methods 01/02*. It contains articles that provide useful perspectives on important topics concerning research methods. You may want to touch briefly on several of the following topics, or focus on one or two of them.

What Is (and Isn't) Research?, Debra Viadero, *Education Week*, June 23, 1999.

Research has long been associated with the *scientific method*, which is logical and linear in approach. In this article, readers are challenged to think about whether *other types of human endeavours*, such as works of art, might *qualify as research*. The topic grows even more controversial when research is used to make policy decisions that affect many people's lives and that require extensive financial resources.

A Primer in Survey Research, Suzanne C. Watson, *The Journal of Continuing Higher Education*, Winter 1998.

When a researcher seeks to gather data on a group that is too large to observe directly, survey research is commonly used. Suzanne Watson provides basic information about *survey research*, including when to use it, the different types, the methods of gathering data, a 10-step sequence for conducting a survey, and practical suggestions on ways to improve response rates.

Quantitative Attitudes Questionnaire: Instrument Development and Validation, Lei Chang, *Educational and Psychological Measurement*, December 1996.

Although the choice of research method needs to be matched to the nature of the specific research question, the fact remains that researchers have different propensities toward *quantitative and qualitative research methods*. A 20-item questionnaire, included in the article, enables readers to see how their knowledge, beliefs, attitudes, and values concerning quantitative methods might be influenced and assessed.

Practical Issues for Teachers Conducting Classroom Research, Marilyn K. Rousseau and Brian Kai Yung Tam, *Teaching Exceptional Children*, Spring 1996.

Although teachers are encouraged to conduct research in their classrooms, they are frequently left wondering how, exactly, to accomplish this. This article offers a step-by-step procedure for *conducting single-subject research with children who have special needs*.

The Future of Focus Groups, Richard A. Krueger, *Qualitative Health Research*, November 1995.

Appropriate applications and common misuses of focus group interviewing techniques are explored in this article. Based on extensive experience with conducting focus groups, the author speculates on the future development of the method, particularly as it relates to *electronic database focus group interviewing*. Six myths about focus groups are identified and counteracted with the correct information.

Videotaped Behavioral Observations: Enhancing Validity and Reliability, Jennifer Harrison Elder, *Applied Nursing Research*, November 1999.

Because of its ease and accessibility, many researchers turn to videotaping as a way of recording behavioral observations. Yet, as Jennifer Elder points out, there are numerous issues that must be addressed if *studies relying on videotaped material* are to be reliable and valid. Topics such as subject reactivity, extraneous variables, ambiguous behavioral definitions, and low inter-rater agreement are discussed.

Using Electronic Mail to Conduct Research, Liz Thach, *Educational Technology*, March/April 1995.

What is the potential of *e-mail* as a tool for *conducting survey research*? The author reviews the research literature and provides a chart analyzing the advantages and disadvantages of e-mail surveys. She also offers practical suggestions for using technology to gather survey data.

Issues in Teaching Participatory Action Research, Paule McNicoll, *Journal of Social Work Education*, Winter 1999.

Participatory action research, true to its name, involves the participants in the research project and attempts to improve the situation of those involved. The author, an instructor in action research methods in the field of sociology, outlines the skills and attitudes required for this type of research, and the difficulties that are associated with it.

Human Subjects and Informed Consent: The Legacy of the Tuskegee Syphilis Study, Carol A. Heintzelman, *Scholars: Research, Teaching, and Public Service*, Fall 1996.

In 1932, a group of African American men, who had already contracted syphilis, were invited to participate in a *research project* with the misleading promise of special, free treatment, when the real purpose of the study was to determine *the natural course of untreated syphilis*. Even after antibiotics were widely accepted as the preferred treatment, penicillin was withheld. This infamous investigation was perhaps one of the most glaring examples of failure to obtain *informed consent*.

The Social Consequences of Bad Research, Daniel Tanner, *Phi Delta Kappan*, January 1998.

The author expresses concern about the way that research is sometimes used to confirm preexisting premises. He cites numerous examples of misleading results that are used by policy makers to render important decisions and the adverse consequences of such decisions. The author advises practitioners to *evaluate research critically* in order to minimize the effects of being manipulated by researchers with hidden agendas.

The instructor could also discuss some of the concepts given in the following link:

http://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/In_research_method_final.pdf (2006).

Source:

Jalongo, M., Gerlach, G., & Yan, W. (Eds.) (2000). *Annual editions research methods 01/02*. New York: McGraw-Hill/Dushkin.

Lecture Suggestion 6: Understanding Correlational Research

Learning Objective 4: Explain how research on life-span development is conducted.

Give a lecture on correlational research, as students often misunderstand the important concepts. It is beneficial to provide numerous examples.

- “Correlation does not equal causation.” For example, exercise is associated with less severe depression. However, it would be a mistake to conclude that exercise causes less severe depression (severely depressed people may not have the energy to exercise). It could be that some third variable affects the other two variables (interacting with others during exercise may affect depression, not exercise per se).
- Define *correlation coefficient* (a statistic that provides a numerical description of the extent of the relatedness of two variables and the direction of the relationship).
- Values of this coefficient may range from -1.0 to $+1.0$. Thus, each correlation coefficient indicates the direction of the relationship and the strength of the relationship.

- Direction of the relationship:
 - A positive relationship is indicated by a correlation value that falls between 0 and 1.0.
 - A positive relationship means that as one variable increases, the other variable increases (the more a student studies, the higher his grades).
 - A negative relationship is indicated by a correlation that is between 0 and -1.0 .
 - A negative relationship means that as one variable increases, the other variable decreases (the more television a student watches, the lower his grades).
- Strength of the relationship:
 - Zero indicates no relationship between the two variables; they do not vary together.
 - The closer the number is to 0, regardless of the direction of the relationship (positive or negative), the weaker the relationship between the two variables.
 - The closer the number is to 1.0 or -1.0 , regardless of the direction of the relationship (positive or negative), the stronger the relationship between the two variables.

Complete this lecture by providing an example of a correlational research study.

In addition, you may want to review and/or recommend that students take a look at a website that hosts strange correlations for meaningless things like “margarine and divorce.” One such website can be found here: <http://twentytwowords.com/funny-graphs-show-correlation-between-completely-unrelated-stats-9-pictures/>.

✧ Classroom Activities

Classroom Activity 1: Ice Breaker

Learning Objective 2: Identify the most important processes, periods, and issues in development.

The purpose of this activity is to break the ice and to introduce various concepts that will be presented throughout the course. Bring in several objects from your home or office that might represent various periods of development. Examples may include a wedding picture, baby bottle, backpack, briefcase, obituary, map, memory book, rattle, or college brochure. Randomly pass out each object to students in your class. Ask the students with the objects to consider what period of life the object might represent (e.g., a baby bottle may represent infancy). However, use the opportunity to get students to think more broadly. For example, the baby bottle may represent young adults having their first child, a new grandparent, a single mom, or a teenage brother who has a new baby stepsister at home. Students should begin to realize how each period of life is difficult to examine in isolation.

Logistics:

- Materials: At least 10 objects representing various periods of development.
- Group size: Individual, then full class.
- Approximate time: 5 minutes to pass out objects and allow time to think, then 10 to 15 minutes for full-class discussion.

Classroom Activity 2: Life-Span Development Myths

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

The two primary objectives of this activity are to introduce ideas and concepts that you will address during the course and to illustrate the relationship between research and everyday life. Often students get frustrated in college courses because they fail to see a connection between research and their lives.

First, present the excerpted selection of life-span development myths commonly espoused by parents, teachers, and others (see **Handout 1** at the end of this chapter). Have the students think of more such myths and express their ideas about each belief. You might want to have the students get into groups of three or four to discuss their thoughts. Second, lead a discussion of relevant research evidence that contradicts these long-held beliefs. This will help initiate more discussion and help the students get acquainted with each other and with the central topics of developmental psychology.

Instructions for Students: You, no doubt, already have many beliefs about life-span development. You may have adopted these beliefs from parents, friends, relatives, books, and/or television programs. Some of these sources may not be accurate. Traditionally, the beliefs passed down from one generation to the next were based on anecdotal evidence, because people did not have access to developmental research findings. Today, scientific data are more readily available. Parents are now able to apply evidence from research in developing their ideas regarding human development. For each statement on the handout, indicate whether you agree or disagree with the statement, and write down your ideas regarding the statement.

Notes and Resources to Aid Classroom Discussion:

1. My baby started walking and talking earlier than other babies. I know he will be smart.

- Infant behaviour, in general (and specifically, the timing of walking and language), is not predictive of later intelligence. Some infant developmental tests (for example, Bayley Scales of Infant Development) are helpful to assess developmental delays or advancement. If delays are noted, enrichment may be necessary. Basically, infant “intelligence” tests measure different types of behaviours (sensorimotor and social abilities) compared with adult intelligence tests (spatial and verbal). Habituation and dishabituation procedures have been found to be more predictive of later intelligence (less attention in habituation phase and more attention in dishabituation phase).
2. I pick up my baby as soon as she starts to cry. My friend thinks I am going to spoil her.
 - Crying is one way infants communicate their needs. In the early months, crying is not an attempt to manipulate caregivers; thus, quick responses will not spoil the infant. Mary Ainsworth’s attachment research has found that more sensitive, responsive caregiving is related to more secure attachments, more independence, more exploration of environment, and less crying. (Page xxx, Chapter 4) More recently, Notre Dame pPsychologist Darcia Narveaz studied 600 adults and found that cuddling as well as lots of other positive childhood interactions as children grew was associated with better adjusted adults and less anxiety.
 3. I only want to have one child, but my partner thinks that only children have problems relating to other children.
 - Research on only children suggests that they are achievement-oriented, bright, successful, popular individuals with good personalities. They are less likely to join organizations, and they have fewer friends than children who have siblings. Yet, if they do join a group, only children are more likely to be the leader of that group. (Page 186, Chapter 6).
 4. I think that in order to raise a well-disciplined child, I will have to use physical discipline.
 - Children disciplined with physical means are more likely to be angry, aggressive, fearful of the individual who gives the punishment, and violent.
 5. When it comes to my young son’s aggressive behaviour, there just isn’t much I can do about it. Boys will be boys.
 - While young children, including girls, often engage in physical aggression as a means of getting their way or expressing anger or frustration, it is not a behaviour that parents should ignore. Aggressive children experience more difficulty in school and have more trouble getting along with peers than do children who use prosocial behaviours to deal with conflict. Parents can use age-appropriate discipline to set and reinforce boundaries regarding aggressive behaviour.

Logistics:

- Materials: Handout 1 (Development Quiz).
- Group size: Small groups (5) to discuss the myths, and then full class for a large-group discussion.
- Approximate time: 15 to 20 minutes for small groups, then 30 to 40 minutes for full-class discussion.

Source:

Excerpted from Segal, J. (1989, July). 10 myths about child development. *Parents*, pp. 81–84, 87.

Classroom Activity 3: Theoretical Perspectives

Learning Objective 3: Describe the main theories of human development.

This activity introduces various theoretical perspectives, and also allows students to determine how much of the material they already know. As an instructor, you will learn the students' strengths as well as the theoretical perspectives that need the most class coverage.

List each of the following perspectives (you may use fewer or modify labels to fit how you cover the course material), leaving room below each to add comments. Then have students contribute terms, ideas, and "great psychologists" associated with each. By the end of the exercise, they will be able to see some similarities and dissimilarities for each group.

Here is an example of this exercise from one class:

- **PSYCHOANALYTIC:** Freud, Adler, id, ego, superego, sex, early childhood, psychosexual stages, "mom's fault," Erik Erikson, unconscious, defense mechanisms, dreams, Jung, Oedipal complex, birth order, sibling rivalry, inferiority, libido. (Pages 16-18).
- **COGNITIVE:** Piaget, Ellis, memory, information processing, Binet, Terman, intelligence tests, accommodation, assimilation, language, development, moral development, Kohlberg. (Pages 18-21).
- **BEHAVIORAL/SOCIAL COGNITIVE:** Skinner, Pavlov, reinforcement, punishment, imitation, Bandura, classical conditioning, operant conditioning, modeling, delay of gratification, Watson, token economy, systematic desensitization, behavioral modification, mazes, mechanistic. (Pages 21-22).
- **ETHOLOGICAL:** Lorenz, split-brain, neurotransmitter, dopamine, genetics, heredity versus environment, central nervous system, instinct, critical periods, pregnancy, genes, genetic counseling, DNA, autonomic nervous system, stress. (Pages 22-23).
- **ECOLOGICAL:** environment, culture, ethnicity, Bronfenbrenner. (Pages 23-24).
- **HUMANISTIC:** people are motivated to do the best they can considering their environment and needs (Pages...)
- **ECLECTIC:** represents a combination of perspectives.

Logistics:

- Group size: Full-class discussion.
- Approximate time: 30 minutes.

Source:

Irwin, D. B., & Simons, J. A. (1984). *Theoretical perspectives class activity*. Ankeny, IA: Des Moines Area Community College.

Classroom Activity 4: Psychological Theories and Methods and Everyday Information

Learning Objective 3: Describe the main theories of human development.

The purpose of this activity is for students to see the relationship between psychological theories and methods, on the one hand, and everyday reading material and information, on the other. One week before you want to use this in class, have students find two or three articles on human development from parenting or other popular magazines. They should bring the magazine issue or copies of the specific articles to class. Have the students get into small groups to discuss their answers to the following questions: Who is the audience for the article (e.g., parents, teachers, or adolescents)? What is the topic of the article? What are some examples of information provided? Does the article emphasize heredity

(nature) or environment (nurture)? What theoretical perspective does the author seem to use (e.g., psychoanalytic, behavioural, humanistic, biological, cognitive, or ecological)? Does the article rely on scientific findings, expert opinion, or case example? Do the conclusions of the article seem valid?

Also have the students consider all of the magazine articles that their group has collected. Which theoretical perspectives seem to be most popular? What topics are getting the most coverage? Are most articles well-done and useful?

Logistics:

- Materials: Students must gather popular magazine articles.
- Group size: Individual, small group, and full-class discussion.
- Approximate time: Individual (1 hour), small group (15 minutes), and full-class discussion (30 minutes).

Source:

Simons, J. A. (1990). *Evaluating psychological value of magazine articles*. Central Iowa Psychological Services.

Classroom Activity 5: Design a Study: Descriptive, Correlational, and Experimental Research

Learning Objective 4: Explain how research on life-span development is conducted.

The purpose of this activity is to illustrate the differences between descriptive, correlational, and experimental research. Students often have difficulty understanding the strengths and limitations of each type of research design. This activity involves them in the process of creating each type of study, using an identical starting point for each. Given the number of new concepts (such as independent and dependent variables, random selection, etc.), the most effective way for students to understand what they are and how they are used is to see them implemented. This activity can be done as an instructor-led whole-class discussion, or the instructor can divide the class into three groups and assign each group one of the three types of research design. Choose a very basic study, such as one based on the question “Does watching violent television increase aggressive behaviour in children?”

For the descriptive study, begin by identifying the behaviors that should be documented (violent TV viewing, aggressive behaviour). Discuss (or have students identify) important guiding issues in describing those behaviours. For example, what ages should be included, and why? How should “aggression” be defined? How do we determine what shows are violent? Students should generate possible ways to document and describe the behaviours. What further questions might be inspired by a description of how much violent TV children watch?

For the correlational study, many of the same questions are important. A brief discussion of what a correlation is (and isn’t!) will help students understand this type of research. Some simple graphs allow students to visualize positive and negative correlations. You might discuss the possible interpretations of a positive correlation between violent TV viewing and aggression.

For the experiment, begin by identifying the independent variables (What will your “violent” show be? Might you have a passive, nonviolent show too? Will there be a control group who watches nothing?) and dependent variables (How are you going to measure “aggression”? Determining both this and what constitutes a “violent” program should prompt an explanation of operationalizing.) Go through the process of how and where you might obtain subjects, and how you will assign them to the various groups. Develop a procedure for carrying out the experiment—where the participants will watch the show, what they will do following the viewing so that you may observe behaviour to assess aggressiveness

(playground, room with toys, problem-solving activity). Consider whether the study needs to be blind or double blind and the importance and logistics of both. Then create some results and discuss possible interpretations, making sure to include consideration of any confounding variables or methodological limitations.

Logistics:

- Group size: Full-class discussion.
- Approximate time: 45 minutes.

Classroom Activity 6: Observations—Easier Said than Done

Learning Objective 4: Explain how research on life-span development is conducted.

Have students watch five minutes of a popular cartoon that is likely to have action that could be construed as aggressive behaviour.

First, ask students to count the number of aggressive acts they see in the video clip. At the end of the segment, write down the range of counts that students recorded (it is likely the counts will vary widely). Discuss the reasons the students' data on aggressive acts varied so widely.

Next, ask students to watch for a more specifically defined behaviour (e.g., physical aggression that involves physical contact between two characters) and record the counts. Discuss the range of data gathered.

Discuss observer bias (do they really LIKE that cartoon?), cultural issues (perhaps “slapping five” would be considered aggressive in some cultures but not others), how the observer might factor in “intention” (e.g., did one character actually mean to hit another character in the head, or was it an accident?), etc.

Discuss reliability and validity issues in observations, and have students write a half page about what they learned from the activity.

Classroom Activity 7: Critical-Thinking Multiple-Choice Questions and Answers

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

Discuss the answers to the critical-thinking multiple-choice questions (**Handout 2**). The purpose of this activity is to facilitate student understanding of various concepts in chapter 1. For each question on this handout, students are asked to indicate the best answer and then explain why the alternate answers are incorrect. You may want to assign **Handout 2** as homework or as a small-group activity. The suggested answers are presented in **Handout 3**.

For the first two questions for chapter 1, you may want to review the concepts students need to understand to answer the questions. You will find that students are often uncertain about the distinction between continuity and discontinuity or stability and change, for example, and are likely to confuse descriptions of each. The third question requires abstract application and a thorough understanding of the characteristics of the life-span perspective.

You may want to discuss the critical-thinking exercises on three different occasions: when you assign them, while students are doing them, and after students have completed them. Chances are students will not be familiar with these exercises and will need support from you as they get used to doing them. When you first assign critical-thinking exercises, make sure that students understand that they are to identify both the best answer and the answers that are not as good. Also, they must give their reasons for both decisions. If you wish, emphasize that their reasoning behind the decisions is really the most important part of the exercises. Present the first thinking exercise and discuss it with the class. Verify that they know what it means to argue for and against answers. You may want to give tips about how to do this. In particular, stress that you are not interested in opinions or feelings, but that you want logical arguments that apply concepts or evidence to the problem posed in the exercise.

Consider devoting class time to having students work together. Have them form groups of three or four, and encourage them to share their ideas and argue their points of view. The objective is for each group to reach a consensus on the answers. Circulate among the groups to listen to their discussions, and possibly deal with difficulties they are having with the assignment. When students finish the assignment, discuss the answers as an entire class or discuss any potential concerns they may have. Have people present their arguments for and against the alternatives. You should find that over the course of the term, this becomes a spontaneous activity among your students. In addition, it may afford you clues about material that students would especially like to discuss.

These suggestions will not be repeated in subsequent chapters, but they are applicable to each. When appropriate, we will suggest specific points you may want to explore with students before, during, or after they have completed the critical-thinking questions.

Logistics:

- Materials: Handout 2 (Critical-Thinking Multiple-Choice Questions) and Handout 3 (Answers).
- Group size: Small groups (5) to discuss the questions, then a full class discussion.
- Approximate time: Small groups (15 to 20 minutes), full-class discussion of any questions (5 minutes).

Classroom Activity 8: Critical-Thinking Essay Questions and Suggestions for Helping Students Answer the Essays

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

Discuss the answers to the critical-thinking essay questions. The purpose of **Handout 4** is threefold. First, answering the essay questions will further facilitate the students' understanding of concepts introduced in chapter 1. Second, this type of essay question affords the students an opportunity to apply the concepts to their own lives which will facilitate their retention of the material. Third, the essay format will also give students practice expressing themselves in written form. Ideas to help students answer the critical-thinking essay questions are provided in **Handout 5**.

Logistics:

- Materials: Handout 4 (Essay Questions) and Handout 5 (Ideas to Help Answer).
- Group size: Individual, then full class.
- Approximate time: Individual (60 minutes), full-class discussion of any questions (30 minutes).

† Personal Applications

Personal Application 1: Who are You?

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

The purpose of this exercise is to get students thinking about, and interested in, human development by focusing on themselves and their experiences. When we think about human development, we often do so in terms of a person's life story, such as those of a celebrity or government official. When we read the summary of others' experiences, it creates an image of who they are and of the road they traveled to get where they are. Our interest in human behaviour is generated by the history each one of us has, and the role it has played in creating the individuals we are.

Instructions for Students: Write your own profile in the style of those presented in the text, and begin your journey into the realm of life-span development with a description of your own life's journey. How would you be written up to this point in your life? What is your background, and what have you experienced that would tell the story of who you have become?

Use in the Classroom: This can also be a classroom activity if students are willing to share. Ask for volunteers to present some events/aspects of their life that they feel have had a significant impact on who they are. As students share their stories, ask for reasons they believe certain aspects of their life have influenced who they are. Also, ask them if they experienced any major events/experiences that they *don't* think impacted the person they have become. To what do they attribute their strengths? Their weaknesses? For additional impact and interest, share your own life story and the influences on your development.

Personal Application 2: What Do You Want to Know?

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Learning Objective 2: Identify the most important processes, periods, and issues in development.

The purpose of this exercise is to get students to focus on what they want to get out of the class, as well as to expose them to the variety of topics addressed in the course. One of the unique aspects of taking a course in life-span development is that everyone can relate to it! The required material focuses on aspects of everyone's life, whether they have experienced it themselves or have a relationship with an older person who has. Certainly there are new concepts, theories, and research findings to learn, but at their core are the fundamental developmental milestones that make up our life's journey and the results of those experiences.

Instructions for Students: Make a list of what you want to learn from this course. Do you want practical information for parenting purposes? Do you have aspects of your own life that you are curious about? What behaviours have you observed in people around you that you would like to understand better?

Use in the Classroom: Help students understand some of the practical applications of this course. Illustrate how, although it involves a great many theories and new concepts, the information they will learn has real-life implications, and can provide insights into many of the behaviours and issues that they encounter on a daily basis. Specifically acknowledge students who are taking the course simply to fill a degree requirement. Challenge them to find something that interests them with regard to life-span

development. Keep careful note of your students' responses. This will guide you in planning your course, enabling you to spend additional time focusing on what your students are particularly motivated to learn. Another option is to have students share their interests in class, at which time you can respond with some introductory "teasers" (a brief anecdote about an area of study, or a particularly amazing research finding) regarding their particular areas of interest. This will assure them that their interests will be addressed at some point during the course, and it will whet their appetite for all the material to come.

Personal Application 3: Erik Erikson and You

Learning Objective 3: Describe the main theories of human development.

The purpose of this exercise is for students to consider their own lives and the lives of their friends and family in terms of Erikson's psychosocial stages of development. Erikson viewed behaviour as the manifestation of an individual's progressive responses to social "dilemmas" that present themselves throughout the life span. The direction that people take in dealing with the dilemma at each stage provides the perspective from which they will approach subsequent stages. Examining one's current behavior can indicate which stage of Erikson's theory an individual is experiencing, as well as provide some insight into how he or she may have responded to previous stages.

Instructions for Students: In what stage of Erikson's psychosocial theory are you currently in? In what stage are your friends? Your parents? Provide evidence to support your reasoning.

Use in the Classroom: Demonstrate how to think through behaviour with regard to Erikson's theory by using yourself as an example. Discuss the current stage of your life, behaviours that reflect your response to the dilemma posed by that stage, as well as memories from past stages and relevant behavioural manifestations.

Personal Application 4: Do I Look like a Pigeon?

Learning Objective 3: Describe the main theories of human development.

The purpose of this exercise is to get students to understand the process of operant conditioning by employing it themselves. The processes identified by learning theorists are constantly occurring in our everyday lives. We do not realize how much of our behaviour is followed by some kind of reinforcement. The impact of many of these consequences usually affects us only at a subconscious level, but if we are tuned in to their occurrence, the results become very clear. Bandura acknowledged that we are cognitive beings, and that not only do we have the ability to self-reward and self-punish, but we do so regularly.

Instructions for Students: Design an operant conditioning experiment to shape someone's behaviour (yours, your roommate's, or your partner's). Identify either a bad habit that you would like to break or a good new one that you would like to establish. Write up what you did, identifying the desired or undesired behaviour, your reinforcement, the schedule of reinforcement implemented, and the results. This should take approximately two to three weeks to carry out.

Use in the Classroom: Have students brainstorm the behaviour(s) they would like to tackle prior to starting the experiment. Provide your own example of something you would like to change about yourself or your spouse or partner, and how you might go about accomplishing it. Once they have established their plan of action, tell them you will compare results of all experiments in class at the end of the time period allotted.

🔍 Research Project Ideas

Research Project 1: Answering Questions about Development

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

The goal of this research project is to have students conduct research on a topic they find interesting in developmental psychology (**Handout 7**). Once students have been initially exposed to the field of developmental psychology (after several lectures and/or after they have read chapter 1 of the text), have them write down one or two questions they would like to have answered by the end of the course. Presumably, they are interested in at least one aspect of development and have specific questions they would like to have answered (e.g., Does bilingualism influence cognitive development?). Direct the students to the library where they should find at least 10 relevant journal articles. Have the students write a brief report that addresses the questions listed in **Handout 7**.

Use in the Classroom: Have students present the question they have researched and the results of their investigation. If possible, organize these presentations so that students present their questions when you are discussing the chapter that is most relevant to their topic. A second option is to ask each student to answer the question he or she has researched as part of the final exam. This will mean that each student will be answering a different question on the final exam.

Research Project 2: Monitoring Contemporary Concerns in the Media

Learning Objective 1: Discuss the distinctive features of a life-span perspective on development.

Chapter 1 highlights life-span development topics, such as health and well-being, parenting and education, sociocultural contexts, and social policy, which are issues that receive frequent media attention. Have students monitor a newspaper, radio news program, or television news program for a week and keep a record of stories that reflect each of these concerns (**Handout 8**). When they are done, they should tally the number of stories that reflect each concern. The students should then write a brief report in which they answer the questions listed in **Handout 8**.

Use in the Classroom: Discuss students' answers to these questions. Find out what the dominant concerns are, what kinds of stories express these concerns, and whether the stories are examples of the life-span perspective. Be on the lookout for how well students appear to understand text material in terms of the answers they provide, and use their answers as opportunities to affirm their understanding or to amend it.

To introduce the importance of rigorous, systematic inquiry for understanding life-span development, contrast media presentations with textbook presentations. Have students compare and contrast topics they have found in the media with similar material in the textbook, and see what they identify as important differences in the respective treatments.

Research Project 3: Using Technology to Enhance Out-of-Class Learning

Adapted from Jarvis and Creasey, "Activities for Lifespan Developmental Psychology Courses."

Learning Objective 2: Identify the most important processes, periods, and issues in development.

Have students choose one of the following activities. It is recommended that students write a 5-7-page paper summarizing their experience and integrating course material.

Developing Websites for Specific Populations—Students should design a website that targets a specific population and provides information and services that *are guided by research, theory, and course material*. Thus, students should have some background information on the population before they tackle this assignment. The students can actually mount the activity on a computer server, or create “paper” sites. If students mount the site on a server, there should be some disclaimer posted that the site is for a class project and does not offer real services (students could link curious visitors to a more well-established site). We suggest reserving this activity for students who already know how to design web pages.

Discussion Groups—There appear to be web discussion groups and chat rooms devoted to just about every topic and developmental population. These groups provide a valuable opportunity for students to observe the current issues regarding the topic/population, and they allow students to compare and contrast the data with the course material. In addition, students can post some sample questions, start a topical thread, and note replies.

“Virtual Tours”—There are many organizations that provide information and services related to topics relevant to developmental psychology. Students can visit these sites and note how the information provided at each site relates to the class material. Recommend sites that are reputable and relate to the material presented in class. Be sure the sites are still active and the web addresses remain current.

Online Newspapers—Many major newspapers or magazines (e.g., the *Globe and Mail*, *Al Jazeera*, *Macleans*) offer free online versions of their papers or offer access to a limited number of online articles within their newspapers. These newspapers routinely publish articles and research reports involving topics and populations covered in developmental psychology classes. Students could be encouraged to visit these sites periodically and compare and contrast the information with material presented in class. This activity could continue over an entire semester with students keeping a weekly journal or diary of their observations.

Student Discussion Groups—Institutions often offer local applications (e.g., WebCT, Web Board) that allow instructors to set up out-of-class student discussion groups. The better discussion groups almost function as support groups in the sense that students can get information, discuss course material, and share anxieties. However, it can be overwhelming for every student in a class to post messages and replies for a given topic. We suggest that instructors randomly assign four to five students to secured (or locked) discussion groups for the semester. In addition, instructors should routinely post “conferences” or topics that augment the course material. Students can craft brief reaction papers regarding their experiences over the course of the semester, and append sample postings/replies. (Note: Data regarding individual student logins, login duration, number of posts, etc., may be inaccurate if the student is participating in discussion groups in other classes.)

Research Project 4: Journal Article Critique

Learning Objective 4: Explain how research on life-span development is conducted.

Part of conducting psychological research is reviewing and understanding published research studies. In this research project (**Handout 9**), students will choose one of the topics that will be covered in this course (e.g., play, gender roles, moral development, effects of television, or memory and aging) and find a research report on the chosen topic in a development journal.

They should read the article and write a report about it. Request that they enclose a copy of the research article with their report. In addition to including the main points of the study, they should give their personal reactions to the research findings and address the questions in **Handout 9**.

Use in the Classroom: Possible modifications of the project are to: (1) assign specific articles to students; (2) have students choose articles all on one topic; (3) have students choose articles from only one journal; (4) have students read two different articles on the same topic; (5) have students read research articles that address a current social issue—e.g., abortion, teenage pregnancy, racial prejudice—and decide what the research findings would suggest for social policy; (6) have students compare journal reading to textbook reading and magazine reading. Which sections were difficult to understand? Which sections of their articles were easy to comprehend? How did the article compare with their expectations? Were their articles based on basic or applied research? What did the students see as the value of their articles?

Research Project #5: The Development of Someone You Know

The purpose of this project is to give students the opportunity to apply two of the approaches to development to someone they know - could be a child, younger sibling, someone older such as parent, or grandparent. Should the student prefer, they could 'interview' themselves. But, one criteria, in not interviewing themselves, is that the interviewee should be at least 7 to 10 years younger or older than themselves.

First students select the person they would like to interview, then one psychological approach and one cognitive approach. Then design interview questions that will encompass at least two periods of development for the person they have chosen to interview. Once they have conducted the interview, students should write report of their findings.

Feature Films

In this section of the Instructor's Manual, we suggest films that are widely available on sites such as Amazon, DocumentaryWIRE, Hulu, Netflix, PBS video, etc.

If Beale Street Could Talk (2018)

Starring: Kiki Layne, Stephen James

Based on a novel by James Baldwin, this film is about a young couple who have been friends since childhood. They face racism and discrimination, and “Fonny” gets arrested for a crime he did not commit. His wife, Trish, visits him in jail and reveals to him that she is expecting their first baby. In spite of religious concerns, Fonny’s mother, her parents, and his father support Trish and her struggles to get her husband released.

The World According to Garp (1982)

Starring: Robin Williams, Mary Beth Hurt, Glenn Close, John Lithgow, and Mark Soper
Directed by George Roy Hill

Based on the novel by John Irving, this film chronicles the life of writer T. S. Garp and his mother, Jenny Fields. The characters take the viewer on a roller coaster ride from birth to death, with many life-altering and life-affecting events in between.

Awakenings (1990)

Starring: Robert De Niro, Robin Williams, Julie Kavner, and John Heard
Directed by Penny Marshall

This film is based on a true story about neurologist Oliver Sacks, who has a ward full of comatose patients who have been in this state for decades. When Sacks finds a possible chemical cure, one patient bravely takes a leap of faith. The patient is now an adult, having gone into a coma in his early teens. The film delights in the new awareness experienced by the patients, and then the upsets that come when the doctor and his patients must face the consequences of the drug’s possible failure, both physically and emotionally.

Website Suggestions

At the time of publication, all sites were current and active; however, please be advised that you may occasionally encounter a dead link.

Adele Diamond
<http://www.devcogneuro.com/AdeleDiamond.html>

Canadian Psychological Association (CPA)
<https://cpa.ca>

Campaign 2000 - End Child & Family Poverty

<https://campaign2000.ca/>

Developmental Psychology.org [List of Peer Reviewed Journals in Developmental Psychology]

http://www.devpsy.org/links/developmental_journals.html

The Future of Children

<http://www.futureofchildren.org/>

Project Happiness

<https://projecthappiness.com/?gclid=CNDfr4W0rtECFdgGgQodkK0M3w>

Research Methods and Statistics

<http://psych.athabascau.ca/html/aupr/tools.shtml>

Handout 1 (CA 2)

Development Quiz

For each of the following statements, indicate whether you agree or disagree, and why.

- My baby started walking and talking earlier than other babies. I know he will be smart.
- I pick up my baby as soon as she starts to cry. My friend thinks I am going to spoil her.
- I want to have only one child, but my partner thinks that only children have problems relating to other children.
- I think that in order to raise a well-disciplined child, I will have to use physical discipline.
- When it comes to my young son's aggressive behaviour, there just isn't much I can do about it. Boys will be boys.

Source:

Excerpted from Segal, J. (1989, July). 10 myths about child development. *Parents*, pp. 81–84, 87.

Handout 2 (CA 7)**Critical-Thinking Multiple-Choice Questions**

1. In chapter 1, Santrock describes some contemporary concerns in the study of development, including health and well-being, parenting and education, sociocultural contexts and diversity, and social policy. Which of the following concepts best relates to these contemporary concerns? Circle the letter of the best answer, and explain why it is the best answer and why each of the other answers is not as good.
 - a. cognitive processes
 - b. nurture
 - c. genetics
 - d. discontinuity
 - e. change

2. The National Scientific Council on the Developing Child is a multidisciplinary center devoted to making cutting-edge research on infant and early childhood development available to policymakers. Its goal is “to close the gap between what we know and what we do to promote successful learning, adaptive behaviour, and sound physical and mental health for all young children.” Which of the following developmental concepts does the Council’s mission align most closely with? Circle the letter of the best answer, and explain why it is the best answer and why each of the other answers is not as good.
 - a. continuity
 - b. development as contextual
 - c. plasticity
 - d. resilience
 - e. risk

3. Chapter 1 presents several different schools of thought about the appropriate subject matter and methods of life-span development psychology. The author of the following quote was most likely a proponent of which of the perspectives below?: “I never wanted to use human subjects. I hated to serve as a subject. I didn’t like the stuffy, artificial instructions given to subjects. I was uncomfortable and acted unnaturally. With animals I was at home. I felt that, in studying them, I was keeping close to biology with my feet on the ground. More and more the thought presented itself: Can’t I find out by watching their behaviour everything the other students are finding out by using observers?” Circle the letter of the best answer and explain why it is the best answer and why each of the other answers is not as good.
 - a. cognitive
 - b. behavioural
 - c. life-span
 - d. psychoanalytic
 - e. ecological

4. The following describes a study that compared the memory performance of children and adults:

Do adults remember more than children because they know more about what they are trying to remember? Would children remember more than adults if they knew more than adults did about a topic? These were questions Michelene Chi tried to answer by comparing the memory performances

of children and adults with differing levels of knowledge about the information they tried to remember.

Chi asked children from grades 3 through 8, who were experienced chess players, to study either 10 numbers or the positions of chess pieces in a chess game for 10 seconds. The children then tried to remember all the numbers or the chess positions, after which they studied the items again for 10 seconds. The look–recall cycle continued until the children remembered all the items. Memory performance was measured in two ways: the total number of items remembered on the first trial and the number of trials that were needed to remember all the items. Chi compared the children’s performances on both tasks to the performances of adults who were novice chess players. The results suggested that knowledge of to-be-remembered material is important to memory. The child chess experts remembered more chess positions and needed fewer trials to achieve perfect recall than did the adult novices. On the other hand, the adults—who presumably knew more about numbers than the children—outperformed the children in both ways when remembering the numbers.

Source:

Chi, M. T. H. (1978). Knowledge structures and memory development. In R. S. Siegler (Ed.), *Children’s thinking: What develops?* Hillsdale, NJ: Erlbaum.

Which of the following types of studies best describes Chi’s research? Circle the letter of the best answer, and explain why it is the best answer and why each of the other answers is not as good.

- a. cross-sectional, experimental study using interviews
- b. longitudinal, correlational study using standardized tests
- c. cross-sectional, correlational study using observations
- d. longitudinal, experimental study using questionnaires
- e. cross-sectional, experimental study using multiple measures

Handout 3 (CA 7)

Answers for Critical-Thinking Multiple-Choice Questions

1. In chapter 1, Santrock describes some contemporary concerns in the study of development, including health and well-being, parenting and education, sociocultural contexts and diversity, and social policy. Which concept below relates best to these contemporary concerns? Circle the letter for the best answer, and explain why it is the best answer and why each of the other answers is not as good.
 - a. Cognitive processes is not the best answer. If so, the issues Santrock raised would have addressed how changes in thought, intelligence, or language influence the behaviour of a child or the quality of a child's adaptation to the environment. But the contemporary concerns—changes in the family, educational reform, and sociocultural issues—are aspects of the child's environment and how they potentially influence child development.
 - b. Nurture is the best answer. As indicated in “a.,” the focus of the contemporary concerns is children's environments and how they affect children. These are explicitly listed in the text as examples of the nurture side of the nature–nurture controversy.
 - c. Genetics is not the best answer. Genetics refers to one's biological make-up based on heredity. This would entail a focus on heredity and, perhaps, genetic engineering as a means of enhancing child development outcomes. Instead, the focus is on improving children's environments to enhance developmental outcomes.
 - d. Discontinuity is not the best answer. If this were the concern, much would be said about the importance of describing child development as a series of stages or about developing the notion of childhood as a distinct stage from adulthood. This is not the sense of the contemporary concerns at all.
 - e. Change is not the best answer. If it were, the issue would be that patterns of behaviour expressed early in a child's life are not especially predictive of later developmental outcomes. Again, the emphasis is on environmental conditions that promote optimal developmental outcomes.

2. The National Scientific Council on the Developing Child is a multidisciplinary centre devoted to making cutting-edge research on infant and early childhood development available to policymakers. Its goal is “to close the gap between what we know and what we do to promote successful learning, adaptive behaviour, and sound physical and mental health for all young children.” Which of the following developmental concepts does the Council's mission align most closely with? Circle the letter of the best answer, and explain why it is the best answer and why each of the other answers is not as good.
 - a. Continuity is not the best answer. Continuity refers to change that is gradual and characterizes many aspects of human development. If this were the best answer, there would be a focus on measuring or observing gradual, cumulative change.
 - b. Development as contextual is not the best answer. If it were, the mission of the Council might be to specifically study the ways in which the context or setting of development affects child outcomes.
 - c. Plasticity is not the best answer. Plasticity refers to the capacity for change. If this were the best answer, there would be a focus on studying how open to external influences early childhood development is.
 - d. Resilience is the best answer. The Council is devoted to promoting optimal development for children by influencing public decision making. Resilience refers to children's ability to thrive in the face of less-than-ideal circumstances.

- e. Risk is not the best answer. Risk refers to circumstances that endanger children's healthy development. If this were the best answer, there would be a focus on characteristics or environments that promote suboptimal outcomes for children.
3. Chapter 1 presents several different schools of thought about the appropriate subject matter and methods of life-span developmental psychology. The author of the quote presented in question 3 of Handout 2 was most likely a proponent of which of the following perspectives?
- Cognitive is not the best answer. The main reasons are that the speaker (1) is mainly interested in animals, whereas cognitivists typically (though not exclusively) are interested in people, and (2) prefers to focus on observing behaviour. Cognitivists are interested in making inferences about the mind and studying conscious mental activity.
 - Behavioural is the best answer. The first reason is the speaker's interest in the objective study of behavior, and the second is the interest in studying animals rather than people. This seems to parallel the development of Skinner's behaviourism—though the speaker is actually John Watson.
 - Life-span is not the best answer. The main reasons are that the researcher (1) is mainly interested in animals, and (2) says nothing that relates clearly to the seven characteristics of the life-span perspective. For example, the focus of observation is on the “here and now” without reference to the context in which development is embedded; the researcher is delighted to be grounded in biology to the exclusion of other disciplines.
 - Psychoanalytic is not the best answer. Psychoanalysts are interested in people and the inner workings of their thoughts. They also do not typically rely on formal observation as a technique for finding things out, preferring instead various forms of clinical interviews or clinical devices for revealing the nature of personality and personality function.
 - Ecological is not the best answer. Bronfenbrenner's ecological theory is based on an analysis of systems of human behaviour, not the observation of individuals—especially not of animals.
4. Which of the following types of studies best describes Chi's research? Circle the letter of the best answer and explain why it is the best answer and why each of the other answers is not as good.
- A cross-sectional, experimental study using interviews is not the best answer. Chi's study is cross-sectional because it compares children with adults. However, the researchers did not manipulate the independent variables (age, chess expertise), but rather selected subjects who had these characteristics. Finally, the researchers did not interview children about their performance, but rather asked them to remember as many items as they could.
 - A longitudinal, correlational study using standardized tests is not the best answer. As indicated in “a.,” Chi used a cross-sectional design, not a longitudinal one. Correlational does best describe the research strategy because Chi attempted to show an association (more knowledge is associated with better memory, regardless of age). However, Chi did not use standardized tests to measure performance; this was measured with a recall task designed for the study.
 - A cross-sectional, correlational study using observations is the best answer. See “a.” for cross-sectional and “b.” for correlational study. Although the claim that Chi used observations is not exactly correct, this term better fits the kind of research she conducted than the possibilities mentioned in the other answers. One can say that she observed how well children remembered the items by counting the number that they were able to name when asked to remember them.
 - A longitudinal, experimental study using questionnaires is not the best answer. See “b.” for longitudinal and “a.” for experimental study. Chi did not measure performance in terms of respondents' written responses to questions they had read.
 - A cross-sectional, experimental study using multiple measures is not the best answer. See “a.” for cross-sectional and experimental. Identifying the measures as multiple measures is not correct

because the phrase implies the use of several different types of measures—for example, combining interviews and questionnaires, or observations, interviews, and standardized tests.

Handout 4 (CA 8)**Critical-Thinking Essay Questions**

Your answers to these kinds of questions demonstrate an ability to comprehend and apply ideas discussed in this chapter.

1. Explain the eight basic characteristics of the life-span perspective in your own terms.
2. Your textbook provides current and comprehensive coverage of four contemporary concerns in life-span development: health and well-being, parenting and education, sociocultural contexts and diversity, and social policy. In your own words, explain the nature and importance of each of these four contemporary concerns. For each concern, also provide one example from your own life and times that illustrates how it relates to you personally.
3. Explain the meaning of (a) nature and nurture, (b) continuity and discontinuity, and (c) stability and change. Also, explain why current life-span developmentalists do not adopt extreme positions on the three issues.
4. Compare and contrast the psychoanalytic theories of Freud and Erikson. Also, explain whether Erikson changed psychoanalytic theory in a fundamental way.
5. Compare and contrast the Piagetian and information-processing approaches to cognitive development. Which approach appears to be more “developmental”? Defend your answer using the characteristics of life-span development outlined in chapter 1.
6. Think about your life during the past 24 hours from the perspective of behavioural and social cognitive theories. Provide at least two examples of how (a) rewards, (b) punishments, and (c) observational learning have influenced your behaviour during this time frame.
7. Explain and evaluate ethological theory by indicating its strengths and limitations, and the aspects of development that are not explained by this approach to life-span development.
8. Define and distinguish the five systems in Bronfenbrenner’s ecological theory. Provide at least two examples of each system by citing aspects from your own personal life.
9. What are the strengths and weaknesses of the cross-sectional and longitudinal approaches to research? In what ways do cross-sectional and longitudinal designs differ from experimental strategies? What kinds of conclusions can you draw from each?
10. What precautions must be taken to safeguard the rights and welfare of a child who might be a psychological subject? In your answer, relate each precaution to a specific ethical concern. In addition, discuss at least two examples of other types of subjects who pose similar ethical difficulties for researchers.

Handout 5 (CA 8)

Ideas to Help You Answer Critical-Thinking Essay Questions

1. Consider examples from your own life for each of the seven characteristics of the life-span perspective. For example, for the characteristic that development is multidimensional, you may reflect on the ways in which you have changed physically (growing larger and increased hair growth during puberty), cognitively (changing music preferences from simple children's tunes to an appreciation for adult music with deeper, more substantial meaning), and socioemotionally (your shift in desire to spend time only with same-sex peers, to a focus on interacting with the opposite sex).
2. Keep in mind that the *nature* of something refers to what it is—the characteristics which define it. The *importance* of something refers to the impact that it has in the context in which it occurs or functions. As you think and write about each of the four contemporary concerns in life-span development and consider them in terms of your own life, combine your consideration of their nature and importance on the particular *influence* they have on growing and developing human beings.
3. After you identify the nature of the issues of nature and nurture, continuity and discontinuity, and stability and change, think about an *extreme* position for each. Work through the process of disproving such drastic viewpoints with reasoning and examples, and present your explanation as to why such extremes are not supported by life-span developmentalists.
4. Start by separately listing characteristics of each theory in a column. Then, match up the concepts that appear in both columns to delineate the similarities. After you have completed the similarities, note the characteristics that appear in only one of the columns, to delineate the differences.
5. Begin by reviewing the main themes of development outlined in chapter 1, and create a graph of the two approaches with regard to each theme. You will then be able to visualize the areas in which they converge and differ, and depending on what you find, you can more easily draw your conclusion about their “developmentalness.”
6. Our own lives are rich with demonstrations of the processes of behavioural and social cognitive theories. When you identify your own personal experiences with them, you will ensure that you will both understand and remember the basic tenets of these approaches to behaviour. Keep in mind when thinking about the last 24 hours of your life that your example does not necessarily have to include your actual *experiencing* of the learning process, but rather much behaviour reflects the *manifestation* or results of that process. Also, always check with your instructor that your personal examples are correct. Cognitive theories and processes can be tricky and, if your example is not quite right, it can really mislead you.
7. Review the main themes of development outlined in chapter 1. Create a chart of the themes and note where ethological theory falls with regard to each. This will provide you with the basis for identifying its strengths and weaknesses, which in turn will provide you with the answer for what may be missing from this approach.
8. Examples of concepts and phenomena are not separate and distinct entities from the concepts themselves. Sometimes to understand something, we must incorporate the example as part of the explanation; this gives us the ability not only to recognize the nature of the concept itself, but to identify its importance and contextual impact. Use your examples to guide you in your definitions

and delineation of Bronfenbrenner's systems for a more comprehensive coverage of the ecological theory.

9. Choose a behaviour you would like to study developmentally. Approach it both longitudinally and using a cross-sectional design. Where would you have challenges with each? What would you gain from each approach? How might you decide which one ultimately to use? Answers to these questions will enlighten you on the strengths, weaknesses, and useful contexts of each design.
10. As you read through each ethical concern for life-span developmentalists, consider its relevance to subjects of all ages. Do those ethical concerns relate and apply to all potential age groups that are studied or are they only relevant to individuals of a particular age? Are there ethical concerns that are only valid for certain ages, but would not be an issue with others? Which concerns cover all age groups, thus indicating a greater issue of general unethical methodology? By familiarizing yourself with these aspects of research design, you will gain a greater understanding of issues life-span developmentalists must consider when studying human behaviour.

Handout 7 (RP 1)**Answering Questions about Development**

The goal of this research project is to conduct research on a topic you find interesting in developmental psychology. You were asked to write down one or two questions that you would like to have answered by the end of this course (e.g., Does bilingualism influence cognitive development?). Investigate the topic by going to the library and finding at least 10 relevant journal articles. Write a brief report that incorporates the following information:

- What is the question you are investigating?
- Why is this question interesting to you?
- How did you go about determining the answer to your question?
- Describe the information you located to address your question.
- What questions has this new information stimulated you to ask?

Handout 8 (RP 2)**Monitoring Contemporary Concerns in the Media**

Chapter 1 highlights life-span developmental topics, such as health and well-being, parenting and education, sociocultural contexts and diversity, and social policy, which are issues that receive frequent media attention. Monitor a newspaper, radio news program, or television news program for a week, and keep a record of stories that reflect each of these concerns. Search the paper for news items or listen to news broadcasts and make a record of stories that reflect these concerns. When you are done, tally the number of stories that reflect each concern. Then write a brief report in which you answer the following questions:

- What was the most frequently expressed concern?
- Were the concerns you encountered in each category focused on one particular kind of story? Or, were there a number of different kinds of news items that reflected a variety of concerns within each category? Explain your answer.
- Did the stories reflect a life-span perspective? Or, did they reflect some other way of viewing the contemporary concerns? Explain your answer.
- Can you find information in this chapter that is related to each story and that helps you to understand it better? Explain your answer.
- What information do you wish you had in order to understand the story better?

Handout 9 (RP 4)**Journal Article Critique**

Part of conducting psychological research is reviewing and understanding published research studies. In this research project, you will choose a topic covered in this course (e.g., play, gender roles, moral development, effects of television, memory and aging) and find a research report in a journal (e.g., *Adolescence*, *Child Development*, *Developmental Psychology*, *Family Therapy*, and *Journal of Marriage and the Family*) on the chosen topic. Read the article and write a report about the article. Enclose a copy of the research article with your report. In addition to including the main points of the study, give your personal reactions to the research findings.

Questions:

- Can you use the title of the study to identify the independent and dependent variables? (Many titles are in this format: “The Effects of IV on the DV.”)
- What did you learn from the introduction section? What is the historical background of the research topic? Which earlier research findings are presented as most relevant to the current study? What theoretical explanations are emphasized in this section? What is the hypothesis of the present study?
- What did you learn from the methods section? Who were the subjects? What procedures (e.g., apparatus, directions, assessment tools) were used?
- What did you learn from the results section? What kinds of statistical procedures were used? What did you learn from charts, frequency tables, and bar graphs? What results did the authors say were statistically significant?
- What did you learn from the discussion section? How did the authors interpret their results? Did they provide alternative explanations? Did they talk about the limitations of the present research study? What future research studies were suggested?
- What kinds of ideas did this article make you think about? Can you design a similar study on this topic?