

Chapter 1

An Introduction to Child Development

PLANNING FOR THE COVERAGE OF THE MATERIAL

Changes in the Organization of Existing Topically Organized Courses

How Children Develop differs from other topically organized texts by presenting theories of development within the context of the phenomena they best explain, rather than in an introductory chapter. Whereas cognitive development theories are usually introduced at the beginning of a textbook, Siegler, DeLoache, and Eisenberg instead explore prenatal development and the effects of nature and nurture on children first, and then examine developmental theories in subsequent chapters. The authors introduce central themes in child development in the initial chapter, rather than marching the student through a maze of difficult-to-differentiate, cryptic summaries of theories at the beginning of the course. This approach corresponds to the course organization that some experienced instructors find themselves developing as they structure their own classes over successive semesters. It offers several advantages.

First, because the themes presented in this chapter integrate the material throughout the book and delineate the critical issues that differentiate alternative theories of development, the instructor can help students acquire a meta-theoretical framework that they can then use to evaluate theories of development. When the students encounter theories of development somewhat later in the course, they are prepared to compare them along relevant dimensions and hence study them with more depth.

Second, many undergraduate students need concrete examples in order to master abstract theoretical concepts. Introducing separate theories just before covering the topical material that the theories attempt to explain helps the instructor link the abstract and the concrete.

Third, the approach eliminates the redundancy many instructors (and even some students!) complain about in more traditionally organized topical courses. A theory often must be re-taught when the behavior best explained by the theory is covered. Because in this text the relevant theories are covered at the beginning of the units on cognitive and social development, the conceptual material is still fresh when students encounter the applications of the theory.

Fourth, presenting theories of cognitive and social development separately reduces the amount of theoretical material to be mastered in one unit and facilitates the comparison of alternative approaches. Students are less likely to complain that “all those stages just blur together” when this approach is used.

Finally, this approach results in the abbreviated coverage of more abstract material that many students may see as rather removed from “real” child behavior. Because of this, the course really gets under way more quickly, resulting in greater student engagement.

Adapting the Textbook to a More Conventional Presentation

Not convinced that the innovative structure used in this textbook is the best format for your course? It is possible, of course, to adapt the material in *How Children Develop* to a more conventional approach, in which the initial class sessions are devoted to theories. This could be accomplished by starting with text pages 1–25 of Chapter 1, then moving to Chapter 4 to cover theories of cognitive development, then turning to Chapter 9 to study theories of social development, and finally returning to the last section of Chapter 1 to examine research methods (pages 25–38). It should be noted, however, that more than one class period is necessary to cover fully the material in each chapter. Instructors providing a survey of theories using this approach will probably choose to convey information about the emphasized points in the reading. For all the reasons indicated above, beginning the course with theories would better suit a more advanced group of students (e.g., a section for psychology majors or a course for graduate students in education or other fields related to psychology), rather than an undergraduate audience.

Class Sessions

Most instructors following the textbook organization in class will find that the material in Chapter 1 breaks easily into two clear sections. The first includes the introduction and the sections “Reasons to Learn about Child Development,” “Historical Foundations of the Study of Child Development,” and “Enduring Themes in Child Development” (text pages 3–25). The second incorporates the material on “Methods for Studying Child Development,” beginning on page 25 and continuing through the end of the chapter.

LEARNING OBJECTIVES

Providing students with clear objectives for each class helps them organize the material and prepare for examinations. (The technique also helps the instructor prepare tests.) The danger inherent in using such advance organizers, of course, is that some learners may focus only on the signaled material and fail to attend to important content. For this reason, it is useful to state learning objectives in terms of behavioral outcomes whenever possible. This helps students read the text and follow the lectures or discussions more purposefully and minimizes the risk that some students will interpret the objectives as a complete inventory of “what we have to know for the test.”

Possible learning objectives for Chapter 1 are as follows. Of course, instructors may choose to omit some of the objectives below in response to the backgrounds and interests of their audience.

Following the completion of the study of Chapter 1, the student should be able to:

1. Understand three good reasons for learning about child development.
2. Identify the historical foundations of the study of child development.

3. Explain each of the seven enduring themes in child development discussed in Chapter 1.
4. Summarize the authors' perspectives on the contemporary positions on each of the first six basic questions about child development and give an example of the way that research has promoted children's well-being.
5. Describe the procedures involved in the scientific method.
6. Name three important criteria for good measurement.
7. Define three contexts for gathering data and summarize the advantages and disadvantages of each.
8. Recognize and label examples of correlational designs.
9. Identify the risks and benefits associated with the use of correlational designs.
10. Recognize and label the essential components of experimental designs, including random assignment, experimental and control groups, independent variables, and dependent variables.
11. Explain the major advantage and disadvantage of experimental designs.
12. Recognize and label examples of each of the three designs for studying development.
13. Name several ethical responsibilities of researchers, as formulated by the Society for Research in Child Development.

CHAPTER GUIDE

I. Introduction (pp. 2-3)

In 1955, Emmy Werner and her colleagues began a 30-year study with 698 children on the Hawaiian Island of Kauai. The study examined the ways in which biological and environmental factors included children's intellectual, social, and emotional growth. It involved the collection of multiple measures of behavior from different sources of data, including home observations, school records, standardized tests, and interviews.

Results of this study illustrated some of the ways that biology and environmental factors work together to influence child development. The longer-term effects of medical problems during the prenatal and perinatal period depended on the quality of the home environment. The majority of children with both biological and environmental challenges developed serious behavior or learning problems by age 10, but about one-third of this at-risk group were resilient children who became productive young adults.

Werner's work introduces important questions about child development that will be introduced in this chapter.

II. Reasons to Learn About Child Development (pp. 3-8)

➤ *Instructor Video: Interview with Robert Siegler (siegler_cr.mpg; 3 minutes, 19 seconds)*

1. Knowledge of child development can help parents and teachers meet the challenges of rearing and educating children.
2. Knowledge of child development is necessary for informed decisions about

social-policy questions that affect children (for example, in determining whether or not preschool children should testify in legal proceedings).

3. Child development research provides important insights into some of the most intriguing questions regarding human nature, such as the existence of innate concepts and the relationship between early and later experiences. For example, research with children who experienced severe deprivation early in their lives has led to the conclusion that human nature is sufficiently flexible to overcome extreme adversity in early life, but that the timing of experiences often influences their effects.

III. Historical Foundations of the Study of Child Development (pp. 8-11)

1. Early philosophers provided enduring insights about critical issues in child rearing, even though their methods were unscientific. Both Plato and Aristotle believed that the long-term welfare of society depended on effective child-rearing, but Plato emphasized self-control and discipline, whereas Aristotle was concerned with fitting child-rearing to the needs of the individual child. Plato believed that children are born with innate knowledge; Aristotle believed that knowledge comes from experience. Locke, who like Aristotle saw the child as a tabula rasa, advocated first instilling discipline, then gradually increasing the child's freedom. Rousseau argued that parents and society should give the child maximum freedom from the beginning.
2. Social reform movements during the Industrial Revolution of the eighteenth and nineteenth centuries not only resulted in the first child labor laws, but also established a legacy of research conducted for the benefit of children and documented the adverse effects harsh environments can have on children.
3. Charles Darwin's theory of evolution inspired research in child development in order to gain insights into human nature. Darwin's theory continues to influence modern developmentalists.
4. Child development emerged as a formal field of inquiry in the late nineteenth and early twentieth centuries. Sigmund Freud and John Watson formulated influential theories of development during this period.

IV. Enduring Themes in Child Development (pp. 11-25)

- *In-Class Activity 1: Summarizing Contemporary Positions on the Seven Basic Questions of Child Development (Note: All in-class activities are presented at the end of the chapter.)*
- *In-Class Activity 2: The Sociocultural Context Theme in the "Up" Documentary Series: Up_Intro_cr.mpg (1 minute, 30 seconds); Up_workingclass_cr.mpg (4 minutes, 14 seconds); Up_Upperclass_cr.mpg (2 minutes, 53 seconds)*
- *In-Class Activity 3: Identifying Child Development Themes In Everyday Approaches to Behavior*
- *Instructor Video: Math Strategies (MathStrategies_vid1_cr.mpg; 1 minute)*
- *Video Segment 4: Interview with Carol Dweck (Dweck_cr.mpg; 1 minute, 17 seconds)*
- *Practicum Connection 1: The Active Child (Note: All practicum connections are presented at the end of the chapter)*

- *Practicum Connection 2: The Sociocultural Context of Development*
- *Practicum Connection 3: Individual Differences in Development*

1. The single most basic question about child development is how nature and nurture interact to shape the development. **Nature** refers to our biological endowment, especially the genes we receive from our parents. **Nurture** refers to the wide range of environments, both physical and social, that influence our development. Recent studies have established that just as the **genome**—the individual's complete set of hereditary information—influences behavior, behaviors and experiences influence the genome (for example, by turning gene activity on or off). Developmental outcomes emerge from the constant, bidirectional effects of nature *and* nurture.
2. The second theme is that of the **active child**: How do children shape their own development? Children contribute to their own development from early in life, and their contributions increase as they grow older. Three of the most important contributions during children's first years are their attentional patterns, their use of language, and their play. Older children and adolescents choose many environments, friends, and activities for themselves, and their choices can exert a large impact on their future.
3. In what ways is development **continuous** and in what ways is it **discontinuous**? Development has been described as continuous, with age-related changes occurring gradually, and as discontinuous, with age-related changes including occasional large shifts so that children of different ages seem qualitatively different. **Stage theories**, such as Jean Piaget's theory of **cognitive development**, propose that development occurs in a progression of age-related, qualitative shifts. Research evidence of the last 20 years supports gradual rather than sudden change, often occurring by specific skill or task. Whether development is continuous or discontinuous depends on "how you look and how often you look," leading some researchers to emphasize continuities and others to emphasize discontinuities in development.
4. "How does change occur?" is one of the deepest mysteries about child development. The mechanisms that produce change include interactions of genes with environment (*nature and nurture*). Researchers also have looked into the role of specific brain parts and chemicals, or **neurotransmitters**, in *effortful attention*—an aspect of temperament involving control of one's emotions and thoughts, often associated with behavior problems and weak academic skills. Understanding how change occurs requires specifying how genes, brain structures and processes, and experiences interact to generate both general development trends and differences among children at particular ages.
5. How does the sociocultural context influence development? The **sociocultural context** of development refers to the physical, social, cultural, economic, and historical circumstances that make up any child's environment. The sociocultural context influences every important aspect of children's development. Contexts of development differ within and between cultures. Development is affected by ethnicity, race, and **socioeconomic status (SES)**, a measure of social class based on income and education. Although poverty presents obstacles to successful development, many children can overcome its effects.
6. An additional guiding theme is the reasons for individual differences in development.

Individual differences among children arise very quickly in development. Children's genes, their treatment by parents and other people, their subjective reactions to other people's treatment of them, and their choice of environments all contribute to differences among children, even those within the same family.

7. A final theme for the course is the use of research to promote children's well-being. Child development research yields practical benefits in diagnosing children's problems and in helping children overcome them. For example, research on beliefs about intelligence has been used to devise an effective intervention that increased motivation and performance in math classes.

V. Methods for Studying Child Development (pp. 22-36)

- *In-Class Activity 4: Investigating Alternative Approaches to Assisting Lee's Adjustment*
 - *In-Class Activity 5: Identifying Examples of Research Methods*
 - *Instructor Video: Structured Observation (StructObserv_vid1_cr.mpg; 1 minute, 58 seconds)*
 - *Practicum Connection 4: Research and Practice*
 - *Project Assignment: Issues in the Dissemination of Research Findings*
1. The **scientific method** is used to acquire knowledge about child development. It is an approach that involves choosing a question, formulating a hypothesis (an educated guess), testing the hypothesis, and drawing a conclusion.
 2. Crucial to the scientific method is obtaining measures that are relevant to the hypotheses being tested. Good measures have high **reliability**, which is defined as the degree to which independent measurements of a given behavior are consistent. One important type of consistency is **interrater reliability**, the amount of agreement in the observations of different raters who witness the same behavior. A second important type of consistency is **test-retest reliability**, which is attained when measures of performance are similar on two or more occasions. Good measures also have high **validity**. Validity refers to the degree to which a test or experiment measures what it is intended to measure. Researchers strive for two types of validity, internal and external. **Internal validity** is the degree to which effects observed within experiments can be attributed to the variables that the researcher intentionally manipulated. **External validity** is the degree to which results can be generalized beyond the particulars of the research.
 3. Interviews are one of the three main contexts in which researchers gather data about children. A **structured interview** is a research procedure in which all participants are asked to answer the same questions. A **clinical interview** is a procedure in which questions are adjusted in accord with the answers the interviewee provides. Although interviews yield a great deal of data quite quickly and can provide in-depth information about individual children, the answers to interview questions are often biased.
 4. When the primary goal of research is to describe how children behave in their usual environments, **naturalistic observation** is the method of choice. This technique, in which observers attempt to remain unobtrusive, yields detailed information about children's lives, but has important limitations. Because naturally occurring contexts vary on many dimensions, it is often hard to know which ones influenced the behavior of interest. Also, many behaviors occur only occasionally in

everyday environments, and so researchers' opportunities to study them through naturalistic observation are reduced.

5. **Structured observation**, which involves presenting an identical situation to a number of children and recording each child's behavior, enables direct comparisons of different children's behavior and makes it possible to establish the generality of behavior across different tasks. It does not, however, provide as much information about children's subjective experiences as do interviews or provide as natural a situation as does naturalistic observation.
6. The primary goal of **correlational designs** is to determine how variables—attributes that vary across individuals and situations, such as age and activity level—are related to one another. A correlation is the association between two variables. The direction and strength of a correlation is measured by a statistic called the **correlation coefficient**.
7. Correlation does not equal causation. The **direction-of-causation problem** is that it is not possible to tell from a correlation which variable is the cause and which is the effect. The **third-variable problem** is that a correlation between two variables may arise from both being influenced by some third variable.
8. **Experimental designs** are a group of approaches that allow inferences about causes and effects to be drawn. All experiments rely on **random assignment**, a procedure in which each child has an equal chance of being assigned to any group within an experiment. **Experimental control** refers to the ability of the researcher to determine the specific experiences that children have during the course of an experiment. Children in the **experimental group** receive an experience of interest, the **independent variable**; those in the **control group** do not receive this experience. The **dependent variable** is a behavior that is hypothesized to be affected by exposure to the independent variable. Although experiments have the unique advantage of allowing researchers to draw conclusions about the causes of events, their external validity can be questionable.
9. In **cross-sectional designs**, children of different ages are compared on a given behavior or characteristic over a short period of time.
10. **Longitudinal designs** are used when the same children are studied twice or more times over a substantial period.
11. **Microgenetic designs**, in which children are studied repeatedly over a short period of time, are used to provide an in-depth depiction of processes that produce change. In this approach, children who are thought to be on the verge of an important developmental change, such as adding small numbers in the counting-on strategy, are provided with heightened exposure to the type of experience that is believed to produce the change and are studied intensely while their behavior is in transition.
12. **Researchers** have a vital responsibility to anticipate potential risks that the children in their studies may encounter, to minimize such risks, and to make sure that the benefits of the research outweigh the potential harm. The Society for Research in Child Development has formulated a code of ethical conduct to be followed by researchers in child development.

IN-CLASS ACTIVITIES

In-Class Activity 1: Summarizing Contemporary Positions on the Seven Basic Questions of Child Development

By identifying the authors' perspectives on each of the major questions in child development, the students will learn that alternative positions on the major questions exist and that different theoretical perspectives involve differing responses to most, if not all, of these questions. In addition, working on this project as an in-class activity would provide a model of active engagement for the students. It is important, of course, that the students see learning objectives as guides for directing their own efforts, rather than simply as notes for study.

It might be helpful to begin by briefly referring to some of the great philosophers' positions on some of these issues, as summarized in the section on the historical foundations of the study of child development. Ask the students: How would you compare Aristotle's and Plato's positions on the nature–nurture question? Locke's and Rousseau's? On which other major questions did the historical figures discussed in the text take different positions? This will help students practice integrating material and will also provide a model for the approach.

Focus the discussion on framing alternative approaches to the positions the authors hold on the central questions. How would extreme views be stated? What are examples of extreme views? Where do the authors' views fit on a continuum defined by these extreme positions?

Guide the class in identifying the positions summarized below.

1. Developmental outcomes emerge from the constant bidirectional interaction of nature *and* nurture, as discussed on pages 11–13 of the textbook.
2. Children actively contribute to their own development from the beginning of life, and their contributions to their own development increase with age (pages 13–14 in the textbook).
3. Development can appear to be either continuous or discontinuous, depending on how it is measured and how often it is observed (pages 14–17).
4. Fully understanding the mechanisms that bring about developmental change requires specifying how genes, brain structures and processes, and experiences interact to bring about age-related trends and individual differences (pages 17–19).
5. Cultural and socioeconomic factors influence but do not determine development (pages 19–22).
6. Children's genes, their treatment by other people, their subjective reactions to their experiences, and their choice of environments interact in complex ways to create the infinite diversity of human beings (pages 22–23).
7. Improved understanding of child development often leads to practical benefits (pages 23–25). [Ask the class to generate examples from throughout the chapter.]

Conclude by letting the students know that the exercise provides a model for effectively studying specific theories (e.g., core knowledge, the bioecological model) later in the semester. Answering each of the basic questions about child development from the standpoint of a particular theory is an excellent way to study the theory.

In-Class Activity 2: The Sociocultural Context Theme in the *Up* Documentary Series

Excerpts from Paul Almond and Michael Apted's powerful documentary series can be used to frame an enlightening discussion of the child development themes illustrated in this chapter. The series explored influences on the development of 13 British school children beginning when they were age 7 (*Seven-Up*) and continuing every 7 years through age 49. Segments from *21-Up* and *28-Up* as well as the initial film are available. The presentation of the recommended Instructor Videos, *Up_Intro_cr*, *Up_workingclass_cr*, and *Up_upperclass_cr* will provide powerful examples of the influences of social class, gender, and historical time on development. You may also wish to present some of the available segments of the individual children. Be prepared to guide the discussion by referring to the sociocultural context and asking for relevant examples from the film clips. Given the emphasis of social class in the documentaries, it will be useful to start with a discussion of the influence of the sociocultural context, incorporating the role of changes across time to compare the depicted participants' experiences with those they might encounter today. You may also wish to encourage the students to explore other themes, including continuity versus discontinuity, individual differences, and the likely role of individuals' actions on their own development.

For background information on the documentary series, see the following website:
<http://rogerebert.suntimes.com/apps/pbcs.dll/article?AID=/19981025/REVIEWS08/401010370/1023>.

If your students assume that issues of gender and SES no longer exert strong influences on development, you may want to share the following recent description of efforts to overturn the right of male primogeniture in the UK:
<http://www.independent.co.uk/news/uk/politics/the-hares-take-on-the-heirs-in-parliament-where-royalty-led-the-aristocracy-may-follow-with-succession-rights-for-girls-to-be-debated-8891780.html>

In-Class Activity 3: Identifying Child Development Themes in Everyday Approaches to Behavior

Many students will need some scaffolding from their instructor to make the connection between material presented in class and child behavior as it occurs in everyday environments. An important idea to get across is that individuals, including parents, teachers, and health care providers, often interpret children's behavior from the perspective of their own beliefs about child development, even when they are not aware that they are doing so. The themes introduced in this chapter, of course, define many of the key components of such naive theories of child development. For this reason, it is important to become aware of the positions that define the "default parameters" in our own interactions with children. The following class exercise was developed to help students understand the organizing themes of the book and to explore their informal applications in response to everyday situations. Successfully implementing this activity will require skills in facilitating and redirecting students' comments.

Read the following brief vignette to the class:

Imagine that it's the first week of the new school year and that your child Lee has just begun kindergarten in a public school with a good reputation in your suburban community. Although most of the children in the class are quickly adjusting to the routine, Lee is having a great deal of difficulty. Lee has been whining about going to school for weeks and clings to you and cries at drop-off time. The teachers report that Lee was very quiet during the first few days of class, tended to watch rather than participate in activities, and interacted to a limited degree with the other children. They also note that Lee is beginning to come to them for assistance and is making some progress. How do you explain Lee's behavior to yourself? Why does Lee act this way? As a parent, have you done something wrong? If so, what? How can you help Lee adjust to kindergarten? How might Lee's teachers help?

Ask the students for their responses. Expect to hear different positions on the nature versus nurture theme. Is Lee just temperamentally a slow-to-warm-up child? Or has Lee not been taught the skills or behaviors that are needed to adapt to a new group setting? How might both nature and nurture be involved in this example? Be ready, too, to hear evidence for continuity and discontinuity in the students' initial approaches to the statement. Is Lee simply maturing more slowly than other children of the same age? Is some developmental transition necessary before Lee can effectively join the group? Help the students understand that such responses reflect a position on qualitative change.

Are some aspects of Lee's sociocultural background relevant? Even if Lee's cultural and socioeconomic background is similar to that of the other children, is it possible that the public school environment differs from Lee's preschool environment, necessitating a qualitatively different adjustment? Note that the issue is inherently one of individual differences.

What mechanisms of developmental change might be involved in a child's readiness for kindergarten? Can understanding such mechanisms be used to facilitate Lee's adjustment? Finally, how active is Lee in the adjustment process? Do the students' ideas for facilitating adjustment assume that a child is active or passive in his or her own development? The final theme, research and child welfare, is examined in some detail within the context of the exercise summarized below. It is important, of course, to encourage the students to consider the questions described above as the basis for observation and parent-teacher discussion, not as conclusions about the sources of Lee's challenges in making the transition to school or as judgments regarding his parenting. Note that as described above, Lee's adjustment to the new setting appears to be progressing and, if the child's engagement and comfort in the classroom continue to increase, the situation is likely to resolve through the provision of on-going support from teachers, parents, and peers. (There is no indication that clinical intervention is needed.)

In-Class Activity 4: Investigating Alternative Approaches to Assisting Lee's Adjustment

One highly engaging way to present research methods is by incorporating the students' approaches to the In-Class Activity 3 vignette into illustrations of research methods. Record the students' ideas about the reasons for Lee's difficulties and their suggestions for fostering Lee's adaptation to the new environment. Restate their comments as hypotheses and guide the students in designing investigations that would test these hypotheses. Of course, this process offers a natural opportunity for you to define and illustrate relevant concepts from the section on "Methods for Studying Child Development" (pages 25–38 of the text).

Begin by helping the students formulate the dependent variable. How will variations in

“adjustment to the classroom setting” be measured? Will the data regarding class adjustment be gathered through naturalistic observation (i.e., by watching children in their classrooms)? What are the relative advantages and disadvantages of naturalistic observation, structured observation, and interviews? Once the dependent measure has been determined, how can it be established that it meets the criteria for a good measure? How might it be determined that it is reliable and valid?

A number of students will identify variables that might predict difficulty with the transition to kindergarten. For example, students may suggest that Lee’s problem is associated with a slow-to-warm-up temperament, limited preschool experience, or some aspects of parenting. Explain how such hypotheses represent correlations between variables. Ask for examples of variables that would be both positively and negatively correlated with the measure of adaptation the class developed. Explore the limitations that are associated with the interpretation of correlation. For example, there could be questions about direction of causality between prior preschool experience and transition difficulty. It is possible that Lee had limited preschool experience because of difficulty with transitions; it is also possible that Lee’s transition difficulty at kindergarten entry arose because of limited exposure to school.

The discussion of the limitations of correlations introduces an opportunity to examine the advantages and disadvantages of experimental designs. Help students understand what would be involved in random assignment in this situation. Examine how the suggested approaches to the research could be designed through experiments or naturalistic observation.

In-Class Activity 5: Identifying Examples of Research Methods

A brief and accessible report by Joseph Campos and his colleagues that summarizes four fascinating experiments is a wonderful resource for helping students learn to recognize research methods and designs.

You may wish to introduce the research by showing the students a video clip of Campos’s apparatus (visit <http://www.youtube.com/watch?v=F87RcxJPIbo> or search YouTube). Following a general introduction to the methodology and to the task, groups of four or five students are assigned to analyze one or other of the experiments. (It is not unreasonable, of course, for multiple groups, working as independent units, to review the same experiment.) A handout with a set of instructions is included on the next page for distribution to the students. Students are given questions to answer, with the instruction to present their conclusions to the group at the end of class. Provide students with the handout and a copy of one of the experiments from the article for analysis.

This exercise could be easily adapted for use with a large group or as an individual assignment. When discussion groups are used, structure the group size to include four or five students. To ensure both individual and group accountability, each member is assigned a specific task and each exercise should culminate in some product that documents the group’s work. Integrating the work of different groups is an important way to end the class.

Date _____

IN-CLASS ACTIVITY 5: HANDOUT**Identifying Examples of Research Methods****Overview**

Joseph Campos and his colleagues conducted a series of experiments to determine if infants' wariness of heights emerged in response to nature or nurture. Do infants show fear of heights because of maturational changes that are unrelated to their experiences with heights? Or is experience necessary to acquire wariness of heights? In the report we are examining, Campos and colleagues summarize four creative experiments that build on one another to answer this question. You and your group members are assigned to review one of these experiences, as specified by your instructor, to identify components of the research methodology. You will share what you learn with your classmates at the end of the session.

Materials

1. A copy of one of the four experiments reported by Campos and colleagues in Campos, J. J., Bertenthal, B. I., & Kermoian, R. (1992). Early experience and emotional development: The emergence of wariness of heights. *Psychological Science*, 3, 61–64. Your instructor will assign your experiment and provide you with a copy.
2. Your textbook or extensive notes from Chapter 1, "Methods for Studying Child Development," pages 22–36.
3. Pencil and paper for recording your conclusions.

Procedure

1. Assign jobs within your group. Designate a taskmaster to keep the group on task, one or two researchers to look up material in the text or in the notes, one or two note-takers to record contributions to the discussion, and one person to report the group's findings to the class. List the assignments here:

Taskmaster: _____

Researcher(s): _____

Recorder(s): _____

Reporter: _____

IN-CLASS ACTIVITY 5: HANDOUT (*continued*)

2. Review the experiment. Discuss with your group any material that is unfamiliar or unclear to you. Ask for help from your instructor as needed.
3. Answer the following questions about the experiment. Record your answers below.
 - a. How was wariness of heights measured in this experiment?
 - b. What hypothesis was tested in this experiment?
 - c. What were the characteristics of the participants?
 - d. Did the experiment include a design (cross-sectional, longitudinal, microgenetic) to study development (age-related changes)? If so, which one?
 - e. What research method was used (observation, experiment, correlation)?
 - f. What were the specific results?
 - g. What do you see as the strengths and weaknesses of this experiment? (It may be helpful to think about the advantages and disadvantages of the research methods.)
4. Be prepared to share your answers with the class.

PRACTICUM: IDEAS FOR OBSERVATIONS AT THE CHILDCARE CENTER

The material in the first chapter provides a number of general directions for the students' observations at the childcare center. Encourage students to explore some of the following possibilities in their first journal entries. Ask students for their observations when the relevant material is presented in class (as indicated in the Chapter Guide above). The following ideas for observations at the practicum site (or in other interactions with children) were prepared for distribution to the students (e.g., by posting them on the course website).

Practicum Connection 1: The Active Child

Although children's contributions to their own development increase with age, even infants are active in shaping their own environments. What examples of the *active child* did you notice? What objects in the classroom were especially appealing to infants? Did infants choose to look at some types of stimulation more than other types? How did toddlers' behavior affect your own interactions with them? Were you more likely to spend time with children who smiled or laughed more or who were more attractive? How did individual preschoolers differ in their selection of activities when choices were provided? In the ways in which they played with the same toys? Think about the ways in which such child-initiated behavior could affect subsequent development.

Practicum Connection 2: The Sociocultural Context of Development

The sociocultural context of a child's life includes physical, cultural, social, economic, and historical circumstances. Examine the sociocultural context in this particular childcare environment. Try to ignore any preconception about what is "typical" or "expected" in environments for young children. It might help to imagine that you are from another planet and are seeing a childcare center for the first time. Describe the aspects of the environment that you consider important. From your observations, what can you tentatively conclude are desired developmental outcomes in this context? For example, is the development of motor skills highly valued? (How much space is devoted to physical activity? How much time is given to activities involving the use of large muscle groups?) Are children of different genders expected to behave in different ways? (Are any activities segregated by gender? Are caregivers' roles associated with gender? Are children of either gender dressed in a manner that could curtail some activities?) Is independence an important goal for the children? (Is there equipment to assist children in their own activities? Do caregivers assist children in doing things for themselves?) If so, in what domains is independence apparently valued? How might the environment change if the community's concerns about violence increased or if the economy crashed?

Practicum Connection 3: Individual Differences in Development

Individual differences characterize development, even within groups of typically developing children. What different skills and accomplishments do you observe among the children in the childcare center? Be specific. Consider several domains of development, such as physical and motor development, social skills, language development, problem solving, and academic skills. In describing these individual differences, remember that

variation among typically developing children is to be expected.

Practicum Connection 4: Research and Practice

Another theme of the course is that research promotes children's well-being. If the opportunity presents itself, talk with a childcare professional about the ways in which research has affected his or her work. (Of course, avoid interrupting the caregiver's work with children or his or her well-deserved personal time. But if a moment is available, ask if you can get his or her opinion about a topic discussed in your class.) Does this caregiver see research as important for enhancing child development? Can he or she share any examples of ways in which research findings have changed care-giving practices in the center? (See the discussion of the "back to sleep movement" as a means of reducing the incidence of sudden infant death syndrome in Box 2.4 on page 61 of the text for a good example.) Are research findings important in his or her continuing education (e.g., at meetings or workshops)? Are there issues or topics that he or she would like to see given more research attention? Has any research been conducted at this center?

PROJECT ASSIGNMENT

Issues in the Dissemination of Research Findings

The handout that follows (which could also be posted on the course website) provides students with additional practice in identifying research methodologies and building critical-thinking skills while exploring the relationship between research and application. Instructors will want to take into account their students' backgrounds in adapting this assignment. For some groups, it may be advisable to provide students with appropriate popular articles or with both the primary and secondary sources (see the Resources section for suggestions).

PROJECT ASSIGNMENT: HANDOUT

Issues in the Dissemination of Research Findings

Overview of the Assignment

This project was designed to explore the process through which research affects children's welfare by examining issues in the dissemination of research findings. How accurately are research findings disseminated through the media? How important is it that professionals who work with children, including teachers, psychologists, and medical personnel, have skills in evaluating research findings? What questions should parents and professionals ask before they apply research findings, summarized in the media, to their own interactions with children? How does an understanding of research methods assist in an informed reading of reports of research findings? This project is designed to assist you in examining these issues while further developing your skills in recognizing research methods and critically examining information from different sources. You will also develop skills in reading primary source materials. The assignment involves comparing a popular account of a psychological investigation with the scientific report.

Procedure

1. Find an article online or in a newspaper or magazine that discusses research relevant to child-rearing. The article should be of interest to you and published in a source that would be available to many parents. (To find your article, browse a weekly news magazine or an online news outlet, or search online using words like "research [an outcome of interest to you; e.g., childhood obesity, school success].") Make sure that the report is summarizing a specific investigation. Look for phrases like "Researchers have recently found . . ." Your article may address any number of topics that are relevant to child psychology; for example, the report could address recent findings in prenatal care, educational practices, gender differences, children's memory, discipline techniques, and so on. The professionals whose work is cited in the article may be psychologists but they might also be educational researchers, pediatricians, or researchers in other disciplines who are concerned with children's welfare. Look for an article that includes information about where the original report was published. For example, the article may include a phrase like "Research reported in this month's issue of *Developmental Psychology* shows that . . ."
2. Find the full report of the investigation. Primary sources differ from secondary sources in that primary sources are written by the researchers themselves and include the actual data or analysis, rather than a summary or interpretation of the work. Primary sources appear in journals that are typically published under the auspices of professional organizations like the American Psychological Association, the Society for Research in Child Development, and the American Academy of Pediatrics. The citations included in the References section of *How Children Develop* refer to primary sources, including such journals as *Child Development*, *Science*, *Psychological Science*, and the *Journal of Experimental Child Psychology*. Most of these journals can be accessed online through your college or university library. You can also find many primary sources through Google Scholar (<http://scholar.google.com/>). If your popular article does not include all the information you need to find the complete primary source citation, you can generally

track it down through a database such as PSYCHINFO. Consult with a librarian if you need assistance.

3. Read both the popular and the scientific reports carefully. Compare the findings and the interpretations. To what extent does the popular article succeed in summarizing the full report? Are the limitations of the research methods used in the investigation taken into account in the popular report? For example, if the research used a correlational approach, are the possibilities of directions of causality or third-variable problems appropriately acknowledged? Or was causation assumed to follow a significant correlation? If your primary source reports an experiment, are questions regarding external validity acknowledged? Or are results generalized too broadly? For example, did the authors of the popular account discuss important characteristics of the original participants, such as their ages or sociocultural backgrounds, which could determine the extent to which the findings could be widely applied? Was the description of age-related changes consistent with the investigation? For example, was it clear from the report whether the same children were followed over time, or different groups were studied at each age, or older individuals were retrospectively reporting childhood experiences?
4. Write a report in which you evaluate the extent to which the popular article provided a fair summary of the original research report. Begin with a brief summary of the popular account. Follow this with a description of the original report. To do this, answer the following questions about the article.
 - a. What were the major research questions and the authors' hypotheses, as stated in the introduction to the article?
 - b. What were the important characteristics of the participants in the research? Identify their ages and important background characteristics. Note how large the sample size was.
 - c. If the research questions addressed age-related changes, what design for studying development was used? Was this a cross-sectional, longitudinal, or microgenetic study?
 - d. What research methods were used in this investigation?
 - e. What were the major findings as they appear in the results section of the article?
 - f. How did the author(s) interpret the findings in the discussion section of the article?
5. Next, compare the popular account with the original report. Would the typical reader take away any misconceptions from the popular article? If so, which one(s)? What limitations in the summary of the research that you identified in question 3 might lead to such misinterpretations? Is it likely that applications of the findings to childcare would have risks and benefits for children? In what ways? Summarize your conclusions in your report. Your final report should include the citations for both the popular and the scientific articles.

RESOURCES

Books and Articles

Campos, J. J., Bertenthal, B. I., & Kermoian, R. (1992). Early experience and emotional development: The emergence of wariness of heights. *Psychological Science*, 3, 61–64. This article provides an excellent example of the use of a variety of research methods and designs for studying development within the context of the summary of a fascinating research program.

Del Campo, D., & Del Campo, R. (2009). *Taking sides: Clashing views in childhood and society* (8th ed.). Guilford, CT: McGraw-Hill/Duskin. Examination of contemporary issues in child development (including effects of divorce, gay adoption, TV violence) in a debate format. Excellent illustrations of themes introduced in this chapter and a good resource for responding to students' questions about applied issues.

Miller, P. H. (2001). *Theories of developmental psychology* (4th ed.). New York: Worth. Thoughtful analysis of the most influential contemporary perspectives. Excellent source of additional background information for instructors.

Miller, S. A. (2007). *Developmental research methods* (3rd ed.). Thousand Oaks, CA: Sage. A good resource for learning more about methods used to study development. Provides assistance in evaluating and conducting research in child development.

Websites

<http://www.psych.yorku.ca/orgs/resource/>

York University maintains an extensive listing of excellent online resources for information on the history and philosophy of psychology. This website provides links to sites devoted to specific historical individuals, including a large number of prominent developmental researchers.

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

The home page of the Society for Research in Child Development includes a number of very valuable resources, including the complete statement of ethical practices in conducting research with children (<http://www.srcd.org/about-us/ethical-standards-research>) and a section on policy updates (<http://www.srcd.org/policy-media/policy-updates>) with excellent examples of research in developmental psychology that has informed public policy.

<http://www.nichd.nih.gov/news/resources/spotlight/pages/index.aspx>

The Eunice Kennedy Shriver National Institute of Child Health and Human Development posts “news spotlights” on this website. The summaries of current research findings provide good examples of current research in child development for use in class.