

CHAPTER GUIDE

Chapter 1: Language Theory and Language Development

Chapter 1 Summary

A language disorder is impaired comprehension or use of spoken, written, or other symbol systems. An individual with a language disorder is different from someone with a language difference. Language difference is a result a variation of a symbol system used by a group of individuals that reflects and is determined by shared regional, social, or cultural/ethnic factors. Sometimes a young child (2 to 3 years old) who exhibits a developmental lag in language is called language delayed or a late talker; experts use this terminology because language impairment cannot be reliably diagnosed in young children in the absence of a primary disorder.

Receptive and expressive language occurs at the linguistic level of the speech chain. Other communication processes that are within the motor/physical and the acoustic levels contribute to the communication system.

A hierarchy of research quality is used to rank the scientific merit of a particular intervention with respect to evidence-based practice (EBP). Both internal evidence (an individual client’s and the SLP’s perspective and beliefs and external evidence (expert opinion, case studies, and well-designed and controlled experimental studies) impact EBP decision-making. Level I research, evidence resulting from randomized controlled trials (RCT) is considered the best or “gold standard” research design. Level II research reflects high quality, but nonrandomized, experiments. Level III evidence represents well-designed nonexperimental studies; Level IV represents expert opinions. Other factors are considered when evaluating the quality of research including control-group design, randomization, limiting extraneous factors that contaminate results, use of reliable and valid assessment instruments, fidelity of intervention procedures, and documentation of effect sizes that demonstrate the “clinical meaningfulness” of the results.

Chapter 1 Focus Questions

1. What are the differences between a language disorder, a language difference, and a language delay?
2. What are the three levels of communication described within the speech chain? Which level is the focus of this book?
3. What are examples of communication behaviors that represent form, content, and use?
4. What differentiates Level I, Level II, Level III, and Level IV research in EBP? How does an interventionist use EBP to guide intervention?

Chapter 1 Key Terms

| | |
|---------------------|--------|
| Communication | Page 2 |
| Speech | Page 2 |
| Language | Page 2 |
| Language Disorder | Page 2 |
| Expressive language | Page 2 |
| Receptive language | Page 2 |

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|-----------------------------------------------------|------------|
| Language delay | Page 3 |
| Late talker | Page 3 |
| Late language emergence | Page 3 |
| Descriptive-developmental approach | Page 3 |
| Speech-chain model | Page 3 |
| Morphology | Page 6 |
| Syntax | Page 6 |
| Phonology | Page 6 |
| Pragmatics | Page 7 |
| Semantics | Page 7 |
| *Morphosyntax | Page 7 |
| Evidence-based practice (EBP) | Page 8 |
| Internal evidence | Page 8 |
| External evidence | Page 8 |
| Level I, Level II, Level III, Level IV EBP evidence | Page 8-9 |
| Randomization | Page 9 |
| Blinding | Page 10 |
| Fidelity | Page 10 |
| Effect-size estimates | Page 10-11 |

* The term morphosyntax is used to avoid wordiness throughout this book and because the lines between syntax and morphology are blurred.

Chapter 1 PowerPoint Presentation Outline

Please note: Additional suggestions and information from the text are included in the notes section of most slides.

1. Introduction
 - a. Present slide 1.1 and introduce the textbook and chapter 1
 - b. Present slide 1.2 and discuss the characteristics of each child described.
 - c. Present slide 1.3 and review the focus questions.
2. Definitions and Background Information
 - a. Present slide 1.4 and carefully go over the definition of each term.
 - b. Present slide 1.5 and discuss the information presented
3. The Speech Chain
 - a. Present slide 1.6 and discuss the acoustic, motor and linguistic levels of the speech chain model
 - b. Present slide 1.7 and review the characteristics of each level
4. Form, Content, & Use: The Cornerstone of Language
 - a. Present slide 1.8 and introduce form, content, and use. Discuss how this Venn diagram is a classic model of the domains, but that students will be introduced to a different way of thinking about domains (the 5 subdomains) in Chapter 2 and the subdomains will help them problem solve how to choose assessments and interventions for students when they are SLPs

- b. Present slide 1.9 and discuss the different aspects of form, content, and use
 - c. Present slide 1.10 and carefully review the definitions of each language component
5. Evidence-based practice: A cornerstone of clinical practice
- a. Present slide 1.11 and discuss the importance of understanding how SLPs use research evidence to make decisions about the most appropriate assessments and interventions for students
 - b. Present slide 1.12 and discuss the differences between internal and external evidence.
 - c. Present slide 1.13 and discuss how SLPs evaluate the research quality of different studies.
 - d. Present slide 1.14 and lead a class discussion evaluating the example show in the book in Figure 1.3
 - e. (Optional) Present slide 1.15 and have students read the Gillam article (Classroom-based narrative and vocabulary instruction: Results of an early stage, non-randomized comparison study) and consider what “level of evidence” the study provides. You may want to eliminate the cover page so that students cannot see the rest of the title that indicates the study is a non-randomized comparison study.

Chapter 1 Discussion Questions and Activities

1. In groups, give examples of communication behaviors in children’s morphology, pragmatics, semantics, and syntax that will be demonstrated as the child matures.
2. Explain the speech chain model to an individual who is not in your class. Draw a simple diagram to illustrate your explanation. Role-play this explanation in class.
3. Go to the video library at the Colorado Department of Education
<http://www.cde.state.co.us/resultsmatter/RMVideoSeries.htm>
 Watch several of the child-interaction videos and discuss the behaviors or language that illustrate the domains of form, content, and use. How do these domains overlap in the communication that you see?
4. Using the process outlined in Figure 1.3, evaluate the research studies listed below. Discuss in class if you feel these studies would qualify as Level I or Level II in the levels of evidence hierarchy.
 - Gillam, S. L., Gillam, R. B., Reece, K. (2012). Language outcomes of contextualized and decontextualized language intervention: Results of an early efficacy study. *Language, Speech, & Hearing Services in Schools*, 43, 276-291.
 - Ruston, H. P., & Schwanenflugel, P. J. (2010). Effects of a conversation intervention on the expressive vocabulary development of prekindergarten children. *Language, Speech, & Hearing Services in Schools*, 41, 303-313.

- Justice, L. M., Mashburn, A., Pence, K. L., & Wiggins, A. (2008). Experimental evaluation of a preschool language curriculum: Influence on children's expressive language skills. *Journal of Speech, Language, & Hearing Research*, 51, 983-1001.

TEST BANK

Chapter 1: The Foundations of Language and Clinical Practice

Chapter 1 Multiple Choice Questions

1. A child who does not comprehend the spoken word or is unable to communicate verbally with others has a
 - a. language difference.
 - b. language delay.
 - c. language disorder.
 - d. all of the above.
2. Clinical practitioners who work with children who have language impairments need
 - a. the ability to synthesize information.
 - b. the ability to weigh scientific evidence.
 - c. the ability to see connections between basic principles.
 - d. all of the above.
3. The Speech Chain Model includes all of the following, except
 - a. the speaker's production of words.
 - b. the transmission of sound.
 - c. the cause and effect relationship.
 - d. the listener's perception of what has been said.
4. The domains of language include form, content, and use. The components of language include
 - a. Morphology.
 - b. Syntax.
 - c. Semantics.
 - d. Phonology.
 - e. Pragmatics.
 - f. All of the above.
5. When a child adds begins to add "s" to nouns to indicate more than one, he/she is demonstrating the use of
 - a. Morphology.
 - b. Syntax.
 - c. Semantics.
 - d. Phonology.
 - e. Pragmatics.
 - f. All of the above.
6. When a child stops calling all males "da-da" and identifies only his/her father as "daddy," he/she is demonstrating the use of
 - a. Morphology.
 - b. Syntax.
 - c. Semantics.
 - d. Phonology.
 - e. Pragmatics.
 - f. All of the above.

7. A hierarchy of research quality is used to rank the scientific merit of a particular intervention with respect to evidence-based practice (EBP). The highest quality evidence resulting from randomized experimental research is
 - a. Level I.
 - b. Level II.
 - c. Level III.
 - d. Level IV.
 - e. Level III and Level IV.

8. Level IV research reflects:
 - a. High-quality, non-randomized experimental research
 - b. Well-designed non-experimental research
 - c. Case studies
 - d. None of the above

9. If I ask a subject (who has agreed to participate in my study) which experimental group he/she would like to be in--the one that will require 3 days a week participation or the intervention that meets 1 day a week--I have evidence that my study will meet the requirements for:
 - a. Randomization
 - b. Fidelity
 - c. Blinding
 - d. Subject equivalency across control and experimental groups
 - e. Effect-size estimates
 - f. None of the above

10. In an experimental study, if I videotape the intervention and carefully document the interventionist's behaviors it is likely that I am trying to control which feature of experimental design quality?
 - a. Randomization
 - b. Fidelity
 - c. Blinding
 - d. Subject equivalency across control and experimental groups
 - e. Effect-size estimates
 - f. None of the above

11. In an experimental study, if I conduct the experimental intervention and also administer and score students' pre- and post-intervention assessments, I may have violated which aspect of high-quality experimental design?
 - a. Randomization
 - b. Fidelity
 - c. Blinding
 - d. Subject equivalency across control and experimental groups
 - e. Effect-size estimates
 - f. None of the above

12. In a study, if I report my statistically statistical results, but do not indicate the magnitude of the statistical effect, I have violated which aspect of high-quality research?
- Randomization
 - Fidelity
 - Blinding
 - Subject equivalency across control and experimental groups
 - Effect-size estimates
 - None of the above
13. I frown at you because I do not agree with what you are saying. I am using
- Speech
 - Language
 - Communication
 - All of the above
14. I am your instructor for a course in which we will learn about how sound waves travel and learn how sound is measured (in dB). We are focusing on the level of the speech chain at the
- Acoustic level
 - Physical/Motor level
 - Linguistic level
 - All of the above
15. You are an SLP and you worry that without a specific diagnosis you will be unable to develop an effective language intervention approach. To avoid this problem you should
- Refer the student to a physician for a specific diagnosis
 - Consider the situation from a descriptive-developmental approach
 - Continue to administer assessments until a diagnosis is made
 - Refuse to provide intervention until the student receives a diagnosis

Chapter 1 Matching Questions

| Evidence-Based Practice | Key Insight |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Fidelity | A. The experimental goal of documenting the intervention was administered as intended |
| 2. Internal evidence | B. A series of different researchers have found similar results, but the studies were not randomized |
| 3. External evidence | C. After the subjects agree to the study, the experimenter pulls numbers “out of a hat” to assign subjects to the intervention group or the control group |
| 4. Blinding | D. The researcher reports, “the language ability of the subjects in group A was not |

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|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | statistically different from the language ability of the subjects in group. |
| 5. Randomization | E. The experimenter has graduate students (who do not know if subjects were in the control or experimental intervention group) administer and score the assessments used during an experiment |
| 6. Subject equivalency | F. |
| 7. Meta-analysis | G. Practitioner expertise |
| 8. Level II evidence | H. The results of several studies investigating a specific experimental question are statistically summarized |
| | I. Case studies and expert opinion |

Chapter 1 True/False Questions

1. A language disorder is impaired comprehension or use of spoken, written, or other symbol systems.
2. Language difference is a result a variation of a symbol system used by a group of individuals that reflects and is determined by shared regional, social, or cultural/ethnic factors.
3. A young child (2 to 3 years old) who exhibits a developmental lag in language is called autistic.
4. The terminology *late language emergence* or *late talker* is used because language impairment cannot be reliably diagnosed in young children in the absence of a primary disorder.
5. Language disorders are caused when there is a disruption in language form, content, and/or use.
6. The speech chain includes three levels; the motor/physical, the acoustic, and the linguistic.
7. Receptive and expressive language occurs at the acoustic level of the communication system.
8. Receptive language refers to an individual's ability to understand and process language.
9. Expressive language refers to an individual's ability to express and communicate meaning with language.If a researcher implements an experimental intervention, randomization has occurred.An SLP doesn't consider expert opinion since it is Level I EBP evidence. There are many clinical approaches that lack Level IV EBP evidence.

Chapter 1 Short Answer Questions

1. Diagram and explain the Speech Chain Model.
2. The Speech Chain Model demonstrates significant challenges confronting the language learner. Identify and explain these challenges.
3. How can a researcher assure that an experimental study design is implemented as intended? Use EBP terminology in your answer.
4. Define each term and give a language example of each:
 - a. Morphology

- b. Syntax
 - c. Phonology
 - d. Semantics
 - e. Pragmatic
5. Read the following statement: “Forty children between the ages of 2 and 3 years with moderate levels of expressive-only language impairment were assigned to participate in either intervention A or intervention B.” What aspects of high-quality research are evidenced in this statement? Use EBP terminology in your answer.

Chapter 1 Essay Questions

1. Explain what this chapter has taught about speech disorders, how you will use this information in your work with children, and what additional skills and knowledge you need to become a practitioner.
2. Read the following statement: “Children were assigned to Intervention A or Intervention B for four weeks. Intervention A was administered by trained SLPs; all intervention was videotaped and analyzed for the number of language targets administered each session. Intervention B consisted of a no-treatment group. The SLP administering the intervention pre- and post-tested the subjects with the assigned assessments for subjects in Intervention A and B. The researcher analyzed the scores submitted by the SLPs.” Which aspects of high-quality EBP were met in this study? What aspects of high-quality EBP may have been violated in this study? Which aspects of the study design do we still need to know about (but are not discussed in this statement)? Explain your answer and use EBP terminology

Chapter 1 Answer Key

| Matching: | True/False: | Multiple Choice: |
|------------------|--------------------|-------------------------|
| 1. A | 1. True | 1. c |
| 2. G | 2. True | 2. d |
| 3. F | 3. False | 3. c |
| 4. E | 4. True | 4. f |
| 5. C | 5. True | 5. a |
| 6. D | 6. True | 6. c |
| 7. H | 7. False | 7. a |
| 8. B | 8. True | 8. c |
| | 9. False | 9. f |
| | 10. False | 10. b |
| | 11. False | 11. C |
| | 12. True | 12. e |
| | | 13. c |
| | | 14. a |
| | | 15. b |