

CSAD 126

Speech Sound Development and Disorders in Children: Aspects of Articulation and Phonology

Instructor: Celeste Roseberry-McKibbin, Ph.D., C.C.C.-SLP

Spring, 2025

Office: *email* is celeste@csus.edu

3 units

Website: <https://webpages/csus.edu/celeste/>

TEXTBOOKS

Bernthal, J.E., Bankson, N.W., & Flipsen, P. (2022). *Articulation and phonological disorders: Speech sound disorders in children* (9th ed.). Pearson Education. Required.

Book of case studies. Required. Available at the bookstore.

PowerPoint outlines are posted on my website.

Prerequisite(s): [CSAD 110](#), [CHDV 30](#), [PSYC 2](#), [STAT 1](#), and [DEAF 51](#).

Study of typical articulation and phonological development in children. Discussion of etiologies and specific characteristics of speech sound disorders. Introductory description of foundational specific assessment and treatment principles. Analyze case studies.

Equal Access:

California State University-Sacramento, Department of Communication Sciences and Disorders, seeks to provide equal access to its programs, services, and activities for people with disabilities. If you have a documented disability and verification from the Office of Services to Students with Disabilities (SSWD), and wish to discuss academic accommodations, please contact your instructor as soon as possible. It is the student's responsibility to provide documentation of disability to SSWD and meet with a SSWD counselor to request special accommodation before classes start. **Sacramento State Services to Students with Disabilities (SSWD)** offers a wide range of support services and accommodations for students in order to ensure students with disabilities have equal access and opportunity to pursue their educational goals. Working collaboratively with students, faculty, staff and administrators, SSWD provides consultation and serves as the information resource on disability related issues to the campus community. SSWD is located in Lassen Hall 1008 and can be contacted by phone at (916) 278-6955 (Voice) or (916) 278-7239 (TDD only) or via email at sswd@csus.edu.

Sacramento State Baccalaureate Learning Goals for the 21st Century (BLG) addressed by this course:

Competence in the Disciplines: The ability to demonstrate the competencies and values listed below in at least one major field of study and to demonstrate

informed understandings of other fields, drawing on the knowledge and skills of disciplines outside the major.

Knowledge of Human Cultures and the Physical and Natural World through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts. Focused by engagement with big questions, contemporary and enduring.

Intellectual and Practical Skills, including: inquiry and analysis, critical, philosophical, and creative thinking, written and oral communication, quantitative literacy, information literacy, teamwork and problem solving, practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.

Personal and Social Responsibility, including: civic knowledge and engagement—local and global, intercultural knowledge and competence, ethical reasoning and action, foundations and skills for lifelong learning anchored through active involvement with diverse communities and real-world challenges.

Integrative Learning, Including: synthesis and advanced accomplishment across general and specialized studies.

Campus health and safety protocols regarding COVID-19 will be updated to match county, state, or CSU system standards. Please comply with campus requirements/protocols for vaccine certification and testing, indoor masking, physical distancing, COVID-19 symptom screening, contact tracing, and other safety measures to minimize the spread of COVID-19.

LEARNING OUTCOMES—The student will:

1. List and describe the structural (anatomical--physiological) mechanisms of speech production.
2. Demonstrate knowledge of basic definitions of articulation and phonology and be able to explain the clinical distinction between *articulation* and *phonology*.
3. Demonstrate knowledge of typical speech sound development in children, including being able to list major milestones from birth through age 8.
4. Explain models of speech sound development and disorders in children.
5. Identify the phenomenology and etiology of speech sound development and disorders in children.
6. Explain the concept of speech sound *differences* vs. *disorders* in children and adults who speak English as a second language.
7. Discuss principles for effective, nonbiased assessment and treatment of culturally and linguistically diverse children with speech sound disorders.
8. Explain variables (e.g., language, sensory) related to speech development and performance.
9. List and describe assessment procedures for children with speech sound disorders and demonstrate ability to interpret and apply this information to specific cases discussed in class.
11. List and describe intervention principles and currently-used clinical techniques for use with children with speech sound disorders.
12. Identify basic treatment principles and procedures for adults and children with organic and neurogenic disorders such as dysarthria and childhood apraxia of speech.
13. Describe methods and materials for integrating intervention for speech sound disorders into classroom curriculum for school-aged children.

14. Expand on information presented in lectures through class discussion and interaction, analyzing the information and making critical evaluations of it from research and clinical perspectives.
15. Understand and apply research to specific case studies of children with speech sound disorders as presented in class.
16. Promote the student's knowledge of evidence-based practice through analysis of relevant current research.
17. Incorporate principles of cultural competence as a foundation for all assessment and treatment procedures.
18. Discuss the importance of integrity, effective communication skills, and accountability when working with clients and their families.
19. Highlight procedures for engaging in collaborative practice with other professionals in order to provide the most comprehensive services for clients.

COURSE OUTLINE

1/22/25 **COURSE INTRODUCTION**

1/27/25 **FOUNDATIONS OF SPEECH SOUND DEVELOPMENT AND DISORDERS**

Fundamentals of articulatory phonetics—consonants and vowels
 Suprasegmental aspects of speech
 Phonetics and speech sound disorders
 Phoneme classification
 Dynamics of speech production

Chapter 2

1/29/25 **TYPICAL DEVELOPMENT: INFANCY THROUGH EARLY SCHOOL YEARS**

Infant milestones; development of meaningful speech
 Stages of infant speech development

Chapter 3

2/3/25 **TYPICAL DEVELOPMENT: INFANCY THROUGH EARLY SCHOOL YEARS (continued)**

Factors influencing typical speech sound acquisition

Chapter 3

Please bring the casebook starting today.

2/5/25 **TYPICAL DEVELOPMENT: INFANCY THROUGH EARLY SCHOOL YEARS (continued)**

Chapter 3

Development of the sound system

Speech intelligibility

2/10/25	Test One
2/12/25	<p>VARIABLES ASSOCIATED WITH SPEECH SOUND DEVELOPMENT AND PERFORMANCE</p> <p>Anatomical, neurological, and physiological factors Language skills, individual characteristics Environmental factors</p> <p>Chapter 4</p>
2/17/25	<p>VARIABLES ASSOCIATED WITH SPEECH SOUND DEVELOPMENT AND PERFORMANCE</p> <p>Chapter 4</p>
2/19/25	<p>CULTURE AND COMMUNICATION: BIDIALECTICAL AND BILINGUAL CONSIDERATIONS IN SPEECH SOUND TRANSFER</p> <p>African American English Spanish-Influenced English Asian and Pacific Islander languages</p> <p>Contrastive analysis practice and phonetic transcription</p> <p>Chapter 14</p>
2/24/25	<p>CULTURE AND COMMUNICATION: BIDIALECTICAL AND BILINGUAL CONSIDERATIONS IN SPEECH SOUND TRANSFER (continued)</p> <p>Practical considerations for assessment and intervention Contrastive analysis practice and phonetic transcription</p> <p>Chapter 14</p>
2/26/25	TEST 2
3/3/25	<p>ASSESSMENT OF SPEECH SOUND DISORDERS</p> <p>General principles of assessment; assessment objectives Conducting a speech screening Gathering a case history</p> <p>Chapter 6</p>

3/5/25

ASSESSMENT OF SPEECH SOUND DISORDERS

Administering standardized tests
 Collecting connected speech samples
 Conducting stimulability testing
 Performing contextual and speech discrimination testing

Chapter 6

3/10/25

ASSESSMENT CONTINUED

Analyzing and interpreting assessment information
 Making a diagnosis and prognosis

Chapter 7

3/12/25

ASSESSMENT OF CHILDREN WITH ORGANICALLY BASED SPEECH SOUND DISORDERS

Assessment of children with dysarthria and childhood apraxia of speech
 Assessment of children with cleft palate

3/17/25

Test 3

3/19/25

BASIC PRINCIPLES AND PROCEDURES IN THE TREATMENT OF SPEECH SOUND DISORDERS

Selecting target behaviors and establishing baselines
 Developing measurable objectives
 Planning and developing a treatment program

Chapter 9

3/24/25

MOTOR-BASED APPROACHES TO INTERVENTION

Traditional approach to therapy—Van Riper
 Successive approximation/shaping
 Context utilization

Chapter 10

3/26/25

MOTOR-BASED APPROACHES TO INTERVENTION

Traditional approach to therapy—Van Riper
 Successive approximation/shaping
 Context utilization

Chapter 10

Have a wonderful spring break! 😊

4/7/25 LINGUISTICALLY BASED APPROACHES TO INTERVENTION

Minimal and maximal contrast approaches
 Hodson's cycles approach
 Naturalistic approach

Chapter 11

4/9/25 LINGUISTICALLY BASED APPROACHES TO INTERVENTION

Minimal and maximal contrast approaches
 Hodson's cycles approach
 Metaphon approach, naturalistic, and whole language approaches

Chapter 11

4/14/25 TREATMENT OF CHILDREN WITH CHILDHOOD APRAXIA OF SPEECH

Core vocabulary approach
 Dynamic temporal and tactile cuing
 Prompts for restructuring oral muscular phonetic targets (PROMPT)

Chapter 12

4/16/25 SPECIFIC TREATMENT TECHNIQUES—INDIVIDUAL PHONEMES

4/21/25 SPECIFIC TREATMENT TECHNIQUES—INDIVIDUAL PHONEMES

4/23/25 TEST 4

4/28/25 GROUP PRESENTATIONS

4/30/25 Dr. R. conducting a national multicultural workshop-no class-work on group projects

5/5/25 GROUP PRESENTATIONS

5/7/25 GROUP PRESENTATIONS

Wrap up, review for final (I'll tell you what's on the final)

COURSE REQUIREMENTS

Participation. Although attendance and participation are not formally graded, I will informally note them. I will take role randomly on days as I choose. I anticipate that you will do all assigned readings. All readings should be completed **before class** on the day

they are to be discussed. Please remember that lectures will be much easier to follow if you have read the day's assignment BEFORE you come to class. I suggest that you do the following:

1. Before class, read the reading(s) and highlight important information.
2. Attend class, hear the lecture.
3. After class, re-read the reading(s).

**I recommend that you review the day's lecture notes LATER THAT SAME DAY. This aids retention. Be sure to study all along! Research with adult learners indicates that in order to truly master information, you have to hear it at least four times and practice it six-eight times. Thus, you are encouraged to review and study course material frequently.

**We forget 95% of what we hear within 72 hours.

4. 4 Examinations. 100 POINTS EACH

Five examinations will be given. You are required to take at least 4 of them. **NO MAKE-UP EXAMINATIONS ARE EVER GIVEN UNLESS THERE IS A DOCUMENTED MEDICAL EMERGENCY AND YOU HAVE WRITTEN PROOF.** If you are allowed a make-up, the make-up can only be done during the week **before** dead week. (Dead week is the week before finals.) ***You are responsible for contacting the professor for this makeup.*** No makeups are given during dead week or finals week for any reason, including medical.

If you are unable to take a test during the day and time it is administered, then you are required to take the one offered during finals week. You must take all exams during the class section you are enrolled in. For example, if you are enrolled in the 9:00 class section, you must take your exam at the 9:00 hour. On non-exam days, you may attend any section of the class you want.

You are welcome to choose not to take any one of the exams offered during the semester; however, if you miss a second exam, that score will be recorded as a "zero" and averaged in with your other test scores counting towards your final grade. If you choose to take all 5 exams, your lowest score will be thrown out and your 4 highest scores averaged together.

Examinations are based on lectures, readings, and case studies. Lectures will cover some of the book information plus additional information not covered in the text. Thus, class attendance is encouraged. Examinations will include 50 true-false, multiple choice, and matching questions worth 2 points each. Each exam is worth 100 points, and will be administered face to face via Scantron form (Form 883-E). For each exam, please bring a blue Scantron form 883-E and a No. 2 pencil to class. **A minimum of 30 points on the exam will cover material in the readings not directly referred to in the lecture.** Thus, doing the readings is critical to good test performance. (*Note: I do not bring extra Scantrons to class. If you do not have a Scantron with you and a classmate doesn't have an extra, you cannot take that examination and will need to take the final. You may not leave class to purchase a Scantron.) Be sure to erase thoroughly on the Scantron. There is no leeway for "accidental" pencil marks or errors. In order to be fair and impartial, I will give you **whatever grade the Scantron machine indicates you earned.**

I will follow university policy regarding cheating and regarding the administration of a grade of "Incomplete." Students are allowed to drop the course only for serious and compelling

reasons. *It is critical to avoid plagiarism. At CSUS, plagiarism is defined as "the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution." Incorporation of another's work into one's own work requires adequate identification and acknowledgement.*

5. STUDENT PRESENTATIONS (50 points)

You are requested to pair up with 3 other students and present a case study to the class. This presentation should take approximately 7 minutes.

This involves creating a fictitious client with an articulatory/phonological disorder and doing the following: (this can be an adult or a child)

1. Give the class the case history of the client
2. Explain the client's diagnosis to the class (e.g., this client fronts velars; this client has a w/r substitution)
3. Tell the class what your treatment plan is. Include goals, objectives, methods, and materials that you will use in treating this client. ***Demonstrate/role-play part of a treatment session.***

The purpose of this assignment is to help you integrate all that you have learned during the semester. It's excellent preparation for clinic in graduate school, and is very helpful for comps at the end of your Master's program! ☺

Roles for each group member: 1) narrator, 2) child, 3) parent 4) SLP

You need to create a 3-4 page handout to accompany your presentation; this will be given to Dr. Roseberry. **Please don't put the pages in plastic sleeves.** I will grade you on the effectiveness of your presentation as well as the thoroughness of your handout. *Points are taken off for typos, grammatical errors, and spelling errors!* Please proofread carefully.

You will need to create a PowerPoint presentation to show the class to accompany your presentation.

Students will present in the order in which they have signed up for a particular day.

You will evaluate each other's performance in the group. You will need to bring your evaluation of your fellow group members to your presentation and give it to me. You must hand me the evaluations of your fellow group members **on the day, date, and time of your presentation**. If your evaluation is late, or handed any time after this, I will take 5 points off your personal grade on the project. Your evaluations of each other will not be counted in the overall grade for this CSAD126 project. However, I will keep them and use them when I write letters of recommendation and am judging you on the ability to collaborate with others.

If you do not have a group by 3/10/25, you will not be able to participate in the project and will receive a 0/50.

If you do not show up on the day of your group presentation, you will receive -15 points unless I have a doctor's note.

LETTERS OF RECOMMENDATION

Please see my website for specifics about this—click on the Courses link and follow this to Letters of Recommendation. I require a minimum of **4 weeks' (28 days)** notice, and all documents and forms must be turned in at least 4 weeks (28 days) in advance. I do not accept or fill out any requests or forms (hard copies *or electronic*) AFTER **November 10** in the fall and **April 10** in the spring. If an electronic link arrives after November 10 in the fall, for example, it will not be filled out until February of the new year.

EMAIL

I answer emails Monday through Friday during the school year between the hours of 6:00 A.M.-6:00 P.M. Thus, for 60 hours a week, I answer email and will do my best to reply within 1-2 days. I do not answer emails on weekends or during vacations. Any emails which come to me during vacations will be answered during the first week of the next semester.

GRADING CRITERIA

I will calculate your grade objectively. I will take your total number of points out of 450.

94.5-100	A	73.5-76.499	C
89.5-94.499	A-	69.5-73.499	C-
86.5-89.499	B+	66.5-69.499	D+
83.5-86.499	B	63.5-66.499	D
79.5-83.499	B-	59.5-63.499	D-
76.5-79.499	C+	Below 59.5	F

Study Tips

1. Review each day's lecture notes later that same day to aid retention.
2. Study with other people.
3. Recite and write. Repeat material out loud. Write it out in **longhand**. Writing out material by hand really helps solidify information in your memory.
4. Study a little every day rather than having 1-2 cram sessions. It is better to study 10-30 minutes a day than in two 5-6 hour sessions.
5. Remember, every course unit = 3 hours of studying outside of class a week. So, for a 3-unit class, you'd study/do homework 9 hours a week.
6. **Write your own test questions in the instructor's format.**
7. DO THE READINGS **BEFORE** CLASS.
8. Make flashcards for key terms. Carry these flashcards everywhere you go and review them whenever you have a minute. Put the term/definition on one side and the exact definition from the book on the other side.
9. Be sure to do the **study guides on my website**.

CSAD 126: Speech Sound Development and Disorders in Children: Aspects of Articulation and Phonology

This course has been designed to be in direct support of the following American Speech-Language Hearing Association (ASHA) Knowledge and Skills Acquisition for certification in Speech-Language Pathology:

Standard IV-C: Speech, Language, Hearing, Communication, and Swallowing Disorders and Differences

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: phonology, articulation disorders (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)
- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: receptive and expressive language disorders (phonology, morphology, syntax, semantics, pragmatics, prelinguistic communication, and paralinguistic communication) in speaking, listening, reading, writing, and manual modalities (including the etiologies, characteristics, and anatomical physiological, acoustic, psychological, developmental, linguistic, and cultural correlates.)

Standard IV-D: Prevention, Assessment, and Intervention

- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding articulation.
- The student will demonstrate the ability to analyze, synthesize, and evaluate knowledge re: the principles and methods of prevention, assessment, and intervention regarding receptive and expressive language (phonology, morphology, syntax, semantics, pragmatics, prelinguistic communication, and paralinguistic communication) in speaking, listening, reading, writing, and manual modalities.

Standard IV-B: Basic Human Communication Processes

- The student will demonstrate the ability to analyze, synthesize and evaluate knowledge re: linguistic bases of human communication.
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Additional Information Commitment to Integrity:

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this class and also integrity in your behavior in and out of the classroom.

Sac State's Academic Honesty Policy & Procedures:

“The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades.” Read more about Sac State's Academic Honesty Policy & Procedures at the following website: <https://www.csus.edu/manual/student/stu-100.htm>

Definitions: At Sac State, “cheating is the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means.” **Plagiarism** is a form of cheating. At Sac State, “plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person's contribution.” Source: Sacramento State University Library Note: Any form of academic dishonesty, including cheating and plagiarism, shall be reported to the [Office of Student](#)

Conduct.

Department Policy on Use of APA format:

The Department of Communication Sciences and Disorders requires the use of the APA format and style. All students are required to reference the APA manual. All assignments are to be composed using APA format and style unless otherwise noted.

Understand When You May Drop This Course:

It is the student's responsibility to understand when he/she need to consider disenrolling from a course. Refer to the Sac State Course Schedule for dates and deadlines for registration. After this period, a serious and compelling reason is required to drop from the course. Serious and compelling reasons include: (a) documented and significant change in work hours, leaving student unable to attend class, or (b) documented and severe physical/mental illness/injury to the student or student's family. Under emergency/special circumstances, students may petition for an incomplete grade. An incomplete will only be assigned if there is a compelling extenuating circumstance. All incomplete course assignments must be completed by the department's policy.

Inclusivity:

Students in this class are encouraged to be active participants in all aspects of the course, including but not limited to lectures, synchronous and asynchronous activities, discussion posts, etc. Each of us must show respect for each other, as our class represents a diversity of beliefs, backgrounds, and experiences. This enriches all of our learning experiences together. Our individual differences deepen our understanding of one another and the world around us, rather than divide us. In this class, people of all ethnicities, genders and gender identities, religions, ages, sexual orientations, disabilities, socioeconomic backgrounds, regions, and nationalities are strongly encouraged to share their rich array of perspectives and experiences. If you feel your differences may in some way isolate you from our classroom community, or if you have a specific need, please contact the instructor early in the semester. Your instructor will work with you to ensure that you become an active and engaged member of our class and community.

Locations of gender-neutral restrooms on campus:

Maryjane Rees Language, Speech and Hearing Clinic, 2nd Floor of Folsom Hall

Equal Access:

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Basic Needs Support

If you are experiencing challenges with food, housing, financial or other unique circumstances that are impacting your education, help is just a phone call or email away! The CARES office provides case management support for any enrolled student. Email the CARES office at cares@csus.edu to speak with a case manager about the resources available to you. Check out the [CARES website](#).

Other Resources

- The Office of Student Affairs maintains a list of campus resources/centers: <https://www.csus.edu/center/>
- Testing Center: <https://www.csus.edu/student-affairs/centers-programs/testing-center/>
- Library: <https://library.csus.edu/> for consultation: Rachel Stark, MS, AHIP, stark@csus.edu
- Services to Students with Disabilities: <https://www.csus.edu/student-affairs/centers-programs/services-students-disabilities/>
- Student Health and Counseling Services at The WELL: <https://www.csus.edu/student-life/health-counseling/>
- Student Academic Success and Education Equity Programs: <https://www.csus.edu/student-affairs/retention-academic-success/>
- Crisis Assistance and Resource Education Support (CARES): <https://www.csus.edu/student-affairs/crisis-assistance-resource-education-support/>
- CHHS Student Success Center: <https://www.csus.edu/college/health-human-services/student-success/>
- Reading & Writing Center: <https://www.csus.edu/undergraduate-studies/writing-program/reading-writing-center.html>

- Peer & Academic Resource Center:
<https://www.csus.edu/student-affairs/centers-programs/peer-academic-resource/>
- SMART Thinking (tutoring resource): <https://www.csus.edu/student-affairs/centers-programs/degrees-project/internal/documents/smarthinking.pdf>

Technical Assistance

Seek help when you can't access Canvas or class materials.

- For technical assistance, contact the IRT Help Desk. Visit AIRC 2005 during [open hours](#) to speak with the IRT Service Desk Team, or call (916)278-7337. [IRT website](#).
- For assistance with course materials, contact your instructor

Spam and Phishing Scams

- Learn how to stay safe and protect yourself from hackers who may try to access your personal information: [Don't Fall for a Phishing Scam](#)
- Use anti-virus, anti-spyware, and anti-malware software. [Sac State's Software and Tools](#) available for download.
- Use pins and passwords to secure your computer and devices- don't share your password with anyone. Use strong passwords that include a combination of letters and numbers that no one can guess.

Canvas Student App

Canvas is fully functional on many types of smartphones and tablets. Compatible devices include platforms such as iPhone/iPad/iPod Touch, and Android. However, it is recommended that you do not solely rely on one of these devices to complete your online course work. Access to a computer is still needed for many online activities.

Visit the [Mobile section](#) of the [Canvas Guides](#) website for more information.

Learning Outcomes Competencies:

- Mastery of each student learning outcome listed below is indicated by a grade of C or better on each component of the corresponding measures listed in the table. Students are required to track their progress towards meeting each learning outcome and must make an appointment with the instructor for any grade equal to or less than a C. The instructor will suggest strategies to help you establish competence and knowledge in these areas.
- Students should track their progress towards meeting each learning outcome by listing their grades on the table below over the course of the semester.

Course Learning Outcome
Grades Received

Components Indicating Competence

• 1-5	Examination 1
• 6-8	Examination 2
• 9-13	Examinations 3 and 4, Assignment
• 14-16	Assignment
• 17-19	Examinations 1-4