ABSTRACT: Purpose: The purpose of this article is to describe the potential academic challenges of college students with dyslexia and to suggest ways that speech-language pathologists (SLPs) can guide students to the appropriate accommodations needed to complete a foreign language requirement successfully.

Method: This article presents a case study of a 21-year-old female university student with dyslexia who struggled with learning a second language but ultimately succeeded. Data were collected through ethnographic interviews and standardized testing.

Results: Ethnographic interviews revealed a developmental progression of specific academic challenges related to the student’s dyslexia from preschool through college. Psycho-educational testing conducted by an SLP confirmed that, in spite of the student’s academic success, she continued to exhibit a pattern of testing that was consistent with her diagnosis of dyslexia in first grade. Instructional strategies that were used to support this student’s academic success are described.

Conclusion: The outcome of our case study revealed that the impact of dyslexia changes across one’s lifespan. Even if a student appears to have “compensated” for his or her dyslexia, accommodations may be needed to face new challenges such as learning a foreign language. SLPs need to be prepared to provide the necessary documentation to assist these students in receiving university accommodations and to provide guidelines to instructors of foreign languages on techniques to help these students learn.

KEY WORDS: dyslexia, foreign language learning, accommodations
on tests, and assistance from note takers; and/or (c) replacement of the foreign language requirement with designated course substitutions (National Joint Committee on Learning Disabilities, 2000; Shaw, 1999).

However, some adults with dyslexia want to learn a second language and may need some degree of foreign language proficiency to pursue a specific area of study. Compensation strategies used by high-ability and highly motivated adults with dyslexia can be effective in helping them achieve their academic and career goals (Fink, 1998) but typically are not enough to ensure that they will successfully complete the foreign language requirement without assistance. This assistance can be accomplished through the services of speech-language pathologists (SLPs) and other professionals by (a) documenting the student’s need for accommodations in the classroom through diagnostic testing and (b) providing instructional strategies to teachers of foreign languages who are willing to modify their methods of teaching for students with dyslexia.

Sparks et al. (2006) underscored the direct relationship between native language skills and the ability to become proficient in a second language. They followed 54 students over a 10-year period, from first grade until they completed 2 years of a foreign language between 9th and 10th grade. Students were tested on measures of word reading, spelling, reading comprehension, listening comprehension, vocabulary, phonemic awareness, and general intellectual ability. Performance on written language tests (i.e., reading, spelling) in the participants’ native language was the best predictor of foreign language proficiency/success. Performance on the Modern Language Aptitude Test (Carroll & Sapon, 1959) was best predicted by a combination of overall intellectual ability and tests of oral and written language. There is no unequivocal evidence that learning disabilities result in severe foreign language learning difficulties (Ganschow & Sparks, 2001; Sparks, 2006). However, most teachers of foreign languages have been confronted with students who, in spite of well-developed spoken language skills in their native language, adequate preparation for taking a foreign language, and excellent motivation, have struggled with or failed to pass their foreign language requirements at secondary or postsecondary levels. We present a case study of a university student with dyslexia and discuss the role of the SLP in assisting this student to qualify for the accommodations needed for her successful completion of this requirement. Further, we present instructional strategies that have been used successfully by the first author, a foreign language instructor who has worked with many students with dyslexia over the past 20 years.

The purpose of this study is to present a case study of a student with dyslexia who was highly motivated to learn a second language and who succeeded. This case was chosen for three reasons. First, this case demonstrates the degree to which some college students with dyslexia can compensate for learning difficulties in most academic contexts. Second, it clarifies the depth of knowledge that SLPs must achieve in the interpretation of test data when assessing the skills of high-functioning students with language learning disabilities who need documentation of their disability to qualify for academic accommodations. Finally, this case underscores the importance and value of interdisciplinary collaboration when identifying these “hidden” disabilities and when prescribing strategies to facilitate students’ successful completion of foreign language requirements.

Standardized test results are presented that document the participant’s dyslexia diagnosis in early elementary school and again during graduate school. In line with recommendations by Westby, Burda, and Mehta (2003), an SLP conducted an ethnographic interview capturing vivid descriptions of this student’s educational history. A second interview was conducted by the student’s foreign language professor to determine the nature of the student’s learning difficulties in the context of her foreign language instruction so that an instructional plan could be developed to meet her specific needs. Results of the testing and interviews document factors that were critical in establishing the nature of this student’s learning disability and ensuring that she received the type of instructional strategies needed for success in completing her foreign language course requirement.

PRESENTING PROBLEM

The participant was a 21-year-old female with dyslexia. At the time of this study, she (hereafter referred to as Kay) was a graduate student majoring in history at a state university in the Southeast. She had made multiple attempts at learning a foreign language with little success. At the time of this study, she was enrolled in a German course and was experiencing significant difficulties.

Kay’s German language instructor referred her for a reading disabilities evaluation because of numerous difficulties that Kay was experiencing in spite of her high level of motivation to succeed. Although Kay felt that she would benefit from academic accommodations, the university she attended required that she have documentation of her disability within the past 5 years to qualify her for registration with the university’s program for students with disabilities. Table 1 shows symptoms of Kay’s difficulties from preschool through college.

University Speech and Hearing Clinic Evaluation

Kay participated in two ethnographic interviews, one conducted by the first author, her foreign language instructor, and one conducted by the third author, a speech-language pathology instructor. Kay provided the examiners with a copy of her psychoeducational evaluation report from elementary school that resulted in her diagnosis of dyslexia. In addition, Kay completed a battery of psychoeducational tests at her university’s speech and hearing clinic for a current evaluation of her spoken language skills, written language skills, phonological processing skills, processing speed skills, and other skill areas that need to be evaluated in persons whose academic difficulties may be the result of a reading disability (Puranik & Lombardino, 2006).
Kay's parents were advised to have her tested for dyslexia because of her difficulty with learning the alphabet, remembering pronunciations of familiar words in print, and printing letters and numbers without reversing the images. She exhibited these difficulties as early as in kindergarten and the first grade. In contrast to her excellent abilities in listening comprehension, Kay's reading skills were depressed for her age and in marked contrast to her superior cognitive area was in verbal recall. Her reading achievement scores were average but much lower than expected for her aptitude and socioeducational experiences. She reversed some letters when writing, even those in her name, and occasionally wrote letters and words in a mirror image. Her writing was described as slow and labored.

On an informal reading inventory, Kay exhibited a typical pattern of performance that is often observed at the early stages of reading acquisition in young children who have dyslexia. Her listening comprehension was excellent to superior, ranging from the second- through the fourth-grade level; her oral reading fluency and reading comprehension were at the preprimer level. Hence, Kay's oral and silent reading skills were depressed for her age and in marked contrast to her excellent abilities in listening comprehension. In Kay's diagnostic report, the diagnostician noted that Kay learned very well by listening and that her skills in this area corresponded to her intellectual aptitude.

The ethnographic interviews were audio recorded and were later transcribed to help reconstruct Kay's case history. The focus of the first ethnographic interview was to obtain a retrospective account of Kay's developmental and academic history. In this interview with an SLP, Kay discussed her memories from early childhood, beginning with her early struggles with print to her current challenges in her status as a graduate student. The focus of the second ethnographic interview was on the nature and extent of the difficulties that Kay was experiencing in fulfilling her second language university requirement. In this interview with her foreign language teacher, the conversation revealed three distinct areas in which Kay's learning problems surfaced: learning in the classroom environment, performing homework assignments, and taking examinations.

### Interview With the SLP

According to Kay's parents, she was a late talker, producing her first words after 18 months of age. However, she appeared to meet all other developmental milestones for speech and language before entering school. Kay reported having difficulty remembering the correct orientation of letters as far back as in kindergarten and the first grade. In first grade, Kay's parents and teacher noted that Kay was experiencing difficulty with learning the alphabet, remembering letter and number names, and writing numbers and letters. Kay's parents were advised to have her tested for dyslexia and to retain her in the first grade. Kay's parents followed the advice to have her tested for dyslexia; however, instead of retaining her in first grade, they moved her to a school for children with learning difficulties.

Kay was tested for and diagnosed with dyslexia at age 6:4 (years;months) by a psychologist. Her test results indicated well above average intellectual functioning for both verbal and nonverbal domains of mental processing, with a particular strength in the area of reasoning abilities. She was advanced in visual areas that involved retention, organization, and eye-hand coordination. Kay's weakest cognitive area was in verbal recall. Her reading achievement scores were average but much lower than expected for her aptitude and socioeducational experiences. She reversed some letters when writing, even those in her name, and occasionally wrote letters and words in a mirror image. Her writing was described as slow and labored.

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Following the diagnosis of dyslexia, Kay was placed in a classroom for children with learning disabilities in which the curriculum was based on the Discovery Program, a multisensory, phonics-based method of reading instruction (http://www.discoveryprogram-inc.com). The major goal of the Discovery Program is to strengthen auditory and visual processing skills for written language expression by training reasoning skills for problem solving in the academic areas of reading, writing, spelling, and mathematics. This method, developed by the National Institute for Learning Disabilities, was one of the first models for instructing children with learning difficulties. The program requires direct, focused educational therapy twice weekly in 80-min sessions. Kay was instructed in the Discovery Program curriculum until the end of third grade, when she transitioned back into a regular classroom. Kay continued to receive tutoring for reading and mathematics twice a week during elementary school.

Kay attributes her successful learning strategies in part to her musical training. In second grade, Kay’s parents were advised to provide her with violin lessons that employed the Suzuki method of instruction in which music is first learned through listening and playing and later through reading musical notations. This technique involves “extensive listening to and copying of recordings” before learning to read music. Hence, Kay was taught to make associations between sounds and movements through repeated practice before learning to read music. She feels that that focus on auditory–motor–visual integration along with constant repetition of learned patterns gave her the foundational strategies needed to approach learning a foreign language.
It is interesting to note that the inventor of this method, Dr. Shin’ichi Suzuki, developed his technique to parallel the way in which children acquire their native language (Suzuki, 1968).

When Kay’s family moved from a state in the Mid-Atlantic region to the Southeast, Kay skipped the eighth grade because she was more advanced than her peers. She attended a private school where her classes were small and where she was given extra help as needed. Although Kay’s teachers were aware that she had learning difficulties, they were perplexed by the incongruity in her academic skills. For example, Kay did well in an advanced placement history class but struggled with learning Spanish. Kay stated, “I just didn’t understand why I was the only student in Spanish class who couldn’t repeat back to the teacher what she was saying.” Typically, Kay’s teachers concluded that she was simply “not applying herself” when she failed to learn at the rate of her peers.

Near the end of high school, Kay took the Scholastic Aptitude Test (SAT, n.d.) twice. She did not request accommodations, such as extended time, on either occasion. Kay received a total score of 950 the first time and 1120 the second time after enrolling in a long-term SAT preparation course. This improvement was the result of a substantial increase in her verbal score but only a minimal increase in her math score. Kay noted that reading comprehension is a relative strength for her, in spite of her slow reading. She speculated that her well-developed vocabulary was the result of the high level of reading materials that were required for her honors classes. She received a scholarship and attended the honors program at a state university for 1 year before transferring to another state university in the same system. Kay received her bachelor’s degree and was admitted to graduate studies in history at the same university. Table 1 lists a developmental account of the types of problems that Kay encountered from grade school through college.

Kay attributes her problems, in large measure, to difficulties matching symbols (letters, numbers) to their pronunciations and holding this information in memory while she is performing tasks such as reading, spelling, and calculating math in her head. Kay noted that she has great difficulty with tasks that require holding words, letters, or number symbols in her memory and matching the symbols with their respective “names.” She also noted that difficulty with this basic skill results in many challenges while trying to retain and/or recall information during everyday activities such as remembering phone numbers or accurate spellings of familiar words. Kay stated that reading aloud is a distraction because pronouncing words takes so much more time than reading them silently where she is not concerned with the sound structure of words.

When asked how she deals with these challenging tasks, Kay stated that she uses strategies or “tricks” that she has learned or figured out on her own over the years. These strategies are based on using concepts instead of rote memory to work through problems. For example, when attempting to remember the number 994, Kay explained how she identifies 9 as a multiple of 3 and 4 as a multiple of 2 to help her remember 994. Kay provided another example of a strategy that she uses to recall multiplication tables. If asked to recall 6 times 3, she explained that she multiplies 6 × 2 and then adds 6 when she cannot automatically recall the answer. In contrast to her difficulty learning and recalling math facts, Kay does not have difficulty with algebra or other aspects of mathematics that require logic and reasoning.

In her current academic program, Kay noted that she has difficulty segmenting and recombining linguistic information. For example, she finds it challenging to segment sounds in unfamiliar printed words in order to arrive at accurate pronunciations. This difficulty slows down her reading and results in a disproportionate number of hours of studying when compared to her peers. Finally, Kay reported having great difficulty concentrating on reading and “listening” to the words in her head in the presence of noises in a room such as a conversation going on in the background. She becomes easily distracted and is unable to focus on comprehending what she is reading because she states that background noise is competing with the pronunciations that she is trying to “remember and hear” while reading.

A review of Kay’s test scores from her evaluation at the age of 6;4 while in first grade revealed that (a) on the Wechsler Intelligence Scale for Children—Revised (WISC–R; Wechsler, 1974), Kay had a verbal intelligence score of 115, a performance intelligence score of 124, and a full scale intelligence score of 122; (b) on the Wide Range Achievement Test—Revised (WRAT–R; Jastak, Wilkinson, & Jastak, 1984), Kay had a single word reading score of 105, single word spelling score of 96, and mathematics score of 105; and (c) on the Ekwall Informal Reading Inventory (Ekwall, 1979), Kay was functioning at the preprimer level for silent oral reading in contrast to the fourth-grade level for listening comprehension. The examiner noted that Kay showed above average intellectual aptitude and reading achievement scores that were within the average range but were much lower than expected for her overall aptitude. The examiner also concluded that Kay exhibited particular strengths on tasks of reasoning, visual processing, and listening comprehension in contrast to specific weaknesses in verbal recall, letter writing, and reading and spelling. Kay was diagnosed with dyslexia at this time.

Kay reported that both of her parents are engaged in successful careers in medical professions. Kay stated that her father is very adept at reading. Her mother, however, reports to have had a lifetime of difficulties with reading, spelling, and pronunciation of words—difficulties that mirror those that Kay experienced since she entered school. Kay’s mother has indicated with certainty that she too has dyslexia, although she has not been formally tested for a learning disability. Kay’s brother was diagnosed with a reading disability in elementary school. Although he excelled in math, he showed very little interest in reading for pleasure. Kay stated that her maternal cousin also has shown signs of dyslexia but has not been diagnosed.

Interview With a Foreign Language Instructor

In her second ethnographic interview, Kay answered questions about previous and current challenges in learning
a foreign language. Kay reported difficulties at all levels of her second language learning coursework. She described the difficulties that she encountered during classroom instruction, test taking, and completing assignments at home.

Kay first encountered second language learning difficulties when she attempted beginning Spanish in high school. After struggling for more than 2 years and experiencing little success, Kay finally withdrew from Spanish. When she entered the university, she enrolled in Latin because she assumed that learning visual–aural associations in a language taught through reading and writing rather than listening and speaking would be easier. Although Kay found Latin to be less challenging than Spanish, she still found herself spending an inordinate amount of time studying and was unable to keep pace with her other academic coursework. However, through a great deal of perseverance, along with frequent tutoring, Kay was able to complete her foreign language requirement for her bachelor’s degree.

In her graduate studies in history, Kay was faced once again with fulfilling a second language requirement. Kay enrolled in a German reading course. She stated that she felt German would be “dyslexia friendly for reading” because of its predictable letter–sound patterns but noted that “speaking it would be a problem because you have to produce many huge words together.” Her intuition is consistent with Landerl’s (2003) contention that the high regularity for sound–letter associations seen in German, sometimes referred to as the level of transparency of a language, enables people with dyslexia to approach the task of reading with greater ease than languages that do not contain this high level of consistency.

Kay noted several difficulties that she experienced in all second language classes. When directions are given in these classes and they are not accompanied by visual symbols, Kay struggles to comprehend them. She stressed that it is essential for her to have time to dissect words that she is hearing and to associate the words with their visual symbols. Making visual pattern-pronunciation associations does not come easily or automatically to Kay; hence, she often feels as though she simply cannot keep pace with listening to directions while paying attention to print at the same time. Further, Kay noted that she experiences the same difficulty when she is reading directions in a second language and finds it necessary to take time to “hear” the words pronounced while she simultaneously examines their graphic symbols. Kay’s description of this difficulty is consistent with Ehri’s (1997) model of sight word reading in which Ehri posits that immediate associations must develop between a word’s spelling and pronunciation for sight word reading to occur. This immediate visual–auditory association is precisely the skill that Kay reported as being difficult and interfering with the rate of her reading.

Kay emphasized that tasks requiring listing, itemizing, or multitasking are overwhelming to her and that these difficulties are not unique to second language learning classes. Her tendency is to focus on the first item or directive and forget the others. In foreign language classes, remembering a series of linguistic elements is particularly challenging for her. She believes that this is because she needs to hold the information in memory and then translate it into English before she can perform the task.

**Spoken and Written Language Testing**

Kay’s language testing was conducted by an SLP at the university’s speech and hearing clinic over a 6-hr period. The battery of tests used to evaluate Kay’s phonological processing, reading, and spelling skills are shown in the Appendix, along with the purpose and a short description of each test. Kay’s test scores are shown in Table 2. An asterisk is placed next to each score where Kay’s performance is below 1 SD of the mean score expected for her age and grade.

**Interpretation of Test Findings**

Based on the findings from our evaluations, along with her developmental history, prior medical diagnoses, and available school records, we found that Kay exhibited a profile of strengths and weaknesses that is consistent with the diagnosis of developmental dyslexia (ICD-9-CM, 315.02) that was made nearly 20 years earlier. Students like Kay are often difficult to diagnose because many of their reading scores fall within the normal range on norm-referenced tests. However, it has been well documented that many college students have compensated well enough for their reading disabilities to score within the range of normal on norm-referenced tests of word reading and nonword decoding (Chiarello, Lombardino, Kacinik, Otto, & Leonard, 2006; Leonard et al., 2001).

Kay’s specific reading disability was most apparent on tasks of phonological memory, rapid naming, timed word recognition, and timed pseudo-word decoding. Although Kay’s performance on the WRMT–R and the WRAT–R are within normal limits when compared to the test norms, her academic endeavors suggest that this may not be the correct comparison group for her. To provide a perspective on the degree to which Kay’s scores are depressed compared to those of her university peers, we compared her test scores to those of 13 college students without reading disabilities at the same institution. These college students scored, on average, 114.69 (SD = 8.47) on the WRMT–R Word Identification, 119.85 (SD = 7.12) on the WRMT–R Word Attack (decoding), 113.31 (SD = 5.41) on the WRAT–R Word Reading, and 109.77 (SD = 6.00) on the WRAT–R Spelling Words to Dictation (Leonard et al., 1997). The average score for these nonreading-impaired college students on all four composite scores is more than 1 SD higher than Kay’s scores. Consistent with her reading score, Kay’s spelling score was significantly below that of other college students, and her errors on vowels and suffixes were typical of those frequently observed in persons with dyslexia. For example, Kay misspelled the vowel digraph in the word “shout” (shou) and the morphological ending on the word “commission” (commiition). Hence, Kay is functioning well below her university peers in single word reading, nonword decoding, and spelling in spite of her ability to achieve reading scores within the average range.
Finally, Kay’s assessment profile showed test score discrepancies between her reasoning skills and her reading skill in a manner that is typical of many bright students who have dyslexia. For example, Kay obtained a thinking ability composite score of 110 on the Woodcock-Johnson Tests of Cognitive Abilities (WJ-III COG; Woodcock, McGrew, & Mather, 2001) and a word reading efficiency score of 73 on the Test of Word Reading Efficiency (TOWRE; Torgesen, Wagner, & Rashotte, 1999). This 37-point difference between reading and reasoning is clinically remarkable. Further, Kay showed a clear strength in reading comprehension as observed on the Gray Oral Reading Mastery Test—4 (GORT–4; Weiderholt & Bryant, 2001) passage comprehension subtest (50th percentile) relative to her depressed scores for rapid decoding of nonsense words and real words on the TOWRE (3rd percentile). This profile of depressed decoding in spite of relatively good comprehension is common in college students with dyslexia because they are able to make use of their good reasoning skills and world knowledge to understand text in spite of slow and often inaccurate reading (Shaywitz, 2003).

Typical of most persons who have dyslexia, Kay exhibited numerous indications of subtle difficulty with rapid retrieval of words (Denkla & Rudel, 1976; Wolf, 1991) and production of grammatical and complete responses (Altmann, Lombardino, & Puranik, 2008). These disfluencies may not be noted in the everyday conversation of persons with dyslexia, but they are apparent when audiotapes of their conversational language are reviewed. For example, in response to the question, “Did you have difficulties in high school?” Kay responded:

I skipped eighth grade, actually. I came down here and what was happening was (um), it was just that teachers didn’t (know to) even understand what to think of me because I was always behind. Like my SAT scores would say advanced in everything, and then I was way below in spelling (or way below) or really advanced in reading comprehension, and really far back in (incomplete sentence). I’m trying to think of the different things.

The hesitancies, revisions, and overall lack of fluency in Kay’s conversational language are indications of difficulty with rapid word retrieval, a deficit that was very apparent in the written transcriptions of the two interviews between Kay and the examiners described above.

### RECOMMENDATIONS FOR ACADEMIC ACCOMMODATIONS AND CLASSROOM INSTRUCTION

Based on the information obtained from Kay’s evaluation and from consultation with her foreign language instructor, we pursued two directions that we deemed essential in facilitating Kay’s successful completion of her foreign language course requirement. First, we recommended that Kay be given access to all academic accommodations provided by the university’s disability resource program. These accommodations include extended time for tests, course waivers, audiotapes of course textbooks, and note takers. Second, based on our interviews with Kay and our knowledge of instruction in a second language, we developed a list of teaching strategies for Kay’s foreign language instructor to consider when assisting Kay to grasp and remember new sound–letter associations, spelling patterns, and grammatical features of her second language. Table 3 summarizes the challenges that Kay reported facing in her

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### Table 2. Kay’s standard scores on diagnostic tests of reading and related processes.

<table>
<thead>
<tr>
<th>Test and composite scores</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodcock-Johnson Tests of Cognitive Abilities (WJ-III COG)</td>
<td></td>
</tr>
<tr>
<td>Verbal Ability</td>
<td>97</td>
</tr>
<tr>
<td>Thinking Ability</td>
<td>110</td>
</tr>
<tr>
<td>Woodcock Reading Master Test—Revised (WRMT–R)</td>
<td></td>
</tr>
<tr>
<td>Word Identification</td>
<td>99</td>
</tr>
<tr>
<td>Word Attack (Decoding)</td>
<td>97</td>
</tr>
<tr>
<td>Wide Range Achievement Test—Revised (WRAT–R)</td>
<td></td>
</tr>
<tr>
<td>Word Reading</td>
<td>97</td>
</tr>
<tr>
<td>Spelling Words to Dictation</td>
<td>89</td>
</tr>
<tr>
<td>Comprehensive Test of Phonological Processing (CTOPP)</td>
<td></td>
</tr>
<tr>
<td>Phonological Awareness</td>
<td>97</td>
</tr>
<tr>
<td>Phonological Memory</td>
<td>79*</td>
</tr>
<tr>
<td>Rapid Naming</td>
<td>82*</td>
</tr>
<tr>
<td>Test of Word Reading Efficiency (TOWRE)</td>
<td></td>
</tr>
<tr>
<td>Timed-Sight Word Efficiency</td>
<td>73*</td>
</tr>
<tr>
<td>Timed-Phonemic Decoding Efficiency</td>
<td>72*</td>
</tr>
<tr>
<td>Gray Oral Test of Reading—4 (GORT–4)</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>8</td>
</tr>
<tr>
<td>Accuracy</td>
<td>12</td>
</tr>
<tr>
<td>Passage Comprehension</td>
<td>10</td>
</tr>
</tbody>
</table>

*Standard scores that are more than –1 SD below the mean.

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Note. Standard scores are based on a mean of 100 (SD = 15) for all tests except the GORT–4 subtests, which are based on a mean of 10 (SD = 3).
second language class along with instructional strategies that the authors, in collaboration with Kay, agreed should prove helpful in overcoming challenges in the classroom and when preparing for class.

In addition, Kay’s foreign language instructor made arrangements to provide Kay with audio translations of the reading passages from the classroom text that students were required to translate at home. Kay commented that “in the future what would be amazing to help people with dyslexia be able to learn another foreign language, would be the tapes. I just wish our book was on tape too so that I could go home... read it at my pace, real slowly and be able to follow along each word, looking at it, hearing it and then translating it.”

After 1 year of accommodations and the use of “adaptive” instructional strategies by her instructor, Kay successfully completed her foreign language requirement in German. In summary, Kay’s success can be attributed to several key factors:

- Choosing to take German courses for “reading” that did not emphasize aural/oral skills, thereby allowing her to avoid the additional stress of having to process spoken language on-line.
- Undergoing a written language evaluation to substantiate her previously diagnosed learning disability, which allowed Kay to qualify for academic accommodations through the university’s office for students with disabilities.
- Collaborating with Kay’s instructor to use strategies recommended by the examiner that employed multi-sensory instruction (refer to Table 4). These strategies are consistent with those recommended by Sparks, Ganschow, Kenneweg, and Miller (1991) to facilitate foreign language learning, especially in students with learning disabilities.
- Capitalizing on Kay’s strong listening skills by encouraging her to first “listen” to the oral version of her text for comprehension before simultaneously listening to the text and reading it.

**General Guidelines for Foreign Language Instructors**

In the context of the foreign language classroom, activities and directions are generated mainly from the instructor’s lesson plan. For many students, such interaction is
nonproblematic. However, for the student with dyslexia, simple directions that involve multitasking are frustrating and in many cases impossible. Kay underscored this point when she identified two major areas of difficulty pertaining to the classroom environment: (a) following instructions and (b) responding to activities, especially when the directions are not accompanied by visual materials or cues. In her words, “I’ve always had trouble following directions…in Spanish, where the teacher is describing an activity he/she wants the student to do or instructions…and they don’t slow it down, what you do is just...space out basically.” Kay emphasized that spoken Spanish was by far the most difficult for her because of its “rapid pace.” She emphasized that instructors should itemize instructions “one at a time or they’ll [students with dyslexia] be so overwhelmed they won’t be able to do them at all.”

The same holds true with oral reading exercises and oral drill activities. Kay maintains that because she is able to repeat whole words, phrases, and even sentences, she gives the false impression to the instructor that she has grasped the word or concept. In actuality, she has only mimicked the words while paying little attention to the words’ meanings. However, when Kay is able to visualize the spelling pattern while pronouncing the word, she is able to make a visual-auditory link that enables her to concentrate on the meaning of the word.

The major difficulty in foreign language classes for students who have dyslexia is following directions in the foreign language. The instructor should read directions at a slightly slower pace so that the student is able to segment incoming information. The instructor does not need to compromise near-native speech rhythm by speaking at an unnatural speed but rather needs to articulate directions clearly and loudly, with attention to students’ nonverbal cues so as to ensure that comprehension is taking place. Instructors should consciously list one item at a time instead of rapidly firing off a string of directions. Listing one item at a time will avoid losing students along the way and will keep them more engaged in the task at hand.

Directions accompanied by demonstrations are strategies that are employed in the natural approach to learning a second language, an approach that was developed by Krashen and Terrell (1983). This approach makes use of language that is only slightly beyond the learner’s current abilities and includes gestures as well as pictures to introduce new concepts. For example, when introducing the verb forms of imperative commands, the instructor demonstrates opening a book while saying “Open your books!”

Learning is facilitated when visual material is paired with oral directions. However, if the written model is on the blackboard, overhead projector, or computer screen but has not been previously made available, this can present a serious challenge for a student with dyslexia. According to Kay, when new material is presented by overhead transparencies, she finds herself spending her time copying the material off of the transparency, unintentionally blocking out what the instructor is explaining.

The testing situation and environment is especially problematic for students with dyslexia. For many of these students, accommodations will need to be provided. Section 504 of the Rehabilitation Act of 1973 mandates that institutions that receive federal funding provide reasonable accommodations to students who have a documented disability. This Act was intended to eliminate barriers to full academic participation of students with learning disabilities (Russo & Morse, 1999), barriers that impede their academic progress.

Graham and English (2001) addressed the implementation of academic accommodations at the postsecondary level and underscored the need for students with disabilities to understand their self-advocacy role in this process. Students who are registered on campus with the office of disabilities will be able to provide the instructor with documentation so that the instructor can help the student. Table 4 provides examples of testing problems in the second language.

### Table 4. Test environment challenges and recommended strategies/accommodations.

<table>
<thead>
<tr>
<th>Student challenge</th>
<th>Recommended strategies/accommodations</th>
</tr>
</thead>
</table>
| Testing in the classroom | • Provide a quiet environment with no distractions (i.e., noises or sounds from either inside the classroom or outside the classroom).  
• Provide accommodations for extended time when appropriate. |
| Dictations | • Provide visual clues to the dictation when possible. (In general, dictations pose problems for students with learning disabilities because they have no visual component.)  
• Separate dictations from the main body of the exam to reduce time-related test anxiety. |
| Testing items requiring more than one task | • Avoid test sections that require more than one type of item; for example, a paragraph that requires the student to supply adjective endings, add prepositions, and change the verb tense. |
| Multiple-choice items | • Avoid multiple-choice items with reading passages, grammatical items, and vocabulary items. |
| Testing frequency | • Have shorter, more frequent tests rather than 1–2 long tests. |
learning classroom with strategies to alleviate or address the problems. Simple and reasonable accommodations can make remarkable differences in students’ test performance. The suggested accommodations are ones that the first author has used during her 20 years of teaching German as a foreign language to help students perform optimally during language instruction and testing.

SUMMARY

This article presented a case study of a graduate student with dyslexia who was highly motivated to learn a second language. Information was gathered through ethnographic interviews and standardized testing. The results of the ethnographic interview helped identify strategies that supported the student’s completion of her foreign language requirement. In a technical report, the American Speech-Language-Hearing Association (ASHA) noted a need for collaborative partnerships between SLPs and teachers to foster literacy in children and adolescents (ASHA, 2001). This study shows how this collaboration can extend to help young adults attain their goals in higher education. The strategies identified in this article should be helpful for SLPs when advising students with dyslexia about potential academic difficulties and when consulting with instructors of foreign languages who are teaching these students. Kay’s story provides one example of how successful collaboration between professionals can function as an advocacy team for helping students with dyslexia succeed in meeting university requirements.

ACKNOWLEDGMENT

The authors are grateful to the student who participated in this study, both for her willingness to undergo a battery of tests to document her learning disabilities and for her eagerness to participate in the ethnographic interviews. The test results and the interviews provided us with the necessary material to make this case study and to create a profile of a successful language learner who has overcome the barrier that her dyslexia posed for learning a foreign language.

REFERENCES


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### APPENDIX. DESCRIPTION OF TEST BATTERIES FOR WRITTEN LANGUAGE

<table>
<thead>
<tr>
<th>Test</th>
<th>Purpose</th>
<th>Description</th>
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<tr>
<td><strong>Woodcock-Johnson Tests of Cognitive Abilities—3rd Edition (WJ-III COG; Woodcock, McGrew, &amp; Mather, 2001)</strong></td>
<td>Subtests from the WJ-III COG were used to assess Kay’s verbal and thinking composite skills.</td>
<td>The Verbal Ability Composite assesses verbal comprehension through a variety of tasks including vocabulary, synonyms, antonyms, and verbal analogies. The Thinking Ability Composite consists of four distinct subsets: visual–auditory learning, spatial relations, sound blending, and concept formation. The Visual–Auditory Learning subtest requires remembering words that certain symbols represent in order to read sentences formed by the symbols. The Spatial Relations subtest requires determining which shapes are needed to construct a geometric figure. The Sound Blending subtest requires listening to the individual sounds of a word then blending them into a word. The Concept Formation subtest requires the formation of rules to solve geometric puzzles.</td>
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<td><strong>Woodcock Reading Mastery Test—Revised (WRMT–R; Woodcock, 1987)</strong></td>
<td>Measure word reading, nonword reading, and reading comprehension.</td>
<td>The Word Identification subtest assesses the ability to read isolated words. The Word Attack subtest assesses the ability to apply phonic skills to reading phonetically structured nonsense words. The Passage Comprehension subtest measures the ability to study a short passage and identify a missing word in that passage.</td>
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<tr>
<td><strong>Wide Range Achievement Test—Revised (WRAT–R; Jastak, Wilkinson, &amp; Jastak, 1984)</strong></td>
<td>Test word reading and word-level spelling.</td>
<td>The Wide Range Achievement Test assesses reading, spelling, and math. The Reading subtest measures single word reading. The Spelling subtest measures spelling single words to dictation.</td>
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<td><strong>Test of Word Reading Efficiency (TOWRE; Torgesen, Wagner, &amp; Rashotte, 1999)</strong></td>
<td>Measure the ability to pronounce printed words in isolation accurately and fluently under timed conditions.</td>
<td>The Sight Word Efficiency subtest measures the ability to recognize familiar words as whole units (sight words). The Phonemic Decoding Efficiency subtest measures the ability to decode nonwords. Each test assesses the number of word units read in 45 s.</td>
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<tr>
<td><strong>Comprehensive Test of Phonological Processing (CTOPP; Wagner, Torgesen, &amp; Rashotte, 1999)</strong></td>
<td>Assess phonological awareness, phonological memory, and rapid naming skills.</td>
<td>Composite scores for phonological awareness, phonological memory, and rapid naming were derived from Kay’s scores on the following six subtests from the CTOPP: Elision, Blending Words, Memory for Digits, Rapid Digit Naming, Nonword Repetition, and Rapid Letter Naming. The Elision subtest measures the extent to which an individual can say a word and then say what is left of that word after dropping out designated sounds. This subtest directly assesses phonemic awareness, a skill that is necessary for an individual to read and spell with accuracy. The Blending Words subtest measures an individual’s ability to combine sounds to form words. The Memory for Digits subtest measures the extent to which an individual can repeat a series of numbers ranging in length from two to eight digits. The Rapid Digit Naming subtest measures the speed with which an individual can name different numbers. An individual’s ability to rapidly name items is often associated with reading accuracy and rate. The Nonword Repetition subtest measures an individual’s ability to repeat nonsense words that range in length from three to fifteen sounds. The Rapid Letter Naming subtest measures the speed at which an individual can name different letters.</td>
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<tr>
<td><strong>Gray Oral Reading Mastery Test—4 (GORT–4; Weiderholt &amp; Bryant, 2001).</strong></td>
<td>Assess reading rate, accuracy, fluency (rate + accuracy), and comprehension.</td>
<td>The GORT–4 involves having the test taker read aloud a set of graded, connected texts. The test begins with a first grade text and progresses to secondary or postsecondary texts. The test taker is instructed to read a text aloud as quickly and accurately as possible. Comprehension is measured by five multiple-choice questions related to each text. Fluency is computed for each text by combining the rate score (time taken to read the passage) with the accuracy score (the number of decoding errors made) and comparing them to those of the test taker’s same-age peers.</td>
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