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CASE 53

The Enduring Nature of Specific Learning Disability

A College Freshman with a Specific Reading Disability

Barbara Wendling

Perhaps the most important lesson to be learned from Tory's report is that specific learning disabilities endure. No matter how bright Tory is, no matter how many intact abilities she has, no matter how hard she works, she continues to struggle with specific academic areas. Her learning difficulties were apparent by second grade and they are still apparent 12 years later. Tory may learn to compensate for her specific learning disabilities, but they will not disappear.

Another lesson to be learned from this case is the need for quality early intervention. The signs were there; Tory was well aware that something was "wrong" with her. The second-grade teacher was supportive and accommodating, but Tory did not get the instruction she needed. Even after years in special education, she did not obtain the skills needed to decode words or to recognize high-frequency words. Understanding Tory's learning disabilities and then prescribing and providing appropriate instruction were and still are critical elements necessary for improving her learning experiences.

Several examples in Tory's report illustrate the importance of considering all levels of score information when interpreting test performance. On certain tests, Tory's standard scores are in the Average range, but her proficiency on the tasks is actually limited. In some cases the reverse is true: low standard scores but average proficiency. The Relative Proficiency Index (RPI) provides an opportunity to look at Tory's proficiency, or functionality, on the task, irrespective of her relative standing in the norm reference group.

Finally, Tory demonstrates the importance of practitioners being aware of the characteristics of specific learning disabilities. She exhibits classic characteristics of dyslexia. Knowledge of the cognitive correlates of reading combined with quantitative and qualitative information lead to good diagnostic conclusions. This understanding is essential when looking for a pattern of strengths and weaknesses that suggests the presence of a specific learning disability.

Note:

While there is a great deal of instructional information that could be garnered from the results of this evaluation, the purpose of the evaluation was to document the presence of a learning disability so that Tory would be eligible for accommodations at college. Therefore, instructional implications were not included.

LEARNING DISABILITIES EVALUATION

Name:	Tory Marten
Date of Birth:	12/15/90
Age:	19-1
Sex:	Female
Parents:	Gina and Keith Marten
School:	Greenwood College
Grade:	13.0
Dates of Testing:	1/16/2010, 1/17/2010
Evaluator:	Barbara J. Wendling, M.A.

REASON FOR EVALUATION

Tory's parents requested a private evaluation to help determine their daughter's present performance in reading, as well as to determine whether or not she has a specific reading disability. Although Tory was identified as having

dyslexia in third grade and received special education services throughout elementary and middle school, she was exited from special education when she entered high school. This was done on the advice of the school counselor who told Tory's parents that she would have a better chance of being accepted by the college of her choice if she was not receiving special education services. This left Tory without any support services or a 504 plan during high school, as well as when she entered college. With extraordinary effort, Tory did complete high school, but her parents are very concerned about her ability to handle the increased academic demands of college. The college Tory is attending requires a current evaluation to determine whether or not she is eligible for any accommodations that may be granted to students with disabilities.

BACKGROUND INFORMATION

Currently, Tory is a freshman at Greenwood College and will be starting again in fall 2010. She dropped out during the fall 2009 semester because of feelings of anxiety over her inability to handle the academic demands. Tory recalls that school was fun in kindergarten and first grade, but that things changed in second grade. She was placed in the lowest reading group, which turned out not to be low enough. A new, lower group was formed just for her. The school conducted a full individual evaluation while Tory was in second grade. Although she exhibited significant discrepancies between her intelligence score and basic reading, reading comprehension, and written expression scores, the school determined Tory did not need special services at that time because the second-grade teacher felt she could accommodate Tory's needs in the general education classroom.

In third grade, the teacher reported that Tory was an extremely bright, articulate child who frequently seemed nervous in the academic setting and lacked confidence. Tory's math skills were very strong but her reading skills were described as significantly below level. In addition, her handwriting was a concern. Tory had difficulty with letter formation, pencil control, and writing speed. During her third-grade year, her parents had her tested at the Child Development Center of a local hospital. The conclusion of that evaluation was that Tory had dyslexia. At this point, the school found her to be eligible for special education and provided her with services until she reached high school.

Even with special education services, Tory felt as though she was struggling just to keep up. She describes her educational experience as "hanging on by her fingernails." Tory expects a great deal from herself and says that "failure is not an option." Her internal drive to succeed and willingness to work extra hard have gotten her through to this point.

Tory reports that she still transposes letters and numbers and has trouble sounding out words. She reports that she even forgot "how" to sound out a word recently when reading to a young child. She misspells simple words like "again," spelling it as "agian." When she comes to a word she doesn't know, she does make an attempt to read it. She tries to determine if she has seen or heard the word she is trying to decode. Clearly, she relies on her oral language and her store of learned words to assist her reading. If she cannot read the word, she skips it and moves on, trying to preserve meaning. In addition, Tory states that she has to read assignments three or four times to really comprehend the text. She spends many hours a night just trying to keep up with class work.

Tory's favorite academic area is mathematics. It is also the area in which she has experienced the most success in her school career thus far. Tory loves children and it is her goal to become a math teacher.

DEVELOPMENTAL AND FAMILY HISTORY

Information regarding Tory's developmental and family history was obtained via review of prior evaluations and an interview with her parents. Her mother reports that pregnancy and birth were uneventful and that Tory passed all developmental milestones within normal limits. Tory's family is intact and she is the youngest of three children. Both parents are college graduates with professional careers. Her sister is a college graduate and her brother is a senior in college. Both siblings had difficulty learning to read in the early grades but were not evaluated for learning disabilities and never received special education services. The father reports that he never enjoyed reading or writing and that he still experiences difficulty with spelling, preferring to do everything on the computer to make use of the spell-checking feature.

ASSESSMENT/EVALUATION PROCEDURES

Woodcock-Johnson III NU Tests of Cognitive Abilities (WJ III COG) (Tests 1–9 and 11–18) 1/16/2010

Woodcock-Johnson III NU Tests of Achievement (WJ III ACH) (Tests 1–11, 13, 17, 20, 21) 1/17/2010

Informal reading sample

Review of previous evaluations

Tory was administered a set of tests from the Woodcock-Johnson III Normative Update (WJ III NU). The WJ III NU is composed of two batteries: the Tests of Cognitive Abilities (WJ III COG) and the Tests of Achievement (WJ III ACH). The WJ III COG is a comprehensive battery of individually administered tests measuring different cognitive/intellectual abilities. The WJ III ACH is a comprehensive battery of individually administered tests measuring oral language, reading, written language, mathematics, and academic knowledge. Because the tests were normed on the same population, direct comparisons can be made among Tory's cognitive abilities and achievement scores. These comparisons can help determine the presence and significance of any strengths and weaknesses among her abilities. Further, the pattern of relationships between Tory's cognitive abilities and academic performance can be explored. The WJ III was selected based on the reasons for the evaluation. The tests were scored using grade norms, which provided the most relevant comparison group for this evaluation.

BEHAVIORAL OBSERVATIONS

Tory was very cooperative and personable during both testing sessions. She appeared at ease, comfortable, and attentive. Rapport was easily established and maintained. During testing, she was focused and took great care in responding. As items became more difficult, she persisted until she was sure she did not know the answer, at which point she would often say, "I have no idea." The present results represent a reliable and valid estimate of Tory's current level of cognitive and academic functioning in the areas assessed.

ASSESSMENT/EVALUATION FINDINGS

Results from the WJ III COG are presented first, followed by the achievement findings. Scores that are discussed include standard scores, percentile ranks, relative proficiency indexes, and instructional zones (achievement tests only). Standard scores (SS) are norm-referenced scores that have a mean of 100 and a standard deviation of 15. The Average range for the WJ III is defined as standard scores from 90 to 110. The standard scores in the report may appear with the +/–1 standard error of measurement (SEM) or range of standard scores, shown in this manner (SS = 110; 105–115). Including the +/–1 SEM increases the likelihood that Tory's true score is represented. Because grade norms were used, the standard scores show Tory's performance relative to other college freshmen attending 4-year colleges or universities. Percentile ranks (PR) indicate the percent of grad peers that scored the same as or lower than Tory on the task. Percentile ranks range from 0.1 to 99.9 on the WJ III. The Average range is defined as percentile ranks from 25 to 75. The relative proficiency index (RPI) is a criterion-referenced score indicating proficiency or functionality on a task compared to average grade peers. It is expressed as an index, for example, RPI 10/90. The top number in the index ranges from 0–100 and reflects Tory's proficiency on the task. The bottom number in the index is fixed at 90 and reflects the average proficiency level of grade peers. RPIs of 75/90 or lower indicate Tory's proficiency on the task is well below the average grade peer's proficiency and that grade-level materials and expectations would be difficult for Tory to manage.

Intellectual/Cognitive Testing

Tory's General Intellectual Ability (GIA) standard score of 99 fell within the Average range and provides an estimate of her general intelligence. The GIA is composed of seven distinctly different cognitive abilities. Her performance on these seven abilities showed significant variation so a better estimate of her ability for academic learning may be Comprehension-Knowledge, a measure of verbal ability or crystallized intelligence (SS 110, PR 74). Tory's results from the WJ III NU Tests of Cognitive Abilities are presented and reviewed below. Her performance is compared to grade peers, other college freshmen attending a 4-year college or university.

Comprehension-Knowledge

Tory's performance on Comprehension-Knowledge, which includes measures of verbal ability and acquired knowledge, was in the Average to High Average range (SS = 110; 105–115). The task demands for both tests within this cluster include oral presentation of the items by the examiner and require oral responses from Tory. She found these verbal tasks manageable to easy and should be able to handle grade-level oral tasks with no problem. Comprehension-Knowledge is an important ability for academic success. Tory has the necessary verbal abilities and acquired knowledge to succeed, especially when no reading is involved.

Cluster/Test	Standard Score (+/–1 SEM)	PR	Relative Proficiency Index (RPI)	RPI Implication (will find grade-level tasks to be)
GIA-EXTENDED	**99 (97–101)**	**47**	**89/90**	**Manageable**
COMPREHENSION-KNOWLEDGE	**110 (105–115)**	**74**	**95/90**	**Easy**
Verbal Comprehension	104 (98–111)	62	93/90	Manageable
General Information	113 (107–120)	81	97/90	Easy
LONG-TERM RETRIEVAL	**104 (98–111)**	**61**	**92/90**	**Manageable**
Visual-Auditory Learning	108 (103–114)	71	95/90	Easy
Retrieval Fluency	81 (74–88)	11	86/90	Manageable
VISUAL-SPATIAL THINKING	**114 (108–121)**	**83**	**96/90**	**Easy**
Spatial Relations	103 (98–108)	57	92/90	Manageable
Picture Recognition	124 (112–135)	94	98/90	Easy
AUDITORY PROCESSING	**82 (76–87)**	**11**	**74/90**	**Difficult**
Sound Blending	88 (83–93)	22	70/90	Difficult
Auditory Attention	78 (68–88)	7	77/90	Difficult
PROCESSING SPEED	**84 (81–87)**	**14**	**41/90**	**Very Difficult**
Visual Matching 2	83 (79–87)	13	32/90	Very Difficult
Decision Speed	85 (81–89)	16	51/90	Very Difficult
FLUID REASONING	**108 (101–115)**	**69**	**94/90**	**Manageable**
Concept Formation	100 (94–106)	50	90/90	Manageable
Analysis-Synthesis	120 (106–133)	91	96/90	Easy
SHORT-TERM MEMORY	**100 (94–106)**	**50**	**90/90**	**Manageable**
Numbers Reversed	91 (86–96)	28	67/90	Very Difficult
Memory for Words	109 (103–116)	73	98/90	Easy
COGNITIVE FLUENCY	**87 (85–89)**	**19**	**62/90**	**Very Difficult**
Retrieval Fluency	81 (74–88)	11	86/90	Manageable
Decision Speed	85 (81–89)	16	51/90	Very Difficult
Rapid Picture Naming	90 (88–92)	25	42/90	Very Difficult
PHONEMIC AWARENESS 3	**90 (86–94)**	**25**	**81/90**	**Difficult**
Sound Blending	88 (83–93)	22	70/90	Difficult
Incomplete Words	111 (100–123)	77	94/90	Manageable
Sound Awareness (ACH)	88 (83–93)	21	71/90	Difficult
WORKING MEMORY	**95 (92–99)**	**38**	**83/90**	**Manageable**
Numbers Reversed	91 (86–96)	28	67/90	Very Difficult
Auditory Working Memory	102 (97–108)	57	92/90	Manageable

Long-Term Retrieval

Long-Term Retrieval, the ability to store and retrieve information through an associative memory process, was in the Average range (SS = 104; 98–111). However, Tory's performance on the two tests composing this cluster varied. Visual-Auditory Learning, an associative memory task, was solidly in the Average range (SS = 108; 103–114) while Retrieval Fluency, a measure of ideational fluency, fell in the Low to Low Average range (SS = 81; 74–88).

Even with these Low to Low Average standard scores, Tory's proficiency on Retrieval Fluency was not impaired as noted by her RPI of 86/90. This indicates that college freshmen were not that variable on this task, so even with low relative standing, Tory is not that far from Average. Because Retrieval Fluency has an element of speed (e.g., name as many pieces of clothing as you can in 1 minute) and Visual-Auditory Learning does not, this may be a possible explanation for the differences noted.

Visual-Spatial Thinking

Visual-Spatial Thinking (SS = 114; 108–121), the ability to analyze, manipulate, and recall visual stimuli, was in the Average to Superior range and is related to higher-level math achievement. Picture Recognition, a measure of visual memory for drawings, was a superior area for Tory, which illustrates her good attention to visual detail. She scored at the 94th percentile with an RPI of 98/90, indicating that these types of visual memory tasks are easy for her. This strength may be related to Tory's interest and success in mathematics.

Auditory Processing

Auditory Processing (SS = 82; 76–87), the ability to analyze, discriminate, and manipulate sounds, is an important ability related to reading. This area was a normative weakness (SS < 85) for Tory and she finds these tasks difficult (RPI 74/90). To explore this area further, additional tests were administered in order to obtain the Phonemic Awareness 3 cluster. Phonemic awareness, a component of auditory processing, is highly related to acquiring basic reading and spelling skills. Tory's performance on two of the tests, Sound Awareness and Sound Blending, fell in the Low Average to Average range (SS = 88; 83–93). Her RPIs for both of these tests indicate she will find grade-level phonemic awareness tasks difficult. Tory's intact verbal and reasoning abilities aided her on the Incomplete Words task, which presents real words with one or more phonemes missing. It is essentially an auditory cloze task, and Tory was able to guess the complete word without too much difficulty. When Tory has to process the individual sounds by blending, deleting, substituting, or discriminating sounds, she has greater difficulty. These weaknesses are directly related to her reading and spelling difficulties.

Fluid Reasoning

Fluid Reasoning, the ability to reason and solve novel problems, was solidly in the Average to High Average range (SS = 108; 101–115). This ability is related to math achievement and to reading comprehension and written expression. On one of the Fluid Reasoning tests, Analysis-Synthesis, a measure of deductive reasoning, Tory scored at the 91st percentile and her RPI of 96/90 indicates advanced proficiency compared to grade-peers. This strength helps explain Tory's affinity for math, which is her favorite academic area. Her reasoning abilities compare favorably to those of other college freshmen.

Processing Speed

Tory scored in the Low Average range (SS = 84; 81–87) for Processing Speed. She found both tasks, Visual Matching and Decision Speed, very difficult. On the Visual Matching test, a perceptual speed task related to basic reading skills, Tory demonstrated limited proficiency (RPI 32/90). To explore Tory's speed-related issues, additional tests were administered to obtain the Cognitive Fluency cluster, which includes aspects of rapid naming and semantic speed. These abilities are related to reading and spelling. Tory's performance fell in the Low Average range (SS = 87; 85–89) and was consistent with her performance in Processing Speed. On the Rapid Picture Naming test, although Tory's standard score was Average (SS = 90), her RPI of 42/90 indicates that rapid retrieval of words from long-term storage is very difficult for her. A slow rate in rapid automatized naming has been linked to reading difficulties.

Short-Term Memory

Short-Term Memory, the ability to hold information in immediate awareness and use it within a few seconds, fell in the Average range (SS = 100; 94–106). Although both tests in this cluster were in the Average range, Tory's proficiency on the memory span task, Memory for Words, was advanced (RPI 98/90), whereas her proficiency on the working memory task, Numbers Reversed, was limited (RPI 67/90). It is important to note that Tory recalled all the numbers presented but did not always repeat them in the exact reverse sequence required. To examine working memory further, the Auditory Working Memory test was administered. Tory scored in the Average range (SS = 102; 97–108). It appears that Tory has adequate memory span and working memory.

Review of Intracognitive Variations

When Tory's performance on the seven cognitive abilities is analyzed using the intracognitive variation procedure, she demonstrates significant and unusual weaknesses in Auditory Processing and Processing Speed. Not only are these two cognitive abilities weak for Tory when compared to the performance of other college freshmen, but they are also weak when compared to Tory's own performance on the other cognitive abilities. Based on her performance on the other cognitive clusters, only 3 out of 100 college freshmen with the same predicted score would obtain a score as low or lower on Auditory Processing, and only 7 out of 100 would score as low or lower on Processing Speed. These significant weaknesses help explain the academic difficulties Tory has experienced throughout her school career. Auditory Processing has a causal and reciprocal relationship with reading and spelling; normal auditory processing facilitates the acquisition of reading and spelling skills, and the acquisition of these skills helps to develop auditory processing further. Consequently, a weakness in auditory processing both impedes the acquisition of reading and spelling skills and, in turn, its own developmental course. A deficit in processing speed directly impacts the ability to develop fluency and automaticity in these skills.

Cognitive Testing Summary

The results of the cognitive testing provide evidence of cognitive processing difficulties in auditory processing and processing speed, both of which are directly related to Tory's difficulties in reading and writing. Furthermore, Tory has many intact abilities, including comprehension-knowledge, fluid reasoning, long-term retrieval, visual-spatial thinking, and short-term memory. These abilities, combined with her high motivation and work ethic, help explain why she has experienced success in mathematics and also how she has managed to survive in school. These results also help illuminate the reasons why Tory has difficulty understanding her learning problems. Tory has good knowledge, language, reasoning, memory, and visual skills, so her difficulty with reading is unexpected and confusing to her. She feels she "should" be able to do it, but no matter how hard she tries, it is a struggle.

	Standard Scores			Variation		Significant at +/–1.50 SD
Variations	**Actual**	**Predicted**	**Difference**	**PR**	**SD**	
Intracognitive						
Comp-Knowledge (Gc)	110	99	+11	81	+0.89	No
L-T Retrieval (Glr)	104	99	+ 5	70	+0.51	No
Vis-Spatial Think (Gv)	114	98	+16	90	+1.30	No
Auditory Process (Ga)	82	103	–21	3	–1.84	Yes
Fluid Reasoning (Gf)	108	99	+ 9	84	+0.98	No
Process Speed (Gs)	84	102	–18	7	–1.50	Yes
Short-Term Memory (Gsm)	100	100	0	49	–0.01	No

Achievement Testing

Tory's performance in Broad Reading (SS = 89; 87–91) and Broad Written Language (SS = 86; 82–90) was in the Low Average to Average range, whereas Broad Math (SS = 108; 104–111) was in the Average to High Average range. In all cases, her performance on basic skills was lower than her performance on the higher-level academic areas of reading comprehension, written expression, and math reasoning. Her oral language performance was solidly in the Average range. When viewed across the academic areas of reading, writing, and math, Tory's performance was lowest on measures of fluency that require speed and automaticity. Her proficiency on these tasks was limited compared to the proficiency of average college freshmen. Tory's results from the WJ III NU Tests of Achievement are presented in the following chart.

Oral Language

Tory's performance on oral language tasks fell in the Average range (SS = 97; 92–103). She should find grade-level oral language demands manageable. This supports the Comprehension-Knowledge results obtained during the cognitive evaluation. These verbal abilities provide an important foundation for learning. Therefore, Tory's difficulties with reading and writing are unexpected. In addition, English is Tory's only language so there are no second language issues to consider.

CLUSTER/Test	Standard Score (+/–1 SEM)	PR	Relative Proficiency Index (RPI)	RPI Implication (will find grade level task)
BROAD READING	**89 (87–91)**	**23**	**57/90**	**Very Difficult**
Letter-Word Identification	84 (80–89)	15	57/90	Very Difficult
Reading Fluency	88 (87–90)	22	10/90	Extremely Difficult
Passage Comprehension	107 (100–114)	67	94/90	Manageable
BASIC READING	**85 (82–88)**	**16**	**57/90**	**Very Difficult**
Letter-Word Identification	84 (80–89)	15	57/90	Very Difficult
Word Attack	85 (80–89)	15	60/90	Very Difficult
READING COMPREHENSION	**113 (108–118)**	**81**	**96/90**	**Easy**
Passage Comprehension	107 (100–114)	67	94/90	Manageable
Reading Vocabulary	112 (108–116)	79	97/90	Easy
PHONEME/GRAPHEME KNOWLEDGE	**80 (76–84)**	**9**	**59/90**	**Very Difficult**
Word Attack	85 (80–89)	15	60/90	Very Difficult
Spelling of Sounds	82 (77–86)	11	58/90	Very Difficult
BROAD WRITTEN LANGUAGE	**86 (82–90)**	**18**	**74/90**	**Difficult**
Spelling	85 (81–89)	16	57/90	Very Difficult
Writing Fluency	83 (78–87)	12	50/90	Very Difficult
Writing Samples	119 (105–132)	89	95/90	Manageable
WRITTEN EXPRESSION	**90 (84–95)**	**25**	**81/90**	**Difficult**
Writing Fluency	83 (78–87)	12	50/90	Very Difficult
Writing Samples	119 (105–132)	89	95/90	Manageable
BROAD MATH	**108 (104–111)**	**70**	**94/90**	**Manageable**
Calculation	111 (105–117)	77	96/90	Easy
Math Fluency	91 (88–94)	27	84/90	Manageable
Applied Problems	110 (106–115)	75	97/90	Easy
BASIC MATH SKILLS	**103 (99–107)**	**58**	**92/90**	**Manageable**
Calculation	111 (105–117)	77	96/90	Easy
Math Fluency	91 (88–94)	27	84/90	Manageable
ORAL LANGUAGE	**97 (92–103)**	**43**	**88/90**	**Manageable**
Story Recall	103 (97–110)	59	91/90	Manageable
Understanding Directions	95 (89–101)	37	85/90	Manageable
ACADEMIC SKILLS	**89 (85–93)**	**23**	**78/90**	**Difficult**
Letter-Word Identification	84 (80–89)	15	57/90	Very Difficult
Spelling	85 (81–89)	16	57/90	Very Difficult
Calculation	111 (105–117)	77	96/90	Easy
ACADEMIC FLUENCY	**86 (84–88)**	**17**	**45/90**	**Very Difficult**
Reading Fluency	88 (87–90)	22	10/90	Extremely Difficult
Writing Fluency	83 (78–87)	12	50/90	Very Difficult
Math Fluency	91 (88–94)	27	84/90	Manageable
ACADEMIC APPLICATIONS	**111 (107–115)**	**76**	**96/90**	**Easy**
Passage Comprehension	107 (100–114)	67	94/90	Manageable
Writing Samples	119 (105–132)	89	95/90	Manageable
Applied Problems	110 (106–115)	75	97/90	Easy

Reading

Tory's Reading Comprehension was in the High Average range (SS = 113; 108–118). Tory's comprehension is aided by her good oral language skills, knowledge base, and reasoning abilities. However, when reading was timed or decontextualized (e.g., words in lists, rather than in passages), her performance declined. On Basic Reading Skills, comprised of tests of word identification and word attack, Tory's performance was in the Low Average range (SS = 85; 82–88). She had difficulty reading both real and nonsense words. Tory's errors on real words typically resulted in words that were not real, especially when reading multisyllabic words. She appeared to focus on specific letter strings and ignore others within the word. When reading phonically regular nonsense words, Tory's errors demonstrated a lack of knowledge of the phonological and orthographic rules of English. For example, she read words that had two vowels together—signaling a long vowel sound—as short vowels. She did not know how to pronounce certain phonic elements, such as "ph," when they occurred at the beginning of a word. Her proficiency on these tasks was limited compared to grade peers, indicating that decoding grade-level materials will be very difficult for her.

In addition, Tory's proficiency on Reading Fluency, a timed test, was very limited (RPI 10/90). She will find grade-level reading tasks that are timed or need to be performed under time constraints extremely difficult. Tory was accurate on the items she completed but she worked slowly. She also demonstrated lack of fluency on an oral reading of a college-level passage from one of her textbooks. Her rate was 70 words per minute with 12 errors and 4 self-corrections. As a point of reference, the oral reading rate for an average eighth-grade student is between 133 and 151 words per minute. The errors Tory made were a mix of mispronunciations, substitutions, deletions, and additions. For example, she substituted the word "use" for "utility," omitted the ending on "intellectual" reading it as "intellect," and changed "included" to "includes."

Her performance on Phoneme/Grapheme Knowledge (SS = 80; 76–84), the ability to encode and decode nonsense words, was at the 9th percentile, with limited proficiency compared to average grade peers. The task of reading or spelling nonsense words requires the application of phonological and orthographic abilities, both of which are problematic for Tory.

Written Language

Tory obtained scores in the Low Average to Average range on Broad Written Language (SS = 86; 82–90) and Written Expression (SS = 90; 84–95), with Spelling (SS = 85; 81–89) in the Low Average range. Again, just as with reading, Tory's performance in written language was characterized by higher scores on higher-level tasks and lower scores on timed or lower-level basic skills tasks. On the Writing Samples test, a task scored on the quality of the ideas expressed, without penalties for spelling errors, Tory's score was in the High Average to Superior range (SS = 119; 105–132). Her strengths in oral language and reasoning assisted her on this type of task. However, on Writing Fluency, a timed task requiring rapid production of simple sentences, Tory's score was in the Low to Low Average range (SS = 83; 78–87). Although she received a point for every sentence she wrote, she completed only 22 of 40 items during the 7-minute time limit. Tory's spelling was in the Low Average range and was characterized by errors in both phonology and orthography. Looking at her errors on the Writing Samples test, Tory demonstrated a lack of knowledge about the rules that govern English spelling. She did not double the consonant when writing the past tense of "trip" or "stop," spelling these words as "triped" and "stoped." Other examples of errors included "exallent" for "excellent" and "vechile" for "vehicle."

Mathematics

Mathematics was Tory's strongest academic area. The Broad Math cluster was in the Average to High Average range (SS = 108; 104–111). There are three tests in this cluster: Calculation, Applied Problems, and Math Fluency. Again, Tory's performance was better when time limits were not involved, as evidenced by her significantly higher scores on the two untimed tests, Calculation (SS = 111; 105–117) and Applied Problems (SS = 110; 106–115). Math Fluency, a timed test requiring the rapid retrieval of simple addition, subtraction, and multiplication facts, was her lowest score (SS = 91; 88–94). Her performance was accurate but slow. Because math was not an area of concern for Tory, only the tests that constitute the Broad Math cluster were administered. Two of those three tests, Calculation and Math Fluency, create the Basic Math Skills cluster so that is reported as well. Tory's performance on Basic Math Skills was in the Average range (SS = 103; 99–107), with the timed test, Math Fluency, lower than the untimed Calculation test, as noted previously.

Cross-Academic Clusters

The cross-academic clusters, Academic Skills, Academic Fluency, and Academic Applications, evaluate performance across reading, writing, and math. An examination of those three clusters illustrates that Tory primarily struggles with

basic skills and fluency but not with application of those skills to higher-level tasks. This is a common characteristic of individuals with a specific learning disability. Further, by examining the tests within the Academic Skills and Academic Fluency clusters, it is apparent that Tory has difficulty with skills and fluency related to reading and writing but not related to math. For example, in the Academic Skills cluster (SS = 89; 85–93), Tory's performance on Letter-Word Identification (SS = 84; 80–89) and Spelling (SS = 85; 81–89) was in the Low Average range. However, her performance on Calculation (SS = 111; 105–117) was in the Average to High Average range. While struggling with reading and spelling skills, Tory finds math skills easy. This pattern of problems in specific academic areas while other areas are intact is another characteristic of a specific learning disability.

Achievement Testing Summary

The results of the achievement testing reveal normative weaknesses (SS < 85) in the areas of basic reading, spelling, and writing fluency. In addition, Tory has many intact academic areas, especially in mathematics, but also in reading comprehension and oral language. In general, Tory has more difficulty with basic skills and fluency than she does with higher-level tasks. Because her oral language is adequate, it is not the reason for her learning difficulties.

SUMMARY OF FINDINGS

Tory will soon be reentering Greenwood College. She is a polite, friendly, and intellectually curious young woman. She has a history of reading and writing difficulties, including a diagnosis of dyslexia in third grade. Results from past evaluations, her history, and the present evaluation confirm that Tory is an individual with dyslexia, a type of specific learning disability. She demonstrates overall intellectual abilities in the Average range. Her verbal, reasoning, visual-spatial, and long-term retrieval abilities were all in the Average to High Average range, and her short-term memory abilities were in the Average range. These intact abilities help explain her strong performance in mathematics, reading comprehension, and written expression. In contrast, she has significant weaknesses in auditory processing and processing speed. These deficits are related to and help explain her academic limitations in decoding, spelling, and fluency with basic skills. This pattern of strengths and weaknesses suggests the presence of specific learning disabilities.

Her pattern of difficulties indicates a lack of automaticity when working with phonological or orthographic information (i.e., the accurate and automatic identification of printed words and the letter patterns that comprise them). Her basic reading skills were lower than expected given her intellectual ability, verbal ability, and educational background. Her spelling was also below expectation. Qualitatively, many of her incorrect attempts violated basic English spelling principles. Given her pattern of cognitive abilities, her difficulties with decoding and spelling are best explained by deficits in phonological and orthographic processing, as well as her slow naming and processing speed.

Because Tory is not able to decode and spell nearly as many words as are in her oral vocabulary, she is much slower to complete reading and writing assignments than others of her ability and educational level. Compared to her peers, when reading a text she does not recognize as many words quickly and automatically. In addition, her sounding out of unfamiliar or unrecognized words is slow and often inaccurate, taking up cognitive resources that should be available for comprehension and critical thinking. These same problems affect Tory's writing. She has to focus on the basic skills (e.g., letter formation, which letters spell which sounds, what sequence of sounds are in a word), which then reduces her speed and the quantity of work she can complete within a given time frame.

Despite her extraordinary efforts, Tory's learning disabilities limit her access to classroom and textbook information and interfere with her ability to demonstrate what she knows. Tory has the ability and motivation to succeed. Her strengths help her compensate for her specific weaknesses. However, advanced reading and writing tasks are time-consuming and difficult for her. In order to benefit from her future postsecondary experiences, Tory should be encouraged to use all available resources. In addition, Tory should be entitled to the accommodations allowed for individuals with specific learning disabilities.

RECOMMENDATIONS AND ACCOMMODATIONS

The following accommodations would assist Tory in her future courses. The reasons for each accommodation are based on Tory's significant weaknesses in auditory processing, orthographic processing, and processing speed.

1. Provide Tory with extra time for in-class writing and reading assignments.

2. Permit use of a tape/digital recorder during lectures.
3. Provide access to textbooks and required readings on CDs.
4. Allow extended time for exams (double time).
5. Allow use of a computer for writing assignments and exams.
6. If necessary, allow Tory to take exams in a separate room.
7. Allow access to assistive technology.

Tory would benefit from work with a learning disability specialist or an academic coach to help her understand her specific weaknesses and develop strategies that will help her to take advantage of her strengths. In addition, Tory should be encouraged to advocate for herself, creating and requesting accommodations to facilitate her learning experience.