



Edmark
READING PROGRAM

Online Version 2.0

Mastery Test

Technical Manual

Katherine O. Synatschk

Gail R. Ryser



© 2023, 2017, 2011, 2008 by PRO-ED, Inc.
800/897-3202 ext. 670 Fax 800/397-7633
www.proedinc.com

All rights reserved. No part of the material protected by this copyright notice may be reproduced or used in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without prior written permission of the copyright owner.



Contents

1	Introduction	1
	Description of the <i>Mastery Test</i>	1
	Uses of the <i>Mastery Test</i>	1
2	Administration	3
	Examiner Qualifications	3
	Accounting for Situational and Subject Error.	3
3	Interpreting the Results	4
	Determining Mastery	4
	Identifying Reteach Levels	4
	Placing Students for Instruction	4
	Targeting IEP Goals	4
4	Test Development	5
	Sample Characteristics	5
	Reliability.	7
	Validity	10
	Acknowledgments	13
	References.	13

Introduction

1

The *Mastery Test* is an easy-to-use, domain-referenced instrument designed to assess students' mastery of the *Edmark Reading Program*. This chapter presents a description of the *Mastery Test* and its uses.

Description of the *Mastery Test*

The *Mastery Test* for Level 1 and Level 2 measure students' word recognition skills achieved in the *Edmark Reading Program*. The tests may be administered in a short amount of time, using four brief subtests designed to mirror the format of the instructional program.

Discrimination (Subtest 1) and Picture/Phrase Match (Subtest 2) are administered independently to students. Word Recognition (Subtest 3) and Oral Reading (Subtest 4) require teacher participation for administration.

Discrimination requires the student to choose the correct word from among four choices. Picture/Phrase Match requires the student to select the sentence that best describes the accompanying picture. Word Recognition requires the student to read aloud a series of individual words. Oral Reading requires the student to read aloud three short passages.

The test takes approximately 40 minutes to complete (you do not have to administer all four subtests during one testing period). Chapter 3 provides interpretation guidelines to understand and analyze each student's data.

Uses of the *Mastery Test*

The *Mastery Test* can be used to (a) continuously monitor student progress during instruction in the *Edmark Reading Program*; (b) determine the extent of the student's mastery of the program; (c) function as a placement instrument, indicating at what point to begin instruction; and (d) identify targeted reading objectives for the student's Individualized Education Program (IEP). Each use is discussed in the following sections.

- **To Monitor Progress in the *Edmark Reading Program***

The *Mastery Test* measures the student's performance against the criterion established in the *Edmark Reading Program*. It is designed to be used for both formative and summative assessment. A typical scenario for continuous progress monitoring includes (a) initial testing at the beginning of the instructional year to serve as a baseline, (b) testing at midyear or earlier to benchmark progress and make adjustments in the student's IEP, and (c) testing at the end of the instructional year to measure progress.

- To Determine Mastery in the *Edmark Reading Program*

An individual's score on a mastery test is expressed as a percentage of the total number of items answered correctly; a perfect score indicates 100% mastery of the material. Rather than noting achievement of each word as the student completes each lesson, the *Mastery Test* gives a percentage of mastery at any point in the program that reflects the entire program.

- To Determine Placement for Instruction in the *Edmark Reading Program*

When students transfer from one setting to another after having had some instruction in the *Edmark Reading Program*, it may be difficult to determine the most appropriate place to begin new instruction. The *Mastery Test* results show the student's mastery through a specific posttest group within the program. This enables the teacher to determine the appropriate lesson on which to begin instruction. Appendix A: Level 1 Word Groups and Appendix B: Level 2 Word Groups list the order in which the words are taught in the program and in the specific word-group divisions.

- To Define Reading Goals for the IEP

The *Mastery Test's* results can be used to determine the student's strengths and weaknesses regarding specific words and skills learned in the *Edmark Reading Program*. Areas that need reinforcement and a projected mastery level can be indicated in the student's IEP. (Please see Appendix C: Objectives of the *Edmark Reading Program* for specific objectives to include in the student's IEP.)

This chapter contains information dealing with administration of the *Mastery Test*. Included is information concerning who is competent to administer, score, and interpret the *Mastery Test*; and situational and subject error.

Examiner Qualifications

The *Mastery Test* can be administered by classroom teachers, paraprofessionals, school psychologists, or other personnel with some training in standardized test administration. Ideally, the examiner will have a working knowledge of the *Edmark Reading Program* and the instructional strategies used within the program. Examiners who are administering the *Mastery Test* for the first time should study the content of this manual and practice administering the test until they become familiar and comfortable with the test's unique features. Examiners should comply with local school procedures, district policies, state laws, and position statements of their respective professional organizations regarding test administration, interpretation, and issues of confidentiality when administering the *Mastery Test*.

Accounting for Situational and Subject Error

Test reliability can be affected by five inherent sources of error: (a) test content, (b) stability over time, (c) examiner–scorer, (d) examinee, and (e) situation. The first three error sources are the responsibility of the test authors and are discussed in Chapter 4.

The final two sources of error variance arise either from the situation in which students are tested or from within the students themselves. The first source of error variance represents the extent to which environmental variables (e.g., noisy room, poor lighting, uncomfortable furniture) adversely affect the examinee's test performance. The second source of error variance represents the extent to which the examinee's state of being (e.g., fatigue, state of health, anxiety, motivation, attitude toward the test, attention level) affects his or her test performance.

When conducting any kind of assessment, possible situational and subject error should be considered when analyzing the results. If you think that the student's performance was adversely affected by environmental or state-of-being factors, note that on the test. Readminister the test when conditions exist for optimal student performance.

Interpreting the Results

3

In this chapter, we discuss how to interpret *Mastery Test* results. Topics include the various types of information yielded by the test.

Determining Mastery

Mastery tests are used to verify an individual's mastery of knowledge covered in a defined set of learning materials. They also help to assure that an individual has achieved a foundation of knowledge and understanding of a *subject* matter. A score on a mastery test is expressed as a percentage of the total of the number of items answered correctly; a perfect score indicates 100% mastery of the material. On the *Mastery Test Summary* form, it is indicated whether mastery was achieved for each word group. Mastery was obtained when the student got at least 5 correct answers of the 6 opportunities to read the words from a specific word group.

Identifying Reteach Levels

Review the mastery indicators for each word group on the *Summary* form. Identify the first word group that is not shown as mastered with a filled in square as a place to begin reteaching.

Placing Students for Instruction

Review the mastery indicators for each word group on the *Summary* form. Determine the level through which the student maintains consistent mastery, and then place the student to begin reviewing the words taught to that point. Have the student take the Posttest for the last mastered group. Then, for any missed words, select assignments from the word group such as Word Recognition, Picture Match or Phrase Match, Stories, and Writing Practice to make sure the student can read those words reliably. The student should have mastered those words before going on in the *Edmark Reading Program*.

Targeting IEP Goals

Based on the progress demonstrated on the *Mastery Test*, reading objectives can be specified for inclusion in the student's IEP. See *Mastery Test User Guide Appendix C: Objectives of the Edmark Reading Program*, for relevant objectives. Include the completion of specific lessons or words groups as expected performance levels for the student as appropriate.

This chapter describes the technical qualities of the *Mastery Test*. Specifically discussed are (a) the sample characteristics, (b) the reliability of the *Mastery Test*, and (c) the validity of the *Mastery Test*.

Sample Characteristics

In this section, we describe the methods used to collect the sample and the demographic characteristics of the sample for Level 1 and Level 2.

- Selection Procedures

Our final sample consisted of 367 students in 22 states: Arizona, Connecticut, Florida, Idaho, Illinois, Indiana, Louisiana, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Wisconsin, and Wyoming. Of these, 242 students took the *Mastery Test*–Level 1 and 125 students took the *Mastery Test*–Level 2.

We collected the sample in the spring and fall of 2006. The students' teachers or paraprofessionals administered the *Mastery Test*. Examiners were all trained in the *Edmark Reading Program* and used it with their students as the primary reading program. The students were administered the level of *Mastery Test* in which they were currently functioning.

We located examiners by accessing PRO-ED customer files and by asking current users of the *Edmark Reading Program* if they would participate in the validation effort. Each participant was asked to test students between the ages of 5 years and 21 years who were using the *Edmark Reading Program* as their primary reading program. More examiners/sites were recruited to balance the sample demographically. This procedure yielded the demographically representative sample that is described in the following section.

- Demographic Characteristics of the Sample

The characteristics of the normative sample with regard to geographic area, gender, race, ethnicity, family income, educational attainment of parents, exceptionality status, and age are reported as percentages in Table 4.1 and Table 4.2 and compared with those reported in the *Statistical Abstract of the United States* (U.S. Bureau of the Census, 2006). A comparison of the percentages demonstrates that the *Mastery Test* sample closely approximates those of the U.S. population.

Table 4.1
Demographic Characteristics of the Level 1 Sample
(N = 242)

Characteristics	% of sample	% of school-aged population
Geographic Region^a		
Northeast	26	18
Midwest	26	23
South	38	35
West	10	24
Gender^a		
Male	69	51
Female	31	49
Ethnicity^b		
White	77	81
Black/African American	15	13
Asian/Pacific Islander	3	4
American Indian/Eskimo/Aleut	2	1
Two or more	2	1
Other	1	0
Hispanic^b		
Yes	17	13
No	83	87
Family Income (in dollars)^c		
Under 15,000	9	14
15,000–24,999	7	14
25,000–34,999	14	14
35,000–49,999	17	19
50,000–74,999	22	20
75,000 and over	31	19
Educational Attainment of Parents^c		
Less than bachelor's degree	72	74
Bachelor's degree	19	17
Master's, professional, doctorate degree	9	9
Exceptionality Status^a		
Autism	20	
Developmental delay	12	
Hearing impairment	2	
Learning disability	16	
Mental retardation	38	
Speech impairment	7	
Other	5	

Characteristics	% of sample
Age	
5 (n = 2)	1
6 (n = 20)	8
7 (n = 45)	19
8 (n = 34)	14
9 (n = 37)	15
10 (n = 20)	8
11 (n = 21)	9
12 (n = 16)	7
13 (n = 16)	7
14 (n = 5)	2
15 (n = 5)	2
16 (n = 5)	2
17 (n = 3)	1
18 (n = 7)	3
19 (n = 3)	1
20 (n = 3)	1

^aBased on school-aged data reported in the *Statistical Abstract of the United States*, by U.S. Bureau of the Census, 2006, Washington, DC: Author. The data on exceptionality status represents the percentage of students being served under IDEA.

^bBased on total population data reported in the *Statistical Abstract of the United States*, by U.S. Bureau of the Census, 2006, Washington, DC: Author.

^cBased on data reported in *Sourcebook America*, by ESRI Business Information Solutions, 2000, La Jolla, CA: Author.

Reliability

Reliability refers to the consistency of scores and other assessment results from one assessment to another. Often, the primary goal of an assessment is to determine whether performance meets a preestablished standard.

The *Mastery Test* was developed to demonstrate students' achievement of the *Edmark Reading Program's* instructional objectives. Consistency and stability of scores on the *Mastery Test* are discussed next.

• Consistency

The examiner can estimate the extent of each student's sight-word vocabulary from the *Mastery Test*. Because the *Mastery Test* does not contain all of the sight words taught in the *Edmark Reading Program*, we determined how closely the proportion-correct scores approximated the domain scores (i.e., the sight words introduced in the *Edmark Reading Program*). Crocker and Algina (1986) stated that the generalizability coefficient provides this estimate. For dichotomous items, the generalizability coefficient is equivalent to Cronbach's alpha. The coefficients for Level 1, as reported in Table 4.3, ranged from .80 to .97. The coefficients for Level 2, as reported in Table 4.4, ranged from .77 to .95.

• Stability of Scores

Although the *Mastery Test* is considered a mastery test, there is no one cut-score that defines whether the student has mastered the entire test; rather, each word grouping is evaluated for mastery. *Mastery Test*–Level 1 has 15 word

Table 4.2
Demographic Characteristics of the Level 2 Sample
(N = 125)

Characteristics	% of Sample	% of School-Aged Population
Geographic Region^a		
Northeast	22	18
Midwest	35	23
South	31	35
West	12	24
Gender^a		
Male	70	51
Female	30	49
Ethnicity^b		
White	80	81
Black/African American	16	13
Asian/Pacific Islander	2	4
American Indian/Eskimo/Aleut	1	1
Two or more	1	1
Other	0	0
Hispanic^b		
Yes	16	13
No	84	87
Family Income (in dollars)^c		
Under 15,000	10	14
15,000–24,999	8	14
25,000–34,999	15	14
35,000–49,999	18	19
50,000–74,999	22	20
75,000 and over	27	19
Educational Attainment of Parents^c		
Less than bachelor's degree	75	74
Bachelor's degree	17	17
Master's, professional, doctorate degree	8	9
Exceptionality Status^a		
Autism	31	
Developmental delay	0	
Hearing impairment	0	
Learning disability	16	
Mental retardation	46	
Speech impairment	6	
Other	1	

Characteristics	% of Sample
Age	
5 (n = 0)	0
6 (n = 0)	0
7 (n = 3)	2
8 (n = 10)	8
9 (n = 23)	18
10 (n = 22)	18
11 (n = 20)	16
12 (n = 8)	6
13 (n = 12)	10
14 (n = 7)	6
15 (n = 7)	6
16 (n = 5)	4
17 (n = 2)	2
18 (n = 2)	2
19 (n = 2)	2
20 (n = 2)	2

^aBased on school-aged data reported in the *Statistical Abstract of the United States*, by U.S. Bureau of the Census, 2006, Washington, DC: Author. The data on exceptionality status represents the percentage of students being served under IDEA.

^bBased on total population data reported in the *Statistical Abstract of the United States*, by U.S. Bureau of the Census, 2006, Washington, DC: Author.

^cBased on data reported in *Sourcebook America*, by ESRI Business Information Solutions, 2000, La Jolla, CA: Author.

groupings. *Mastery Test*–Level 2 has 12 word groupings. When examining consistency of scores, we administered the test twice, 2 to 3 weeks apart. A total raw score was calculated for each student, and the two testings were correlated.

The sample characteristics for the test–retest study are reported in Table 4.5 and Table 4.6. Tables 4.7 and 4.8 show the reliability coefficient, means, and standard deviations. As the tables illustrate, the test–retest reliability for the *Mastery Test* is more than adequate. The reliability coefficient for Level 1 is .95. The reliability coefficient for Level 2 is .94. As expected, the raw score mean is slightly higher for the second testing than for the first testing, indicating that instruction was occurring during the intervening time period. This illustrates that the *Mastery Test* is an effective measure of progress. These results show that students’ scores are consistent on the *Mastery Test*.

Table 4.3
Internal Consistency Reliabilities
for the Level 1 *Mastery Test* Subtests
(Decimals Omitted)

Values	Reliability
Subtest 1: Discrimination	80
Subtest 2: Picture/Phrase Match	89
Subtest 3: Word Recognition	88
Subtest 4: Oral Reading	97

Table 4.4
Internal Consistency Reliabilities
for the Level 2 *Mastery Test* Subtests
(Decimals Omitted)

Values	Reliability
Subtest 1: Discrimination	77
Subtest 2: Picture/Phrase Match	81
Subtest 3: Word Recognition	89
Subtest 4: Oral Reading	95

Validity

Validity research provides the user with evidence that the instrument in question measures what it purports to measure, that it can be put to work for its stated or intended purposes, and that useful inferences can be drawn from its results. Because an instrument's validity will vary according to the purpose for which its results are being used and for the types of individuals assessed, validity must be continuously investigated until a conclusive body of research has been accumulated. The data presented in the next section demonstrate that the *Mastery Test* is a valid instrument for assessing students' achievement of the instructional objectives of the *Edmark Reading Program*.

Table 4.5
Demographic Characteristics of the
Level 1 *Mastery Test* Test–Retest Sample

Characteristics	<i>n</i> (<i>N</i> = 45)
Gender	
Male	33
Female	12
Ethnicity	
White	24
Black/African American	7
Asian/Pacific Islander	2
Two or more	1
Hispanic	
Yes	11
No	34
Exceptionality Status	
Autism	2
Learning Disability	3
Mental Retardation	37
Speech Impairment	3
Age	
6	2
7	8
8	6
9	4
10	4
11	3
12	3
13	3
14	2
15	2
16	2
17	1
18	3
19	1
20	1
21	0

Note. Location = AZ, IA, ID, NY, PA, TX.

Table 4.6
Demographic Characteristics of the
Level 2 *Mastery Test* Test–Retest Sample

Characteristics	<i>n</i> (<i>N</i> = 25)
Gender	
Male	16
Female	9
Ethnicity	
White	16
Black/African American	3
Asian/Pacific Islander	0
Two or more	0
Hispanic	
Yes	6
No	19
Exceptionality Status	
Autism	2
Learning Disability	4
Mental Retardation	19
Speech Impairment	0
Age	
6	0
7	0
8	1
9	2
10	4
11	6
12	2
13	4
14	2
15	1
16	1
17	1
18	0
19	0
20	0
21	1

Note. Location = AZ, IA, ID, NY, PA, TX.

Table 4.7
Reliability Coefficient, Means,
and Standard Deviations
for Level 1 Test–Retest Study

Level	<i>r</i>	First testing		Second testing	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1 Total Score	.95	35.7	22.3	39.4	22.9

Table 4.8
Reliability Coefficient, Means,
and Standard Deviations
for Level 2 Test–Retest Study

Level	<i>r</i>	First Testing		Second Testing	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2 Total Score	.94	33.0	17.2	37.8	18.6

• Test Development

To develop the format for the subtests of the *Mastery Test*, we examined the instructional formats used in the *Edmark Reading Program*. Because the *Edmark Reading Program* is a systematic program designed for use by students with moderate and severe disabilities, we believed a close similarity in the design of subtests would contribute to ease of use by students and examiners and lead to more reliable and valid student performance results. As a result, the four subtests closely resemble the learning tasks students are asked to perform in the program. A fundamental requirement for constructing a domain-referenced measure is a clearly defined domain of knowledge or skills to be assessed by the test. The domain in this case consists of the 150 sight words in Level 1 and the 200 sight words in Level 2 in the *Edmark Reading Program*. We randomly selected words from the entire pool of sight words using the following procedures.

First, we subdivided the *Edmark Reading Program* Word List into word groups, defined by the groups of words students are taught before taking one or more posttests (Level 1 has 15 word groups, Level 2 has 12 word groups). Next, we selected three words at random from each word group. One word was used in each of the first three subtests, Discrimination, Picture/Phrase Match, and Word Recognition. Finally, we chose three more words from each word group to create the Oral Reading subtest. These words were selected purposefully to create reading passages that made sense to the reader. For the *Mastery Test*–Level 1, we chose three sight words from five consecutive word groups to create three reading passages with 15 target words per passage. For the *Mastery Test*–Level 2, we chose three sight words from four consecutive word groups to create three passages with 12 target words per passage. In each reading passage we included words that the student had already learned.

• Pilot Study

We pilot tested the *Mastery Test*–Level 1 with 61 students from Iowa, California, and South Carolina. The students ranged in age from 6 to 14 years. Forty-eight students were White, 9 were Hispanic, and 4 were African American. Forty-two of the students were male, and 19 were female. Forty-eight students had mental retardation, 8 had a developmental delay, 3 had autism, and 2 had a traumatic brain injury.

The pilot test consisted of four subtests: Discrimination, Picture/Phrase Match, Oral Reading, and Word Recognition. The original Word Recognition subtest used a format of word strings that required the student to circle an actual word amidst a line of letters. This format had proven successful in other tests and would have allowed this subtest to be administered in group format. In field testing, however, this format proved difficult for some of the students being tested and led us to question the accuracy of their test results. Therefore, this subtest was redesigned to match the word recognition tasks in the program. In addition to this change, we modified several of the Discrimination items and Oral Reading passages based on the item analysis results. We also developed *Mastery Test*–Level 2 using the same subtest formats as the modified *Mastery Test*–Level 1. In further field testing, all four subtests provided accurate results.

Table 4.9
Percentage of Accurate and Inaccurate Decisions for Level 1

Level	% accurate	% inaccurate
1	83	17

Table 4.10
Percentage of Accurate and Inaccurate Decisions for Level 2

Level	% Accurate	% Inaccurate
2	82	18

- Decision Accuracy

Making decisions about students' levels of competency is one of the major uses of domain-referenced mastery tests. When test scores are used in this way, one must provide evidence of the accuracy of the decisions made on the basis of the scores. For the *Mastery Test*, decision accuracy is defined by the degree to which the results of the test match the set of lessons the student is currently learning in the *Edmark Reading Program*. Previously, we described that word groups were created by the groups of words students are taught before taking one or more posttests. Each word grouping contains several lessons. For example, the first word grouping in *Mastery Test*–Level 1 includes Lessons 1 through 10, and the second word grouping includes Lessons 11 through 20. For each grouping, mastery is defined as obtaining a score of 5 or 6, representing 85% or 100%, respectively. We examined the mastery levels for all students to determine if the mastery levels matched their lesson placement. An inaccurate decision was defined as one in which students either (a) did not demonstrate mastery of word groupings that came before where they were in the lesson sequence or (b) demonstrated mastery of word groupings beyond where they were in the lesson sequence. Thus, a student in Lesson 15 should demonstrate mastery of word grouping 1 and should not demonstrate mastery of word groupings 3 or beyond.

As Table 4.9 illustrates, the *Mastery Test*–Level 1 places students in the correct word grouping 83% of the time. As Table 4.10 illustrates, the *Mastery Test*–Level 2 places students in the correct word grouping 82% of the time. The majority of the inaccurate decisions occurred because students demonstrated mastery of word groupings beyond where they were in the *Edmark Reading Program*'s lesson sequence. This may be a problem with the instructional sequence rather than with the *Mastery Test*. That is, teachers may be placing students in *Edmark Reading Program* lessons that are too easy for them. The *Mastery Test* can be a valuable resource to teachers in placing students in the lesson sequence at their optimal level of learning. These results demonstrate the validity of using the *Mastery Test* as a mastery test.

Acknowledgments

We are indebted to many people who supported our efforts to construct and test the *Mastery Test*, Levels 1 and 2. They were generous in their contributions, time, and advice, and we could not have completed the test without their assistance. We especially want to thank the following people: Peggy Wolf, Life Skills Lead Teacher, Round Rock Independent School District, Round Rock, Texas; Diana Ocheltree, Clinton Public Schools, Clinton, Iowa; and Ramona Lee of Fruitland, Idaho. We could not have produced the *Mastery Test* without the help of these dedicated professionals—thank you to each of you.

To the following people who provided valuable pilot testing and field testing of the *Mastery Test*, Levels 1 and 2, we offer a sincere thank you: Norma Vangunten (Arizona); Margaret Kozub, K. Marshello, and K. Ryan (Connecticut); Jamie Scmitt (Florida); Wren Garcia, Gina Kemble, and Lori Steiniker (Idaho); Karla Bellisario (Illinois); Kim Eaker, Lynnette Lott, and Jessica Reistroffer (Indiana); DeWanna Pipes (Louisiana); Bernadette Seariac (Massachusetts); Kathi McMahon (Michigan); Julie Schramm and Connie Sim (Minnesota); Wendy Craig (Nebraska); Debra Bradley, Alicia Fahlman, Heather Paolo, and Robin Thorne (New Jersey); Patricia DeCarlo, Jillian Golden, Rose Mastropolo, Rosanne Murphy, Michele Reser, Krista Schwarzer, Mary Ann Siano, and Lynn Watson (New York); Lindsay Travis (North Carolina); G. Cardone, Teresa Groll, Jeana Kirkendall, Julie Moor, Karis Norton, Sheryl Reeve, Jessica Reistroffer, Heather Rubley, Christa Stalter, Tiffany Triplett, and Anne Utrup (Ohio); Cindy Cordray (Oregon); Michael Birnbaum, Robin Bok, Jacque Cooper, Robin DeViva, Nancy Harkins, Sue Marcin, Shirley Mennella, Deborah Olah, Martha Smith, Heather Wadding, and Cynthia Zimmerman (Pennsylvania); Charleen Ricci (Rhode Island); Laura Davis (South Carolina); Julie Brown and Dawn Leenderts (South Dakota); Robert Glen Buscha, Ana Caldas, Rose Chambers, Carol Clark, Cindy Davis, Jill Ginger, Linda Gregory, Amy Hansen, Cynthia Homer, Sallie Humphreys, Lori Kajimura, Joe Kida, Janet Lewis, Mary Maluski, Alma Mancillas, Lynne Pfeffer, Crystal Plemons, Martha Ratcliff, Darcy Schiller, Sherri Schneider, Jackie Slaughter, Shannon Souter, Martin Synatschk, Nancy Tighe, and Gail Wilson (Texas); Deanna Kostroski (Wisconsin); Barbara Van Hoosier (Wyoming).

We also want to thank the students who are using the *Edmark Reading Program* and those who participated in the field testing. We appreciate your contributions as well.

References

- Aiken, L. R. (2003). *Psychological testing and assessment* (11th ed.). Allyn & Bacon.
- Anastasi, A., & Urbina, S. (1997). *Psychological testing* (7th ed.). Prentice Hall.
- Crocker, L., & Algina, J. (1986). *Introduction to classical and modern test theory*. Wadsworth.
- ESRI Business Information Solutions. (2000). *Sourcebook America*. Author.
- Glaser, R. (1963). Instructional technology and the measurement of learning outcomes: Some questions. *American Psychologist*, 18, 519–523.
- Gronlund, N. E. (1998). *Assessment of student achievement* (6th ed.). Allyn & Bacon.
- PRO-ED, Inc. (2011). *Edmark reading program*. Author.
- U.S. Bureau of the Census. (2006). *Statistical abstract of the United States: Projections for 2005*. Author.