Measuring Attitude Toward Reading: A New Tool for Teachers

Michael C. McKenna and Dennis J. Kear

In 1762, the philosopher Rousseau speculated that any method of teaching reading would suffice given adequate motivation on the part of the learner. While present-day educators might resist such a sweeping pronouncement, the importance of attitude is nevertheless widely recognized. The Commission on Reading in its summary of research (Anderson, Hiebert, Scott, & Wilkinson, 1985) concluded that "becoming a skilled reader requires…learning that written material can be interesting" (p. 18). Smith (1988) observed that "the emotional response to reading...is the primary reason most readers read, and probably the primary reason most nonreaders do not read" (p. 177). Wixson and Lipson (in press) acknowledge that "the student's attitude toward reading is a central factor affecting reading performance." These conclusions are based on a long history of research in which attitude and achievement have been consistently linked (e.g., Purves & Beach, 1972; Walberg & Tsai, 1985).

The recent emphasis on enhanced reading proficiency has often ignored the important role played by children's attitudes in the process of becoming literate. Athey (1985) suggested that one reason for this tendency is that the affective aspects of reading tend to be ill-defined and to involve "shadowy variables" (p. 527) difficult to conceptualize, measure, and address instructionally.

The focus of recent research and development in assessment has been comprehension rather than attitude. Some progress has been made in the development of individually administered, qualitative instruments, but quantitative group surveys, which form a natural complement to qualitative approaches, are often poorly documented in terms of desirable psychometric attributes, such as normative frames of reference and evidence of reliability and validity. Our purpose was to produce a public-domain instrument that would remedy these shortcomings and enable teachers to estimate attitude levels efficiently and reliably. This article presents that instrument along with a discussion of its development and suggestions for its use.

Development of the Scale

Several important criteria were established to guide the development of the instrument. The

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authors agreed that the survey must (a) have a large-scale normative frame of reference; (b) comprise a set of items selected on the basis of desirable psychometric properties; (c) have empirically documented reliability and validity; (d) be applicable to all elementary students, Grades 1 through 6; (e) possess a meaningful, attention-getting, student-friendly response format; (f) be suitable for brief group administration; and (g) comprise separate subscales for recreational and academic reading. We knew of no instrument that possessed all of these characteristics.

A pictorial format was elected because of its natural appeal for children and because of its comprehensibility by the very young. An informal survey of more than 30 elementary teachers indicated that the comic strip character Garfield was more apt to be recognized by children in Grades 1 through 6 than any other. Jim Davis, who is the creator of Garfield, and United Features, his publisher, agreed to supply four black-line, camera-ready poses of Garfield, ranging from very happy to very upset, and to permit the resulting instrument to be copied and used by educators. (See the Elementary Reading Attitude Survey and scoring sheet prior to the Appendix at the end of this article.)

An even number of scale points avoids a neutral, central category which respondents often select in order to avoid committing themselves even when clear opinions exist (Nunnally, 1967). The use of four points was based on a substantial body of research suggesting that young children typically can discriminate among no more than five discrete bits of information simultaneously (e.g., Case & Khanna, 1981; Chi, 1978; Chi & Klahr, 1975; Nitko, 1983).

Several earlier surveys were used as models in the creation of an item pool from which the final set of items would be constructed (e.g., Estes, 1971; Heathington, 1979; Right to Read, 1976; Robinson & Good, 1987). A total of 39 items were developed, each related to one of two aspects of attitude: (a) attitude toward recreational reading (24 items) or (b) attitude toward academic reading (15 items). To establish a consistent, appropriate expectation on the part of the students, each item was worded with a uniform beginning: "How do you feel...."

This prototype instrument was then administered to 499 elementary students in a middle-sized midwestern U.S. school district. For each of the two item sets (recreational and academic), final sets of 10 items each were selected on the basis of inter-item correlation coefficients. The revised instrument was then administered at midyear to a national sample of over 18,000 children in Grades 1–6. Estimates of reliability, as well as evidence of validity, were based on this national sample. A complete description of the technical aspects of the survey appears in the Appendix.

Administering and Scoring the Survey

The Elementary Reading Attitude Survey (ERAS) can be given to an entire class in a matter of minutes, but, as with any normed instrument, it is important that the administration reflect as closely as possible the procedure used with the norming group. The administration procedures are presented in the "Directions for Use" information that accompanies the instrument itself. This process involves first familiarizing students with the instrument and with the purposes for giving it. The teacher next reads the items aloud twice as the students mark their responses.

Each item is then assigned 1, 2, 3, or 4 points, a "4" indicating the happiest (leftmost) Garfield. The scoring sheet that follows the instrument can be used to organize this process and record recreational, academic, and total scores, along with the percentile rank of each. The results are then ready for use.

Using the Survey

Collecting data about students is an empty exercise unless the information is used to plan instruction. Scores on the ERAS can be helpful in this process, but it is important to understand what they can and cannot do as well as how they relate to other sources of information.

Strengths and limitations. This survey provides quantitative estimates of two important aspects of children's attitudes toward reading. Like global measures of achievement, however, they can do little in themselves to identify the causes of poor attitude or to suggest instructional techniques likely to improve it. On the other hand, the instrument can be used to (a) make possible initial conjecture about the attitudes of specific students, (b) provide a convenient group profile of a class (or a larger unit), or (c) serve as a means of monitoring the attitudinal impact of instructional programs.

A classroom plan. A teacher might begin by administering the ERAS during the first few weeks of the school year. Class averages for recreational and academic reading attitude will enable the teacher to characterize the class generally on these two dimensions. Scores for individual students may suggest the need to further explore the nature, strength, and origins of their values and beliefs. This goal could be pursued through the use of individually conducted strategies such as structured interviews, open-ended sentence instruments, or interest inventories. Reed (1979) suggested using nonreactive measures as well, such as recorded teacher observations following reading instruction and reading-related activities. The combination of these techniques provides a variety of useful information that can be collected in portfolio fashion for individual students.

Survey results can be very useful in deciding what sorts of additional information to pursue. Four general response patterns are especially notable, and we will depict each of them with hypothetical students who are, in fact, composites of many with whom we have worked.

Two profiles involve sizable differences (5 points or more) between recreational and academic scores. Jimmy, a third grader, has a recreational score of 29 and an academic score of 21. The difference suggests a stronger attitude toward reading for fun than for academic purposes. To an extent, this pattern is typical of third graders (compare the means in Table 2 in the Appendix), but not to the degree exhibited in Jimmy's case. Had both scores been higher, Jimmy's teacher might have been justified in disregarding the difference, but a score of 21 is low both in the criterial sense (it is close to the slightly frowning Garfield) and in a normative one (18th percentile rank). Examining the last 10 items of the survey one-by-one might prove helpful in forming hypotheses about which aspects are troublesome. These can then be tested by carefully observing Jimmy during reading instruction.

For Katy, a fifth grader, assume that the two scores are reversed. By virtue of her stronger attitude toward academic reading, Katy is somewhat atypical. Her academic score of 29 is quite strong in both a criterial sense (it is near the slightly smiling Garfield) and a normative sense (71st percentile rank). Her score of 21 in recreational reading attitude is cause for concern (13th percentile rank), but the strong academic score suggests that her disdain is not total and may be traceable to causes subject to intervention. Because items 1–10 are somewhat global in nature, it is unlikely that scrutinizing her responses will be very helpful. A nonthreatening chat about reading habits may be much more productive in helping her teacher identify Katy's areas of interest and even suggest a book or two. Katy may not have been exposed to a variety of interesting trade books.

Two other profiles involve differences between attitude and ability. These are very real possibilities that require careful attention

(Roettger, 1980). Consider Patrick, a second grader whose academic attitude score is 28 and who has been placed in a low-ability group by his teacher. Patrick's relatively positive score (near the smiling Garfield) may encourage his teacher, for it is apt to be higher than others in his reading group. However, more than half of his second-grade peers across the country have stronger attitudes toward reading in school. Data from this study document a widening attitudinal gap between low- and high-ability children as they move through school. Patrick's teacher should be concerned about the likely effects of another frustrating year on his attitude toward instruction. Teaching methods and instructional materials should be scrutinized.

Ironically, the same conclusion might be reached for Deborah, a sixth-grade student of extraordinary ability. Her academic attitude score, however, is only 17, which is quite negative, whether one looks to its position among the pictures or notes that it represents a percentile rank of 11. If Deborah's recreational score were substantially higher, her teacher would be correct in wondering whether the instruction she is receiving is adequately engaging. As with Jimmy, an inspection of her responses to items 11–20 could be helpful, followed by a nonintrusive reading interview and tactful observation. On the other hand, suppose that Deborah's recreational score were also 17. This would place her total score (34) at the 5th percentile rank and suggest a strong disinclination to read despite the ability to do so. This would warrant action on the part of an insightful teacher who is willing to make instructional and leisure reading attractive.

Examples of this nature illustrate how the Elementary Reading Attitude Survey can enter into the process of instructional planning, especially near the beginning of a school year. As the year draws to a close, the survey can again be given, this time to monitor any attitudinal changes of the class as a whole. By comparing class averages from the beginning and end of the year, a teacher can gauge the movement of a class relative both to its own earlier position and to a national midyear average. Estimating year-long changes for individual students is a less reliable process and should only be attempted with regard to the standard error of measurement for a given subscale and grade level (see Table 2 in the Appendix). We recommend using twice the standard error to construct an adequate confidence interval. In other words, the pre/post difference would, in general, need to be 5 points or more on either the academic or recreational subscale before *any* real change could be assumed. On the total score, the pre/post change would need to be 7 or 8 points.

Conclusion

The instrument presented here builds on the strengths of its predecessors and, it is hoped, remedies some of their psychometric shortcomings. Its placement into the public domain by means of this article provides teachers with a tool that can be used with relative confidence to estimate the attitude levels of their students and initiate informal assessment efforts into the role attitude plays in students' development as readers.

Authors' Note

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Elementary Reading Attitude Survey
Directions for use

The Elementary Reading Attitude Survey provides a quick indication of student attitudes toward reading. It consists of 20 items and can be administered to an entire classroom in about 10 minutes. Each item presents a brief, simply worded statement about reading, followed by four pictures of Garfield. Each pose is designed to depict a different emotional state, ranging from very positive to very negative.

Administration

Begin by telling students that you wish to find out how they feel about reading. Emphasize that this is *not* a test and that there are no "right" answers. Encourage sincerity.

Distribute the survey forms and, if you wish to monitor the attitudes of specific students, ask them to write their names in the space at the top. Hold up a copy of the survey so that the students can see the first page. Point to the picture of Garfield at the far left of the first item. Ask the students to look at this same picture on their own survey form. Discuss with them the mood Garfield seems to be in (very happy). Then move to the next picture and again discuss Garfield's mood (this time, a *little* happy). In the same way, move to the third and fourth pictures and talk about Garfield's moods—a little upset and very upset. It is helpful to point out the position of Garfield's *mouth*, especially in the middle two figures.

Explain that together you will read some statements about reading and that the students should think about how they feel about each statement. They should then circle the picture of Garfield that is closest to their own feelings. (Emphasize that the students should respond according to their own feelings, not as Garfield might respond!) Read each item aloud slowly and distinctly; then read it a second time while students are thinking. Be sure to read the item *number* and to remind students of page numbers when new pages are reached.

Scoring

To score the survey, count four points for each leftmost (happiest) Garfield circled, three for each slightly smiling Garfield, two for each mildly upset Garfield, and one point for each very upset (rightmost) Garfield. Three scores for each student can be obtained: the total for the first 10 items, the total for the second 10, and a composite total. The first half of the survey relates to attitude toward recreational reading; the second half relates to attitude toward academic aspects of reading.

Interpretation

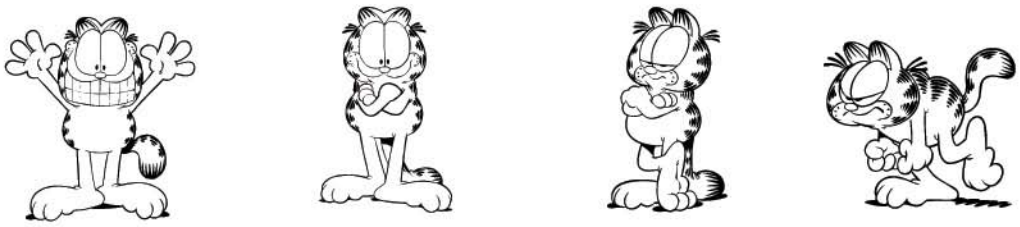
You can interpret scores in two ways. One is to note informally where the score falls in regard to the four nodes of the scale. A total score of 50, for example, would fall about mid-way on the scale, between the slightly happy and slightly upset figures, therefore indicating a relatively indifferent overall attitude toward reading. The other approach is more formal. It involves converting the raw scores into percentile ranks by means of Table 1. Be sure to use the norms for the right grade level and to note the column headings (Rec = recreational reading, Aca = academic reading, Tot = total score). If you wish to determine the average percentile rank for your class, average the raw scores first; then use the table to locate the percentile rank corresponding to the raw score mean. Percentile ranks cannot be averaged directly.

Elementary Reading Attitude Survey

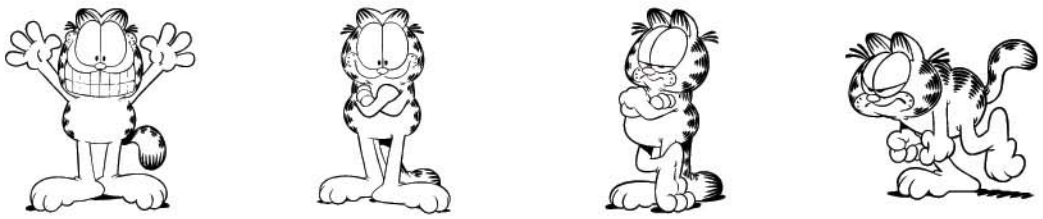
School_____ Grade_____ Name_____

Please circle the picture that describes how you feel when you read a book.

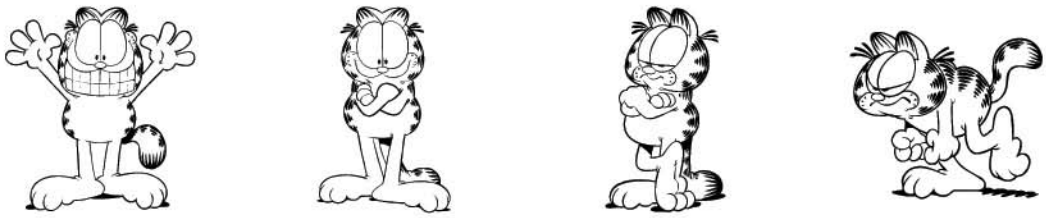
1. How do you feel when you read a book on a rainy Saturday?



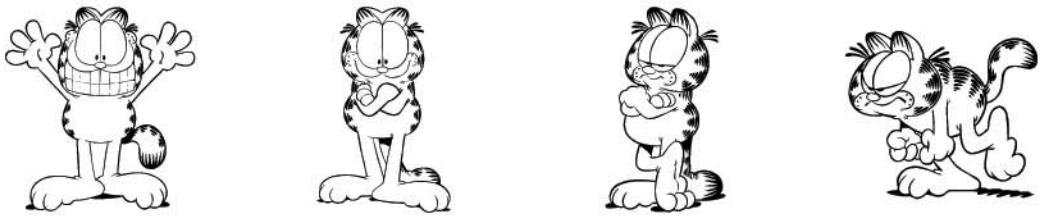
2. How do you feel when you read a book in school during free time?



3. How do you feel about reading for fun at home?

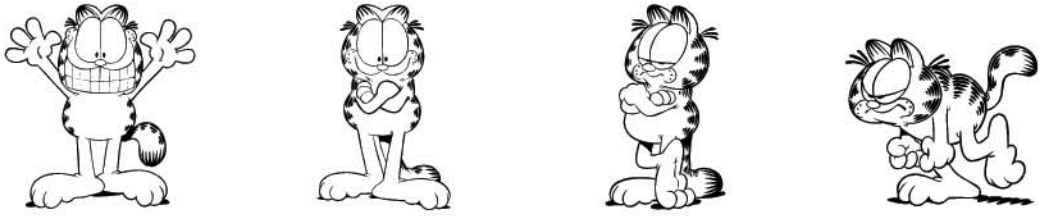


4. How do you feel about getting a book for a present?

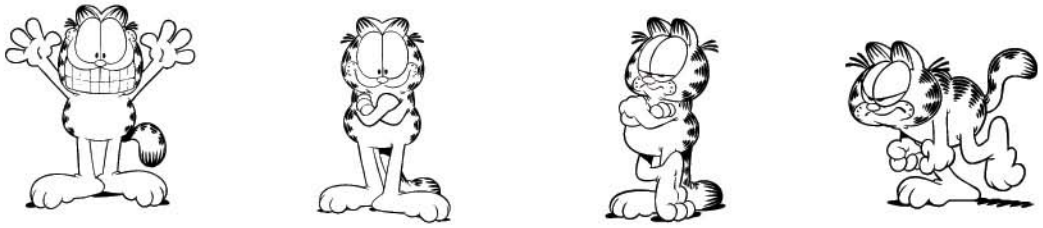


Please circle the picture that describes how you feel when you read a book.

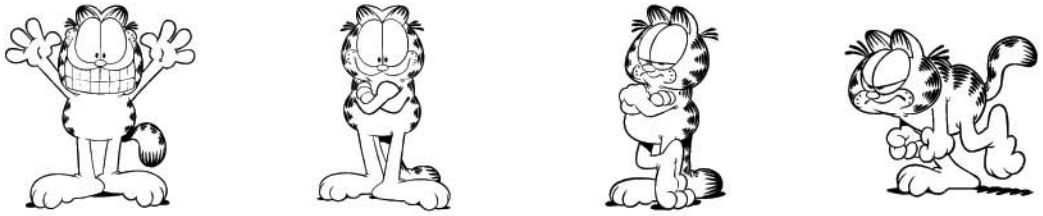
5. How do you feel about spendng free time reading a book?



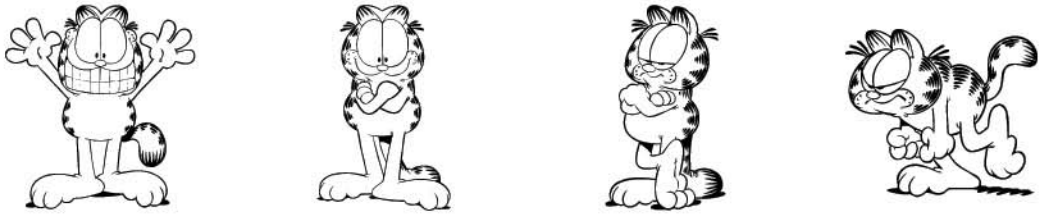
6. How do you feel about starting a new book?



7. How do you feel about reading during summer vacation?

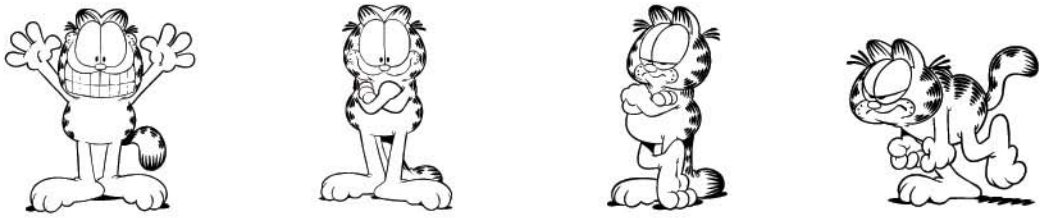


8. How do you feel about reading instead of playing?

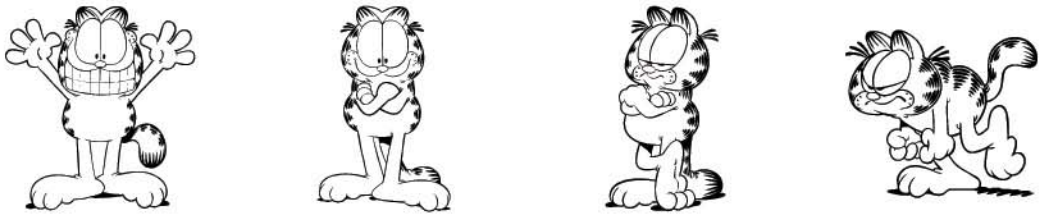


Please circle the picture that describes how you feel when you read a book.

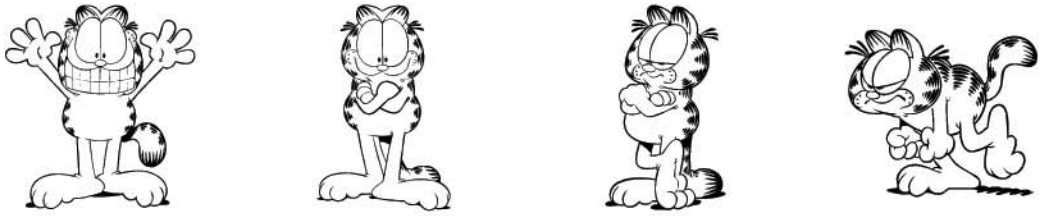
9. How do you feel about going to a bookstore?



10. How do you feel about reading different kinds of books?



11. How do you feel when a teacher asks you questions about what you read?

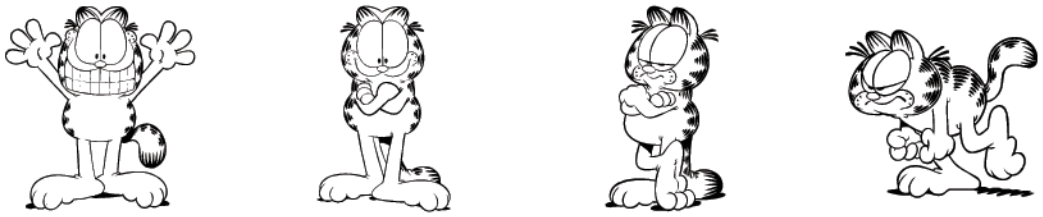


12. How do you feel about reading workbook pages and worksheets?

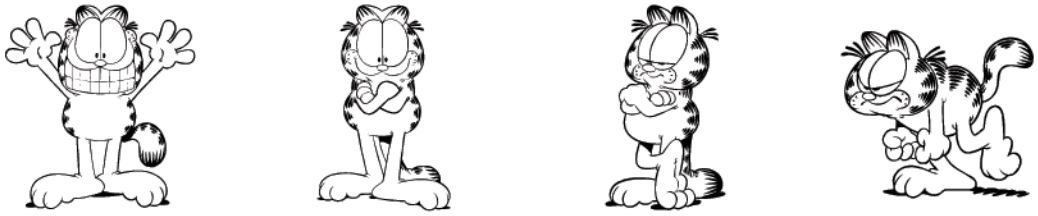
Please circle the picture that describes how you feel when you read a book.

13. How do you feel about reading in school?

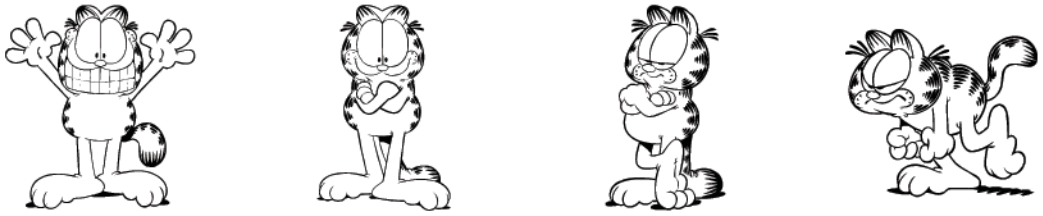
14. How do you feel about reading your school books?



15. How do you feel about learning from a book?

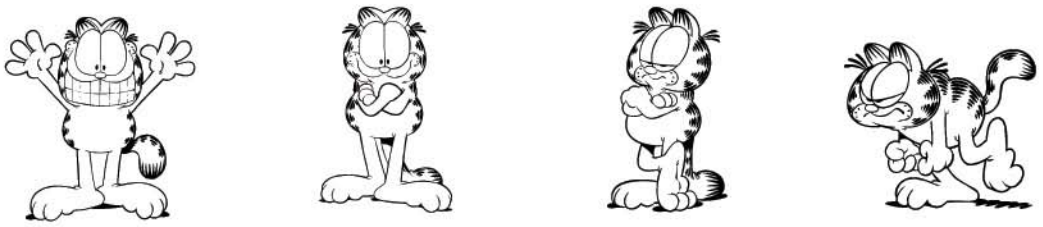


16. How do you feel when it's time for reading in class?

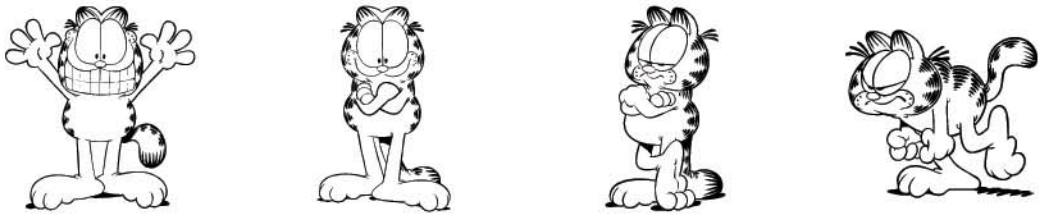


Please circle the picture that describes how you feel when you read a book.

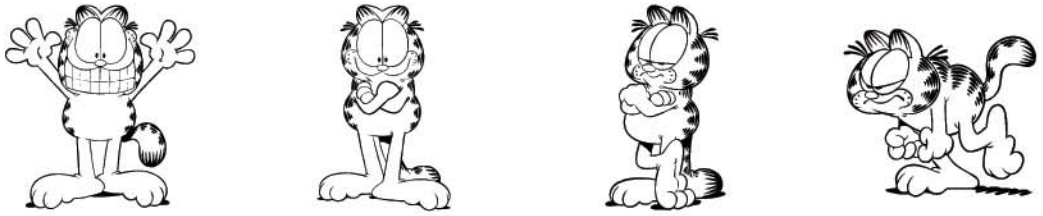
17. How do you feel about stories you read in reading class?



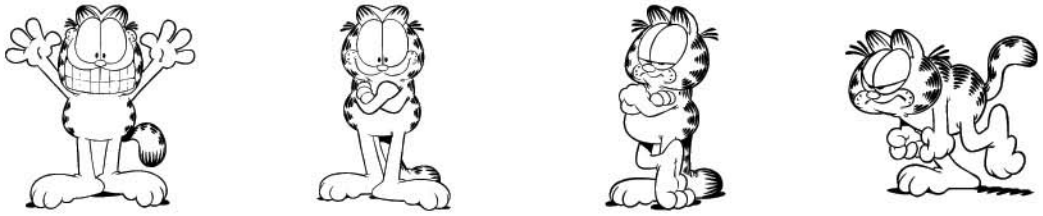
18. How do you feel when you read out loud in class?



19. How do you feel about using a dictionary?



20. How do you feel about taking a reading test?



Elementary Reading Attitude Survey Scoring Sheet

Student Name_____

Teacher_____

Grade_____ Administration Date_____

Scoring Guide	
4 points	Happiest Garfield
3 points	Slightly smiling Garfield
2 points	Mildly upset Garfield
1 point	Very upset Garfield

Recreational reading	Academic reading
1. ____	1. ____
2. ____	2. ____
3. ____	3. ____
4. ____	4. ____
5. ____	5. ____
6. ____	6. ____
7. ____	7. ____
8. ____	8. ____
9. ____	9. ____
10. ____	10. ____
Raw Score: ____	Raw Score: ____

Full scale raw score . . . . . (Recreational + Academic): _____

Percentile ranks: . . . . . Recreational

. . . . . Academic

. . . . . Full scale

Survey designed by Dennis J. Kear, Wichita State University

Appendix
Technical Aspects of the Elementary Reading Attitude Survey

The norming project

To create norms for the interpretation of scores, a large-scale study was conducted in late January 1989, at which time the survey was administered to 18,138 students in Grades 1–6. A number of steps were taken to achieve a sample that was sufficiently stratified (i.e., reflective of the American population) to allow confident generalizations. Children were drawn from 95 school districts in 38 U.S. states. The number of girls exceeded by only 5 the number of boys. Ethnic distribution of the sample was also close to that of the U.S. population (*Statistical abstract of the United States*, 1989). The proportion of blacks (9.5%) was within 3% of the national proportion, while the proportion of Hispanics (6.2%) was within 2%.

Percentile ranks at each grade for both subscales and the full scale are presented in Table 1. These data can be used to compare individual students' scores with the national sample and they can be interpreted like achievement-test percentile ranks.

Table 1
Mid-year percentile ranks by grade and scale

Raw	Grade 1			Grade 2			Grade 3			Grade 4			Grade 5			Grade 6		
Scr	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot
80	99			99			99			99			99			99		
79	95			96			98			99			99			99		
78	93			95			97			98			99			99		
77	92			94			97			98			99			99		
76	90			93			96			97			98			99		
75	88			92			95			96			98			99		
74	86			90			94			95			97			99		
73	84			88			92			94			97			98		
72	82			86			91			93			96			98		
71	80			84			89			91			95			97		
70	78			82			86			89			94			96		
69	75			79			84			88			92			95		
68	72			77			81			86			91			93		
67	69			74			79			83			89			92		
66	66			71			76			80			87			90		
65	62			69			73			78			84			88		
64	59			66			70			75			82			86		
63	55			63			67			72			79			84		
62	52			60			64			69			76			82		
61	49			57			61			66			73			79		
60	46			54			58			62			70			76		
59	43			51			55			59			67			73		
58	40			47			51			56			64			69		
57	37			45			48			53			61			66		
56	34			41			44			48			57			62		
55	31			38			41			45			53			58		
54	28			35			38			41			50			55		

Table 1
Mid-year percentile ranks by grade and scale (continued)

Raw Scr	Grade 1			Grade 2			Grade 3			Grade 4			Grade 5			Grade 6		
	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot	Rec	Aca	Tot
53			25			32			34			38			46			52
52			22			29			31			35			42			48
51			20			26			28			32			39			44
50			18			23			25			28			36			40
49			15			20			23			26			33			37
48			13			18			20			23			29			33
47			12			15			17			20			26			30
46			10			13			15			18			23			27
45			8			11			13			16			20			25
44			7			9			11			13			17			22
43			6			8			9			12			15			20
42			5			7			8			10			13			17
41			5			6			7			9			12			15
40	99	99	4	99	99	5	99	99	6	99	99	7	99	99	10	99	99	13
39	92	91	3	94	94	4	96	97	6	97	98	6	98	99	9	99	99	12
38	89	88	3	92	92	3	94	95	4	95	97	5	96	98	8	97	99	10
37	86	85	2	88	89	2	90	93	3	92	95	4	94	98	7	95	99	8
36	81	79	2	84	85	2	87	91	2	88	93	3	91	96	6	92	98	7
35	77	75	1	79	81	1	81	88	2	84	90	3	87	95	4	88	97	6
34	72	69	1	74	78	1	75	83	2	78	87	2	82	93	4	83	95	5
33	65	63	1	68	73	1	69	79	1	72	83	2	77	90	3	79	93	4
32	58	58	1	62	67	1	63	74	1	66	79	1	71	86	3	74	91	3
31	52	53	1	56	62	1	57	69	0	60	75	1	65	82	2	69	87	2
30	44	49	1	50	57	0	51	63	0	54	70	1	59	77	1	63	82	2
29	38	44	0	44	51	0	45	58	0	47	64	1	53	71	1	58	78	1
28	32	39	0	37	46	0	38	52	0	41	58	1	48	66	1	51	73	1
27	26	34	0	31	41	0	33	47	0	35	52	1	42	60	1	46	67	1
26	21	30	0	25	37	0	26	41	0	29	46	0	36	54	0	39	60	1
25	17	25	0	20	32	0	21	36	0	23	40	0	30	49	0	34	54	0
24	12	21	0	15	27	0	17	31	0	19	35	0	25	42	0	29	49	0
23	9	18	0	11	23	0	13	26	0	14	29	0	20	37	0	24	42	0
22	7	14	0	8	18	0	9	22	0	11	25	0	16	31	0	19	36	0
21	5	11	0	6	15	0	6	18	0	9	20	0	13	26	0	15	30	0
20	4	9	0	4	11	0	5	14	0	6	16	0	10	21	0	12	24	0
19	2	7		2	8		3	11		5	13		7	17		10	20	
18	2	5		2	6		2	8		3	9		6	13		5	18	
17	1	4		1	5		1	5		2	7		4	9		6	11	
16	1	3		1	3		1	4		2	5		3	6		4	8	
15	0	2		0	2		0	3		1	3		2	4		3	6	
14	0	2		0	1		0	1		1	2		1	2		1	3	
13	0	1		0	1		0	1		0	1		1	2		1	2	
12	0	1		0	0		0	0		0	1		0	1		0	1	
11	0	0		0	0		0	0		0	0		0	0		0	0	
10	0	0		0	0		0	0		0	0		0	0		0	0	

Appendix
Technical Aspects of the Elementary Reading Attitude Survey (continued)

Reliability

Cronbach's alpha, a statistic developed primarily to measure the internal consistency of attitude scales (Cronbach, 1951), was calculated at each grade level for both subscales and for the composite score. These coefficients ranged from .74 to .89 and are presented in Table 2.

It is interesting that with only two exceptions, coefficients were .80 or higher. These were for the recreational subscale at Grades 1 and 2. It is possible that the stability of young children's attitudes toward leisure reading grows with their decoding ability and familiarity with reading as a pastime.

Table 2
Descriptive statistics and internal consistency measures

		Recreational Subscale				Academic Subscale				Full Scale (Total)			
Grade	N	M	SD	S_eM	Alpha[a]	M	SD	S_eM	Alpha	M	SD	S_eM	Alpha
1	2,518	31.0	5.7	2.9	.74	30.1	6.8	3.0	.81	61.0	11.4	4.1	.87
2	2,974	30.3	5.7	2.7	.78	28.8	6.7	2.9	.81	59.1	11.4	3.9	.88
3	3,151	30.0	5.6	2.5	.80	27.8	6.4	2.8	.81	57.8	10.9	3.8	.88
4	3,679	29.5	5.8	2.4	.83	26.9	6.3	2.6	.83	56.5	11.0	3.6	.89
5	3,374	28.5	6.1	2.3	.86	25.6	6.0	2.5	.82	54.1	10.8	3.6	.89
6	2,442	27.9	6.2	2.2	.87	24.7	5.8	2.5	.81	52.5	10.6	3.5	.89
All	18,138	29.5	5.9	2.5	.82	27.3	6.6	2.7	.83	56.8	11.3	3.7	.89

[a] Cronbach's alpha (Cronbach, 1951).

Validity

Evidence of construct validity was gathered by several means. For the recreational subscale, students in the national norming group were asked (a) whether a public library was available to them and (b) whether they currently had a library card. Those to whom libraries were available were separated into two groups (those with and without cards) and their recreational scores were compared. Cardholders had significantly higher ($p < .001$) recreational scores ($M = 30.0$) than noncardholders ($M = 28.9$), evidence of the subscale's validity in that scores varied predictably with an outside criterion.

A second test compared students who presently had books checked out from their school library versus students who did not. The comparison was limited to children whose teachers reported not requiring them to check out books. The means of the two groups varied significantly ($p < .001$), and children with books checked out scored higher ($M = 29.2$) than those who had no books checked out ($M = 27.3$).

A further test of the recreational subscale compared students who reported watching an average of less than 1 hour of television per night with students who reported watching more than 2 hours per night. The recreational mean for the low televiewing group (31.5) significantly exceeded ($p < .001$) the mean of the heavy televiewing group (28.6). Thus, the amount of television watched varied inversely with children's attitudes toward recreational reading.

The validity of the academic subscale was tested by examining the relationship of scores to reading ability. Teachers categorized norm-group children as having low, average, or high overall reading ability. Mean subscale scores of the high-ability readers ($M = 27.7$) significantly exceeded the mean of

Appendix
Technical Aspects of the Elementary Reading Attitude Survey (continued)

low-ability readers ($M = 27.0$, $p < .001$), evidence that scores were reflective of how the students truly felt about reading for academic purposes.

The relationship between the subscales was also investigated. It was hypothesized that children's attitudes toward recreational and academic reading would be moderately but not highly correlated. Facility with reading is likely to affect these two areas similarly, resulting in similar attitude scores. Nevertheless, it is easy to imagine children prone to read for pleasure but disenchanted with assigned reading and children academically engaged but without interest in reading outside of school. The inter-subscale correlation coefficient was .64, which meant that just 41% of the variance in one set of scores could be accounted for by the other. It is reasonable to suggest that the two subscales, while related, also reflect dissimilar factors—a desired outcome.

To tell more precisely whether the traits measured by the survey corresponded to the two subscales, factor analyses were conducted. Both used the unweighted least squares method of extraction and a varimax rotation. The first analysis permitted factors to be identified liberally (using a limit equal to the smallest eigenvalue greater than 1). Three factors were identified. Of the 10 items comprising the academic subscale, 9 loaded predominantly on a single factor while the 10th (item 13) loaded nearly equally on all three factors. A second factor was dominated by 7 items of the recreational subscale, while 3 of the recreational items (6, 9, and 10) loaded principally on a third factor. These items did, however, load more heavily on the second (recreational) factor than on the first (academic). A second analysis constrained the identification of factors to two. This time, with one exception, all items loaded cleanly on factors associated with the two subscales. The exception was item 13, which could have been interpreted as a recreational item and thus apparently involved a slight ambiguity. Taken together, the factor analyses produced evidence extremely supportive of the claim that the survey's two subscales reflect discrete aspects of reading attitude.