

Reliability and Validity of the Reading Engagement for Adolescent Development (READ) PROFILE

Summary of Findings

- All four categories from the READ showed good internal reliability: Self-Efficacy $\alpha = .82$; Identity $\alpha = .83$; Empathy $\alpha = .88$; and Utility Value $\alpha = .84$.
- A factor analysis provided support for the construct validity of the items (i.e., the extent to which the items are measuring what they are intended to measure).
- Composite measures based on the four categories correlated moderately ($r = .48$ to $r = .70$), suggesting the four categories are measuring distinct but related constructs.

The Instrument

The READ Profile is a self-report instrument for screening and detecting motivation and engagement issues related to reading, as well as selecting and monitoring interventions to engage and sustain reading activities. The instrument has 16 items with a 6.6th grade reading level that is appropriate for the intended student population. Researchers (i.e., Calderon & Beltran, 2004; Calderon et al., 2004) recommended that surveys items be within a 5th grade education level. This is consistent with the American Medical Association (Weiss, 2003) and National Institutes of Health who recommend a 6th grade reading comprehension level as being appropriate for survey items.

Sample

The sample for this analysis included 637 students in grades 9 to 12 who attended one public high school in Southern California. The participating students were distributed across the 9th (29.4%), 10th (24.7%), 11th (22.6%), and 12th (23.3%) grades. The overall response rate was 88.5% (i.e., 637 out of 720 students completed surveys). Although demographic data was not collected on the individual students who completed the survey, the school was 98.9% Latino or Hispanic. In terms of gender, 52% are females and 48% males. A total of 95% of students come from high-poverty backgrounds with 91% of the student population qualifying for free lunches.

Descriptive Statistics

The means and standard deviations for the 16 READ items are shown in Table 1. The Self-Efficacy items had the highest mean on the 1 (*not at all like me*) to 5 (*very much like me*) scale. The means for these items ranged from 3.44 to 3.99. The Identity items had some of the lowest means and three of the four items had average responses below 3.0 (i.e., *occasionally like me*).

Table 1. Means and Standard Deviations for the READ Items

Item	Mean	Standard Deviation
Subscale 1: Self-Efficacy (SE)		
1. I am confident that I can succeed in reading-related activities.	3.42	0.99
2. I believe I can improve as a reader.	3.89	0.99
3. I believe in working hard on reading-related tasks can help me better understand written language.	3.75	0.99
4. I believe I can succeed in reading more difficult material.	3.44	1.06
Subscale 2: Identity (ID)		
5. Reading is a valuable activity to me in living my life.	2.77	1.22
6. I gain more from reading when I identify with the characters in the book.	3.16	1.19
7. I like readings that reflect who I am.	2.99	1.24
8. I see reading as a strength that allows me to connect with my inner self.	2.81	1.28
Subscale 3: Empathy (EM)		
9. I like to put myself in the shoes of the characters in a story.	3.13	1.27
10. I imagine how I would respond if the events in a story were happening to me.	3.36	1.20
11. I like to imagine as though I am one of the characters in a story.	2.83	1.32
12. When I read, I like connecting with the experiences of a character in a story.	2.93	1.17
Subscale 4: Utility Value (UV)		
13. It is important that I see myself as a strong reader.	3.06	1.18
14. It is important to me to be a strong reader to get a high paying job.	3.31	1.15
15. I am driven to work hard to get better at reading and prepare me for my future.	3.37	1.12
16. Going on field trips and connecting in-class readings to real-life experiences is important to me.	3.24	1.25

Note. All items were rated using a 1 (*not at all like me*) to 5 (*very much like me*) scale.

Internal Reliability

All four categories showed good internal reliability. The Cronbach's alpha for the four categories were: Self-Efficacy $\alpha = .82$; Identity $\alpha = .83$; Empathy $\alpha = .88$; and Utility Value $\alpha = .84$. Although interpretations of Cronbach's alpha depend on the length of scales, reliability estimates around .70 are considered acceptable and estimates approaching .90 are indicative of high reliability (John & Benet-Martinez, 2000).

Factor Analysis

The results of a factor analysis with the items comprising the four categories provided support for the construct validity of the items (i.e., the extent to which the items are measuring what they are intended to measure). Factor analysis is a statistical technique that researchers can use to determine which survey items “hang together” and form coherent sets of items (i.e., factors) that are relatively independent of one another (Tabachnick & Fidell, 2013). The results of a factor analysis with a Varimax rotation are presented in Table 2. Although there were only three Eigenvalues above 1.0, which suggests a three-factor solution, a four-factor solution was “forced” and produced a more interpretable set of factor loadings. A cutoff of .45 was used for including the items in the interpretation of the factors and factor loadings above .45 are bolded. All of the items in each of the categories had factor loadings above .45 on their respective factors and loadings below .45 on the other factors.

Table 2. Factor Analysis Results for the READ Items

Item	Factor 1	Factor 2	Factor 3	Factor 4
Category 1: Self-Efficacy (SE)				
1. I am confident that I can succeed in reading-related activities.	.08	.71	.19	.19
2. I believe I can improve as a reader.	.19	.71	.24	.18
3. I believe in working hard on reading-related tasks can help me better understand written language.	.26	.59	.33	.11
4. I believe I can succeed in reading more difficult material.	.17	.58	.21	.19
Category 2: Identity (ID)				
5. Reading is a valuable activity to me in living my life.	.26	.32	.21	.52
6. I gain more from reading when I identify with the characters in the book.	.44	.24	.24	.49
7. I like readings that reflect who I am.	.42	.16	.27	.49
8. I see reading as a strength that allows me to connect with my inner self.	.34	.26	.23	.70
Category 3: Empathy (EM)				
9. I like to put myself in the shoes of the characters in a story.	.77	.18	.22	.19
10. I imagine how I would respond if the events in a story were happening to me.	.69	.28	.14	.18
11. I like to imagine as though I am one of the characters in a story.	.77	.09	.19	.20
12. When I read, I like connecting with the experiences of a character in a story.	.66	.18	.25	.37

Item	Factor 1	Factor 2	Factor 3	Factor 4
Category 4: Utility Value (UV)				
13. It is important that I see myself as a strong reader.	.15	.34	.58	.30
14. It is important to me to be a strong reader to get a high paying job.	.21	.20	.74	.14
15. I am driven to work hard to get better at reading and prepare me for my future.	.23	.36	.68	.16
16. Going on field trips and connecting in-class readings to real-life experiences is important to me.	.23	.23	.58	.21

Correlations Among the Categories

The correlations among the four categories are shown in Table 3. The composite variables were created by averaging the four items that comprise each category. The correlations, which are all statistically significant, ranged from a low of $r = .48$ (i.e., Self-Efficacy and Empathy) to a high of $r = .70$ (i.e., Identity and Empathy). The size of the correlations suggests that the four categories are measuring related but distinct constructs.

Table 3. Correlations Among the Four Categories

	1.	2.	3.	4.
1. Self-Efficacy (SE)	—			
2. Identity (ID)	.57***	—		
3. Empathy (EM)	.48***	.70***	—	
4. Utility Value (UV)	.61***	.61***	.53***	—

*** $p < .001$.

References

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