Using the Elementary Reading Attitude Survey (ERAS) in a bilingual context: Evidence from a Pakistani study

Jehanzeb Rashid Cheema
George Mason University, United States
Saulat Pervez
International Institute of Islamic Thought, United States

In this study we evaluated the performance of the *Elementary Reading Attitude Survey* (ERAS) in a sample of 189 students in Grades 3 and 6 who attended a middle-tier private school in Karachi, Pakistan, where the medium of instruction was English (L2) and the majority language was Urdu (L1). We took a holistic approach and employed several statistical techniques to obtain a consensus about items that did not perform well in the sample and thus need more probing regarding their application in the local context. Our main finding is that ERAS can be used, albeit with more attention to the specific Pakistani educational setting, to measure reading attitudes of Pakistani students in grades comparable to elementary school in the U.S. Implications are discussed.

Introduction

Success in literacy is associated with children's pleasure of and frequent participation in literacy-related activities (Bracken & Fischel, 2008; Farver, Xu, Eppe & Lonigan, 2006; Frijters, Barron & Brunello, 2000; Weigel, Martin & Bennett, 2006). In the process, children learn letter names and sounds, concept of word, and concept of print; they begin to recognise words, gain fluency, build vocabulary, understand that words carry meaning, and eventually begin independent reading, simultaneously comprehending the written word as mental images (Scanlon, Anderson & Sweeney, 2010). The more practice they have, the better readers they become (Gambrell, 2015) with many of them attaining cognitive clarity during reading (Fisher, 2005).

At the same time, children's literacy development is impacted by various influences, including whether they are learning in a monolingual or multilingual setting. For example, English language learners face more complex issues related to reading achievement because lack of vocabulary can negatively influence reading comprehension (Bedore, Peña & Boerger, 2010; Jiménez, García & Pearson, 1996; Nagy, 1997; Verhoeven, 1990). Wood and Gabas (2017, p.412) theorised that

> ... it would seem reasonable to expect that children with low oral language skills in English may have difficulty participating in specific literacy activities (e.g. shared-book reading, storytelling, answering comprehension questions) which could potentially influence their attitudes and ratings of enjoyment of reading in the early grades.

Content taught to English learners is often watered-down and below their grade level by untrained teachers, resulting in their lack of preparation in strategies to tackle academic content critically (Solórzano, 2008). Yet, scholars recommend that instructional practices that have improved outcomes for monolingual speakers will similarly be effective for

English language learners, so long as they are suited to their distinct needs (August, Goldenberg, Saunders & Dressler, 2010; Genesee, Lindholm-Leary, Saunders & Christian, 2005; Shanahan & Beck, 2006).

There are many schools around the world where students are immersed in English even though the majority language is different. While English has been used as a medium of instruction since colonial times for elite populations, the situation has changed recently due to globalisation with greater segments of populations valuing bi/multilingualism for reasons such as higher education abroad, job mobility, and socio-economic progress (de Mejía, 2002). These students' trajectory from attaining basic literacy to achieving reading success is also complicated due to various factors such as attitudes toward reading, vocabulary limitations, quality of instruction, as well as access to books, in addition to socio-economic status and type of schooling opportunities.

Due to the differences between monolingual and multilingual settings, it is important to study the applicability of research instruments developed in the former environment for relevance in the latter context. In this article, we conducted item analysis of the *Elementary Reading Attitude Survey* (ERAS), developed by McKenna and Kear (1990), to determine adaptability in Grade 3 and Grade 6 in a middle-tier English-medium private school in Karachi, Pakistan.

Background and literature review

Pakistan has a thriving English-medium private education sector. English-medium private schools in Pakistan are generally categorised as elitist or non-elitist (Rahman, 2001). Elitist schools cater to an elite population and prepare their students for international pre-university credentials, providing quality English-medium education (Rahman, 2005). Non-elitist schools are low-fee schools which are attended by children of lower middle class and working class segments of the society (Coleman & Capstick, 2012); despite their "English-medium" label, students gain minimal exposure to the English language as these schools mainly rely on Urdu, the national language, or a regional tongue as medium of instruction (Manan, David & Dumanig, 2015). This binary classification, although repeatedly reproduced in literature, does not account for the recent demographic changes in Pakistan due to urbanisation, migration, and the return of migrants which have contributed to the proliferation of quality English-medium schools for the "new middle class" (Akhtar, 2016; Maqsood, 2017); Pervez, (2024) has termed these schools middle-tier private schools. As de Mejía (2002) has shown in her book, this phenomenon of larger segments of society pursuing education which was hitherto restricted to elites only is not limited to Pakistan.

Middle-tier private schools are high-fee schools that provide a resource-rich and literacy-rich environment to their students; they generally follow the British educational system of O/A Levels (see Appendix) (Pervez, 2024). Their clientele are mostly members of the new middle class who are both moneyed and modern yet committed to religious conservatism and cultural norms, unlike elites (Maqsood, 2017). Parents in the new middle class

typically have tertiary degrees and professionally occupy mid-level positions in the government or private sector (Maqsood, 2017), unlike the largely illiterate clientele that sends its children to non-elitist schools (Haidar & Fang, 2019). Furthermore, students of middle-tier private schools are immersed in English from an early age while speaking Urdu or a regional language at home (Pervez, 2023). This is distinct from both elitist and non-elitist schools because, according to the literature, elite students speak English fluently both at school and at home (Rahman, 2005; Malik, 2015) whereas students who belong to the low socio-economic strata mainly speak Urdu or a regional language both at home and at school (Manan, David & Dumanig, 2015). When analysing results of the item analysis of ERAS, therefore, we are mindful of the particular setting in which it has been administered: a literacy-rich, resource-rich school where students are immersed in an English-only instruction from an early age, yet their home language environment is predominantly Urdu (Pervez, 2023, 2024).

Considering the multilingual context of Pakistan's middle-tier private schools, studying students' attitudes towards reading is an important step in assessing ways to support students in developing literacy skills. The literature notes that reading has affective and cognitive features (Robeck & Wilson, 1973). While research has mostly focused on cognitive aspects of reading, such as reading fluency and comprehension, studying reading affect, such as reading attitudes, is extremely important as well (Petscher, 2010). For instance, a student's attitude toward reading determines "whether one likes to read or not" (Lwin & Lynch 2015, 41). As such, reading attitudes are linked with reading behaviours such as motivation to read, reading frequency, and engagement while reading (McGeown, Johnston, Walker, Howatson, Stockburn & Dufton, 2015).

Motivation has been identified as a key factor in reading success due to increased time spent reading which influences reading proficiency (Schaffner, Schiefele & Ulferts, 2013). Coddington and Guthrie (2009) further identified three elements that form the larger concept of reading motivation: reading self-efficacy, i.e., how well a student judges their reading abilities; perceived difficulty of reading in general and reading orientation (ability to focus during a reading task). Engagement is another vital component of reading achievement, which has the potential to positively affect student reading proficiency despite low socio-economic status or family background, both in the United States and internationally (Brozo, Shiel & Topping, 2008; Campbell, Voelkl & Donahue, 1997). Fredricks, Blumenfeld and Paris (2004) explained that engagement consists of behavioural (amount of participation), affective (emotional connection), and cognitive (level of effort) aspects. Engaging activities are authentic and collaborative while offering choice, challenge, and sustained learning (Parsons, Malloy, Parsons & Burrowbridge, 2015). It is important to note here that while we want students to become proficient readers, we also want them to develop a reading habit so that they want to read, instilling in them a love of reading (Hiebert, 2009; Spiegel, 1981). Indeed, research has shown that "developing positive attitudes towards reading arguably sets a child on the right path towards becoming a successful, independent and active reader" (McGeown et al., 2015, p.391).

ERAS (McKenna & Kear, 1990) has been widely used both in the United States and across the world. Its reliability and versatility has been verified through many studies. For

instance, Lee (2014) employed ERAS translated into the Korean language to probe whether peer reading enhances reading attitudes among children. In the Phillipines, Gunobgunob-Mirasol (2020) studied fifth and sixth graders' reading attitudes using local languages and concluded that girls have greater positive attitudes than boys and attitudes declined when student age increased, similar to the original findings of McKenna, Kear and Ellsworth (1995). Mahasneh, von Suchodoletz, Larsen and Dajani (2021) studied the impact of reading aloud on Jordanian children's reading attitudes via ERAS translated into Arabic. Çalışkan and Ulaş (2022) utilised ERAS in the Turkish language to study the impact of parental involvement on children's reading attitudes. Ho, Pham and Dam (2022) likewise translated ERAS into Vietnamese for investigating reading attitudes in early grades.

As evident from the above examples, ERAS has usually been administered in the students' main language, whether in the United States or internationally. However, there are some studies where ERAS was administered to students whose school language was English, but home language was not. Wood and Gabas (2017, p.408) found that Spanish-speaking English language learners in Grades 1 and 2 "demonstrated generally positive attitudes towards reading, despite potential language barriers." Lwin and Lynch (2015) studied the reading attitudes of EFL students at an international school in Bangkok using ERAS. Our study also administered ERAS in the English language to Pakistani students whose schooling takes place in English, whereas their home language is predominantly Urdu (Pervez, 2024).

Method

Sample and participants

The data used in this study came from a survey of Grade 3 and Grade 6 students from a middle-tier private school situated in the metropolitan city of Karachi in Southern Pakistan. Karachi is the largest Pakistani city by population with an estimated population of 15 million people. It is considered a financial and manufacturing hub and represents individuals from all provinces of the country. The data were collected in two waves (January and November) of the same year. Our sample included 106 students from Grade 3 and 83 students from Grade 6. Among Grade 3 students, 43.4% were female with age ranging from 7 to 10 years ($M = 8.00$, $SD = 0.53$). Among Grade 6 students, 59.0% were female with age ranging from 10 to 12 years ($M = 10.94$, $SD = 0.44$).

Elementary Reading Attitude Survey (ERAS)

We adopted the *Elementary Reading Attitude Survey* (ERAS) scale developed by McKenna and Kear (1990). It was selected due to its potential generalisability to diverse populations of primary school (Grades 1–6) students with scale items selected based on desirable psychometric properties, empirically-supported validity and reliability, and suitability for brief group administration to counter low attention spans. The scale consists of 20 multiple-choice questions with answer choices depicted in pictorial form. In the original survey Garfield, a well-known comic character in the U.S., was used. However, we

decided to replace Garfield who may not be familiar to Pakistani students with smiley faces ranging from the very upset to the happiest. A few other minor changes were made to the wording of some of the questions for alignment with a Pakistan-specific audience. Of the 20 survey questions, ten measure academic reading while the other half measure recreational reading. We refer to these two dimensions as independent scales in this study. All surveyed students in both grades were administered the full set of 20 ERAS items, with each item measured on a 4-point ordinal happiness scale. The scale categories were (1) very upset, (2) mildly upset, (3) slightly happy, and (4) happiest. Thus, higher values on this scale are indicative of a positive attitude towards reading. Item descriptions are provided in Table 1.

Methodological approach

To see whether the items underlying each scale measured the same latent construct, we examined detailed item-level statistics separately for each scale. Our methodological approach was holistic in that rather than rely on a single criterion or cut-off we examined several psychometric properties to develop a consensus about various scale characteristics. The analytical methods that we used for item and scale analysis included reporting descriptive statistics such as measures of centre, variability, and association for the overall sample as well as by grade; reliability analysis with both original and standardised items; principal components analysis; t tests for item means; inter-item correlations; and multiple regression.

Table 1: Items comprising the *Academic reading* and *Recreational reading* scales

Item	Grade 3		Grade 6	
	M	*SD*	*M*	*SD*
Academic reading	**3.37**	**0.41**	**3.34**	**0.36**
How do you feel ...				
1. when the teacher asks you questions about what you read?	3.20	0.78	3.26	0.66
2. about doing reading workbook pages and worksheets?	3.29	0.80	3.05	0.75
3. about reading in school?	3.47	0.66	3.31	0.68
4. about reading your school books?	3.37	0.78	3.11	0.81
5. about learning from a book?	3.68	0.55	3.73	0.52
6. when it's time for reading class?	3.44	0.67	3.56	0.63
7. about the stories you read in reading class?	3.41	0.73	3.50	0.59
8. when you read out loud in class?	3.16	1.01	3.34	0.80
9. about using a dictionary?	3.28	0.88	3.02	0.88
10. about taking a reading test?	3.41	0.82	3.49	0.72

Notes. Grade 3, $n = 106$. Grade 6, $n = 83$. Response choices for all items ranged from 1 (very upset) to 4 (happiest). Scale statistics are shown in bold.
Cronbach's alpha reported in parentheses is for standardised items.

Item		Grade 3		Grade 6	
		M	*SD*	*M*	*SD*
Recreational reading		**3.40**	**0.35**	**3.40**	**0.42**
How do you feel ...					
1.	when you read a book on a holiday when you have to stay inside the house?	3.27	0.75	3.22	0.70
2.	when you read a book in school during free time?	3.52	0.71	3.37	0.67
3.	about reading for fun at home?	3.44	0.74	3.64	0.69
4.	about getting a book for a present?	3.52	0.63	3.41	0.75
5.	about spending free time reading?	3.24	0.82	3.36	0.72
6.	about starting a new book?	3.71	0.55	3.73	0.47
7.	about reading during summer vacation?	2.97	0.87	3.29	0.85
8.	about reading instead of playing?	2.92	0.93	2.66	0.80
9.	about going to a bookstore?	3.66	0.56	3.67	0.59
10.	about reading different kinds of books?	3.77	0.46	3.63	0.53
Cronbach's alpha: Academic reading		.72 (.73)		.68 (.70)	
Cronbach's alpha: Recreational reading		.66 (.66)		.82 (.82)	

Notes. Grade 3, *n* = 106. Grade 6, *n* = 83. Response choices for all items ranged from 1 (very upset) to 4 (happiest). Scale statistics are shown in bold.
Cronbach's alpha reported in parentheses is for standardised items.

Empirical results

Academic reading scale

We calculated reliability coefficients for each scale separately. For Grade 3, Cronbach's alpha for the academic reading scale was .73 for standardised items and .72 for unstandardised items. For Grade 6 the corresponding alpha values were .70 and .68 respectively. Although .68 is slightly lower than the usual .7 textbook cut-off, overall these figures support adequate reliability in both Grade 3 and Grade 6 samples. Having established that the 10 items on the academic reading scale were more or less measuring the same underlying construct, we examined item means and standard deviations, and inter-item correlations to flag unusual or problematic items. These summary statistics are presented by grade in Table 1.

The means on all 10 items significantly exceeded 3 with item 8 being the only exception in Grade 3 sample, and items 2, 4, and 9 being exceptions in Grade 6 sample. The *t* test results for deviation of item means from a hypothesised value of 3 are presented in Table 2. We chose 3 as the hypothesised value because grand means on both scales for each grade were closest to this anchor point on the original 1–4 Likert scale. Cohen's *d* for all differences was smaller than or equal to 0.2 indicating small effect sizes.

Table 2: *t* tests for item means and Cohen's *d*

Item	Grade 3		Grade 6	
	ΔM	d	ΔM	d
Academic reading scale				
How do you feel ...				
1. when the teacher asks you questions about what you read?	0.20**	0.06	0.26**	0.08
2. about doing reading workbook pages and worksheets?	0.29***	0.09	0.05	0.02
3. about reading in school?	0.47***	0.14	0.3***	0.09
4. about reading your school books?	0.36***	0.11	0.11	0.04
5. about learning from a book?	0.68***	0.18	0.73***	0.2
6. when it's time for reading class?	0.43***	0.13	0.56***	0.16
7. about the stories you read in reading class?	0.41***	0.12	0.5***	0.14
8. when you read out loud in class?	0.16	0.05	0.34***	0.1
9. about using a dictionary?	0.28**	0.09	0.02	0.01
10. about taking a reading test?	0.41***	0.12	0.49***	0.14
Recreational reading scale				
How do you feel ...				
1. when you read a book on a holiday when you have to stay inside the house?	0.27***	0.08	0.22**	0.07
2. when you read a book in school during free time?	0.51***	0.15	0.37***	0.11
3. about reading for fun at home?	0.44***	0.13	0.64***	0.18
4. about getting a book for a present?	0.52***	0.15	0.41***	0.12
5. about spending free time reading?	0.24**	0.07	0.36***	0.11
6. about starting a new book?	0.71***	0.19	0.73***	0.2
7. about reading during summer vacation?	-0.03	-0.01	0.29**	0.09
8. about reading instead of playing?	-0.08	-0.03	-0.34***	-0.13
9. about going to a bookstore?	0.66***	0.18	0.67***	0.18
10. about reading different kinds of books?	0.77***	0.2	0.63***	0.17

Notes. Grade 3, *n* = 106. Grade 6, *n* = 83. ΔM = mean difference. Cohen's *d* interpretation: .2, small; .5, medium; .8, large (Cohen, 1992). H_0: μ =3. *p < .05. **p < .01. ***p < .001.

Inter-item Pearson correlations are reported in Table 3. These correlations ranged from -.03 to .46 (*M* = .22, *SD* = .11) for Grade 3 and from -.06 to .43 for Grade 6 (*M* = .19, *SD* = .11). Negative correlations are typically indicative of problematic items with undesirable psychometric properties. Our examination of inter-item correlations suggested that four items on the academic reading scale involved negative correlations in Grade 3 (items: 3, 8, 9, and 10) and five items involved negative correlations in Grade 6 (items: 2, 3, 6, 8 and 9).

Table 3: Inter-item correlations (Pearson *r*)

Academic reading scale

Item	1	2	3	4	5	6	7	8	9	10
1	–	.17	.32**	.08	.13	.39***	.36**	.30**	.09	.25*
2	.29**	–	.12	.23*	.35**	.12	.17	.28*	~0	.21
3	.22*	.10	–	.14	.20	.32**	.41***	-.01	.23*	.04
4	.26**	.43***	.34***	–	.18	.14	.27*	.07	.15	.17
5	.36***	.23*	.21*	.08	–	.21	.15	.14	.17	.06
6	.29**	.24*	.43***	.46***	.16	–	.23*	.20	~0	.20
7	.19	.38***	.15	.32**	.35***	.27**	–	.16	.33**	.21
8	.15	.25**	.08	.10	.16	.13	.17	–	-.06	.43***
9	.26**	.32**	.06	.30**	.07	.10	.12	-.03	–	.18
10	.22*	.36***	-.01	.20*	.15	.21*	.31**	.21*	.08	–

Recreational reading scale

Item	1	2	3	4	5	6	7	8	9	10
1	–	.19	.37**	.39***	.38***	.32**	.58***	.40***	.54***	.44***
2	.14	–	.13	.17	.21	.34**	.25*	.28*	.06	.13
3	.19	-.02	–	.28*	.50***	.25*	.31**	.47***	.34**	.42***
4	.09	.10	.09	–	.30**	.12	.25*	.52***	.25*	.30**
5	.45***	.42***	.13	.15	–	.31**	.42***	.45***	.28*	.27*
6	.21*	.05	.15	.07	.13	–	.26*	.31**	.30**	.15
7	.43***	.21*	.13	.30**	.39***	.12	–	.40***	.42***	.37***
8	.18	.29**	.03	.09	.25**	-.06	.16	–	.18	.31**
9	.12	.05	.24*	.05	.05	.12	.10	-.11	–	.32**
10	.17	.16	.25*	.21*	.35***	.06	.27**	.11	.17	–

Notes. Grade 3, *n* = 106. Grade 6, *n* = 83. Correlations for Grade 3 are reported below the diagonals and for Grade 6 above the diagonals. *$p < .05$. **$p < .01$. ***$p < .001$.

Scale reliability coefficients were earlier reported in Table 1. In order to see how these coefficients reacted to removal of individual items from the scale we recalculated Cronbach's alpha if-item-deleted. These estimates are presented in Table 4 and suggest that the coefficient increased when either item 8 or item 9 were removed from the scale for Grade 3, and when item 9 was removed for Grade 6. R^2 values from multiple regression models predicting each individual item on the scale as a function of all remaining items are also presented in Table 4. We used the criterion of medium effect size (R^2 = 13%, Cohen [1992]), to flag potentially problematic items that did not have a strong linear predictive relationship with other items on the scale. This approach flagged item 8 for Grade 3 as problematic (R^2 = 10.8%).

Next, we performed principal components analysis to flag items with poor properties. Since all items were supposed to form a single dimension, we extracted one component and examined the loadings matrix to identify items that did not correlate well with the extracted component. For this purpose we used .3 as a cut-off (medium effect, Cohen [1992]). Based on this criterion, the principal components procedure did not flag any item on this scale (Table 4).

Table 4: Cronbach's alpha if-item-deleted, R^2, and component loadings

Academic reading

	Cronbach's alpha if-item-deleted		R^2		Component loadings	
Item	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
1.	.69	.64	0.26	0.29	0.59	0.64
2.	.67	.66	0.37	0.22	0.69	0.49
3.	.71	.66	0.26	0.28	0.47	0.55
4.	.68	.67	0.39	0.13	0.68	0.44
5.	.70	.66	0.25	0.20	0.49	0.47
6.	.69	.65	0.33	0.24	0.63	0.57
7.	.69	.63	0.28	0.33	0.61	0.66
8.	**.73**	.67	**0.11**	0.29	0.35	0.48
9.	**.72**	**.69**	0.18	0.21	0.39	0.35
10.	.70	.65	0.21	0.27	0.49	0.52

Recreational reading

	Cronbach's alpha if-item-deleted		R^2		Component loadings	
Item	Grade 3	Grade 6	Grade 3	Grade 6	Grade 3	Grade 6
1.	.60	.79	0.32	0.52	0.65	0.76
2.	.63	**.83**	0.23	0.18	0.50	0.38
3.	.65	.80	0.14	0.41	0.36	0.67
4.	.65	.81	**0.11**	0.34	0.39	0.58
5.	.58	.80	0.41	0.37	0.75	0.67
6.	.66	.82	**0.08**	0.26	**0.29**	0.51
7.	.59	.80	0.30	0.44	0.69	0.70
8.	**.66**	.79	0.15	0.48	0.38	0.70
9.	**.66**	.81	**0.11**	0.38	**0.25**	0.60
10.	.63	.81	0.21	0.30	0.57	0.60

Notes. Grade 3, $n = 106$. Grade 6, $n = 83$. R^2 interpretation: .02, small; .13, medium; .26, large (Cohen, 1992). Bold alpha values indicate an increase when corresponding item is dropped from the scale. Bold R^2 values indicate small effect.

Recreational reading scale

We repeated the analyses performed on academic reading scale for the recreational reading scale. For Grade 3, Cronbach's alpha for the academic reading scale was .66 for both standardised items and unstandardised items. For Grade 6 both corresponding alpha values were .82. Summary statistics are presented in Table 1. The means on all 10 items significantly exceeded 3 with items 7 and 8 being the only exceptions in Grade 3 sample. The *t* test results for deviation of item means from a hypothesised value of 3 are presented in Table 2. Cohen's *d* for all differences was smaller than or equal to 0.2 indicating small effect sizes. Our examination of inter-item correlations in Table 3 suggested that five items on the recreational reading scale involved negative correlations in Grade 3 (items: 2, 3, 6, 8, and 9).

Examination of Cronbach's alpha if-item-deleted suggested that scale reliability increased when either item 8 or item 9 were removed from the scale for Grade 3, and when item 2 was removed for Grade 6. The R^2 criterion flagged items 4, 6, and 9 for Grade 3 as having weak linear predictive relationship with other scale items. The principal components procedure flagged items 6 and 9 for Grade 3 as having low loading on this scale (Table 5).

Table 5: Summary of statistical methods

Scale and items	t test	Inter-item r	Cronbach's a if-item-deleted	R^2	PCA loading
Academic reading					
How do you feel ...					
1. when the teacher asks you questions about what you read?					
2. about doing reading workbook pages and worksheets?	†	†			
3. about reading in school?		* †			
4. about reading your school books?	†				
5. about learning from a book?					
6. when it's time for reading class?		†			
7. about the stories you read in reading class?					
8. when you read out loud in class?	*	* †	*	*	
9. about using a dictionary?	†	* †	* †		
10. about taking a reading test?		*			
Recreational reading					
How do you feel ...					
1. when you read a book on a holiday when you have to stay inside the house?					
2. when you read a book in school during free time?		*	†		
3. about reading for fun at home?		*			
4. about getting a book for a present?				*	
5. about spending free time reading?					
6. about starting a new book?		*		*	*
7. about reading during summer vacation?	*				
8. about reading instead of playing?	*	*	*		
9. about going to a bookstore?		*	*	*	*
10. about reading different kinds of books?					

Notes. * Item flagged for Grade 3. † Item flagged for Grade 6.

Discussion and conclusions

In this study we evaluated the performance of Elementary Reading Attitude Survey (ERAS) in a sample of 189 students in Grades 3 and 6 who attended a middle-tier private school in Karachi, Pakistan, where the medium of instruction was English (L2) and the

majority language was Urdu (L1). We took a holistic approach and employed several statistical techniques to obtain a consensus about items that did not perform well in the sample and thus should either be modified or dropped from the scale. The main results are summarised in Table 5 which shows flagged items from all five methods that we applied. Our main finding is that ERAS can be used, albeit with modification, to measure reading attitudes of Pakistani students in grades comparable to elementary school in the U.S. As a liberal rule we suggest that only items which were flagged by three or more methods be removed before administering the survey. This would still leave seven to eight items on the scale. Alternatively, a conservative approach would be to keep only those items that were not flagged by any of the methods. However, this would result in retaining only three items on either scale which may not be sufficient for some statistical analyses.

There are several potential reasons why some of the ERAS questions showed poor performance in our sample. First, the original survey was designed specifically for a U.S. audience. Given the differences in cultural, social, linguistic, economic and educational makeup across countries, there is never a guarantee that a scale may generalise perfectly beyond the intended population. Our empirical results certainly support this. Despite this, some of the items that were flagged for poor psychometric properties by our methods may be retrievable with a change in wording. For example, question 9 on the recreational reading scale, "How do you feel about going to a bookstore?" was flagged as a poor item for Grade 3 by four of our five methods. This could be due to a student's lack of familiarity with the context in which this question was imagined. Unlike the U.S., where bookstores and libraries tend to have a very similar structure (e.g. in terms of cataloguing, browsing and buying/checking out books), in Pakistan most neighbourhood bookstores have a very traditional layout that more closely resembles a pizza take-out experience (order, wait, verify, pay). Bookstores that are similar to the American experience are few and often have prohibitive cost structures for middle class families.

Furthermore, book fairs are more common places where students may be purchasing books instead of bookstores. In addition to weekly book fairs at select locations, schools routinely host book fairs. Karachi Private Academy, for instance, has book fairs with discounted prices at least twice a year on days when parents come to the school with their children to meet teachers and receive report cards. Then, similar to flea markets, there are street vendors at local markets who sell used books; this could be a peddler with a cart carrying a heap of books or stacks of books displayed on the ground. Karachi has an annual book exhibition as well for many days where many publishers and bookstores are represented that offer books at reduced prices. Therefore, there are a variety of ways students may be acquiring books rather than "bookstores" which may be why this item has been flagged.

This difference in context points to the larger issue of uneven mapping of research from the Global North in the Global South environment as highlighted in recent literature (e.g. Groenewald & Teise, 2024). Instead of taking instruments and/or findings from the former context and applying them wholesale to the latter landscape, it is important to probe them for relevance first and situate them accordingly. For instance, while reading success in monolingual contexts often focuses on pleasure reading which is intrinsically

motivated, in multilingual contexts where English is centred as the language of instruction even though it is not the majority language, reading success in students' minds may have more to do with academic success, i.e., extrinsically motivated. Therefore, even reading for pleasure may be promoted by teachers and parents for the purpose of better academic outcomes to counter the limitations of low oral language skills and lack of word bank which are also faced by English language learners in the Global North (Wood & Gabas, 2017; Bedore, Peña & Boerger, 2010; Jiménez, García & Pearson, 1996; Nagy, 1997; Verhoeven 1990). As such, students in the Global South may be approaching recreational reading with an academic goal since it improves their vocabulary, comprehension, and fluency in the English language. In the context of English-medium middle-tier private schools in Pakistan, Pervez (2023) has found that students prefer English books when reading for pleasure, even though they are more comfortable speaking in their home language. Our findings in this study, hence, contribute to identifying these bigger issues that need to be acknowledged when utilising studies from the Global North in the Global South research endeavours.

Additionally, ERAS was developed in the early 1990s. Since then the reading scene has changed significantly in the U.S. Hand-held devices such as smart phones and tablets have become prevalent during the last two decades and are being used by students at increasingly younger ages. For example, reading does not mean just reading a book any more but also includes reading information from a website. Moreover, children may be reading e-books more and more as newly published books in English may be more difficult to obtain in the physical form. ERAS questions that equate reading with book-reading or printed copies of books thus may no longer be completely relevant in a digital era.

These explanations are not meant to suggest that ERAS is totally obsolete. This survey remains popular and continues to be used for academic research (for recent examples, see Coffman et al., 2023; Sánchez et al. 2023). However, it may be time for a thorough overhaul and rewording of the original survey questions. From an applied perspective, when used effectively a tool such as ERAS can aid teachers objectively in promoting students' pleasure of reading as well as their frequency of participation in activities related to reading literacy. For example, the survey can be used at the start of the school year to assess where students stand with respect to their attitudes towards both academic and recreational reading i.e. to establish a baseline. This information can also be used for group comparisons (e.g. boys versus girls) and for evaluation purposes (e.g. repeated measurements over fixed time intervals to assess improvement).

Limitations

Our study has several limitations. First, the sample that we used came from a large city in Pakistan. Thus, our results may not be generalisable to those parts of the country that have a very different demographic makeup. Second, we did not evaluate the validity of survey items as this has been established in earlier literature (see McKenna & Kear, 1990). Our main focus was on identifying issues with internal consistency and unusual item behaviour.

Future research

Our study can be advanced in several ways. First, our approach can be replicated in samples representing other elementary grades, and across demographic subgroups. Second, employing a large-scale nationally representative sample will increase generalisability of findings. Third, it will be useful to employ a longitudinal approach where student attitude towards reading can be monitored over time. Fourth, additional scales can be tested using the methodology outlined in this study. These need not be limited to reading and the domain can be expanded to include other key areas of literacy such as science and mathematics. Fifth, researchers need to work towards a more representative version of ERAS that better reflects the diverse media students engage with in terms of literacy-related activities beyond the printed books such as through informational websites, e-books, videos, as well as educational gaming. The need for such research takes on a special importance in light of recently published findings that suggest improved outcomes for students exposed to digital media (e.g. Günbaş & Gözüküçük, 2020). Finally, this study's findings can be extended by probing intrinsic versus extrinsic reading motivational factors among students in the Global South and what that may reveal regarding how to promote children's pleasure of and frequent participation in literacy-related activities, in a context where students are immersed in English even though the majority language is different.

References

Akhtar, A. S. (2016). Dreams of a secular republic: Elite alienation in post-Zia Pakistan. *Journal of Contemporary Asia*, 46(4), 641-658. https://doi.org/10.1080/00472336.2016.1193214

August, D., Goldenberg, C., Saunders, W. M. & Dressler, C. (2010). Recent research on English language and literacy instruction: What we have learned to guide practice for English language learners in the 21st century. In M. Shatz & L. C. Wilkinson (Eds.), *The education of English language learners: Research to practice* (pp. 272-297). New York: Guilford Press. https://www.routledge.com/The-Education-of-English-Language-Learners-Research-to-Practice/Shatz-Wilkinson/p/book/9781462503308

Bedore, L. M., Peña, E. D. & Boerger, K. (2010). Ways to words: Learning a second-language vocabulary. In M. Shatz & L. C. Wilkinson (Eds.), *The education of English language learners: Research to practice* (pp. 87-107). New York: Guilford Press. https://www.routledge.com/The-Education-of-English-Language-Learners-Research-to-Practice/Shatz-Wilkinson/p/book/9781462503308

Bracken, S. S. & Fischel, J. E. (2008). Family reading behavior and early literacy skills in preschool children from low-income backgrounds. *Early Education and Development*, 19(1), 45-67. https://doi.org/10.1080/10409280701838835

Brozo, W. G., Shiel, G. & Topping, K. (2007). Engagement in reading: Lessons learned from three PISA countries. *Journal of Adolescent & Adult Literacy*, 51(4), 304-315. https://www.jstor.org/stable/40026882

Çalışkan, E. F. & Ulaş, A. H. (2022). The effect of parent-involved reading activities on primary school students reading comprehension skills, reading motivation, and attitudes towards reading. *International Electronic Journal of Elementary Education*, 14(4), 509-524. https://doi.org/10.26822/iejee.2022.260

Campbell, J. R., Voelkl, K. E. & Donahue, P. L. (1997). *NAEP 1996 trends in academic progress* (NCES Publication No. 97985r). Washington, DC: U.S. Department of Education. [about 1.7 MB]
https://nces.ed.gov/nationsreportcard/pdf/main1996/97985r.pdf

Coddington, C. S. & Guthrie, J. T. (2009). Teacher and student perceptions of boys' and girls' reading motivation. *Reading Psychology*, 30(3), 225-249.
https://doi.org/10.1080/02702710802275371

Coffman, A. N., Bernstein, E. R., Davies, S. C. & Justice, A. F. (2023). The impact of a canine-assisted reading program on readers needing extra practice. *The Reading Teacher,* 76(6), 724-734. https://doi.org/10.1002/trtr.2192

Cohen, J. (1992). Quantitative methods in psychology: A power primer. *Psychological Bulletin*, 112(1), 155-159.
https://web.mit.edu/hackl/www/lab/turkshop/readings/cohen1992.pdf

Coleman, H. & Capstick, T. (2012). *Language in education in Pakistan: Recommendations for policy and practice*. Islamabad: British Council.
https://www.teachingenglish.org.uk/publications/case-studies-insights-and-research/language-education-pakistan-recommendations-policy

De Mejía, A.-M. (2002). *Power, prestige and bilingualism: International perspectives on elite bilingual education*. Clevedon: Multilingual Matters.
https://www.degruyter.com/document/doi/10.21832/9781853595929/html

Farver, J. A. M., Xu, Y., Eppe, S. & Lonigan, C. J. (2006). Home environments and young Latino children's school readiness. *Early Childhood Research Quarterly*, 21(2), 196-212.
https://doi.org/10.1016/j.ecresq.2006.04.008

Fisher, R. (2005). *Teaching children to think*. Cheltenham, UK: Nelson Thornes Ltd.
https://global.oup.com/education/product/teaching-children-to-think-9780748794416/

Fredricks, J. A., Blumenfeld, P. C. & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59-109.
https://doi.org/10.3102/00346543074001059

Frijters, J. C., Barron, R. W. & Brunello, M. (2000). Direct and mediated influences of home literacy and literacy interest on prereaders' oral vocabulary and early written language skill. *Journal of Educational Psychology*, 92(3), 466-477.
https://doi.org/10.1037/0022-0663.92.3.466

Gambrell, L. B. (2015). Getting students hooked on the reading habit. *The Reading Teacher*, 69(3), 259-263. https://doi.org/10.1002/trtr.1423

Genesee, F., Lindholm-Leary, K., Saunders, W. & Christian, D. (2005). English language learners in U.S. schools: An overview of research findings. *Journal of Education for Students Placed at Risk, 10*(4), 363-385.

Groenewald, E. & Teise, K. (2024). The North-South research gap: Challenges and lessons learnt. *Issues in Educational Research*, 34(2), invited guest editorial vii-xii.
http://www.iier.org.au/iier34/groenewald.pdf

Günbaş, N. & Gözüküçük, M. (2020). Digital listening texts versus traditional listening texts: Fourth graders' listening comprehension. *Issues in Educational Research*, 30(1), 97-114. http://www.iier.org.au/iier30/gunbas.pdf

Gunobgunob-Mirasol, R. (2020). A survey of grade 5 and 6 pupils' attitudes toward reading. *Reading Psychology*, 41(3), 229-239. https://doi.org/10.1080/02702711.2020.1768982

Haidar, S. & Fang, F. (G). (2019). Access to English in Pakistan: A source of prestige or a hindrance to success. *Asia Pacific Journal of Education*, 39(4), 485-500. https://doi.org/10.1080/02188791.2019.1671805

Hiebert, E. H. (2009). *Reading more, reading better*. New York: Guilford. https://openlibrary.org/books/OL23058228M/Reading_more_reading_better

Ho, T. T., Pham, G. T. & Dam, Q. (2022). Reading attitudes in Vietnam: Initial study of the early school years. *Reading and Writing*, 35(2), 303-323. https://doi.org/10.1007/s11145-021-10181-2

Jiménez, R. T., García, G. E. & Pearson, P. D. (1996). The reading strategies of bilingual Latina/o students who are successful English readers: Opportunities and obstacles. *Reading Research Quarterly*, 31(1), 90-112. https://www.jstor.org/stable/748241

Lee, Y. (2014). Promise for enhancing children's reading attitudes through peer reading: A mixed method approach. *The Journal of Educational Research*, 107(6), 482-492. https://doi.org/10.1080/00220671.2013.836469

Lwin, Z. & Lynch, R. (2015). A study of elementary level English as foreign language students' attitudes towards reading for pleasure in English at Bangkok Christian International School, Thailand. *Scholar*, 7(2), 39-56. http://www.assumptionjournal.au.edu/index.php/Scholar/article/view/1505/1298

Mahasneh, R., von Suchodoletz, A., Larsen, R. A. A. & Dajani, R. (2021). Reading for pleasure among Jordanian children: A community-based reading intervention. *Journal of Research in Reading*, 44(2), 360-378. https://doi.org/10.1111/1467-9817.12342

Malik, A. H. (2015). *A comparative study of elite-English-medium schools, public schools, and Islamic madaris in contemporary Pakistan: The use of Pierre Bourdieu's theory to understand "Inequalities in educational and occupational opportunities"*. Doctoral thesis, University of Toronto, Canada. https://hdl.handle.net/1807/34798

Manan, S. A., David, M. K. & Dumanig, F. P. (2015). Disjunction between language policy and children's sociocultural ecology – an analysis of English-medium education policy in Pakistan. *Language and Education*, 29(5), 453-473. https://doi.org/10.1080/09500782.2015.1046882

Maqsood, A. (2017). *The new Pakistani middle class*. Cambridge, Massachusetts: Harvard University Press. https://www.hup.harvard.edu/books/9780674280038

McGeown, S. P., Johnston, R. S., Walker, J., Howatson, K., Stockburn, A. & Dufton, P. (2015). The relationship between young children's enjoyment of learning to read, reading attitudes, confidence and attainment. *Educational Research*, 57(4), 389-402. https://doi.org/10.1080/00131881.2015.1091234

McKenna, M. C. & Kear, D. J. (1990). Measuring attitude toward reading: A new tool for teachers. *The Reading Teacher*, 43(9), 626-639. https://www.jstor.org/stable/20200500

McKenna, M. C., Kear, D. J. & Ellsworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30(4), 934-956. https://doi.org/10.2307/748205

Nagy, W. (1997). On the role of context in first- and second-language vocabulary learning. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 64-83). New York: Cambridge University Press. https://www.cambridge.org/mu/cambridgeenglish/teacher-development/vocabulary/vocabulary-description-acquisition-and-pedagogy

Parsons, S. A., Malloy, J. A., Parsons, A. W. & Burrowbridge, S. C. (2015). Students' engagement in literacy tasks. *The Reading Teacher*, 69(2), 223-231. https://doi.org/10.1002/trtr.1378

Pervez, S. (2023). English immersion at middle-tier private schools in Karachi, Pakistan: A case study of students' additive v. subtractive language learning experience. *Journal of Multilingual and Multicultural Development*, online first. https://doi.org/10.1080/01434632.2023.2248077

Pervez, S. (2024). Problematising school classifications in Pakistan: The case of English-medium private schools. *International Journal of Multilingualism*, online first. https://doi.org/10.1080/14790718.2024.2347946

Petscher, Y. (2010). A meta-analysis of the relationship between student attitudes towards reading and achievement in reading. *Journal of Research in Reading,* 33(4), 335-355. https://doi.org/10.1111/j.1467-9817.2009.01418.x

Rahman, T. (2005). Passports to privilege: The English-medium schools in Pakistan. *Peace and Democracy in South Asia,* 1(1), 24-44. http://www.dspace.cam.ac.uk/handle/1810/229190

Rahman, T. (2001). English-teaching institutions in Pakistan. *Journal of Multilingual and Multicultural Development*, 22(3), 242-261. https://doi.org/10.1080/01434630108666435

Robeck, M. C. & Wilson, J. A. R. (1973). *Psychology of reading: Foundations of instruction.* New York: Wiley. https://archive.org/details/psychologyofread0000robe_e5n7/page/n5/mode/2up

Sánchez, G., Cózar-Gutiérrez, R., Olmo-Muñoz, J. & González-Calero, J. (2023). Impact of a gamified platform in the promotion of reading comprehension and attitudes towards reading in primary education. *Computer Assisted Language Learning,* 36(4), 669-693.

Scanlon, D. M., Anderson, K. L. & Sweeney, J. M. (2010). *Early intervention for reading difficulties: The interactive strategies approach.* (2nd ed.). New York: Guilford. [3rd ed.] https://www.guilford.com/books/Early-Literacy-Instruction-and-Intervention/Scanlon-Anderson-Barnes-Sweeney/9781462553655

Schaffner, E., Schiefele, U. & Ulferts, H. (2013). Reading amount as a mediator of the effects of intrinsic and extrinsic reading motivation on reading comprehension. *Reading Research Quarterly*, 48(4), 369-385. https://doi.org/10.1002/rrq.52

Shanahan, T. & Beck, I. L. (2006). Effective literacy teaching for English language learners. In D. August & T. Shanahan (Eds.), *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth* (pp. 319-339). Mahwah, NJ: Erlbaum. https://www.taylorfrancis.com/books/mono/10.4324/9781315094922/developing-literacy-second-language-learners-diane-august-timothy-shanahan

Solórzano, R. W. (2008). High stakes testing: Issues, implications, and remedies for English language learners. *Review of Educational Research,* 78(2), 260-329. https://doi.org/10.3102/0034654308317845

Spiegel, D. L. (1981). *Reading for pleasure: Guidelines.* Newark, DE, USA: International Reading Association. https://eric.ed.gov/?id=ED204722

Verhoeven, L. T. (1990). Acquisition of reading in a second language. *Reading Research Quarterly,* 25(2), 90-114. https://www.jstor.org/stable/747596

Weigel, D. J., Martin, S. S. & Bennett, K. K. (2006). Contributions of the home literacy environment to preschool-aged children's emerging literacy and language skills. *Early Child Development and Care*, 176(3/4), 357-378. https://doi.org/10.1080/03004430500063747

Wood, C. L. & Gabas, C. M. (2017). Young Spanish-English speaking children's reading attitudes in relation to language skills. *Educational Research*, 59(4), 408-425. https://files.eric.ed.gov/fulltext/ED588520.pdf

Appendix: List of abbreviations and their meanings

ERAS	Elementary Reading Attitude Survey (McKenna & Kear, 1990)
L1	First language
L2	Second language
O/A levels	"Ordinary Levels" and "Advanced Levels." These are academic qualifications typically associated with the General Certificate of Education (GCE) system, commonly used in the UK and its former colonies.
EFL	English as a foreign language

Jehanzeb Rashid Cheema *PhD* is an applied research methodologist and currently works as an Associate Professor at the Costello College of Business, George Mason University, Virginia, USA. Jehanzeb has peer-reviewed publications on topics such as student literacy, self-efficacy, sense of belonging, and enjoyment of reading.
ORCID: https://orcid.org/0000-0003-2994-6679
Email: jcheema1@gmu.edu

Saulat Pervez is a researcher at the International Institute of Islamic Thought (IIIT), Virginia, USA. She has more than a decade of experience in the private schooling sector in Karachi, Pakistan, which is the subject and site of her research in postcolonial educational systems influencing social class, language disparities, and reading attitudes.
ORCID: https://orcid.org/0000-0001-8468-9025
Email: saulat@iiit.org