

# Factors Contributing to Gender-Based Disparities in Sinhala Language Achievement among Grade 8 Students in Sri Lanka

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DOI: <https://doi.org/10.47772/IJRISS.2025.91200106>

Received: 11 December 2025; Accepted: 19 December 2025; Published: 01 January 2026

## ABSTRACT

Gender differences in assessment of learning outcomes are a notable feature of national assessment in Sri Lanka, with female students consistently outperforming male students. Such differences can be observed not only in the results of learning Sinhala language but also in other subjects. Even though language achievement is a single element in the curriculum, it would form the basis of the overall success of students in their academic performance and would affect many other subjects which depend on reading comprehension, writing skill and language proficiency. Thus, the present research explored the reasons for these differences at the learner level among 485 Grade 8 students selected from an educational division in Sri Lanka. The quantitative cross-sectional method was used in the research to find out the connections of gender, motivation, self-efficacy, home literacy environment, and Sinhala language achievement. The outcome of the study was the discovery of significant differences in gender achievement ( $M_{\text{female}} = 57.73$  vs.  $M_{\text{male}} = 51.52$ ,  $p < 0.001$ ,  $d = 0.48$ ) where the females scored significantly higher on the scales of motivation, self-efficacy, and home literacy environments. The results of the multiple regression analysis showed that motivation ( $\beta = 0.31$ ,  $p < 0.001$ ), self-efficacy ( $\beta = 0.28$ ,  $p < 0.001$ ), and the home literacy environment ( $\beta = 0.24$ ,  $p < 0.001$ ) together accounted for 52% of the variance in Sinhala achievement and significant interaction between the genders was noted for both motivation and self-efficacy. The research findings emphasize the complexity of the gender-based differences in the education that is conducted in the mother-tongue and they also provide a solid basis for conducting the required interventions that are aimed at males as they are the ones mostly affected by the non-motivational, affective, and environmental factors that result in their poor language learning outcomes.

**Keywords:** gender disparities, Sinhala language achievement, motivation, self-efficacy, home literacy environment, Sri Lankan education

## INTRODUCTION

Equity in educational outcomes represents a fundamental goal of modern education systems worldwide. In Sri Lanka, despite the provision of free, universal schooling through a comprehensive network of state schools, national assessments consistently reveal persistent disparities in student achievement across various demographic and institutional dimensions (National Education Research and Evaluation Centre [NEREC], 2016). Among these disparities, gender-based differences in language achievement have emerged as a particularly salient concern, with implications for students' academic trajectories, cognitive development, and long-term educational engagement.

The language ability in the mother tongue is considered as the basic learning outcome that gives support to the development of literacy and the broader cognitive capacities, the access to the curriculum in all subjects, and social participation (Niroshinie, 2023). In the case of Sri Lanka, mastery of Sinhala—the main language of most of the population—is a precondition for academic success, since it is both a subject and a medium of instruction in the whole curriculum. National-level assessments of the eighth-grade students have recently

revealed that there are systematic differences in the Sinhala language achievement between the sexes, with the girls always getting better scores than the boys (Niroshinie, 2023).

The differences in gender are consistent with the trends observed in the previous national assessment reports, which have always pointed out that there are inequalities in achievement according to gender along with other factors like the type of school, the medium of instruction, and the geographical area (NEREC, 2016; Ministry of Education, 2022). The fact that these disparities have persisted through so many assessment cycles indicates that they are rooted in the system. Besides, the widening of the gender gap from primary to lower-secondary school shows that Grade 8 is such a time where disparities are very apparent, thus making the developmental stage of the students very critical as far as intervention and research attention is concerned.

The international research on gender and language has come to a consensus that the differences in academic performance between boys and girls are not a result of innate ability but are rather caused by a combination of factors: cognitive, motivational, sociocultural, and institutional (Kheder and Rouabhia (2023); OECD, 2021). Studies from various cultural backgrounds have shown that the factors that cause girls to lag boys in certain subjects are gender differences in reading engagement, writing motivation, literacy practices, and self-perceptions of language competence. Nevertheless, the combination of factors that lead to the disparity in gender performance differs from one educational and cultural context to another; thus, it is necessary to conduct localized research to understand how these factors work in settings.

In Sri Lanka, while the national assessment reports have acknowledged the presence of gender differences, there is very little empirical research that has been done to investigate the mechanisms that are producing these differences. Most of the reports that are currently available only state the mean score differences and do not consider the learner-level characteristics, home environments, or instructional contexts that might explain the different achievement patterns of male and female students. This lack of understanding limits the development of evidence-based interventions that are customized to meet the specific needs of male students who are underperforming in learning the Sinhala language.

The present study addresses this gap by investigating the factors contributing to gender-based disparities in Sinhala language achievement among Grade 8 students in Sri Lanka. Drawing on theoretical perspectives from socioecological theory (Bronfenbrenner, 1994), social cognitive theory (Bandura, 1997), and opportunity-to-learn frameworks, the research examines how learner-level variables—including motivation, self-efficacy, home literacy environment, and language attitudes—are associated with Sinhala achievement and how these associations differ between male and female students. By elucidating the specific factors that contribute most substantially to gender disparities, this study aims to provide evidence for pedagogical strategies designed to promote more equitable language learning outcomes.

## LITERATURE REVIEW

### Gender and Language Achievement: Global Perspectives

Internationally comparative assessments have constantly reported male and female students' differences in language skills as a major fact in different educational scenarios. PISA and PIRLS, which are large scale assessments, claim that girls continue to be the successes in reading understanding, writing, and other related skills, while boys are considered the failures in all these areas (Mullis et al., 2021; OECD, 2021).

Theorizations related to the above-mentioned global pattern demand a multi-faceted approach. According to cognitive developmental theories, it is girls who undergo the 'earlier' phase of the maturation process in verbal and language processing skills and thus have a slightly better foothold that with time comes to be the advantage (Stoet & Geary, 2019). Nevertheless, the difference between genders in this regard is not very large in all countries, and sometimes the difference disappears over time in one country, thus making it clear that the biological factor cannot be the sole reason for the disparity in the first place. Sociocultural perspectives highlight the role of socialization in reading and writing, with girls getting more support and encouragement to take part in these activities from very young ages (Eagly, 1987). These different paths taken by boys and girls

in the area of literacy skills end up being noticed by the time they are teenagers in the form of gaps in achievement.

## **Gender Disparities in National Assessments in Sri Lanka**

National assessments conducted in Sri Lanka mirror these international trends, consistently demonstrating female advantages in Sinhala language achievement across both primary and secondary schooling (NEREC, 2020; Ministry of Education, 2022). However, the specific factors contributing to these disparities within the Sri Lankan context remain inadequately understood.

There exists a significant amount of research that sheds light on gendered patterns of literacy engagement which in turn result in varying outcomes in language learning. It is revealed that girls take part in home-based reading and other informal literacy experiences more than boys, and this is one of the aspects influenced by cultural expectations that designate literacy-related activities as more appropriate for girls. The resulting differential exposure builds up cumulative advantages that make it easier for girls to acquire both basic and higher literacy skills and thus more girls will be able to read, write, and understand advanced texts.

In addition, teacher expectations support the existing distribution of girls and boys in the literacy development stage. A report on the perceptions of teachers regarding strengths of the girls and boys in language learning shows that there is a more positive view of girls' abilities in language-related tasks (Gunawardena & Lekamge, 2021). This can have a subtle yet significant impact on the nature of instructional interactions. Teachers' techniques such as giving girls more encouragement, providing them with constructive feedback, and assigning them cognitively demanding tasks can contribute to the development of positive academic self-structures and continued motivation among girls.

The report by Aturupane, Shojo, & Ebenezer in 2018 concludes that boys in Sri Lanka are disadvantaged regarding access and achievement in education: girls have higher enrollment and tertiary enrollment and higher success rates in major examinations. It also shows that there are considerable gender variations in time spent by students with friends or watching TV, with boys spending much more time than girls, which could be interpreted as a sign of low motivation and a cause of under-performance.

Reading and writing outside of school is then the main area suffered by boys in their allocation of time. Therefore, it can be concluded that the opportunity costs, which are especially high during the middle school years, accumulate negatively affecting the literacy skill development and consequent academic performance. The motivational differences constitute an additional aspect of this whole picture. According to studies, boys report being intrinsically less motivated than girls for the literacy tasks that require the longest time to be completed such as the ongoing reading and writing of essays. In Sri Lanka, empirical research indicates that male students have higher likelihood to achieve lesser academic ambitions and lack motivation than their female counterparts. As an example, a recent survey of students in the Sri Jayawardenapura education zone discovered that female students have much higher academic ambitions than male students, especially as regards national examinations and higher educational attainment; the authors report that boys tend to have short-term career expectations (Alvitigaga, 2025). Furthermore, the school atmosphere and teaching methods in Sri Lankan schools can be the cause of male disengagement without any intention of the school. In a study of the teaching techniques of English-as-a-Second-Language (ESL), the researchers claim that the current teaching techniques are biased towards a more feminine type of learning, passive, language-focused and heavy memorization, whilst providing fewer practical or hands-on learning experiences or competitive learning methods, which most male learners are allegedly fond of, (Pereira et al., 2025).

## **Learner-Level Factors and Language Achievement**

### **Home Literacy Environment**

The home literacy environment includes the presence of reading materials, the literacy habits of parents, and family attitudes towards reading and writing. Many studies prove that children living in literacy-rich home environments develop better language skills and score higher in school-based literacy tests. Therefore,

differences in home literacy experiences among girls and boys may be one of the factors that lead to achievement disparities.

### **Motivation and Attitudes Toward Language Learning**

Motivation is viewed as a very important factor for learning in all school subjects, but it may still be a decisive factor if language proficiency is to be developed since that requires a lot of effort over a long period of time. According to self-determination theory, there are two different types of motivation: intrinsic (doing something just for the fun of it) and extrinsic (doing something for a reward or to avoid punishment), with intrinsic motivation being a stronger predictor of greater learning outcomes in general.

Therefore, students who read Sinhala literature for fun or write stories just for their own sake are still considered to be at a consistently higher level of achievement as compared to students who only do language study to meet the school requirements. There could be various factors influencing these differences in motivation such as one's prior experiences of success or failure, one's perceptions of task relevance, and the messages from society and culture concerning the importance of literacy for different groups of people.

Another important affective dimension is the attitudes toward the Sinhala language as a subject of study. Language learning is considered interesting, valuable, and enjoyable by students who are more willing to invest cognitive effort in language tasks and are more patient when they encounter difficulties. Boys' negative attitudes toward language learning because of past experiences, peers, or sociocultural factors may act as a barrier to motivation and involvement and thus limit their performance.

### **Self-Efficacy in Language Tasks**

Self-efficacy endorses the idea that people can master a specific activity having as a basis their confidence in themselves (Bandura, 1997). Alongside, it has also been acknowledged as one of the top predictors of academic performance across disciplines. In the case of language learning, learners with high self-efficacy are likely to take on more difficult tasks, persist in their efforts when a problem arises, and use good learning strategies. Low self-efficacy students, in contrast, might eschew hard reading and writing, surrender quickly, and lack the skill development that corresponds with high-level performance.

It is plausible that the self-efficacy differences may both reflect and cause the performance differences. The cycle begins with the students who are good at reading and writing, they become self-assured in their language skills, and this self-assurance acts as a stimulus for them to further participate and to exert more effort. Eventually, they are locked in a feedback loop where self-efficacy, motivation, and success are upholding and dependent on one another. Conversely, boys who face early challenges or get less support may lose their self-efficacy and enter a vicious cycle of low effort, poor performance, and further loss of confidence.

### **Prior Achievement and Cumulative Processes**

Any achievement during a child's schooling is basically a reflection of the child's cumulative learning experiences from his/her early childhood. According to NEREC (2020), the inadequacies of primary education-literacy skills that are acquired at the primary educational level and then get compounded over time, hence, the achievement gaps that widen as students mature and go to higher grades. These cumulative characteristics of literacy have significant meanings in comprehending the gender differences that exist in middle school.

It is suggested that if boys, compared to girls, stop engagement with literacy activities earlier and have more frequent difficulties in reading and writing at the primary-level, then these early disadvantages would become increasingly larger as students get more complex linguistic demands in the later grades. Grade 8 is the point of a very critical change when students must not only consolidate their basic literacy skills but also develop more advanced skills in textual analysis, argumentative writing, and the use of formal language. Students who come to this stage with weak foundational skills are the ones facing the problem of compounding challenges, which, without intensive intervention, may even be difficult to remediate.

## Theoretical Framework

This research invokes various theoretical frameworks to explain the differences between male and female students in language performance.

Bronfenbrenner's (1994) socioecological theory is a major framework, which explains development as the result of interaction between different systems that include the individual, family, school, and the broader sociocultural context. Gender disparities in language achievement can be seen as resulting from the complicated interrelations of factors that influence each level of this ecological system rather than from a single cause.

Social cognitive theory (Bandura, 1997) helps in understanding the role of self-efficacy beliefs, outcome expectations, and goal-setting processes as intermediaries between environmental influences and achievement outcomes. According to this view, gender differences in language-related self-efficacy constitute the main mechanism by which past experiences, social messages, and cultural expectations result in differential achievement. The development of differential self-efficacy beliefs among boys and girls as well as the subsequent effects of these beliefs on motivation and performance is the crux of the gender gap explanation.

Opportunity-to-learn (OTL) theory (Schmidt & Burroughs, 2016) states that achievement fundamentally depends on access to quality instruction, curricular coverage, and learning resources. The formal curriculum was the same for all students in this research, but according to OTL theory, effective learning opportunities may differ depending on how students take advantage of the available learning opportunities. Even if there is formal access to instruction, gender differences in motivation, self-efficacy, and home support may cause disparities in the opportunities to benefit from teaching.

These theoretical perspectives together point to the fact that gender disparities in Sinhala language performance are due to the complex, multilevel processes that involve individual traits (motivation, self-efficacy), domestic environments (literacy resources and practices), and the interaction between these factors. The current research exemplifies this conceptual framework by investigating learner-level variables that theoretical framework and previous studies suggest as potential contributors to gender disparities.

## Research Questions

This study addressed three primary research questions:

1. What is the gender-based differences in Sinhala language achievement among Grade 8 students in Sri Lanka?
2. What learner-level factors (motivation, self-efficacy, home literacy environment, attendance, and language attitudes) are associated with Sinhala language achievement, and do these associations differ by gender?
3. What recommendations can be derived from these findings for reducing gender-based disparities in Sinhala language learning outcomes?

## METHODOLOGY

### Research Design

The study utilized a quantitative, cross-sectional research design to examine the factors that led to gender-based differences in Sinhala language performance of Grade 8 students. The researchers chose a quantitative method since it allows them to explore systematically the relationships between several variables, to provide statistical accuracy when gender differences are analyzed, and to generalize to larger populations. In addition, the use of a cross-sectional design made it possible to gather data from a wide range of students and schools in a short time; however, it does not allow determining causality and the direction of the relationships observed.

## Target population and the sample

The target population was Grade 8 students of government schools in the Homagama Education Division area, Homagama Education Zone, Colombo District, Western Province, Sri Lanka, who study through the medium of Sinhala. One educational division from the Colombo District was selected as the study site to maintain geographic coherence and facilitate the administration of the study. To have an adequate representation of different types of schools that are characteristic of the Sri Lankan education system and to overcome the problem of selection bias, the authors of this research paper used a stratified random sampling method. Firstly, schools were divided into different categories according to the classification system of the Ministry of Education; 1AB schools (offering grades 1-13 with science and commerce streams), 1C schools (offering grades 1-13 with arts stream only), and Type 2 schools (offering grades 1-11). It was important to do this stratification as school type is strongly correlated with a significant difference in school resources, teacher qualifications, and student composition (NEREC, 2016).

After that, schools were randomly selected from the sampling frame of all the schools and the selected educational division within each school type stratum. In the selected schools through cluster sampling, the Grade 8 classes were selected and all the students in those classes were invited to take part in the study. This cluster sampling approach was a good compromise between achieving practical efficiency and securing an adequate sample size.

The final sample consisted of 485 Grade 8 students (252 female, 233 male) from nine schools that represent the three types of schools. The sample size was determined through an a priori power analysis, which showed that about 400 participants would provide enough statistical power (0.80) to detect small-to-medium effect sizes ( $f^2 = 0.05$ ) at an alpha level of 0.05 in multiple regression analyses with up to eight predictors. The actual sample of 485 was above this minimum requirement, thus, there was enough power for the planned analyses.

The ages of the participants were between 13 and 14 years ( $M = 13.8$ ,  $SD = 0.6$ ), and their ages were typical for Grade 8 in Sri Lanka. The sample comprised students from different socioeconomic backgrounds and thus, it was representative of the selected school types of socio-economic status. The demographic characteristics of the sample are shown in Table 1.

Table 1: Sample Characteristics by Gender

Characteristic	Female (n=252)	Male (n=233)	Total (N=485)
Age M(SD)	13.7 (0.6)	13.9 (0.6)	13.8 (0.6)
School Type			
1AB	96 (38.1%)	89 (38.2%)	185 (38.1%)
1C	84 (33.3%)	76 (32.6%)	160 (33.0%)
Type 2	72 (28.6%)	68 (29.2%)	140 (28.9%)

Source: Study Data

## Data collection instruments

### Sinhala Language Achievement test

The dependent variable i.e. Sinhala language achievement was measured through a standardized Grade 8 Sinhala test that was initially designed based on the national curriculum standards. There were in all 50 items in the test which assessed four main competency areas: reading comprehension (15 items), writing skills (12 items), grammar (13 items), and vocabulary (10 items). Reading comprehension questions require students to read passages of different lengths and complexities and answer the questions. These questions include literal

comprehension, inferential reasoning, and critical evaluation. Writing skills consisted of short-answer items and an extended essay that was evaluated for organizational structure, language use, and content development. Grammar items were used to check the knowledge of sentence structure, verb conjugation, and morphological patterns. Vocabulary items measured both receptive vocabulary (word recognition and meaning) and productive vocabulary (appropriate word use in the context).

The test was implemented in all schools under standardized conditions. The total time allowed was two hours. The raw scores were changed into percentages, making them more understandable, and it also helped in the comparison of schools. Reliability as measured by Cronbach's alpha for the total test score was 0.88, which is quite good. The subscale reliability ranged from 0.72 (vocabulary) to 0.84 (reading comprehension), and they were all above the minimum levels that are considered acceptable for research purposes.

To ensure that the test reflects the curriculum standards and that it is not too hard or too easy for Grade 8 students, the instrument was first looked at by experts, i.e. experienced Sinhala language teachers and curriculum specialists. The item difficulty indices were from 0.35 to 0.78, showing that the difficulty levels varied appropriately. By item-total correlations, the range was from 0.28 to 0.65, which means that the items in question made a significant contribution to the overall measurement of Sinhala proficiency.

### Student Questionnaire

A structured student questionnaire was used to gather information about essential learner-level variables from the research that were considered as possible contributors to language achievement. The questionnaire was created through an iterative process that incorporated review of the literature, generation of items, consultation with experts, and pilot testing with a different sample of Grade 8 students ( $n = 50$ ) who were not part of the main study. The questions were prepared in Sinhala at a suitable reading level for Grade 8 students and were checked for clarity and understandability.

**Motivation Toward Sinhala:** Student motivation was assessed using a 10-item scale measuring both intrinsic motivation (e.g., "I enjoy reading Sinhala stories in my free time," "I like writing in Sinhala") and extrinsic motivation (e.g., "I study Sinhala mainly to get good grades," "I practice writing because my parents expect me to"). Items used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). After reverse-coding negatively worded items, responses were averaged to create a composite motivation score, with higher scores indicating stronger motivation. Cronbach's alpha for this scale was 0.82, indicating good internal consistency.

**Self-Efficacy in Reading and Writing:** Self-efficacy was measured using an 8-item scale adapted from Bandura's (1997) self-efficacy assessment framework. Items assessed students' confidence in their ability to successfully perform specific Sinhala language tasks (e.g., "I am confident I can understand difficult Sinhala texts," "I am confident I can write a well-organized essay in Sinhala," "I can correctly use complex grammatical structures in my writing"). Items used a five-point Likert scale ranging from 1 (not at all confident) to 5 (very confident). Responses were averaged to create a composite self-efficacy score. The scale demonstrated good reliability ( $\alpha = 0.85$ ).

**Home Literacy Environment:** The home literacy environment was assessed using a 12-item scale measuring multiple dimensions of literacy support at home. Items assessed the availability of reading materials ("How many Sinhala books do you have at home?"), frequency of literacy activities ("How often do you read Sinhala newspapers or magazines at home?"), and parental encouragement and involvement ("How often do your parents ask you about your Sinhala homework?", "How often do your parents encourage you to read Sinhala books?"). Response formats varied by item type, with frequency items using a five-point scale (1 = never, 5 = every day) and quantity items using ordinal categories (e.g., none, 1-10 books, 11-25 books, 26-50 books, more than 50 books). Items were standardized and averaged to create a composite home literacy environment score. Cronbach's alpha for this scale was 0.79.

**Language Attitudes:** Student attitudes toward Sinhala as a subject were measured using a 6-item scale (e.g., "Sinhala is an interesting subject," "Learning Sinhala is important for my future," "I enjoy Sinhala period").

Items used on a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Responses were averaged to create a composite attitude score ( $\alpha = 0.77$ ).

**Attendance:** Student attendance was assessed through two sources: self-reported frequency of absence ("In the past month, how many days did you miss school?") and school records. Because school attendance records were incomplete in some schools, the self-report measure was used as the primary attendance indicator. This variable was reverse coded so that higher scores indicated better attendance.

## Procedure

After receiving approvals from the provincial and zonal education offices, permission was obtained from school principals to conduct the study. Then, consent forms and information sheets were handed out to parents via students, and a two-week period was allowed for parents to scrutinize the materials and give their written consent if they agreed to their child's participation.

In each school, data collection occurred in two stages on the same day. Initially, the Sinhala achievement test was given to students following uniform standards in regular classrooms during the school day. Students were given two hours to complete the test. A short break was given to the students for 15 minutes. After that they filled out the questionnaire measuring their motivation, self-efficacy, home literacy environment, attitudes, and attendance. Completion of the questionnaire took around 30-40 minutes. To protect anonymity while allowing matching of the two data sources, both the test and questionnaire used unique numerical codes instead of student names.

## Data Analysis

Data analysis proceeded in several stages using both descriptive and inferential statistical techniques. First, preliminary analyses examined data quality, including checks for missing data patterns, outliers, and violations of statistical assumptions. Missing data were minimal (< 3% for any variable) and appeared to be missing completely at random based on Little's MCAR test,  $\chi^2(47) = 52.34$ ,  $p = 0.28$ . Cases with missing data were retained in the dataset, with pairwise deletion used for specific analyses.

Descriptive statistics, including means, standard deviations, and frequency distributions, were calculated for all study variables, both overall and disaggregated by gender. These descriptive analyses provided an initial picture of gender differences in achievement and learner characteristics.

To address the first research question regarding gender differences in Sinhala achievement, an independent samples t-test compared mean achievement scores for male and female students. Cohen's  $d$  was calculated to quantify the magnitude of gender differences using the pooled standard deviation. Following Cohen's (1988) conventions,  $d = 0.20$  was considered a small effect,  $d = 0.50$  a medium effect, and  $d = 0.80$  a large effect.

To examine the second research question regarding learner-level factors associated with achievement, several analytic approaches were employed. First, Pearson correlation coefficients were calculated to examine bivariate relationships between each learner-level variable and Sinhala achievement, both for the total sample and separately by gender. Fisher's  $r$ -to- $z$  transformations tested whether correlation magnitudes differed significantly between male and female students.

Next, hierarchical multiple regression analysis was conducted to identify which learner-level factors most strongly predicted Sinhala achievement while controlling demographic characteristics. The regression was structured in three steps: (1) demographic control variables (school type, age) were entered in the first block; (2) learner-level predictors (motivation, self-efficacy, home literacy environment, attitudes, attendance) were entered in the second block; and (3) interaction terms between gender and each learner-level predictor were entered in the third block to test whether the relationships between learner factors and achievement differed by gender. Significant interactions were probed using simple slopes analysis to characterize the nature of gender differences in predictor-outcome relationships.

Prior to conducting regression analyses, assumptions were verified including linearity (through examination of scatterplots), normality of residuals (through Q-Q plots and Kolmogorov-Smirnov tests), homoscedasticity (through residual plots), and absence of multicollinearity (through variance inflation factors). All assumptions were adequately satisfied, supporting the appropriateness of regression analyses. All statistical tests were two-tailed with alpha set at 0.05. Effect sizes were reported for all major findings to facilitate interpretation of practical significance beyond statistical significance.

### Ethical Considerations

The study adhered to rigorous ethical standards throughout all phases. Approval was obtained from the university's institutional review board prior to any data collection. Additionally, formal permission was secured from the Ministry of Education and relevant provincial and zonal education offices, ensuring compliance with Sri Lankan educational research regulations.

The informed consent was obtained at multiple levels. School principals provided institutional consent after receiving detailed information about the study's purposes, procedures, and data protection measures. Parents received information sheets explaining the study and were asked to provide written consent for their child's participation. Students themselves provided assent after the researcher explained the study in age-appropriate language, emphasizing that participation was completely voluntary and would not affect their school grades.

Participants were informed of their right to withdraw from the study at any time. No students who initially consented subsequently withdrew from participation. All data were de-identified using numerical codes, with the key linking codes to student identities stored separately in a secure, password-protected file. Test scores and questionnaire responses were anonymized in all datasets used for analysis and presentation of findings.

## RESULTS

### Descriptive Statistics and Gender Differences

In Table 2, descriptive statistics of all study variables are shown, not only overall but also by gender. Based on national assessment data, which were the basis of our expectations, the female students proved to be significantly ahead of their male counterparts in terms of Sinhala language achievement. The mean achievement score of females was 57.73 (SD=12.84), whereas that of males was 51.52 (SD=13.67). The difference of 6.21 percentage points was found to be statistically significant,  $t(483) = 5.12, p < 0.001$ , and was equivalent to the medium effect size (Cohen's  $d = 0.48$ ). Among the females, roughly 60% were above the overall mean for the sample, while this ratio was only 40% among the males, thus, showing the considerable practical importance of this gender difference.

Table 2 : Descriptive Statistics and Gender Comparisons

Variable	Total Sample	Female Students	Male Students	t	p	Cohen's d
	M (SD)	M (SD)	M (SD)			
Sinhala Achievement (%)	54.79 (13.58)	57.73 (12.84)	51.52 (13.67)	5.12	<.001	0.48
Motivation	3.62 (0.74)	3.89 (0.68)	3.32 (0.72)	8.96	<.001	0.81
Self-Efficacy	3.48 (0.81)	3.72 (0.76)	3.21 (0.79)	7.21	<.001	0.66
Home-Literacy Environment	3.21 (0.68)	3.38 (0.64)	3.02 (0.69)	5.89	<.001	0.54
Language Attitudes	3.74 (0.69)	3.92 (0.65)	3.54 (0.69)	6.17	<.001	0.57
Attendance (days present)	18.6 (2.8)	19.1 (2.4)	18.0 (3.1)	4.23	<.001	0.39

Source: Study Data

Examination of achievement by subscale revealed that gender differences were consistent across the four competency areas assessed by the Sinhala test. Female students scored higher than male students in reading comprehension (Mfemale = 59.2% vs. Mmale = 53.8%,  $d = 0.43$ ), writing skills (Mfemale = 56.8% vs. Mmale = 48.7%,  $d = 0.58$ ), grammar (Mfemale = 58.1% vs. Mmale = 52.4%,  $d = 0.47$ ), and vocabulary (Mfemale = 57.3% vs. Mmale = 51.9%,  $d = 0.45$ ). The largest gender difference appeared in writing skills, consistent with international research identifying writing as an area of female advantage.

Besides the differences in achievements, the learners' level variables showed large gender differences all over the period. Females gave much more than males (i.e.,  $M = 3.89$  vs.  $M = 3.32$ ) the average for motive in learning Sinhala,  $t(483) = 8.96$ ,  $p < 0.001$ ,  $d = 0.81$ . The size of the effect was very large, which meant that the difference in motivation related to gender was even more than the difference in achievements related to gender. The same pattern of gender differences was evident in self-efficacy reported by female students who were involved in reading and writing tasks ( $M = 3.72$  vs.  $M = 3.21$ ),  $t(483) = 7.21$ ,  $p < 0.001$ ,  $d = 0.66$ .

Female students also reported more supportive home literacy environments ( $M = 3.38$  vs.  $M = 3.02$ ),  $t(483) = 5.89$ ,  $p < 0.001$ ,  $d = 0.54$ , more positive attitudes toward Sinhala as a subject ( $M = 3.92$  vs.  $M = 3.54$ ),  $t(483) = 6.17$ ,  $p < 0.001$ ,  $d = 0.57$ , and better attendance ( $M = 19.1$  days vs.  $M = 18.0$  days present in the past month),  $t(483) = 4.23$ ,  $p < 0.001$ ,  $d = 0.39$ . These consistent patterns across multiple learner characteristics suggested that gender differences in Sinhala achievement emerged from a constellation of interrelated factors rather than any single variable.

In Table 3, the Pearson correlation coefficients that investigate the interactions between learner-level factors and the achievement in Sinhala are displayed, both for the entire sample and by gender separately. All the predictors expected showed significant positive correlations with achievement in the entire sample. Among the predictors, motivation had the highest bivariate correlation with the achievement in Sinhala ( $r = 0.58$ ,  $p < 0.001$ ), and it was followed by self-efficacy ( $r = 0.54$ ,  $p < 0.001$ ), home literacy environment ( $r = 0.48$ ,  $p < 0.001$ ), language attitudes ( $r = 0.46$ ,  $p < 0.001$ ), and attendance ( $r = 0.31$ ,  $p < 0.001$ ) respectively.

Table 3: Correlations Between Learner-Level Variables and Sinhala Achievement

Variable	Total Sample	Female Students	Male Students	Z-test
Motivation	.58***	.52***	.61***	1.87
Self-Efficacy	.54***	.48***	.58***	2.08*
Home Literacy Environment	.48***	.44***	.50***	1.12
Language Attitudes	.46***	.42***	.49***	1.34
Attendance	.31***	.28***	.33***	0.89

Note. \*\*\* $p < 0.001$ , \* $p < 0.05$  for Z-tests comparing correlation magnitudes between genders.

Source: Study Data

According to gender-stratified analyses, it was unveiled that all the predictors were significantly associated with the achievement of male and female students, but some of the connections were more applicable to male students. The correlation between self-efficacy and achievement which was represented by male students ( $r = 0.58$ ) was significantly greater than the one of female students ( $r = 0.48$ ),  $z = 2.08$ ,  $p < 0.05$ . This trend indicated that self-efficacy would be a major factor affecting the language achievement of male students. On this same note, however, motivation did have the slightest tendency to manifest a stronger relationship with the achievement of male students ( $r = 0.61$ ) as compared to female students ( $r = 0.52$ ),  $z = 1.87$ ,  $p = 0.06$ .

The inter-correlation among the predictor variables was from  $r = 0.34$  to  $r = 0.62$  which suggested that the learner characteristics were significantly correlated but still distinguished different constructs rather than being

redundant measurements of one dimension. The moderate inter-correlation backed up the decision to use all variables in the multivariate analysis while at the same time indicating that multicollinearity would not be a problem for regression modeling.

Hierarchical multiple regression analysis examined which learner-level factors most strongly predicted Sinhala achievement while controlling for demographic characteristics (Table 4). In Step 1, demographic control variables (school type and age) explained 11% of variance in Sinhala achievement ( $R^2 = 0.11$ ,  $F(3, 481) = 19.87$ ,  $p < 0.001$ ). School type emerged as a significant predictor, with students in 1AB schools scoring approximately 5 percentage points higher than those in Type 2 schools ( $\beta = 0.28$ ,  $p < 0.001$ ), reflecting well-documented resource and quality differences across school types in Sri Lanka.

Table 4: Hierarchical Multiple Regression Predicting Sinhala Language Achievement

Predictor	Step 1		Step 2		Step 3	
	$\beta$	SE	$\beta$	SE	$\beta$	SE
<b>Step 1: Demographics</b>						
School Type (1AB)	0.28***	1.42	0.18***	1.18	0.17***	1.16
School Type (1C)	0.14**	1.38	0.09*	1.15	0.09*	1.13
Age	-0.06	1.24	-0.04	1.02	-0.03	1.00
<b>Step 2: Learner-Level Factors</b>						
Gender (Female = 1)			0.12**	1.48	0.11**	1.45
Motivation			0.31***	0.92	0.29***	0.90
Self-Efficacy			0.28***	0.84	0.27***	0.82
Home Literacy Environment			0.24***	0.98	0.23***	0.96
Language Attitudes			0.14**	0.79	0.13**	0.77
Attendance			0.09*	0.24	0.09*	0.23
<b>Step 3: Gender Interactions</b>						
Gender $\times$ Motivation					-0.11*	0.52
Gender $\times$ Self-Efficacy					-0.13**	0.48
Gender $\times$ Home Literacy					-0.06	0.45
Gender $\times$ Attitudes					-0.08	0.44
Gender $\times$ Attendance					-0.04	0.18
$R^2$	0.11***		0.52***		0.54***	
$\Delta R^2$			0.41***		0.02**	
F	19.87***		52.34***		42.18***	

Note.  $\beta$  = standardized regression coefficient; SE = standard error. \*\*\* $p < 0.001$ , \*\* $p < 0.01$ , \* $p < 0.05$

Source: Study Data

In Step 2, adding learner-level predictors substantially increased explained variance ( $\Delta R^2 = 0.41$ ,  $F(6, 475) = 67.89$ ,  $p < 0.001$ ). The full model at Step 2 explained 52% of variance in Sinhala achievement ( $R^2 = 0.52$ ,  $F(9, 475) = 52.34$ ,  $p < 0.001$ ), representing a large effect size and indicating that learner-level factors account for substantial variability in language achievement beyond demographic and school characteristics.

Gender remained a significant predictor even after controlling for all learner-level variables ( $\beta = 0.12$ ,  $p < 0.01$ ), indicating that being female was associated with approximately 1.6 percentage points higher achievement holding all other factors constant. However, the standardized coefficient for gender was substantially reduced from what would be observed in a model without learner-level predictors, suggesting that gender differences in motivation, self-efficacy, and home environment partially mediate the overall gender gap in achievement.

Among learner-level predictors, motivation emerged as the strongest individual predictor ( $\beta = 0.31$ ,  $p < 0.001$ ), indicating that a one standard deviation increase in motivation was associated with a 0.31 standard deviation increase in Sinhala achievement, or approximately 4.2 percentage points. Self-efficacy ( $\beta = 0.28$ ,  $p < 0.001$ ) and home literacy environment ( $\beta = 0.24$ ,  $p < 0.001$ ) also demonstrated substantial predictive power. Language attitudes ( $\beta = 0.14$ ,  $p < 0.01$ ) and attendance ( $\beta = 0.09$ ,  $p < 0.05$ ) showed smaller but still significant relationships with achievement.

In Step 3, interaction terms between gender and each learner-level predictor were added to test whether the relationships between predictors and achievement differed for male and female students. The interaction block explained an additional 2% of variance ( $\Delta R^2 = 0.02$ ,  $F(5, 470) = 4.12$ ,  $p < 0.01$ ), indicating that some predictor-achievement relationships were indeed moderated by gender.

Two interaction terms reached statistical significance. The Gender  $\times$  Motivation interaction ( $\beta = -0.11$ ,  $p < 0.05$ ) indicated that the relationship between motivation and achievement was stronger for male students than for female students. Simple slopes analysis revealed that for male students, the relationship between motivation and achievement was  $\beta = 0.37$  ( $p < 0.001$ ), compared to  $\beta = 0.26$  ( $p < 0.001$ ) for female students. This pattern suggested that while motivation predicted achievement for both genders, increases in motivation were associated with larger achievement gains for boys than for girls.

The Gender  $\times$  Self-Efficacy interaction ( $\beta = -0.13$ ,  $p < 0.01$ ) showed a similar pattern. Self-efficacy demonstrated a stronger relationship with achievement for male students ( $\beta = 0.35$ ,  $p < 0.001$ ) than for female students ( $\beta = 0.22$ ,  $p < 0.001$ ). Together, these interaction effects suggested that motivational and self-belief factors were particularly consequential for male students' language achievement, perhaps because boys' lower average levels of motivation and self-efficacy created greater variability in achievement within this group.

Regression diagnostics confirmed that model assumptions were satisfied. Variance inflation factors ranged from 1.24 to 2.18, well below the threshold indicating problematic multicollinearity ( $VIF < 10$ ). Examination of residual plots revealed no systematic patterns, supporting assumptions of linearity and homoscedasticity. The distribution of standardized residuals approximated normality (skewness = 0.08, kurtosis = -0.15), with no evidence of influential outliers based on Cook's distance values (all  $< 0.15$ ).

## DISCUSSION

This research focused on uncovering the learner-level factors that were responsible for the gender-based differences in the performance of Sinhala language among the eighth graders. The findings confirmed that there were quite large gender differences in the performance, as girls were able to score about 6 percentage points more than boys on average, which corresponds to a medium effect size ( $d = 0.48$ ). However, the most significant fact that came out of the research was that motivation, self-efficacy, and home literacy environment were the main factors responsible for these disparities, together accounting for 52% of the variance in students' achievement in Sinhala. The results obtained from this research have very well supported the view of a multifaceted understanding of gender differences in first-language education and have pointed to specific areas in need of intervention.

## Magnitude and Nature of Gender Disparities

The gender gap in Sinhala achievement that has been observed corresponds not only to the local assessment data (Niroshinie, 2023; NEREC, 2020) but also to the international female preference in language learning documented by researchers (OECD, 2021). The effect size value of  $d = 0.48$  points to a significant difference in education that probably affects students' academic paths, self-esteem, and involvement in reading and writing activities, among others. Gender differences, however, were noted in all four competency areas of reading comprehension, writing, grammar, and vocabulary where there were no exceptions, indicating that male students' difficulties are not limited to certain skill areas but rather encompass the whole aspect of learning Sinhala language.

The largest gender differences were found to be in the writing skill area ( $d = 0.58$ ), a fact that warrants special attention. Writing is the most mentally taxing and coordinated language skill since it requires the student to cope with ideation, organization, language selection, grammar, and mechanics at the same time. The fact that boys have their largest disparity in this area indicates that they are experiencing difficulties with self-regulation, sustained effort, and metacognitive planning that effective writing requires. This tendency has a significant impact on the teaching and learning process, making educators think that boys might need more help than girls when it comes to explicit strategy instruction, writing frameworks, and planning and revision processes.

## Role of Motivation in Achievement and Gender Disparities

Motivation appeared as the strongest predictor of Sinhala achievement in the regression analysis ( $\beta = 0.31$ ). This highlights the important role of engagement and interest in language learning. Notably, female students reported significantly higher motivation than male students ( $d = 0.81$ ). This difference in motivation partly explains the gender gap in achievement. The significant Gender  $\times$  Motivation interaction showed that motivation had a particularly strong impact on male students' achievement. Among boys, those with high motivation achieved at levels similar to female students, while those with low motivation had considerable achievement gaps.

These findings support self-determination theory, which stresses that intrinsic motivation drives learning (Karunaratne, 2021). Students who engage with Sinhala learning because they find it interesting or enjoyable put in more effort, keep trying with tough tasks, and use deeper processing strategies compared to those motivated mainly by outside factors. The gender difference in motivation likely comes from ongoing experiences throughout many years of schooling. If boys face early challenges with reading and writing, these difficulties may lower their motivation, creating a negative cycle. Low motivation leads to less engagement, which results in poor achievement, further decreasing motivation.

The strong relationship between motivation and achievement for male students suggests that focusing on boys' engagement could significantly reduce gender disparities. Teaching methods that show the relevance of Sinhala learning, offer choice and freedom, use texts and topics that interest boys, and create opportunities for success may help break the cycle of low motivation and poor achievement. However, it's essential to understand that motivation is both a cause and a result of achievement. Increasing boys' motivation should enhance their learning, but the achievement gains may be necessary to sustain motivational improvements in the long run.

## Self-Efficacy as a Mechanism of Gender Differences

perceptual and less impacted by differences in self-efficacy beliefs.

Self-efficacy—students' beliefs about their capabilities to successfully perform language tasks—together with achievement were correlated strongly ( $\beta = 0.28$ ) and showed large gender difference ( $d = 0.66$ ). The significant Gender  $\times$  Self-Efficacy interaction suggested that self-efficacy beliefs were particularly indicative of the male students' achievement. This pattern indicates that boys' lack of confidence in their English skills can be both a symptom and a cause of their poor performance in the subject.

Social cognitive theory (Bandura, 1997) posits that self-efficacy has an indirect influence on achievement through several paths. High self-efficacy students set higher goals, endure longer in the face of hardship, use more effective learning strategies and have less anxiety during assessment. On the other hand, low self-efficacy students may tend to avoid hard tasks, quit quickly if they meet some obstacles and suffer from so much anxiety that their performance is affected. If boys form a lower self-efficacy for English based on their previous experience of difficulties or take social message about girls being more suited to language learning as the one for them, these beliefs could lead to a situation where boys' self-fulfilling prophecies keep the achievement gap open.

The result that self-efficacy was more a predictor of achievement for male students than for female ones is extremely important. It could be inferred from such a pattern that among boys' self-efficacy beliefs might be highly changeable and consequential. High self-efficacy boys (may be because of early success or nurturing) perform quite well, while low self-efficacy boys (probably due to early struggles or unencouraging experiences) are left far behind. In the case of girls, differences in achievement might be more uni-perceptual and not so much influenced by variance in self-efficacy beliefs.

### Home Literacy Environment and Socialization Processes

Home literacy environment was a significant predictor of Sinhala achievement ( $\beta = 0.24$ ) and had a large gender difference ( $d = 0.54$ ), as the female students claimed higher levels of supportive literacy environments at home. This observation is consistent with the studies highlighting the background influence of home experiences in determining language development. Children that are exposed to a lot of reading materials, observing their relatives reading and being encouraged to practice language skills gain better language skills and more favorable views of reading and writing. The difference in gender in home literacy experiences may be explained by a couple of overlapping factors. In some cases, parents (unconsciously) can encourage reading and writing among their boys and girls, particularly when they believe that literacy is more suitable or important among girls. In the meantime, the parents could be influenced by the tendency of the children themselves. When boys demonstrate less interest in reading or disliking literacy activities, parents may gradually provide them with less opportunities in the form of a tug-of-war pattern that may eventually create the gap between children as they grow. That home literacy environment was predicting achievement in the context of motivation and self-efficacy control, indicates that the positive effect of supportive home environment may not merely come in the form of positive attitude development. Home literacy practices can offer a chance to develop skills (exposure to vocabulary via reading, experience with written language) and demonstrate the usefulness and worth of literacy in a normal daily life. These experiences are especially relevant in middle childhood and early adolescence when students are building up more advanced language competencies.

From an intervention perspective, these findings suggest potential value in family engagement programs designed to support boys' literacy development at home. Such programs might help parents understand the importance of reading aloud to older children (not just young children), provide suggestions for texts that might interest boys, and offer strategies for encouraging reluctant readers. However, it is important to recognize that home literacy environment is itself influenced by socioeconomic factors. Families with limited resources may have fewer books available and less time for shared literacy activities regardless of their intentions. Thus, school-based interventions that provide rich literacy experiences for all students remain essential.

### Language Attitudes and Attendance

Language attitudes ( $\beta = 0.14$ ) and attendance ( $\beta = 0.09$ ) revealed minor yet still noteworthy correlations with achievement. Girls had gained more positive attitudes toward Sinhala subject ( $d = 0.57$ ) and better school attendance ( $d = 0.39$ ) than boys. Though these factors were less effective individually in explaining variance than motivation, self-efficacy, and home environment, they still together with the female students' factors contributed to the overall constellation of factors supporting their superior achievement.

The relationship between attitudes and achievement most likely works in both directions. Students regarding Sinhala as interesting and important are more inclined to put forth the effort in their learning, and at the same

time, success in Sinhala classes leads to the reinforcement of positive attitudes. Likewise, regular school attendance means that instruction and practice opportunities are given, thus supporting achievement, while a student who finds it difficult to cope with Sinhalese may be more likely not to attend school. These interrelations highlight the systemic nature of gender disparities—differences arise from factors that are mutually reinforcing and have a long-time frame, not from single causes.

### **Integration with Theoretical Frameworks**

The results of the current study corroborate well with the theoretical framework, which is underpinned by socioecological theory (Bronfenbrenner, 1994), social cognitive theory (Bandura, 1997), and opportunity-to-learn frameworks (Schmidt & Burroughs, 2016). According to the socioecological approach, the gender gap in Sinhala achievement is the result of the interplay of several interacting systems on different levels. Motivation and self-efficacy are the individual-level factors that have the most direct impact on learning. The family literacy environment at the microsystem stage represents the home processes that either foster or hinder language growth. The links between home and school—the “overlapping” zone of the household and school situations, like the alignment of parents' literacy values with school expectations—may be the case when the mesosystem has an accentuated effect.

One of the many advantages of the application of social cognitive theory to this study is the clarification it provides regarding the very mechanisms through which self-efficacy beliefs interact with experiences and learning success. The finding that boys' lower self-efficacy is one of the reasons why they are less proficient in their studies than girls support Bandura's (1997) assertion that self-belief is one of the major factors determining the outcome of the learning process. Also, the fact that there is a stronger relationship between self-efficacy and performance in the case of male students suggests that self-efficacy might be very volatile and powerful within this group, perhaps because of the prevailing social attitudes that learning a language is more appropriate for girls, which in turn, results in the boys' confidence being undermined.

The theory of opportunity to learn contends that the key factor in determining and maintaining higher educational achievement is quality of instruction and the learning resources provided. The entire group of students participating in the study had access to the same formal curriculum; however, the results point out that the effective opportunity was different depending on the students' characteristics. The students have high motivation, strong self-efficacy, and supportive.

### **Practical Implications**

The above findings carry important implications for educational practice aimed at reducing gender disparities in Sinhala language achievement:

#### **1. Motivation-Enhancing Instructional Practices**

The fact that motivation showed the strongest relationship with success and also pointed out the difference between genders, it becomes important to apply the methods which will outdo boys' participation in the learning of Sinhala in the first place. The following could be some of the effective approaches:

- Incorporating texts and topics aligned with boys' interests (adventure, sports, technology, humor) while maintaining literary quality and curriculum alignment
- Providing choice in reading materials and writing topics, allowing students to pursue personally meaningful literacy activities
- Using collaborative learning structures such as literature circles or peer editing groups that leverage social interaction to support engagement
- Emphasizing real-world applications of Sinhala competencies, helping students see language skills as relevant to their lives and future goals
- Celebrating diverse forms of literacy beyond traditional academic texts, including digital media, graphic novels, informational texts, and multimodal compositions

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## 2. Building Self-Efficacy Through Mastery Experiences

The strong relationship between self-efficacy and achievement, specifically for male students, suggests that interventions targeting boys' self-confidence in their language abilities could noticeably improve outcomes. The following could be some of the effective approaches:

- Providing scaffolded instruction that ensures regular experiences of success, gradually releasing support as competence develops
- Teaching specific reading and writing strategies explicitly, helping students develop concrete tools for approaching language tasks
- Using formative assessment to provide timely, specific feedback that helps students recognize their progress and identify areas for continued growth
- Creating classroom cultures that normalize struggle and emphasize growth, helping students develop incremental theories of language ability
- Encouraging attributions linking success to controllable factors (effort, strategy use) rather than fixed traits

## 3. Family Engagement and Home Literacy Support

The significant relationship between home literacy environment and achievement suggests potential value in programs designed to support boys' literacy development at home:

- Providing workshops helping parents understand the continued importance of reading aloud and shared literacy activities during early adolescence
- Offering suggestions for texts and topics that might engage boys who are reluctant readers
- Creating lending libraries with diverse, high-interest materials available for students to take home
- Communicating regularly with families about students' progress and specific ways to support language development at home
- Recognizing socioeconomic barriers to home literacy support and ensuring that school provides rich literacy experiences for all students regardless of home resources

## 4. Gender-Responsive Pedagogy

While avoiding stereotyping or essentializing gender differences, teachers can benefit from awareness of the factors associated with gender disparities:

- Monitoring participation patterns to ensure that boys receive equal opportunities to engage in discussions, receive feedback, and demonstrate competence
- Reflecting on whether classroom practices might inadvertently advantage students with learning styles or preferences
- Using varied instructional approaches that appeal to diverse learners rather than relying exclusively on methods that may favor certain groups
- Examining assessment practices to ensure they evaluate genuine language competencies rather than compliance or presentation skills that might advantage certain students

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## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Several limitations should be considered when interpreting these findings. The cross-sectional design restricts the ability to draw causal conclusions about the direction of relationships between learner characteristics and achievement. Although existing theory indicates that motivation and self-efficacy can influence achievement, the opposite pattern—where achievement shapes these factors—is also plausible. Longitudinal research that follows students across multiple time points would provide a clearer understanding of temporal sequencing and allow examination of reciprocal effects.

Most learner-related variables, aside from achievement, were gathered through self-report questionnaires. Such measures may be influenced by social desirability and may not accurately represent students' actual behaviors or beliefs. For example, reports of the home literacy environment may reflect what students believe they should say rather than their true experiences. Incorporating observational methods, parent reports, or alternative measures could help address this limitation.

The study drew its sample from a single educational division, which constrains the generalizability of the results. Although various school types were included, broader sampling across additional districts and provinces would enhance confidence in applying these findings to the wider student population.

The focus on learner-level variables meant that teacher and school characteristics—factors that may also shape gender differences—were not examined. In addition, the study relied on aggregate achievement scores, which may mask variation across specific literacy skills. More fine-grained analyses could identify areas of disparity and help inform targeted interventions.

## CONCLUSION

This study presents clear proof that the differences in language achievements by gender in Grade 8 students of the Sinhala language are at the root of the systematic differences in motivation, self-efficacy, and home literacy environment. The learner-level mentioned factors explain 52% of the differences in achievement. Though the male students have shown low language ability, they possess such low levels of motivation, confidence in their language skills, the quality of their home literacy environments, and negative attitudes toward language learning as well. The association between these learner factors and achievement is specifically strong for boys, implying that if the circumstances around motivation and self-efficacy were changed, the gaps between genders could be reduced substantially.

The results have added to the gender and language achievement debate in a few important ways. They provided evidence from the local context of Sri Lanka, which is similar to the trends seen globally. They have also built upon earlier studies by spotting specific learner-level reasons that are responsible for the disparities in achievement, thus giving very specific areas for intervention. In addition, they have revealed that gender plays a role in these relationships with the case of motivation and affectivity being more pronounced for boys.

From an educational policy and practice perspective, the findings underscore the necessity of comprehensive and multi-faceted measures to tackle the problem of gender inequality in Sinhala language achievement. The motivating factors, emotional aspects, and home environments should be the subjects of the implementation of the approaches, rather than instructional changes only. For instance, schools can help boys' language learning by providing reading materials that correspond to their interests, increasing self-efficacy through instruction and strategy training that is supported, and involving families in the process.

## Disclosure Statement

The authors declare that no conflicts of interest relate to the research, authorship, or publication of this article.

## REFERENCES

1. Alvitigala, S. S.. (2025). Gender-Based Differences in Learning Aspirations. *Pumithiri e-Journal of Gender Studies*, 2(1). <https://doi.org/10.31357/pumithiri.v2i1.8503>
- Aturupane, H., Shojo, M., & Ebenezer, R. (2018). Gender dimensions of education access and achievement in Sri Lanka. The World Bank. <https://www.cabidigitallibrary.org/doi/full/10.5555/20183362022>
2. Aturupane, H., Shojo, M., & Ebenezer, T. (2018). Gender dimensions of education access and achievement in Sri Lanka. World Bank. [https://www.researchgate.net/publication/328751365\\_Gender\\_Dimensions\\_of\\_Education\\_Access\\_and\\_Achievement\\_in\\_Sri\\_Lanka](https://www.researchgate.net/publication/328751365_Gender_Dimensions_of_Education_Access_and_Achievement_in_Sri_Lanka)
3. Bandura, A. (1997). Self-efficacy: The exercise of control. W H Freeman/Times Books/ Henry Holt & Co. <https://psycnet.apa.org/record/1997-08589-000>
4. Blatchford, P., Bassett, P., & Brown, P. (2016). Class size and the quality of classroom instruction. *Learning and Instruction*, 44, 66–77. <https://doi.org/10.1016/j.learninstruc.2016.02.001>
5. Bronfenbrenner, U. (1994). Ecological models of human development. In T. Husen & T. N. Postlethwaite (Eds.), *The international encyclopedia of education* (2nd ed., pp. 1643–1647). Pergamon. <https://www.ncj.nl/wp-content/uploads/media-import/docs/6a45c1a4-82ad-4f69-957e-1c76966678e2.pdf>
6. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
7. Cummins, J. (2017). *Literacy, language, and learning in multicultural contexts*. Routledge.
8. Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Erlbaum.
9. Gunawardena, S., & Lekamge, N. (2021). Teacher quality and student achievement in Sinhala language: Evidence from Grade 8 students. *Sri Lanka Journal of Education Research*, 13(2), 45–62.
10. Calafato, R. (2023). Charting the motivation, self-efficacy beliefs, language learning strategies, and achievement of multilingual university students learning Arabic as a foreign language. *Asian-Pacific Journal of Second and Foreign Language Education*, 8(20). <https://doi.org/10.1186/s40862-023-00194-5>
11. Kheder, K., & Rouabhia, R. (2023). Gender differences in learning languages. *European Journal of Applied Linguistics Studies*, 6(2). [https://www.researchgate.net/publication/373810888\\_GENDER\\_DIFFERENCES\\_IN\\_LEARNING\\_LANGUAGES/citations](https://www.researchgate.net/publication/373810888_GENDER_DIFFERENCES_IN_LEARNING_LANGUAGES/citations)
12. Annual Report, National Education Commission(2022), [https://nec.gov.lk/wp-content/uploads/2023/10/AnnualReport\\_2022\\_E.pdf](https://nec.gov.lk/wp-content/uploads/2023/10/AnnualReport_2022_E.pdf)
13. Mullis, I. V. S., von Davier, M., Foy, P., Fishbein, B., Reynolds, K. A., & Wry, E. (2021). PIRLS 2021 international results in reading. International Association for the Evaluation of Educational Achievement. [https://www.zenexfoundation.org.za/wp-content/uploads/2023/05/PIRLS-2021-International-Results-in-Reading\\_Full-report.pdf](https://www.zenexfoundation.org.za/wp-content/uploads/2023/05/PIRLS-2021-International-Results-in-Reading_Full-report.pdf)
14. National Education Research and Evaluation Centre. (2016). [https://edu.cmb.ac.lk/nerec/wp-content/uploads/2017/11/2.-Inner-Pages-Gr.08-2016\\_.pdf](https://edu.cmb.ac.lk/nerec/wp-content/uploads/2017/11/2.-Inner-Pages-Gr.08-2016_.pdf)
15. National Education Research and Evaluation Centre. (2020). National assessment of student achievement, <https://edu.cmb.ac.lk/nerec/> <https://edu.cmb.ac.lk/nerec/?p=998> National Education Research and Evaluation Centre. (2020).
16. National Education Research and Evaluation Centre (2022)National Report, National Assessment of Learning Outcomes of the Subjects of Mathematics and English of Students Completing Grade 04 in the Year2022,<https://cdnc.heyzone.com/files/uploaded/c3a177531c6b6141a3fb5859722307f8bd5a25a0.pdf>
17. Niroshinie, R. D. C. (2023). Assessment of Achievement in Grade 8 Students in the Sinhala Language. Proceedings of the International Conference on Holistic Outcome-Based and Multicultural Education (HOME), Department of Education, Alagappa University, India, p.597-604. <https://archive.cmb.ac.lk/handle/70130/7985>
18. Organization for Economic Co-operation and Development. (2019). *PISA 2018 results (Volume II): Where all students can succeed*. OECD Publishing. <https://doi.org/10.1787/b5fd1b8f-en>
19. Organization for Economic Co-operation and Development. (2021). *PISA 2021 assessment and analytical framework*. OECD Publishing.

20. Pereira, S. S., Silva, W. R. K., Jeewani, S. J. J. H., Kumara, J. K. J. C. K., Ekanayaka, E. M. U. P., Harischandra, D. V. T. N., Senevirathne, M. G. R. K., Rodrigo, U. R. D., & Wickramaratne, T. Y. (2025). The ESL Teaching Strategies in Sri Lankan Schools are More Female-Friendly. *Pumithiri e-Journal of Gender Studies*, 2(1). <https://doi.org/10.31357/pumithiri.v2i1.8504>
21. Schmidt, W. H., & Burroughs, N. A. (2016). Opportunity to learn. In A. A. Lipnevich, F. Preckel, & R. D. Roberts (Eds.), *Psychosocial skills and school systems in the 21st century* (pp. 323–346). Springer.
22. Stoet, G., & Geary, D. C. (2019). A simplified approach to measuring national gender inequality. *PLoS ONE*, 14(1), e0205349. <https://doi.org/10.1371/journal.pone.0205349>