

# EDUCATION FOR ROHINGYA REFUGEES AND HOST COMMUNITIES IN BANGLADESH

## Report

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## Education Cannot Wait



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## Acronyms

<b>Acronym</b>	<b>Full Form</b>
<b>ALP</b>	Accelerated Learning Programme
<b>CBLF</b>	Community Based Learning Facility
<b>CI</b>	Confidence Interval
<b>ECW</b>	Education Cannot Wait
<b>EGMA</b>	Early Grade Mathematics Assessment
<b>EIE</b>	Education in Emergencies
<b>EGRA</b>	Early Grade Reading Assessment
<b>GTP</b>	Global Technical Partner
<b>ICC</b>	Intraclass Correlation Coefficient
<b>IRT</b>	Item Response Theory
<b>LC</b>	Learning Centre
<b>MYRP</b>	Multi Year Resilience Programme
<b>NGO</b>	Non-governmental organisation
<b>PAPI</b>	Paper and Pen Interview
<b>PCDF</b>	Panna Community Development Foundation
<b>PIB</b>	Plan International Bangladesh
<b>RFP</b>	Request for Proposal
<b>SEL</b>	Social and Emotional Learning
<b>SCI</b>	Save the Children International
<b>TCG</b>	Technical Consultative Group
<b>ToT</b>	Training of Trainers
<b>UNICEF</b>	United Nations Children's Fund

## A. Executive Summary

### Background:

The Rohingya community, originating from Myanmar's Rakhine State, have long been considered one of the world's most persecuted minorities. Their plight intensified post-independence due to systematic disenfranchisement and the 1982 Burmese Citizenship Law, leading to their statelessness. In the 1990s, Bangladesh provided refuge to Rohingya, but the situation escalated significantly on August 25, 2017, when approximately 700,000 Rohingya fled to Bangladesh due to a humanitarian crisis. Today, Bangladesh hosts over a million Rohingya refugees, with children making up 52% of this population. The educational needs of these children are critical, as many had limited access to education in Myanmar, necessitating substantial catch-up efforts in Cox's Bazar, an already impoverished region. (UNHRC, 2024 and JRP, 2024)

To address these educational challenges, the Education Cannot Wait (ECW) Multi-Year Resilience Program (MYRP) 2022-2024 targeted 350,000 children, including both Rohingya refugees and those from the host community. The program placed a strong emphasis on girls, who comprised 60% of the target, and children with disabilities, representing 10% of the target group. The MYRP aimed to enhance access to quality education through a community-based model, integrating the Myanmar Curriculum and improving infrastructure and teacher training. (Save the Children, 2023 and INEE, n.d)

The assessment aimed to establish a baseline for children's proficiency in Burmese, functional literacy, numeracy, and Social and Emotional Learning (SEL) levels under the MYRP in Bangladesh. It also sought to provide quality data on learning levels of Grade 2 and Grade 5 learners to enhance decision-making in the Education in Emergencies (EiE) context of Cox's Bazar.

### Methodology:

In collaboration with Oxford MeasurEd, our Global Technical Partner (GTP), the Ipsos team created assessment tools tailored for Grade 2 and Grade 5 learners, utilizing the EGRA and EGMA frameworks. Additionally, a tool was designed to gather insights into teachers' backgrounds and evaluate the conditions of the learning centres. The tools are designed in English, then translated to Rohingya (Rohingya Language written in Latin script) and Burmese as per the assessment requirement. The key components of tools are as follows:

**Table.1: Key Components of tools**

Tool	Section	Language of administration
Grade-2 and Grade-5 Learners	Learner Background Data	Rohingya
	Functional Literacy Assessment	English or Burmese as per child's comfort
	Burmese Language Assessment	Burmese
	Numeracy Assessment	Burmese
	SEL Assessment	Rohingya (Latin Script)
Teacher	Teacher Background Data	English or Rohingya
	Learning centre details	

The assessment encompassed 62 of the lists of 89 learning centre, which included 52 Grade-2 and 10 Grade-5 centres. Although the initial plan aimed to assess 12 learners per centre, practical considerations such as enrollment numbers and attendance led to fewer than 12 learners being assessed in some centres. In total, the assessment covered 680 learners, comprising 560 Grade-2 learners and 120 Grade-5 learners.

Prior to the main survey, the tools were piloted for both grade-2 and grade-5 learners. Oxford MeasurEd team supported in conducting psychometric test for each assessment. Based on the results, the assessment tools are updated for final assessment.

For the main survey, the psychometric analysis involved evaluating discrimination scores to determine each item's effectiveness in distinguishing proficiency levels, with derived difficulty scores highlighting the challenge posed to children. These scores were used to order items by difficulty, forming the basis for grade-specific benchmarks.

### **Findings:**

The report discusses the findings around the learning centre and teacher's background, background of children, specific assessment levels of learners and important contextual factors of learners.

#### ***Profile of Learning Centre:***

The learning centres report an average of 24 learners per centre with a high attendance rate of 90% across both Grade-2 and Grade-5. The curriculum is comprehensive, offering a variety of subjects such as Mathematics and Science; however, there is a noticeable gap in Arts and Civics, particularly in Grade-5 centres. Resource scarcity is evident, with many centres lacking basic amenities like fans and lights in 53% (33 centres) and 61% (38 centres) respectively, though essential resources such as blackboards and chalk are widely available in 89% (55 centres) and 90% (56 centres) respectively.

#### ***Profile of Teachers:***

Of the 61 teachers interviewed (one teacher in each centre), 66% (40) were Rohingya and 34% (21) Bangladeshi. In terms of education qualification, 34% have not completed high school, 26% hold high school diplomas, 25% hold Higher Secondary and the remaining 15% had some vocational certification, graduation or post-graduation degree. The teaching workforce is also relatively younger with an average age of 27 years in a range of 19 years to 55 years. In terms of gender distribution, 53% (32 teachers) were female.

Majority teachers (97%) mentioned they participated in different training opportunities. The trainings listed by the teachers were those on child protection, Teacher development and subject-specific training.

#### ***Profile of Learners:***

In an assessment of 560 Grade 2 learners, it was found that 76% were female, with an average age of 11 years. Notably, there was considerable age diversity among these learners, with ages ranging from 7 to 17 years. In contrast, Grade 5 learners were predominantly male, constituting 78% of the group, with an average age of 13 years and an age range from 10 to 18 years.

All learners reported Rohingya as their primary language spoken at home, with 99% demonstrating proficiency in speaking and understanding it. Additionally, 70% of learners

across both grades reported full proficiency in Burmese, and 73% in English, indicating the ability to speak, read, write, and comprehend these languages.

The availability of educational resources varied, with books being the most accessible at 93%, followed by pens and pencils at 76%. Notebooks and other stationery were less commonly available, and internet access at learners' homes was particularly limited.

Regarding parental backgrounds, 91% of learners resided with both parents. However, the educational attainment of parents was low, with over 42% of both fathers and mothers being illiterate. Employment patterns showed that most fathers (61%) engaged in labor-related occupations, while a significant majority of mothers (93%) were homemakers.

### Learning Level of Learners:

For each assessment, based on the scores secured by the learners, the learning levels are determined. The below table outlines percentage of grade-2 and grade-5 learners at the highest learning level for assessment.

**Table 2: Learning Level of Learners**

Assessment Type	Established highest Learning level for each Assessment type	Grade-2 (N=560)	Grade-5 (N=120)
Literacy	Foundational Literacy	2%	30%
Language	Basic listening comprehension and speaking	9%	30%
Numeracy	Basic Numeracy	59%	72%
SEL	High SEL	33%	26%

In Grade 2, the assessment revealed that only 2% of learners reached the level of foundational literacy, highlighting an area for potential growth in literacy skills. About 9% of these learners demonstrated Basic level listening comprehension and speaking skills, indicating a need for enhanced language focus. A significant 59% of learners demonstrated basic numeracy proficiency, showing a solid foundation in mathematics at this grade level. Additionally, 33% of Grade 2 learners achieved high levels of SEL.

For Grade 5, 30% of learners reached the foundational literacy level, demonstrating improved literacy skills at this higher grade. Basic listening comprehension and speaking skills were present in 30% of learners. Numeracy proficiency was strong, with 72% of learners achieving basic numeracy, indicating a solid grasp of mathematical concepts. In the realm of social and emotional learning, 26% of Grade 5 learners attained high SEL levels.

### Learning comparison between Boys and Girls:

In Grade 2, there is a noticeable disparity in educational performance between girls and boys across various assessments. Only 2% of girls achieved the foundational literacy level, compared to 3% of boys, while 46% of girls reached basic literacy, compared to 62% of boys. In terms of numeracy, 54% of girls reached the basic numeracy level, whereas this was true for 75% of boys. Regarding Social and Emotional Learning (SEL), 32% of girls achieved high SEL levels, slightly below the 34% of boys. Similarly, in language proficiency, 8% of girls attained basic listening comprehension and speaking skills, compared to 10% of boys.

In Grade 5, the performance gap persists, with no girls demonstrating foundational literacy skills, contrasted with 39% of boys achieving this level. For numeracy, only 26% of girls

reached basic numeracy, whereas 85% of boys did. High SEL levels were achieved by 11% of girls, in comparison to 30% of boys. In language skills, 19% of girls reached basic listening comprehension and speaking skills, compared to 33% of boys. These findings highlight a critical need for targeted interventions to support girls in improving social and emotional skills, including self-confidence, and their academic performance.

### ***Contextual Factors affecting Learning:***

A regression analysis was conducted to identify contextual factors, specifically learner, teacher, and facility-related elements, which influence learning outcomes. Significant learner-related factors include gender differences, with boys outperforming girls, and the educational background of parents, especially mothers, which positively affects literacy scores.

Teacher-related factors encompass shared language between the teacher and learner, enhancing comprehension and performance, as well as the residency of teachers. Notably, teachers who speak same language as learners and who are Bangladesh residents positively impacted the numeracy scores of learners.

Facility-related factors underscore the necessity of adequate classroom infrastructure and access to essential amenities, such as toilets and drinking water, which foster a conducive learning environment.

The data reveals a correlation between home support, participation in Social and Emotional Learning (SEL) classes, and improved learning outcomes. This underscores the interrelated nature of wellbeing and learning and suggests the importance of addressing both individual and structural elements to enhance educational achievements.

### **Conclusion and Recommendations:**

The comprehensive assessment of the learning centres in Rohingya Camps reveals significant insights into the educational landscape. While learner attendance is strong, the authorized Myanmar Curriculum doesn't offer play-based and holistic learning opportunities, particularly in the areas of arts, civics and SEL, which are essential for supporting comprehensive developmental outcomes. Resource constraints, such as inadequate infrastructure, present challenges. The diverse teacher demographic offers a multicultural environment, yet many lack formal education. Gender disparities in learning outcomes necessitate targeted interventions. Contextual factors, including parental education and home language, significantly affect academic performance.

- 1. Learner-Focused Interventions:** Recommendations emphasize age-appropriate learning strategies and infrastructure improvements to enhance educational effectiveness. Extracurricular activities and reflective practices in social and emotional learning are also encouraged to support holistic development. Further, specific focus on female learners by understanding their needs, learning gaps to enhance their learning outcome.
- 2. Infrastructural improvements** can involve creating safe and conducive learning environments, such as well-equipped classrooms with access to a variety of stimulating learning materials. Considering the time and space available at the learning centres, extracurricular activities could be tailored to include group games and arts programs that promote social-emotional learning.
- 3. Teacher-Focused Interventions:** Tailored training programs and access to digital resources are recommended to build teacher capacity. Addressing compensation issues and fostering teacher engagement through community practices are also emphasized to boost motivation and professional growth.

4. **Community-Focused Interventions:** Encouraging parental involvement in educational activities can be challenging in given contexts due to language barriers and cultural differences. However, organizing community meetings or creating parent-teacher committees can help bridge this gap. Sharing success stories of learners who have benefited from education can illustrate the long-term benefits and inspire more community engagement.

Further, recommendations highlight the use of standardized tools and infrastructure observations in future assessment. Additionally, implementing teacher competency tests and a clear sampling plan are critical for comprehensive and representative assessments.

Report provides detail insights and analysis and delves deeper into these recommendations and provides additional context to inform future strategies.

# 1. Introduction

## 1.1 Situation of the Rohingya Community in Bangladesh:

Tracing their roots back to the fifteenth century in the former Arakan Kingdom, the Rohingya are an ethnic Muslim minority. Prior to August 2017, a majority of the estimated 1 million Rohingya in Myanmar resided in Myanmar's Rakhine State<sup>1</sup>.

In the 1990s, Bangladesh initially provided refuge to 36,689 Rohingya individuals. However, on August 25, 2017, a significant humanitarian crisis unfolded, resulting in approximately 700,000 Rohingya—comprising men, women, and children—being forced to escape Myanmar and seek asylum in Bangladesh.<sup>2</sup> This prompted a substantial increase in the Rohingya population within Bangladesh, which increased by 968,986 individuals. According to the most recent figures, Bangladesh currently hosts an estimated 1,005,675 Rohingya refugees, organized into 204,236 families. Within this refugee population, 51% are female and 49% are male, with children representing 52% of the total population.<sup>3</sup>

The plight of Rohingya refugees in Cox's Bazar, Bangladesh, remains a pressing humanitarian concern, as highlighted in the 2024 Inter Sector Needs Assessment (ISNA). The assessment underscores critical challenges faced by this vulnerable population, despite ongoing assistance efforts. With an average monthly income below 5,000 BDT, contrasted against average household expenditures of 7,480 BDT, many households remain heavily reliant on humanitarian food aid. Among earners, only 35% can significantly contribute to household income due to low pay or irregular income activities. Access to skills or livelihood training is limited, with only 15% having received training, and just 36% of those trained have utilized their skills for income generation.<sup>4</sup>

Shelter conditions in the Rohingya refugee camps are severely impacted by structural vulnerabilities like leaks, roof damage, and overcrowding, with 13% of shelters at risk of collapse due to major damages. Government restrictions on building materials, close proximity of shelters, and environmental factors like deforestation further heighten the risk of damage from landslides, fires, and cyclonic storms.<sup>4</sup>

The Standardized Expanded Nutrition Survey (SENS) 2023 highlights a worsening malnutrition crisis among children, with wasting at a critical level of 15.1%, up from 12.3% in 2022. Severe wasting has nearly tripled from 0.7% to 2.0% in 2023, resulting in a 20% increase in admissions for severe wasting.<sup>5</sup>

The Rohingya refugee crisis in Cox's Bazar presents multifaceted challenges, with critical issues in shelter, health, and nutrition demanding urgent attention. Among these pressing concerns, education is also an essential area requiring focused intervention, particularly considering that 52% of the Rohingya population in Bangladesh comprises children.<sup>3</sup> These

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<sup>1</sup> <https://www.cfr.org/backgrounder/rohingya-crisis#chapter-title-0-8>

<sup>2</sup> [Seven years since the Rohingya refugee influx in Bangladesh, UNHCR reminds need for international solidarity | United Nations in Bangladesh](#)

<sup>3</sup> [Document - Joint Government of Bangladesh - UNHCR Population Factsheet as of January 2025](#)

<sup>4</sup> <https://reliefweb.int/report/bangladesh/bangladesh-2023-msna-bulletin-december-2023>

<sup>5</sup> [2023 BAN CXB-SENS-FINAL-EXEC-SUMMARY 4-JAN-2024.pdf](#)

young individuals' educational needs must be addressed to ensure their development and prospects.

## 1.2 Education Status of Rohingya's:

The 2017 refugee influx created significant demand for education provision in Cox's Bazar, affecting both refugee and host community populations. A high proportion of the Rohingya refugee population is school-aged, with most under the age of 18. Prior to this displacement, education access in Myanmar was limited for Rohingya children, with less than 60% attending school and fewer than 10% advancing beyond primary education. The situation was even more dire for girls, particularly adolescents. Consequently, refugee children were already at a disadvantage regarding educational access, necessitating significant catch-up efforts.<sup>10</sup>

Cox's Bazar, already one of Bangladesh's most impoverished districts, struggled with low educational outcomes even before the influx. The arrival of refugees exacerbated the challenges faced by the district's overburdened communities and schools, particularly those near the camps. Enrolment and retention rates were among the lowest in the country, with only 60% of individuals aged 12-24 having completed primary school in Teknaf and 75% in Ukhiya. Since 2017, coordinated efforts by education providers have led to substantial progress in the camps, establishing over 6,000 learning centres by 2021. These centres serve children aged 3 to 14, although opportunities for adolescents and youth aged 15 to 24 remain limited. Host communities have also benefited from increased access through school construction, renovation, and repair.<sup>10</sup>

However, challenges persist, including inadequate teaching materials, teacher absenteeism, and physical punishment practices. Crowded conditions further hinder access, particularly for girls and adolescent girls, who face additional barriers due to the need for sex-segregated classrooms and latrines. Trauma, disease outbreaks, and environmental threats compound these access issues, highlighting the importance of integrated child protection and mental health support as part of a holistic education approach. 8

The educational attendance of adolescent girls remains particularly limited. The educational attendance rates for Rohingya children in Bangladesh reveal significant disparities when examined by gender and age. Among children aged 5 to 11 years, 82% of boys and 88% of girls were reportedly enrolled and regularly attending school. However, attendance rates drop for older children aged 12 to 18, with only 46% of boys and 20% of girls enrolled and attending the learning centres regularly.<sup>6</sup> Social and religious barriers restrict girls' mobility, further reducing their educational participation, especially as they age. Challenges are also pronounced for children with disabilities, who face environmental, communication, institutional and most of all attitudinal barriers in accessing education. <sup>11</sup>

A critical barrier to education for the Rohingya children was the lack of a harmonized, government-approved education framework. However, the recent rollout of the Myanmar Curriculum is addressing this gap, providing formal, standardized education that includes secondary education opportunities, thus helping to meet the educational needs of Rohingya children, preserve their cultural identity and would facilitate their reintegration in Myanmar

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<sup>6</sup> [https://rohingyaresponse.org/wp-content/uploads/2024/04/BGD\\_CXB\\_J-MSNA-2023\\_Factsheets\\_Camps\\_Feb-2024.pdf](https://rohingyaresponse.org/wp-content/uploads/2024/04/BGD_CXB_J-MSNA-2023_Factsheets_Camps_Feb-2024.pdf)

smoothly upon their return.<sup>7</sup> The Myanmar Curriculum Pilot project, originally planned for rollout in 2020-21, faced significant delays due to the COVID-19 pandemic.<sup>8</sup>

The pandemic also severely restricted education access in the camps, leading to the closure of learning facilities and depriving children of school and essential support mechanisms, such as psychosocial and socio and emotional learning. This increased the risks of child protection issues and school dropouts, particularly among girls.<sup>8</sup>

Before 2023-24, most of the Rohingya children were educated through the Learning Competency Framework Approach (LCFA), which spans levels one to four and primarily serves children aged 4-14 years. The LCFA was developed as an emergency educational response for Rohingya refugee children and is considered an informal learning system.<sup>9</sup> The Government of Bangladesh, along with Education Sector partners, has made significant strides in improving educational access for Rohingya children by implementing the Myanmar Curriculum from kindergarten to Grade 10 for the 2023-2024 academic year. As of October 2023, 330,207 children—comprising 161,201 females and 169,006 males—are benefiting from inclusive learning services across 5,494 established facilities, achieving 89% enrolment of the targeted Rohingya children, adolescents, and youth. This initiative has led to increased acceptance and attendance, with an impressive 82% attendance rate among both girls and boys.<sup>10</sup>

### 1.3 Solutions Provided by the ECW Programme:

The Education Cannot Wait (ECW) Multi-Year Resilience Program (MYRP) 2022-2024 aimed to address the educational setbacks faced by refugee and host communities in Cox's Bazaar, exacerbated by the COVID-19 pandemic and the challenges of hosting nearly a million individuals of the Rohingya community. This second MYRP targeted 350,000 children, with a strong emphasis on girls (60% of the target) and children with disabilities (10% of the target). The MYRP 2022-2024 aligns with the existing education sector's multi-year strategy and joint response plan, aiming to strengthen sector coordination and expand the reach of educational interventions. The MYRP 2022-24 emphasizes enhancing early childhood education, gender and disability inclusion, and adolescent girls' education.<sup>11</sup>

The program outlines five broad outcomes:

- **Outcome 1 Access:** Enhance access to safe and protective educational opportunities for all children.
- **Outcome 2 Equity and Inclusivity:** Foster gender and disability-inclusive, safe, and child-friendly learning environments.
- **Outcome 3 Quality Learning:** Elevate the quality of learning for all learners.
- **Outcome 4 Systems Strengthening:** Develop robust systems for quality, safe, and equitable educational provision.
- **Outcome 5 Resource Mobilization:** Secure increased funding to expand quality, safe, and equitable education

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<sup>7</sup> [https://mofa.gov.bd/site/press\\_release/1d7a1bee-fa79-418d-ba46-f6351547e965](https://mofa.gov.bd/site/press_release/1d7a1bee-fa79-418d-ba46-f6351547e965)

<sup>8</sup> <https://www.educationcannotwait.org/resource-library/ecw-multi-year-resilience-programme-bangladesh-2022-2024>

<sup>9</sup> <https://www.unicef.org/press-releases/unicef-education-milestone-rohingya-refugee-children-myanmar-curriculum-pilot>

<sup>10</sup> <https://rohingyaresponse.org/wp-content/uploads/2024/03/JRP-2024.pdf>

The Education Cannot Wait (ECW) Multi-Year Resilience Program (MYRP) 2022-2024 utilized a community-based education model to enhance community ownership and decision-making, coupled with capacity development for community members and teachers. This approach was intended to improve sustainability over time, ensuring continuity even if the Rohingya population was repatriated to Myanmar or relocated.<sup>11</sup>

The program was linked to existing Education Sector coordination mechanisms in Cox's Bazar, integrating into broader humanitarian and development planning. The governance structure, which included entities like the Strategic Advisory Group, facilitated this integration.

By supporting the introduction of the Myanmar curriculum, the MYRP represented a shift from the temporary Learning Competency Framework to a more sustainable educational approach.<sup>8</sup>

The programme has prioritized expanding access to education for Rohingya community residing in Cox Bazar by establishing learning centres within refugee camps. These centres aim to provide safe and inclusive educational spaces for children who have been deprived of formal schooling opportunities.<sup>11</sup>

To address the infrastructural challenges in educational facilities, the ECW programme has invested in the construction and renovation of classrooms and learning spaces. These efforts focus on creating environments conducive to learning, with improvements in ventilation, lighting, and seating arrangements. By upgrading the physical infrastructure, ECW aims to enhance the overall educational experience for learners.<sup>12</sup>

Recognizing the critical role of educators, the ECW programme has funded comprehensive teacher training initiatives. These initiatives focussed on equipping teachers with the necessary pedagogical skills and knowledge to effectively deliver education in crisis contexts. Training modules cover child-centred teaching approaches, classroom management, and psychosocial support, to train teachers to address the diverse needs of their learners. This also includes training teachers to provide emotional support and creating safe spaces where children can express themselves and build resilience. The programme also collaborates with local organizations to offer counselling services and support networks for learners and their families<sup>11</sup>.

The ECW programme emphasizes the importance of community involvement in educational initiatives. By engaging parents, community leaders, and local organizations, the programme fosters a sense of ownership and sustainability. Community participation ensures that educational solutions are culturally appropriate and responsive to the specific needs of both refugee and host communities. The programme provides comprehensive solutions to address the educational challenges faced by Rohingya refugees and host communities in Bangladesh. Through initiatives focused on access, infrastructure, teacher training, curriculum

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<sup>11</sup> Save the Children's Resource Centre. (2023). Baseline report on ECW MYRP II project, Rohingya community. Retrieved from <https://resourcecentre.savethechildren.net/document/baseline-report-on-ecw-myrrp-ii-project-rohingya-community/>

<sup>12</sup> INEE. (n.d.). Political economy and (in)coherence of the education system in Cox's Bazar, Bangladesh. Retrieved from <https://inee.org/resources/political-economy-and-incoherence-education-system-coxs-bazar-bangladesh>

development, psychosocial support, and community engagement, the ECW programme aims to create a sustainable and inclusive educational system.

## **1.4 Objectives of the Study**

The assessment aimed to address key research questions related to the assessment grades, domains of assessment, and the background characteristics of learners, teachers, and learning facilities/centres. The specific objectives were as follows:

a) **Baseline Establishment:** To set the baseline for children on Burmese, functional literacy, numeracy, and SEL levels for learners targeted by the Multi-Year Resilience Program (MYRP) in Bangladesh.

b) **Data Provision for Decision Making:** To provide quality data on the learning levels of Grade 2 and Grade 5 learners, thereby facilitating improved decision-making regarding the delivery and adaptation of education programming in the Education in Emergencies (EiE) context of Cox's Bazar.

## 2 Methodology

The assessment methodology was meticulously crafted in collaboration with the GTP and the Sector Technical Consultative Group (TCG). This comprehensive approach entailed the evaluation of Grade 2 and Grade 5 learners across various domains, including literacy in English, Burmese language, numeracy, and Social and Emotional Learning (SEL). The learners' proficiency levels were measured through a single wave of assessment, which involved one-on-one interactions between assessors and learners. These interactions utilized the Pen and Paper Interview (PAPI) method at learning centres during regular class sessions.

Furthermore, interviews were conducted with one teacher at each selected learning centre to provide additional insights.

### 2.1 Data collection tools

#### 2.1.1 Overview of the data collection tools

The Ipsos team, in collaboration with Oxford MeasurEd, developed literacy and numeracy assessment tools for Grade 2 and Grade 5 learners utilizing the EGRA and EGMA frameworks. The Social and Emotional Learning (SEL) assessment was specifically designed to evaluate self-awareness, empathy, and problem-solving skills.

Additionally, a structured tool was employed to capture learners' profiles and family details for a comprehensive understanding of their backgrounds.

Furthermore, an instrument was devised to gather insights into teachers' background characteristics and evaluate the conditions of the learning centres.

The table below outlines the items included in the assessment tools for Grade 2 and Grade 5 learners, as well as the teacher's tool.

**Table 3: Overview of the data collection tools**

Tool	Section	Source	Grade 2 Details	Grade 5 details
Learner	Learner Background Data	Learner	<ul style="list-style-type: none"> <li>- Age</li> <li>- Sex<sup>13</sup></li> <li>- Parents' education and occupation</li> <li>- Languages known</li> <li>- Attendance in the past one week</li> <li>- Time taken to reach the learning centre</li> <li>- Learning support and access to learning material at home</li> <li>- Disability status</li> </ul>	
	Literacy assessment	Learner	<ul style="list-style-type: none"> <li>- Listening comprehension</li> <li>- Letter recognition</li> <li>- Phonological awareness</li> <li>- Familiar word reading</li> <li>- Answer questions based on a narrated story</li> <li>- Reading comprehension: Answer questions about the story</li> <li>- Writing</li> </ul>	<ul style="list-style-type: none"> <li>- Listening comprehension</li> <li>- Using words and sentences</li> <li>- Answer questions based on a narrated story</li> <li>- Reading comprehension: Answer questions about the story</li> <li>- Using punctuation marks</li> <li>- Writing</li> </ul>
	Language Assessment (Burmese)	Learner	<ul style="list-style-type: none"> <li>- Speaking</li> <li>- Listening comprehension</li> <li>- Letter recognition</li> <li>- Word recognition</li> </ul>	<ul style="list-style-type: none"> <li>- Speaking</li> <li>- Listening comprehension</li> <li>- Word recognition</li> <li>- Reading words and sentences</li> </ul>

<sup>13</sup> Enumerators recorded learners' sex (male/female) as reported by them, parents, or teachers, but this report analyses gender differences, considering social and cultural influences on education.

Tool	Section	Source	Grade 2 Details	Grade 5 details
			- Writing	- Writing
	Numeracy Assessment	Learner	<ul style="list-style-type: none"> <li>- Number recognition</li> <li>- Counting</li> <li>- Measuring/estimating daily life objects</li> <li>- Comparing numbers</li> <li>- Identifying missing numbers</li> <li>- Addition</li> <li>- Subtraction</li> <li>- Story problem</li> </ul>	<ul style="list-style-type: none"> <li>- Number recognition</li> <li>- Counting</li> <li>- Measuring/estimating daily life objects</li> <li>- Comparing numbers</li> <li>- Identifying missing numbers</li> <li>- Addition</li> <li>- Subtraction</li> <li>- Multiplication</li> <li>- Division</li> <li>- Comparison, addition and subtraction of fraction numbers</li> <li>- Story problem</li> </ul>
	Social and Emotional Learning	Learner	<ul style="list-style-type: none"> <li>- Emotion recognition</li> <li>- Articulating own strengths, weaknesses and goals</li> <li>- Empathy</li> <li>- Self-concept</li> </ul>	<ul style="list-style-type: none"> <li>- Emotion recognition</li> <li>- Acceptance of other point of view</li> <li>- Articulating own strengths, weaknesses and goals</li> <li>- Strategy to cope with stress</li> <li>- Problem solving</li> <li>- Empathy</li> <li>- Self-concept</li> </ul>
Teacher	Teacher Background Data	Teacher	<ul style="list-style-type: none"> <li>- Age</li> <li>- Sex</li> <li>- Educational qualifications</li> <li>- Years of teaching experience,</li> <li>- Subject expertise</li> <li>- Designation and role</li> <li>- Languages known</li> <li>- Population status (refugee/host)</li> <li>- Trainings received and additional trainings required</li> </ul>	
	Facilities at the learning centre		<ul style="list-style-type: none"> <li>- Usage of technology at the learning centre</li> <li>- Teacher's attendance in the past one month</li> <li>- Learners' attendance in the past one week</li> <li>- Subjects taught and language of administration</li> <li>- SEL classes</li> <li>- No. of teachers</li> <li>- Learners' assessment methods and frequency of assessment</li> <li>- Psychosocial support</li> <li>- Facilities for differently abled learners</li> <li>- Learning centres infrastructure like toilet, fan light, bench, desk, learning material, etc.</li> <li>- Recommendations for improvement to ensure better learning</li> </ul>	

## 2.1.2 Piloting of the Tools.

The pilot study sought to assess the effectiveness of the administration processes alongside the reliability and validity of the assessment tools for Grade 2 and Grade 5 learners. The study focused on evaluating assessors' proficiency in utilizing the tools and scoring formats, the logistics of conducting assessments across various physical settings at Community-Based Learning Facilities (CBLF) and Learning Centres, the duration of assessments per learner, and the refinement of data entry formats and procedures.

A team of 15 skilled assessors (comprising 8 males and 7 females), proficient in the Rohingya and Burmese languages, was deployed. These assessors underwent an extensive training session from September 7th to 10th, 2024, in Cox's Bazar. The training was conducted collaboratively by Ipsos' partners in Bangladesh, PCDF, with support from Save the Children (SCI).

The pilot encompassed three camp locations (camps 6, 12, and 13) across five learning facilities, assessing a total of 59 learners. Specifically, Grade 2 assessments were conducted in Camps 13, 6, and 12, involving 30 learners, while Grade 5 assessments were carried out in Camp 12, engaging 29 learners. Data entry was executed using an Excel template that adhered to the scoring guidelines of the assessment tools. Ipsos implemented random checks using scanned copies of the assessment sheets to ensure scoring and data entry accuracy, identifying any discrepancies for correction.

### 2.1.3 Analysis of Validity and Reliability of Assessment Tool

Rasch modelling (Item Response Theory) was used to support the development of the assessment tools as well as to analyse the learning attainment of learners post pilot. In this regard, the following steps were carried out:

- Tested the psychometric properties of the items to ensure they were useful measures of what learners know.
- Ranked the items according to difficulty. This was done using *fit-for-purpose software*. The software then also ranked learners according to their ability and placed the learners onto the same metric.

This process produced results based on a probability model, positioning learners on a scale according to their likelihood of correctly answering questions of varying difficulty levels. Although these scale scores are less intuitive compared to percentage scores, they offer a more accurate reflection of learners' attainment relative to their actual knowledge and skills.

#### Reliability and Validity Testing of Tools:

*Test Reliability Statistics:* These statistics provided insights into the tool's reliability and efficacy as a measuring instrument. According to the Office of Educational Assessment (University of Washington), scores above 0.90 indicate excellent reliability, akin to top standardized tests. Scores between 0.80-0.90 denote very good reliability for classroom tests or those reporting at an individual learner level. Scores ranging from 0.70-0.80 are considered good for classroom tests, though some items might require enhancement. Scores between 0.60-0.70 suggest low reliability, necessitating supplementary measures for individual learner grading. Scores from 0.50-0.60 indicate a need for test revision.

*Item Discrimination Analysis:* This analysis assessed each item's capacity to distinguish between high and low-performing learners. An item with a discrimination score of 0.3-0.5 is considered to have fair discrimination, while scores of 0.5-0.7 indicate good discrimination. Items exceeding this range are viewed as having excellent discrimination. A score of -1 suggests perfect discrimination in the wrong direction. Item discrimination statistics were analysed alongside the item's objectives. For instance, an item used for ranking, such as in entrance examinations, should possess a high discrimination index, whereas an item representing 'essential knowledge' may have a near-zero discrimination index.

#### Reviewing Item Discrimination:

- Less than 0: Negative discrimination is generally unfavourable, indicating a potentially misleading or mis-keyed item.
- Between 0 and 0.2: Not discriminating.
- Between 0.2 and 0.3: Beginning to show discrimination.

- Between 0.3 and 0.5: Fair discrimination.
- More than 0.5: Excellent discrimination.

The tools were developed in-house based on item difficulty and were not calibrated against external global or national frameworks due to contextual constraints. Given the absence of global benchmarks for non-academic assessments, items discriminating between 0.2-0.3 were considered in relation to their objectives. For both academic and non-academic assessments, if an item assessed basic essential knowledge expected of all learners, it was acceptable for the item to have a discrimination index below 0.3 (but not negative). However, an assessment should not contain a significant number of items at this level of discrimination, as this would indicate an inability to effectively differentiate between learners with varying proficiency levels.

Grade	Assessment type	Guttman's L2	Coefficient Alpha
<b>Grade-2</b>	Literacy	0.9441	0.9357
	Language	0.8957	0.8870
	Numeracy	0.9581	0.9534
	SEL	0.8251	0.8233
<b>Grade-5</b>	Literacy	0.9415	0.9346
	Language	0.9358	0.9196
	Numeracy	0.9684	0.9632
	SEL	0.9348	0.9335

#### 2.1.4 Designing of the tools for main assessment

The assessment tools were initially drafted in English and subsequently translated into Rohingya (Latin script and Rohingya language) and Burmese as per the assessment type, adhering to the assessment requirements. While overall instructions and dialogue were conducted in Rohingya, assessments of the Burmese language were administered in Burmese. For literacy assessments, the tools were maintained in English and translated into Burmese, allowing learners to choose their preferred language. The Social and Emotional Learning (SEL) assessments were translated into Rohingya using Latin script.

The finalized tools were designed to enhance their visual appeal to learners and to streamline both the administration and scoring processes for assessors.

These tools were produced and printed in booklet form, with each booklet assigned to an individual learner. The designed tools and stimulus sheets were printed in preparation for the main survey.

Figure 1: Grade 2: Assessment tools

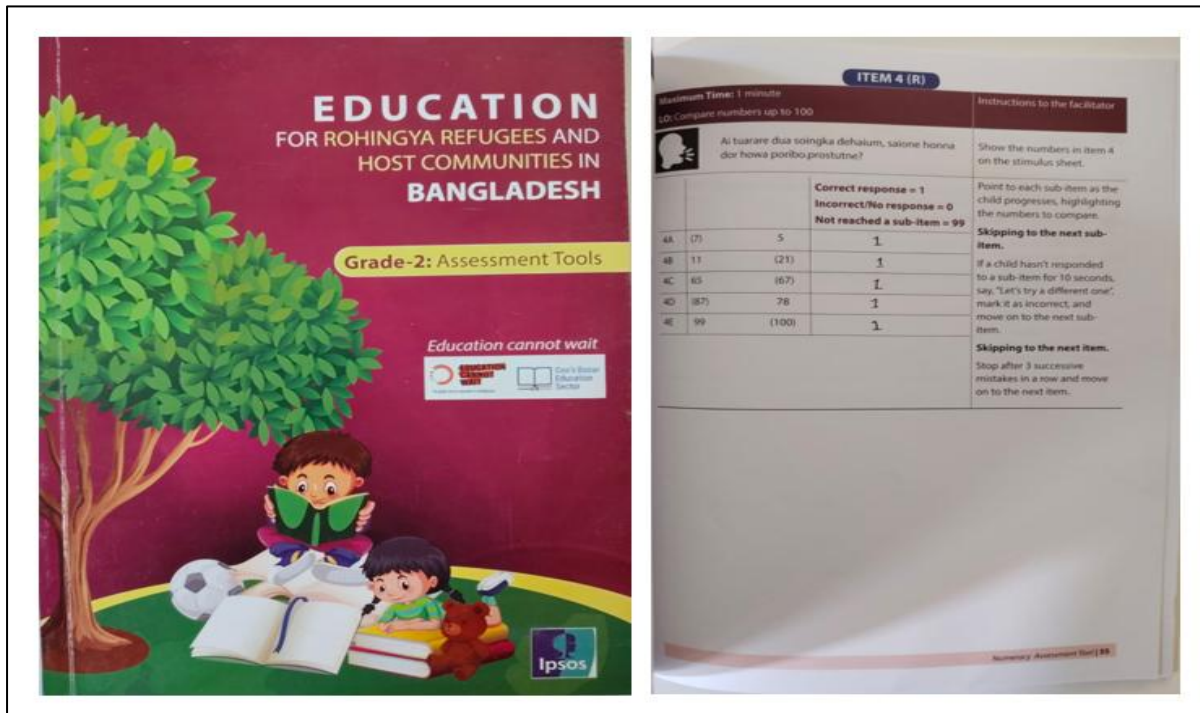


Figure 2: Grade 5: Assessment tools

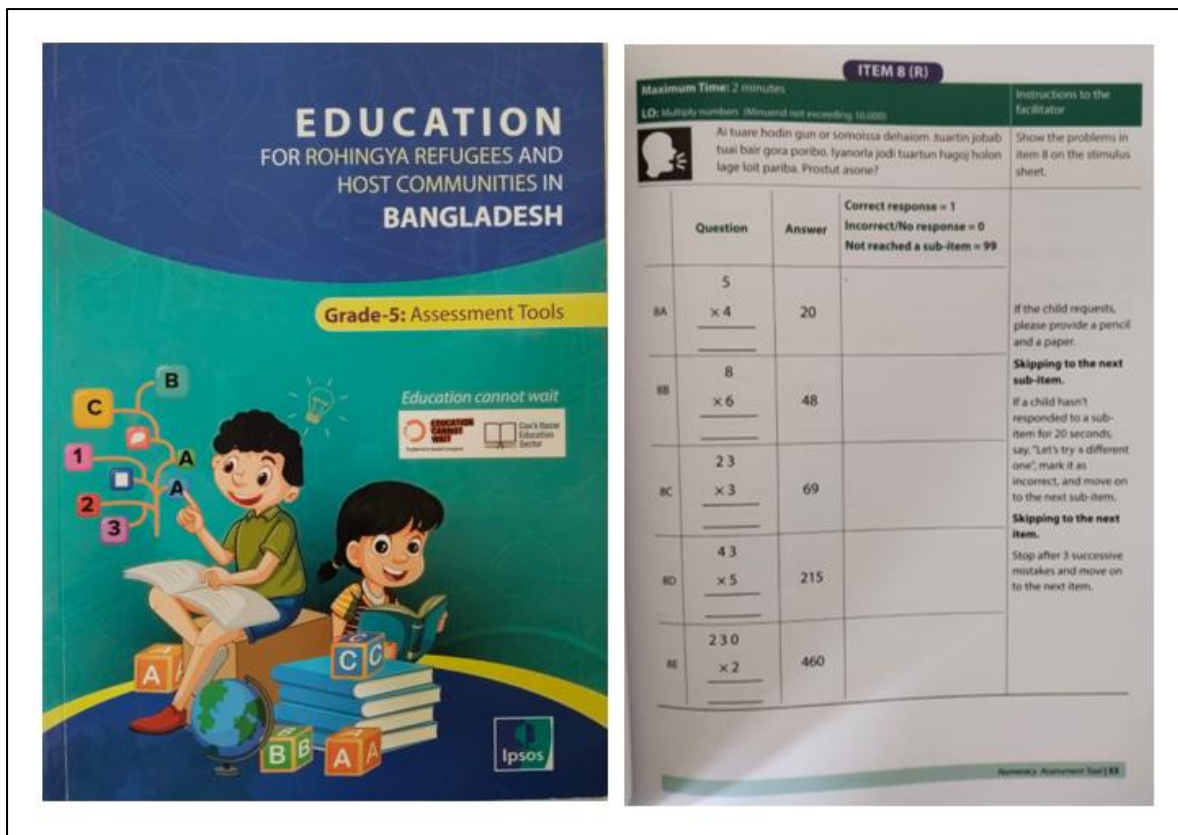


Figure 3: Grade 2: Stimulus sheets

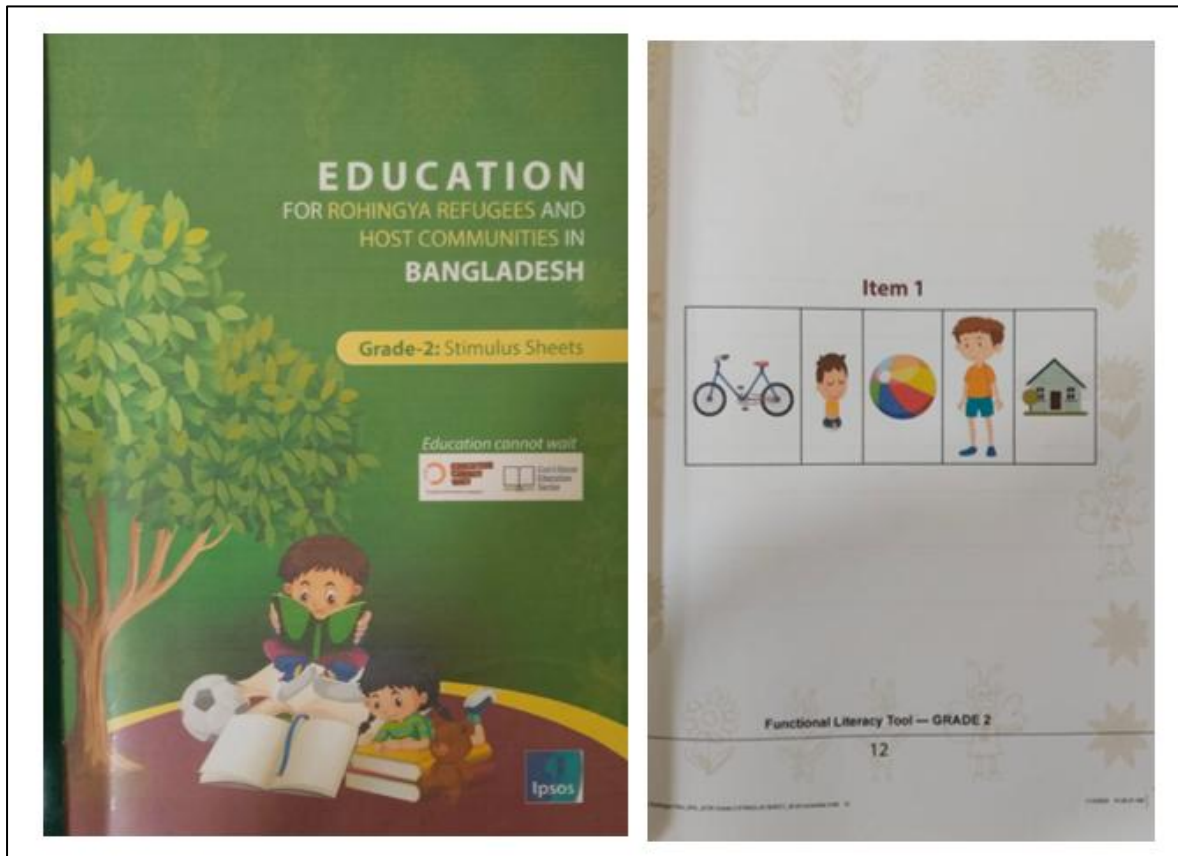
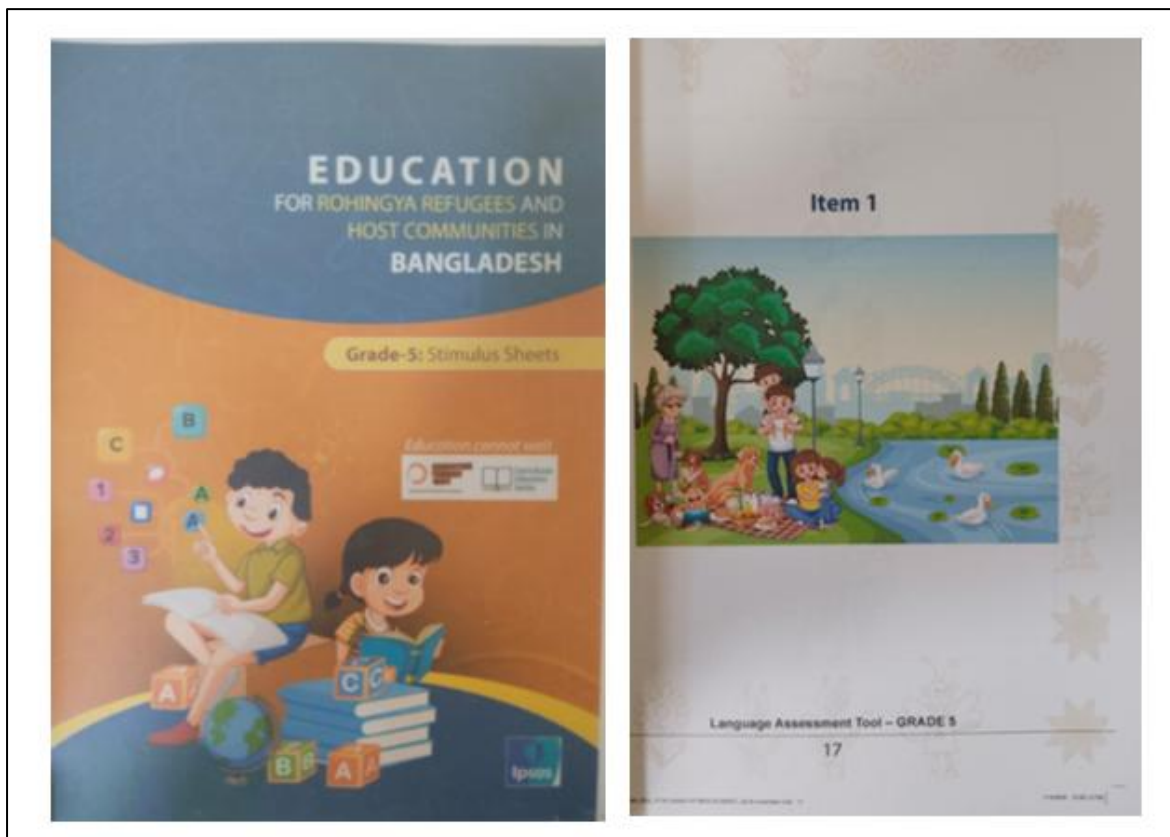


Figure 4: Grade 5: Stimulus sheets



## 2.2 Sampling

The actual sampling conducted deviated from the initially planned sample size due to the availability of operational learning centres and learners within the target population. The sample is not representative of the broader population but is rather a sample of MYRP sites based on sector criteria. This section delineates the modifications made to the initial sampling strategy and elaborates on the final sampling process executed in consultation with GTP and TCG.

**Initial Sampling Plan as per the Terms of Reference (TOR):** Initially, the scope of work outlined a plan to sample 90 learning centres encompassing 1,260 learners from a universe of 278 centres, which included 10,275 Grade 2 and Accelerated Learning Program -1 (ALP-1) learners, comprising 6,731 boys and 3,544 girls. The sample size calculation was based on population estimates and power calculations, taking into account gender, intervention, and age.

**Revision of Sample Size Prior to Fieldwork:** Before commencing fieldwork, Sector TCG provided a list of 89 learning centres selected based on two criteria:

- a. Learning Centres that were part of the original Education Cannot Wait (ECW) facilities since the initiation of the Multi-Year Resilience Programme (MYRP) II.
- b. Learning Centres accommodating Grade 2 and/or 5 learners.

With a significant reduction in the number of centres and learners, Ipsos collaborated with GTP to formulate a revised sampling plan. The updated sample design involved covering 60 centres with 12 learners per centre, thereby achieving a sample of 720 learners. Given the diverse distribution of learning centres by grade and the gender distribution of learners, a random selection of learners within each centre was planned. The determination of this sample size focused on power calculation for gender comparison, revealing insufficient statistical power to detect an effect by grade. Consequently, the sampling strategy outlined below is predicated solely on gender analysis.

Following the proposed approach, 60 learning centres were randomly selected from the list of 89. In cases where a learning centre had 12 or fewer learners, all learners were included, whereas in centres with more than 12 learners, a random selection was conducted.

**During the Fieldwork:** During the fieldwork phase, it was observed that some centres were either non-operational or unavailable on the scheduled assessment date. These centres were consequently replaced with others from the list. Ultimately, the assessment involved 680 learners—comprising 560 from Grade 2 and 120 from Grade 5—across 62 learning centres (52 for Grade 2 and 10 for Grade 5) randomly selected from the available list. Among the 680 learners, 454 were female and 226 were male, reflecting the learner distribution within the universe.

## 2.3 Training for main assessment phase

### 2.3.1 Designing of training manual:

Comprehensive training manuals for both Grade 2 and Grade 5 assessment tools were meticulously developed, encompassing detailed instructions for each item and sub-item within the tools. The training manual included the following components:

- Learning Objective
- Time Allocation

- Skip Rule
- Scoring Pattern
- Language of Administration
- Administration Tips and Probes

Additionally, an Excel summary document was prepared, encapsulating all instructions from the manual in a succinct format for assessors to reference during the assessment process.

### **2.3.2 Execution of Training:**

A cascading training approach was implemented to efficiently train the team. Ipsos provided training to the core team members of PCDF, who were responsible for conducting local training sessions for participants.

The Training of Trainers (ToT) was held on the 29th and 30th of October 2024, where a team of five master trainers received comprehensive training. Ipsos facilitated this training by offering detailed explanations for each section of the tool, including thorough instructions on managing each item and sub-item.

#### **Training of the assessors for the assessment**

The ToT was followed by a 4-day training led by trainers from PCDF. The training was held in Cox's Bazaar, from 6th November to 9th November 2024. The training was attended by 38 assessors and supervisors.

During the training, it was emphasized that the assessors understand that the primary goal of the assessment is to objectively assess the learners which will eventually guide the improvement in their educational access and quality, rather than to examine the learners. It was reiterated that the learners' scores would not affect their individual standing. This understanding ensured that the assessors approached the process with objectivity.

The training included a detailed explanation of each item in the Grade 2 and Grade 5 assessment tools, which covered all the items in the 5 sections - learners' background characteristics, language competency, functional literacy, functional numeracy, and social and emotional learning.

The training was aimed at ensuring a comprehensive understanding of these assessment tools among the assessors. This was done through a blend of the following activities:

- a. Theoretical explanations
- b. Discussions on each item of the assessment
- c. Role-playing exercises and mock assessments
- d. Written test of the training participants to understand their level of understanding of the assessment and tools

Additionally, Save the Children conducted ethical and child safeguarding training to ensure that assessors adhered to safeguarding guidelines during the survey.

The training also covered discussion on cultural sensitivity. Activities were done to reflecting upon classroom situations and discuss potential actions. These included situations around noting cues on restlessness, distractions, nervousness in children and how to handle gently and respectfully.

For the teachers' survey, the supervisors were briefed about the tool, and mock practices were conducted.

The entire training session was led by the Master Trainers and observed and guided by the Ipsos research team, who participated virtually.

## 2.4 Data collection

The main phase of the assessment was conducted from November 10th to November 26th, 2024. This data collection process necessitated substantial logistical coordination with the Sector Technical Consultative Group (TCG) and implementing agencies.

**Team Deployment:** A dedicated team of 36 members was deployed for the main assessment, comprising 30 assessors and 6 supervisors. The assessors, an evenly balanced group of 15 males and 15 females, all possessed at least a graduation degree and relevant survey experience, ensuring a balanced and skilled approach to data collection. These assessors were residents of Bangladesh, with prior experience working in Cox's Bazar and proficient language skills in Rohingya.

The supervisory team, consisting of 4 male and 2 female supervisors, each with a minimum of three years of experience, played a crucial role in overseeing the process and ensuring data quality.

The assessors and supervisors were organized into 5 teams, each comprising 6 enumerators and 1 supervisor, with each assessor responsible for completing 2 assessments per day.

For centres with fewer than 12 learners, the team composition was adjusted to cover more learning centres within the given timeframe.

In addition, volunteers from the implementing agencies, proficient in the Burmese language, assisted the assessors in conducting the Burmese Language Assessment.

### Sample Achieved:

A total of 62 centres were covered, assessing 680 learners, which included 560 learners from Grade 2 and 120 learners from Grade 5.

*Table 4: Sample targeted vs achieved*

	Sample Targeted	Sample Achieved
Learning Facilities	60	62
Learners	720	680
Teachers	60	61

*\*The shortfall in the achievement of sample despite covering more learning facilities than planned was majorly due to a smaller number of learners, particularly in grade 2 learning facilities and absence of learners on the day of assessment.*

**Table 5: Grade wise distribution of the centres**

Centres covered	Grade 2	Grade 5	Total
	52	10	62

**Table 6: Sector Technical Consultative Group (TCG) partner wise distribution of the centres**

Centres covered	PIB	SCI	UNICEF	Total
	5	29	28	62

**Table 7: Gender wise distribution of the learners**

No. of centres covered	Total no. learners included in the assessment		No. of boys	No. of girls
62	680		226	454

**Table 8: Sector Technical Consultative Group (TCG) partner wise distribution of the learners**

Sector TCG Partner	Grade	No. of centres covered	Total no. learners included in the assessment	No. of boys	No. of girls
SCI	2	29	285	0	285
PIB	2	5	58	27	31
UNICEF	2	18	217	111	106
<b>Grade 2 (Total)</b>		<b>52</b>	<b>560</b>	<b>133</b>	<b>427</b>
UNICEF	5	10	120	93	27
<b>Grade 5 (Total)</b>		<b>10</b>	<b>120</b>	<b>93</b>	<b>27</b>
<b>Total</b>		<b>62</b>	<b>680</b>	<b>226</b>	<b>454</b>

In addition to the learner assessments, a teacher survey was conducted by the supervisors with one teacher at each learning centre. However, due to the absence of a teacher at one centre on the assessment day, the teacher survey was conducted at 61 centres instead of the initially planned 62. At the learning centres, comprehensive written consent was obtained from the teachers to conduct assessments with learners.

At the learning centers, written blanket consent was obtained from teachers to conduct assessments with learners under their care. This teacher-based approach was adopted due to the logistical challenges of obtaining individual parental consent in informal camp settings with limited parental access and literacy challenges. Teachers understood that participation was voluntary, assessments would take approximately 90 minutes per child, and both they and learners could withdraw at any time. The consent form outlined data privacy measures, child safeguarding provisions (with all field consultants having completed Save the Children's Child Safeguarding Policy orientation), and provided contact information for a designated child

safety focal point from the SCI accountability team. Teachers received a copy of the signed consent form with these details for their records.

The average duration of the learners' assessments was approximately 90 minutes for both Grade 2 and Grade 5 learners. To prevent the learners from becoming overwhelmed or losing interest, the assessors engaged them in games such as tic-tac-toe, dots and boxes, and rock-paper-scissors. The duration of the interview for the teacher survey was approximately 70 minutes.

## 2.5 Quality Control Measures

Quality control was a central focus throughout the assessment process, with the following measures implemented to ensure data quality and consistency:

- **Designing Tools to Fit Assessment Requirements and Local Context:**
  - The assessment tools were reviewed by the Sector Technical Consultative Group and the Global Technical Partner to ensure alignment with local context and assessment objectives.
  - Tools were meticulously translated and validated by education experts proficient in Burmese and Rohingya languages.
  - Pilot testing was conducted to refine the tools and evaluate their reliability and validity, ensuring robust assessment processes.
  
- **Ensuring Assessor Proficiency and Confidence:**
  - During training, assessors participated in mock practice sessions and quiz tests to solidify their understanding of the assessment objectives and tools, ensuring preparedness and proficiency.
  
- **Mitigating Assessor Bias in Administering SEL:**
  - Assessment items were scientifically developed considering developmental stages. Literacy, numeracy, and language responses were designed to be objective, while SEL responses required assessors to code accurately.
    - Training included real-life response collection from children on specific SEL questions, with assessors practicing coding.
    - The assessment tools included examples and coding criteria for reference.
    - Assessors were instructed to document complete learner responses when uncertain and discuss coding later.
  
- **Language of Assessment:**
  - The assessment tool was administered in Rohingya and Burmese. Literacy assessments were conducted in English or Burmese, as Rohingya lacks a written script.
  - Each team included an assessor fluent in Burmese, with teacher support provided as needed to ensure learners understood questions.

- SEL assessments were conducted in Rohingya, with questions simplified for comprehension.
- **Ensuring learners' safety and comfort:**
  - Training included a session on child safeguarding, emphasizing gentleness, respect, and safety. Exercises also focused on attention span, anxiety, learner comfort, and potential do's and don'ts to be followed during assessment process.
  - Recognizing the extensive duration of the assessment tool, learners were given brief breaks before each assessment. Assessors were supplied with a list of quick ice breakers and games to engage learners and ensure their comfort.
- **Quality Assurance During Fieldwork:**
  - A detailed field plan outlined daily schedules and learning centre visits, shared with the Sector TCG for alignment and support.
  - On-site supervisors provided real-time oversight of data collection and scoring.
  - Daily debriefs with supervisors addressed challenges and documented observations.
  - Assessment progress was monitored daily, with deviations or delays promptly reported to the Sector TCG.
- **Review and Scrutiny of Assessment Sheets:**
  - The PCDF project management team reviewed all assessment sheets for consistency and accuracy across centres.
  - The Ipsos team conducted further reviews of 30% of scrutinized sheets, rectifying gaps or errors.
  - Verified sheets were processed by trained data entry operators, with close monitoring by Ipsos to maintain data integrity.

## 2.6 Data Analysis:

Upon completion of the data collection phase, the scores for each item and sub-items were entered into a predefined data entry sheet. To minimize errors, the following procedures were put in place:

<b>Unique Coding of Assessment Sheets</b>	Each assessment sheet was assigned a unique code to streamline data organization and retrieval, ensuring each learners' data was accurately tracked
<b>Linking Data Entry to Unique Codes</b>	These unique codes were then linked to the respective data entries, promoting precise and efficient data management. This practice minimized errors and ensured that all data points were correctly associated with the respective learners.
<b>Data Entry Checking</b>	The Ipsos team reviewed all the data entries to ensure consistency and integrity of the data.

In the psychometric analysis, discrimination scores were assessed to evaluate each item's capacity to differentiate between individuals with varying proficiency levels. Difficulty scores, derived from these discrimination scores, indicated the level of challenge each item posed to the children, allowing items to be ordered according to their difficulty levels. Using these ordered difficulty scores, benchmarks were established for each grade.

The learning levels are reported both in aggregate and disaggregated by gender, providing a comprehensive view of educational outcomes across different demographics.

The mean scores for literacy, language, numeracy, and Social and Emotional Learning (SEL) were analysed across genders using independent samples two-tailed t-tests with unequal variance, to discern if any statistical differences existed. This approach facilitates the assessment of whether the observed variations in scores between boys and girls are significant or attributable to random chance.

The chi-square test was employed to determine if there is a significant association between gender and learning levels across grades. This test is suitable for categorical data, making it ideal for analysing the distribution of learners at various learning levels by gender. The appropriateness of the sample size was considered along with adequacy of cell counts of the relevant contingency table, and it was ensured that the sample was large enough to provide reliable results.

Furthermore, Cramér's V was used to measure the strength of association between gender and learning levels. It complements the chi-square test by providing a measure of effect size, helping to interpret the practical significance of the findings. The values of Cramér's V range from 0 to 1, with the following generally accepted thresholds for effect size: 0.1 = Small Effect; 0.3 = Moderate Effect and 0.5+ = Strong Effect.

When analysing small subgroups like the Grade 5 girls (N=27), it is crucial to ensure the reliability and validity of the statistical analysis. Small sample sizes can lead to issues like reduced statistical power, which might cause us to miss a real effect. This attention are crucial in maintaining the integrity of the findings by minimizing errors, such as false positives or negatives. Additionally, it allows for better interpretation of results, ensuring observed trends are consistent and not skewed by small sample sizes.

Cramér's V is valuable in this context because it quantifies the strength of the association between two categorical variables, such as gender and learning outcomes. The inclusion of Cramér's V alongside the Chi-square test was crucial due to the large disproportionate number of girls and boys across grades, ensuring reliability by considering effect sizes of the differences given small sizes in sub-samples by gender. While the chi-square test shows whether an association is significant, Cramér's V indicates how strong that association is, ranging from 0 (no association) to 1 (perfect association). It helps interpret the practical significance of the findings by using thresholds for small, moderate, and strong effects. Moreover, Cramér's V is not influenced by sample size disparities, making it more reliable for comparing associations across different groups or studies, especially when dealing with unequal sample sizes, like the imbalance of boys and girls. Overall, it adds depth by not only confirming an association but also clarifying its strength and relevance.

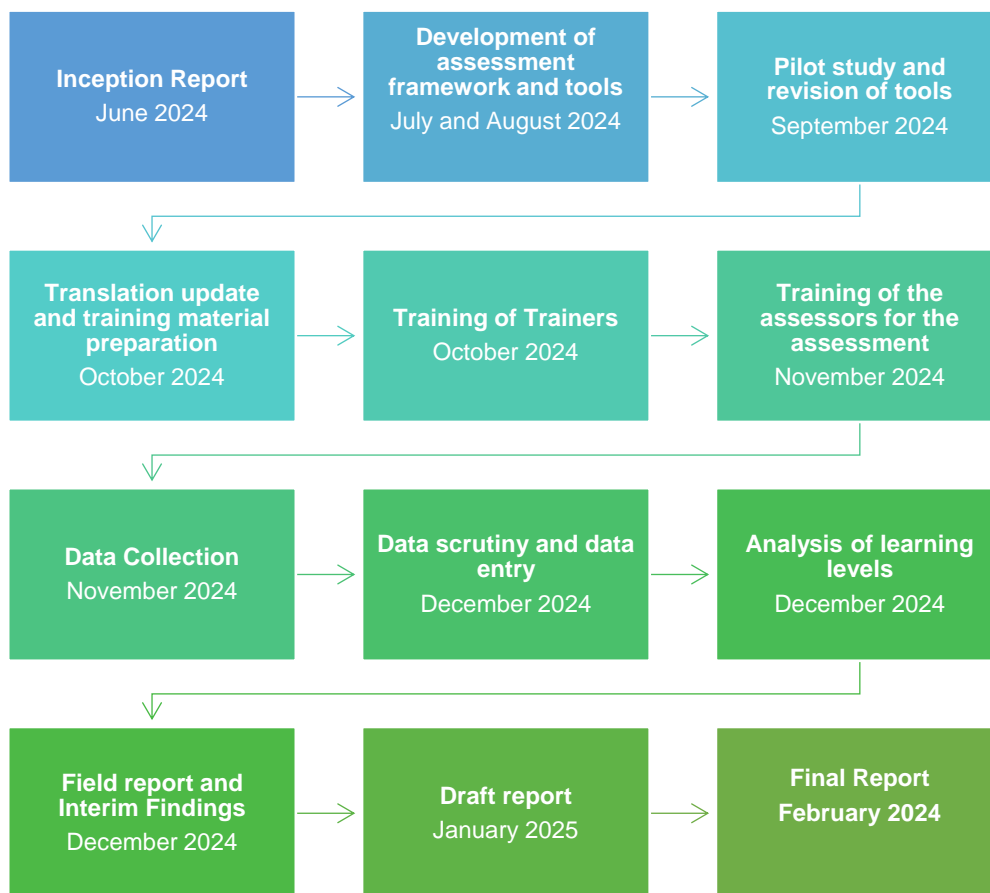
The regression analysis utilized a mixed-effects logistic regression model to examine the significant associations between various variables and learning outcomes while controlling for other characteristics. This approach accounts for learners being clustered within their learning centres, implying that their results may not be entirely independent of their classmates. The

use of this model permits the inclusion of both fixed and random effects, addressing the nested structure of the data, as indicated by the Intraclass Correlation Coefficient (ICC) in the regression table. This methodology distinguishes itself from typical Ordinary Least Squares (OLS) or standard logistic regression by considering both individual and group-level influences on learning outcomes. A significance level of  $p < 0.05$  was used for all findings.

## 2.7 Limitations

- **Complexity of Language in Assessment:** Initially, the literacy assessment was intended to be conducted in the learners' home language. However, it was discovered that the Rohingya language lacks a written script. Consequently, the assessment was modified to be administered in either English or Burmese, contingent on the learner's language preference. While most learners opted for English, it is crucial to acknowledge that English is not their primary spoken language, which could potentially affect their literacy performance.
- **Influence of Learners' Grade on Assessment:** According to the scope of work, the assessment was designed for learners in Grades 2 and 5. However, due to delays in launching the assessments on the ground, learners had progressed to Grades 3 and 6 by the time the assessment tools were prepared, which were calibrated for the earlier grade levels. This discrepancy may lead to the assessment not accurately reflecting the learners' actual abilities.
- **Delay in Launching Assessment:** Public unrest in Bangladesh in August 2024 led to the closure of centres. As a result of accessibility challenges and safety concerns, the commencement of fieldwork was delayed.
- **Age Disparity Within Grade:** There was a notable age disparity among learners within the same grade level, likely influencing learning outcomes. For instance, in Grade 2, the average age was 11 years, with a range from 7 to 17 years, and in Grade 5, the average age was 13 years, ranging from 10 to 18 years.
- **Revised Sample Size:** The original sample size, initially set at 90 learning centres, was significantly reduced to 60. This adjustment was necessitated by a decline in the number of eligible learning centres within the target universe, decreasing from an original list of 278 to just 89. Consequently, this reduction in sample size skewed the representation of learners across different grades and limited the scope of analysis.
- **Small Subgroup Sizes:** While confidence intervals have been provided for key outcomes, it is important to note that the small sample size for Grade 5 learners—particularly the female subgroup ( $n=27$ )—introduces a higher degree of uncertainty in provided estimates. This limitation applies across all domains (Literacy, Language, Numeracy, and SEL). Although the statistical analyses indicate significant differences and strong associations, stakeholders should interpret these findings with caution, as the precision and generalisability of the Grade 5 results are constrained by the limited number of observations.
- **Exclusion of Learners with Disabilities:** Disability status was recorded, but learners with disabilities (2 in the selected learning centers) were excluded, as the assessment tools were not designed to accommodate their needs.

## 2.8 Timeline



### 3 Profile of Learning Centre

This chapter offers a comprehensive profile of the learning centres, and the teachers affiliated with them, examining various dimensions such as learner attendance, curriculum offerings, available resources, and operational schedules. Additionally, it investigates the background of the teachers, including their demographic characteristics, educational qualifications, and professional training. The chapter further underscores the perceived training needs and suggests areas for improvement, providing insights into potential strategies for enhancing educational outcomes and addressing current challenges within the learning centres.

#### 3.1 Centre Schedule and Strength

In this study, 62 out of 69 eligible learning centres were included, with 52 centres for Grade 2 and 10 centres for Grade 5. However, in one Grade 2 centre, the teacher assessment was not conducted due to the absence of teachers.

##### 3.1.1 Learner Attendance

The table below illustrates that the average number of learners per centre for Grade 2 is 23, while Grade 5 centres have a slightly larger average of 28 learners. Overall, the attendance rate remains consistently high, with 90% of learners attending on all days preceding the survey week.

*Table 9: Learner strength and attendance*

Parameters	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
Average number of learners	23	28	24
Average % of learners present all days preceding one week of survey	90%	91%	90%

##### 3.1.2 Class Schedules in learning Centres

The majority of learning centres conduct both morning and afternoon sessions, with 86% (44) of Grade 2 centres and 100% (10) of Grade 5 centres adhering to this schedule. A minor portion of Grade 2 centres, 12% (6), operate exclusively in the morning, while an even smaller fraction, 2% (only one centre), operates solely in the afternoon.

*Table 10: Learning centre schedule*

Centre schedule	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
Morning	6 (12%)	0	6 (10%)
Afternoon	1 (2%)	0	1 (2%)
Both Morning and Afternoon	44 (86%)	10 (100%)	54 (89%)

## 3.2 Curriculum

### 3.2.1 Subjects offered in Learning Centres

Discussions with teachers revealed that a diverse range of subjects is offered to both male and female learners across learning centres, with Mathematics being the most universally taught subject, available in 98% (51) of Grade 2 centres and 100% (10) of Grade 5 centres.

Science and Burmese/Myanmar are also prominently included, with a presence in 94% (49) to 100% (10) of the centres. English is offered in the majority of centres, with an availability of 87% (45) in Grade 2 and 70% (7) in Grade 5.

Life Skills are commonly taught in Grade 2 centres at 92% (48), but significantly less in Grade 5, at 40% (4). Social Studies/History/Geography is well-represented, particularly in Grade 2 centres (96% or 50). Conversely, Arts and Civics/Moral and Civics are underrepresented, being offered in only 8% (4) of Grade 2 centres and absent in Grade 5, indicating a potential area for curriculum expansion.

**Table 11: Subject offered in learning centre**

Subjects offered at learning centre	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
English	45 (87%)	7(70%)	52(84%)
Science	49 (94%)	10(100%)	59(95%)
Maths	51(98%)	10(100%)	61(98%)
Burmese/Myanmar	45(87%)	10(100%)	55(89%)
Life skill	48(92%)	4(40%)	52(84%)
Social Studies/History/Geography	50(96%)	8(80%)	58(94%)
Arts and civics/Moral and Civics	4(8%)	0	4(6%)

Overall, Social Emotional Learning (SEL) classes were not explicitly included under the regular curricular subjects followed in the centres. However, upon further probing, it was revealed that teachers in 79% (n=48, comprising 42 Grades 2 and 6 Grade 5 centres) reported offering SEL classes to learners.

Of these 48 centres, 92% (n=44) conduct weekly classes, while 8% (n=3) hold classes bi-weekly. A few centres provide these classes on a daily basis (n=2) and monthly (n=1). In 87% (n=42) of the centres, SEL classes are conducted by in-house staff, whereas 11% (n=5) utilize external resource persons. In one centre, both in-house staff and external resource persons deliver SEL classes.

### 3.2.2 Extracurricular Activities

While a variety of extracurricular activities are offered across the learning centres, they are not universally available. Indoor games, word games, and puzzles are present in 38% (20) of Grade 2 centres and 20% (2) of Grade 5 centres, amounting to 35% (22) overall. *Exercise and outdoor games* are more prevalent in Grade 5 centres at 60% (6), compared to 35% (18) in Grade 2, constituting 39% (24) overall.

*Art and craft* or drawing activities are available in 25% (13) of Grade 2 centres but only 10% (1) of Grade 5 centres, totalling 23% (14).

*Drama and singing* activities are offered only in a small fraction of Grade 2 centres at 6% (3), with none in Grade 5. Storytelling activities are found in 13% (7) of Grade 2 centres and 20% (2) of Grade 5 centres, combining to 15% (9) overall.

*Awareness classes* focused on safety and protection are minimally included, with 4% (2) in Grade 2 and 10% (1) in Grade 5 centres, amounting to 5% (3) overall.

**Table 12: Extracurricular activities at learning centres**

Extra curriculars	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
Indoor games/Word games/Puzzle	20(38%)	2(20%)	22(35%)
Exercise/outdoor games	18(35%)	6(60%)	24(39%)
Art and craft/Drawing	13(25%)	1(10%)	14(23%)
Drama/Singing	3(6%)	0	3(5%)
Story telling	7(13%)	2(20%)	9(15%)
Awareness classes (safety/protection)	2(4%)	1(10%)	3(5%)

Furthermore, approximately 41% (27 centres) reported offering psychosocial support to children, with 23% providing support to all children and 21% focusing primarily on children in need. Upon further inquiry, teachers elaborated on activities conducted under the ECW program, which aim to foster emotional and physical resilience through storytelling, motivational engagement, and special care for children with disabilities, thereby assisting them in adjusting to their environment. Specifically, teachers shared instances where they engage in individual discussions with learners who were previously attentive but became quiet and disengaged, to understand their issues and provide necessary support.

### 3.3 Resources and materials

The assessment also evaluated the spatial and resource availability in learning centres. Among 52 learning centres, 50 (99%) consist of a single room, with only one centre having two rooms. For Grade 5, 9 out of 10 centres have one room, while one centre possesses two rooms.

Regarding the availability of amenities, the data reveals a general scarcity across the learning centres. Of the 15 listed amenities, 54% (33 centres) have 7 to 9 facilities, 29% (18 centres) have 6 or fewer facilities, and 16% (10 centres) have 10 or more facilities.

Essential resources such as blackboards (89% or 55 centres) and chalk (90% or 56 centres) are nearly ubiquitous. However, slightly over half of the centres are equipped with fans (53% or 33 centres) and lights (61% or 38 centres), indicating a significant deficiency in climate control and lighting infrastructure.

Seating arrangements include desks in 32% (20 centres) and benches in 35% (22 centres), while ground mats are more common, present in 69% (43 centres), suggesting a reliance on flexible learning spaces.

Drinking water facilities are widely available in 92% (57 centres); however, the presence of toilets in only 54% (36 centres) underscores a substantial need for improved sanitation facilities. Libraries (5% or 3 centres) and projectors (2% or 1 centre) are rare, indicating limited access to supplementary learning resources. Recreation areas are available in a minimal 0.3% (3 centres), highlighting very limited opportunities for recreational activities.

**Table 13: Amenities available at the learning centres**

List of available amenities	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
Fan	32(62%)	1(10%)	33(53%)
Light	37(71%)	1(10%)	38(61%)
Bench	13(25%)	9(90%)	22(35%)
Desk	13(25%)	7(70%)	20(32%)
Ground mat	41(79%)	2(20%)	43(69%)
Blackboard	46(88%)	9(90%)	55(89%)
Chalk	47(90%)	9(90%)	56(90%)
White board	31(60%)	0	31(50%)
Marker pen for white board	31(60%)	0	31(50%)
Library	3(6%)	0	3(5%)
Games/play items	36(69%)	2(20%)	38(61%)
Projector	1(2%)	0	1(2%)
Drinking water facility	48(92%)	9(90%)	57(92%)
Toilet for children	28(54%)	8(80%)	36(54%)
Recreation area	0	3(30%)	3(0.3%)

Regarding the use of learning aids, teachers reported that learning charts are extensively utilized in 94% (58 centres), while art and craft materials are available in 69% (43 centres). Flashcards are employed in approximately 28% (17 centres) and sticks and stones are used as educational tools in 31% (19 centres). However, storybooks are reported to be available in only one learning centre, and audio systems are present in two centres.

**Table 14: Learning Materials at the learning centres**

Learning Materials	Grade-2 (N=51)	Grade-5 (N=10)	Overall (N=61)
Learning charts	50(96%)	8(80%)	58(94%)
Art and craft items	37(71%)	6(60%)	43(69%)
Flash Cards	15(29%)	2 (20%)	17(28%)
Stick and Stone	17(33%)	2 (20%)	19(31%)
Story Books	1 (0.2%)	0	1 (1.6%)
Audio/MP3	1 (0.2%)	1 (10%)	2 (3.2%)

## 3.4 Teacher's Background

### 3.4.1 Age and Gender

In the study, a total of 61 teachers were included, with one teacher representing each centre. Of these educators, 55% (32 teachers) are female, while 47% (29 teachers) are male. The average age of the teachers is approximately 27 years, with the youngest being 19 years old and the oldest 52 years. Nearly half of the teachers, 48% (29 teachers), are aged between 19 and 24 years, 39% (24 teachers) are between 25 and 34 years, and 13% (8 teachers) are above 35 years. This demographic distribution indicates a predominantly younger teaching staff across the learning centres.

### 3.4.2 Community and Language

Among the participating teachers, 66% (40 teachers) identified as Rohingya (comprising 16 females and 24 males), while 34% (21 teachers) were Bangladeshi (with 16 females and 5 males). 84% (51 teachers) reported speaking Rohingya at home. This linguistic and residential diversity indicates a multicultural and multilingual teaching environment, which may influence teaching methodologies and learner interactions, a well-recognized aspect of the educational response.

### 3.4.3 Education Qualification

The table below presents the educational qualifications of the teachers. Within the overall teacher population (N=61), a significant portion, 34% (21 teachers), have not completed high school, with all such teachers being from the Rohingya community (15 female and 6 male), High school diploma holders account for 26% (16 teachers), while those with Higher Secondary/HSC qualifications comprise 25% (15 teachers). Teachers with a bachelor's degree constitute 7% (4 teachers), all of whom are teaching in Grade 2 centres. A small percentage, 5% (3 teachers), possess a master's degree. Among the seven teachers with bachelor's or higher degrees, six are Bangladeshi residents.

It is important to note that due to limited access to higher education in Myanmar, the Rohingya community's educational attainment is constrained.

**Table 15: Teacher's education qualification**

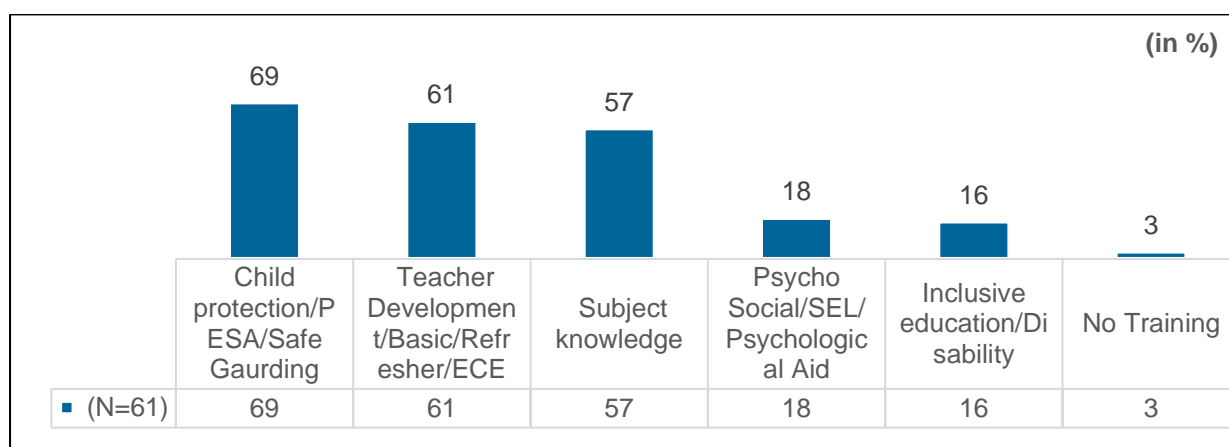
Education Status of Teachers	Rohingya Community (N=40)	Resident of Bangladesh (N=21)	Male (N=29)	Female (N=32)	Overall (N=61)
Not completed high school	21(53%)	0	6 (21%)	15 (47%)	21(34%)
High-school diploma/ SSC	14(35%)	2(10%)	14 (48%)	2 (6%)	16(26%)
Higher Secondary/HSC	4(1%)	11(51%)	4 (14%)	11 (34%)	15(25%)
Associate's degree/vocational certification	0	2 (10%)	2 (7%)	0	2(3%)
Bachelor's degree	0	4 (19%)		4 (13%)	4(7%)
Master's degree	1(0.1%)	2(10%)	3 (10%)		3(5%)

### 3.4.4 Training received by teachers

Out of 61 centres, teachers in 59 centres (97%) reported participating in various training programs. On average, teachers received training in approximately two topics since entering the profession. The most commonly attended safeguarding training such as Protection Sexual Exploitation & Abuse (PSEA), with 69% (42 teachers) participating in such sessions. This was followed by Teacher Development/Basic/Refresher/ECE courses, attended by 61% (37 teachers), and Subject Knowledge training, attended by 57% (35 teachers).

Participation in Psycho-social Support (SEL/Psychological First Aid) training was reported by 18% (11 teachers), while Inclusive Education/Disability training was the least attended, with 16% (10 teachers) participating.

**Figure 5: Training received by teachers**



### 3.4.5 Years of Experience

On average, regardless of country of origin, teachers have five years of experience. A significant portion, 41% (25 teachers), possess between 3-5 years of experience, while 36% (22 teachers) have 0-2 years of experience, and 23% (14 teachers) have over 5 years of experience.

In Grade 2, 47% (24 teachers) have 3-5 years of experience, 35% (18 teachers) have 0-2 years, and 18% (9 teachers) have over 5 years of experience. In Grade 5 centres, the distribution shifts slightly, with 40% (4 teachers) having 0-2 years of experience, one teacher with 3-5 years, and a notable 50% (5 teachers) possessing more than 5 years of experience.

Among the 32 female teachers, 53% (17 teachers) have 3-5 years of experience, followed by 38% (12 teachers) with 0-2 years of experience, and only 9% (3 teachers) have more than 5 years of experience. Out of 29 male teachers, 38% (11 teachers) have over 5 years of experience, 28% (8 teachers) have 3-5 years of experience, and 34% (10 teachers) have less than 2 years of experience.

### 3.5 Teacher Training needs:

The majority of teachers, 85% (52 teachers), believe that additional training would enhance their teaching capabilities. Specifically, in Grade 2, 83% (43 out of 52 teachers) expressed a desire for further training, while in Grade 5, this sentiment was shared by 90% (9 out of 10 teachers).

Overall, 61% (37 teachers) indicated a need for subject-specific training, followed by training in teaching and learning methodology (44%, n=27), inclusive education (21%, n=13), child protection (21%, n=13), classroom management (15%, n=9), psychosocial support (15%, n=9), and communication and community engagement (5%, n=3). Conversely, about 20% (12 teachers) felt no further training was necessary.

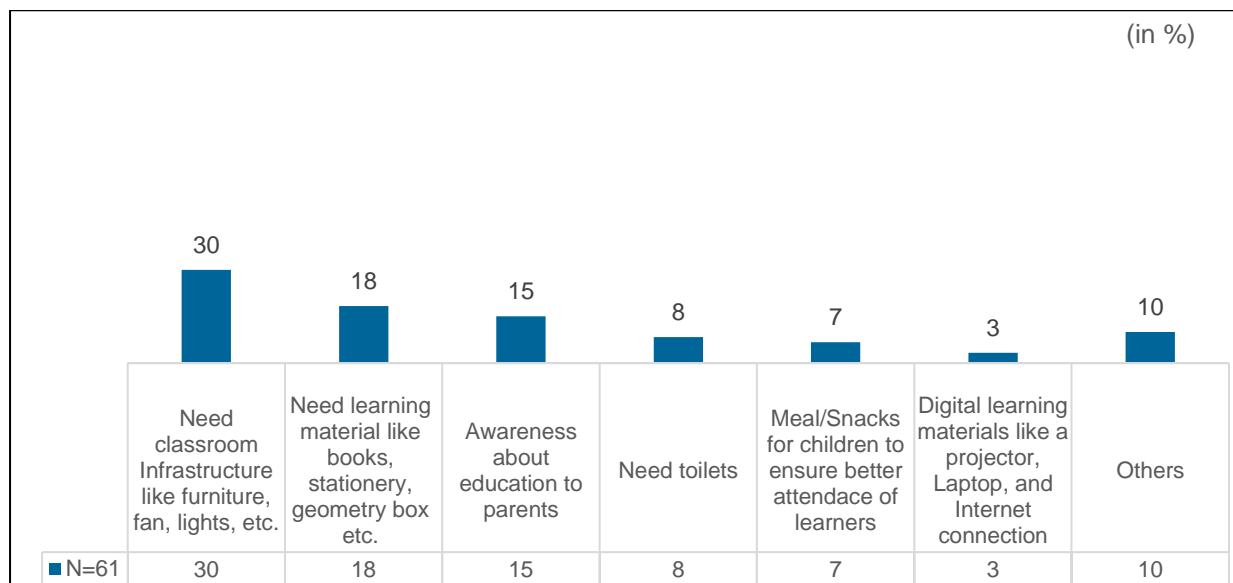
### 3.6 Suggested Areas of Improvement

Teachers identified several areas for improvement to enhance learner learning outcomes. A significant 30% (18 out of 61 teachers) emphasized the need for better classroom infrastructure, including furniture, fans, and lighting. The necessity of providing learning materials such as books and stationery was identified by 18% (11 responses). Additionally,

15% (9 responses) suggested increasing educational awareness among parents. Furthermore, 10% (6 responses) pointed to other needs, while 8% (5 responses) noted the need for improved sanitation facilities, particularly toilets. Meals or snacks to boost attendance were mentioned by 7% (4 responses), and 3% (2 responses) highlighted the requirement for digital learning tools such as projectors and internet access.

Other suggestions by teachers include raising awareness among parents and local religious leaders to better align religious and academic schedules. They also emphasized the need for host community teachers and subject-specific teaching staff. Moreover, they highlighted the importance of infrastructure improvements, such as adding classrooms and introducing uniforms, along with offering computer courses to enhance learners' digital literacy.

**Figure 6: Areas of improvement suggested by teachers**



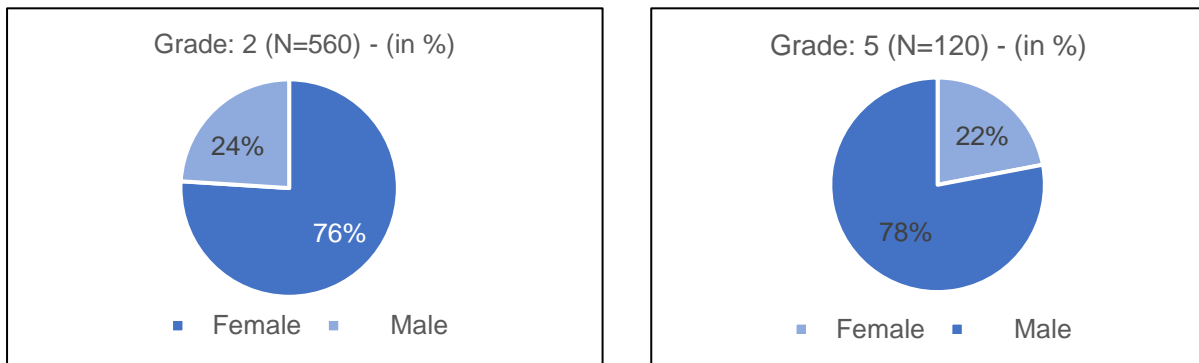
## 4 Comprehensive Profile of Children

This learning assessment encompassed a total of 680 learners distributed across 62 learning facilities, targeting learners in Grade 2 and Grade 5. In Grade 2, a considerable cohort of 560 learners participated in the assessment, which was conducted across 52 learning facilities. For Grade 5, the assessment involved a smaller yet substantial group of 120 learners, conducted in 10 learning facilities.

### 4.1 Demographics

#### 4.1.1 Gender

*Figure 7: Gender distribution of learners in Grade 2 and Grade 5*



In Grade 2, there is a substantial predominance of female learners, with girls constituting 76% of those assessed, whereas boys account for 24% of the Grade 2 cohort.

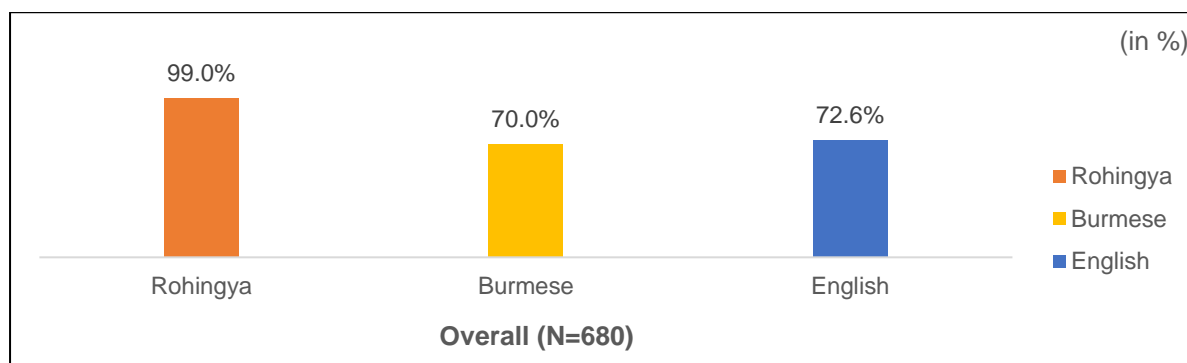
In contrast, Grade 5 exhibits a reversal in gender distribution, with male learners forming the majority at 78% of those assessed. Female learners in Grade 5 represent only 22% of the participants, marking a significant decline from their representation in Grade 2.

#### 4.1.2 Age

In Grade 2, the average age of learners was *11 years*, although there was substantial variation, with ages ranging from 7 to 17 years. This broad age range suggests significant age diversity within the same grade level, potentially indicative of disrupted educational trajectories or delayed entry into formal education. For Grade 5, the average age of learners is *13 years*, with ages spanning from 10 to 18 years.

### 4.1.3 Language

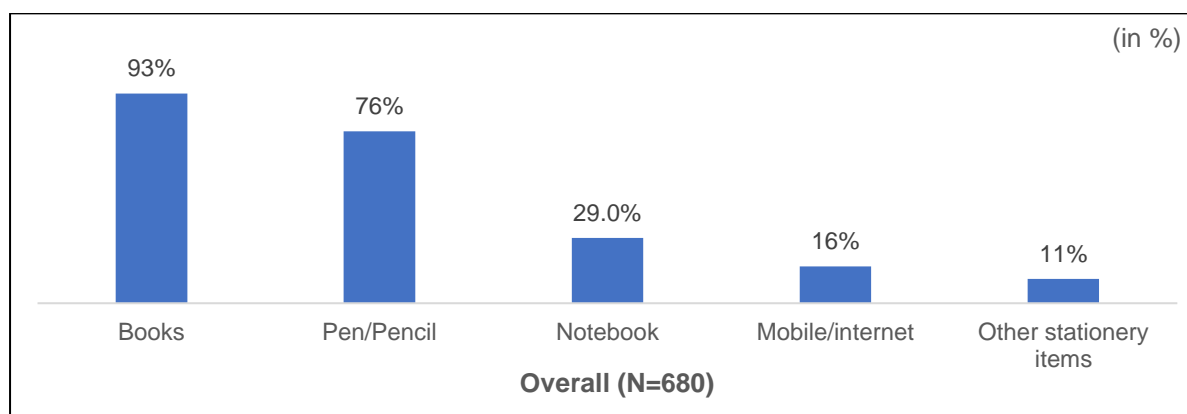
Figure 8: Languages known by the learners (N = 680)



All learners identified Rohingya as the primary language spoken in their homes. The assessment collected self-reported data on language proficiency from the Rohingya learners in multiple languages, including Rohingya, Burmese, and English. Notably, 99% of learners reported proficiency in speaking and understanding Rohingya, highlighting the absence of a widely used written script for the language. Regarding other language skills, 70% of learners (85% of Grade 5 and 67% of Grade 2) reported proficiency in Burmese, encompassing reading, writing, speaking, and understanding. Similarly, 73% of learners (87% of Grade 5 and 70% of Grade 2) claimed the same level of proficiency in English.

### 4.1.4 Access to educational material

Figure 9: Access to learning material



The learners reported varying levels of access to learning materials at home. Books emerged as the most commonly available resource, with 93% of learners having access to them, comprising 94% in Grade 2 and 88% in Grade 5. The availability of pens and pencils was also relatively high, with an overall accessibility rate of 76%. In contrast, notebooks were less commonly available, accessible to only 29% of learners. Other stationery items such as erasers, sharpeners, geometry boxes, and colours were available to merely 11% of learners. Access to mobile/internet resources was limited to 16% overall, with a notably higher availability in Grade 5 (22%) compared to Grade 2 (15%).

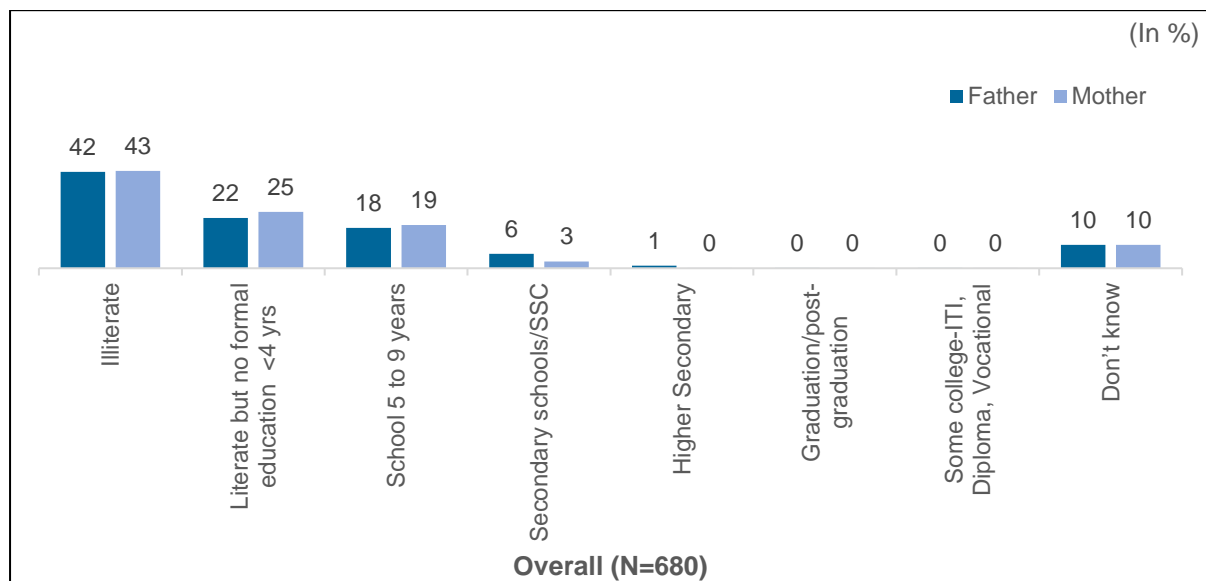
## 4.2 Profile of Parents of learners

The learners provided information regarding their family backgrounds, including their parents' education and occupation, which is detailed in this subsection.

A significant majority, 91%, reported living with both parents. Among these, 75% resided with both parents and siblings, whereas 5% had experienced the loss of one parent. This data underscores the diverse family structures and potential vulnerabilities present within the community.

### 4.2.1 Education level

Figure 10: Parent's education level (N=680)



The assessment uncovered similar educational backgrounds for the fathers and mothers of learners, albeit with some notable distinctions. Illiteracy rates were high and nearly identical for both parents, with 42% of fathers and 43% of mothers reported as illiterate. A significant portion of parents had limited formal education: 22% of fathers and 25% of mothers had less than four years of schooling.

There was a noticeable disparity in the percentage of parents who had access to secondary education, with 6% of fathers having access compared to only 3% of mothers. Higher levels of education were exceedingly rare among both parents, with only 1% of fathers and 0.1% of mothers completing higher secondary education, and a mere 0.1% of both fathers and mothers attaining graduation, post-graduation, or vocational training. These figures underscore the generally low levels of formal education among parents in the Rohingya refugee community, which may influence their capacity to support their children's learning at home.

### 4.2.1.1 Parents Occupation

Figure 11: Father's occupation

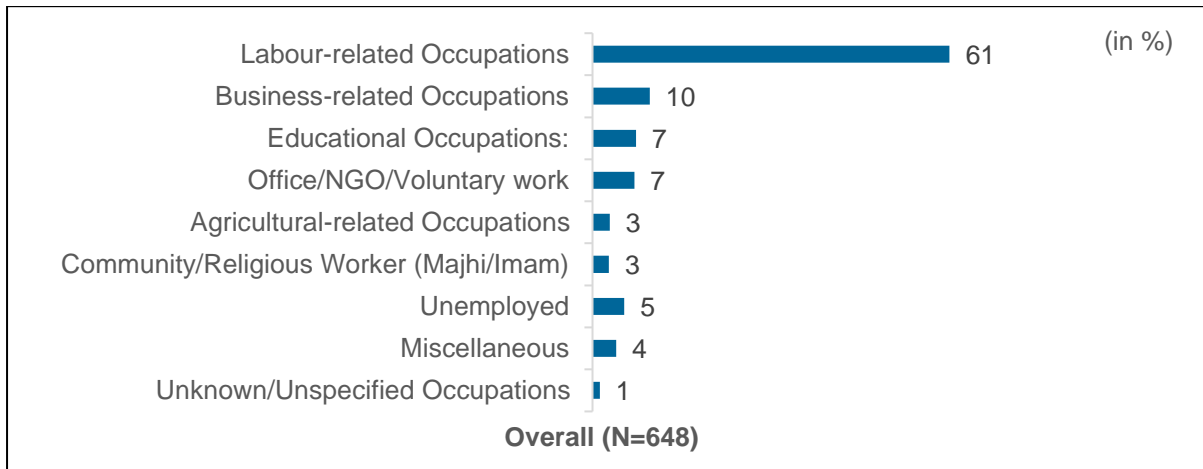
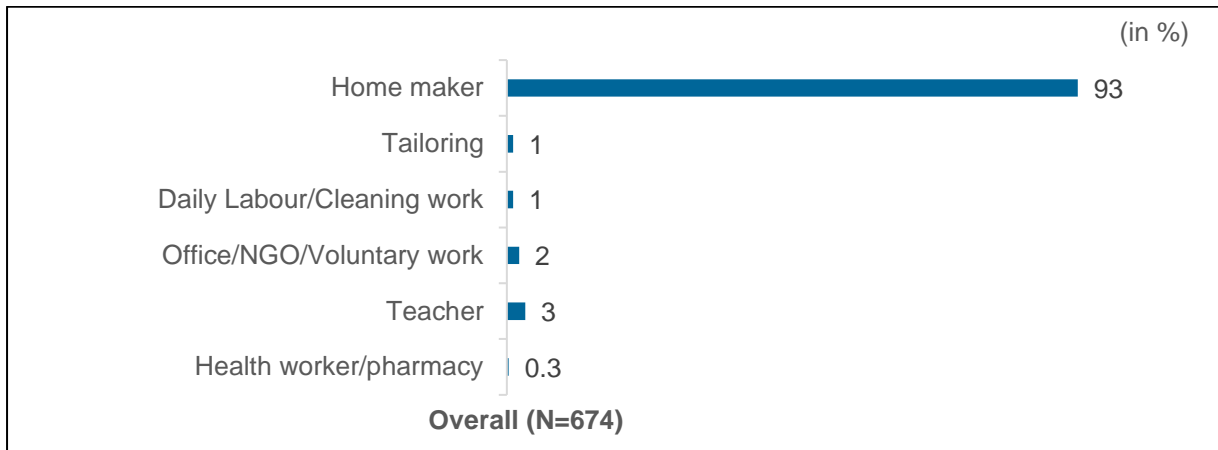


Figure 12: Mother's occupation



In the Rohingya community, the predominant occupation among fathers is labour-related work, accounting for 61%, followed by business-related occupations at 10%. Other significant categories include educational roles (7%) and positions in office/NGO/voluntary sectors (7%). In contrast, an overwhelming majority of mothers, 93%, are reported as homemakers. A minority of mothers are involved in other professions, such as teaching (3%) and office/NGO/voluntary work (2%). These statistics underscore the gendered nature of employment within the Rohingya community and reflect the limited formal employment opportunities available within the refugee context.

## 5 Findings

Below, we present the findings of the baseline evaluation by Research Question:

What are the current levels of learning among the learners in the learning facilities?

How are girls learning compared to boys in the learning centres?

What are the important contextual factors associated with low and high levels of learning?

For each section, we have presented the findings separately for Grades 2 and 5 – starting with Grade 2 followed by Grade 5.

### 5.1 What are the current levels of learning among the learners in the learning facilities?

#### Analysis of Learning Levels of Grade 2 Learners

##### 5.1.1 Literacy in Grade 2

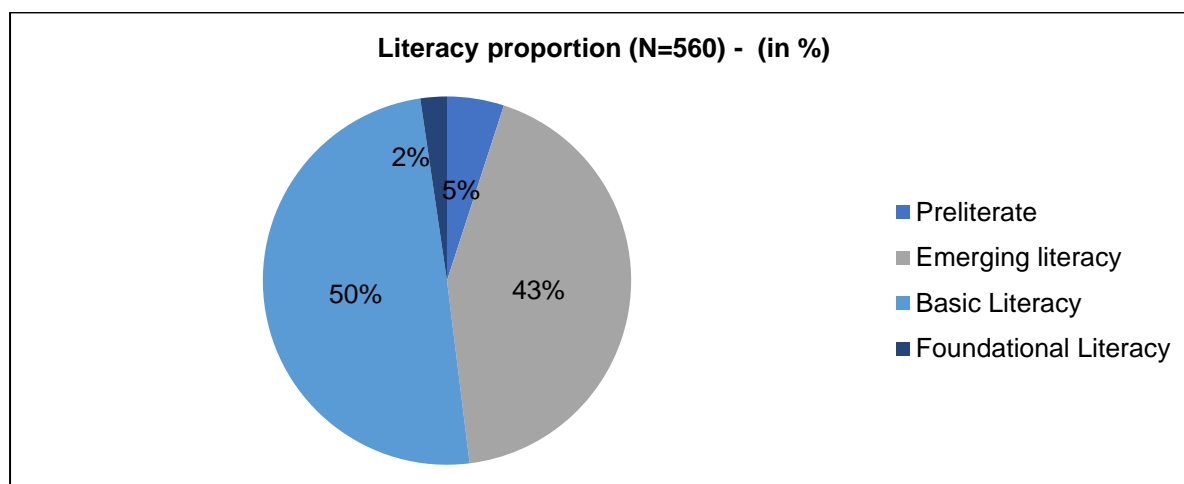
The language of administration for literacy assessment was chosen by the learner. Among the 560 learners in Grade 2, 556 (99%) chose English and only 4 chose Burmese. Based on decisions made in the benchmarking workshop with stakeholders, the literacy proficiency levels are broadly defined as outlined in table below

*Table 16: Literacy benchmark definitions*

Score	Level	Description
3	Foundational literacy	In addition to the below, learners at this level can read the questions based on a story and answer them
2	Basic literacy	In addition to the below, learners at this level can identify sounds of letters and digraphs, write a sentence and read a story aloud
1	Emerging literacy	In addition to the below, learners at this level can read and identify the meaning and short high frequency words and perform letter sound segmentation
0	Pre-literate	At this level learners can follow spoken instructions, answer questions based on a narrated story, identify letters and read short high frequency words

**In the learning centres across Rohingya camps, only 2.3% of Grade 2 learners achieved the established foundational literacy level. Half of the learners were positioned at the basic literacy level, while 43% were at the emergent literacy level. The four learners who chose Burmese, three (3) were at basic literacy level and one (1) at emerging literacy level.**

**Figure 13: Proportion of learners achieving literacy proficiency levels (Grade-2)**



The mean literacy score, calculated as 500 on the Literacy Scale with a standard deviation of 100, indicates that the average literacy level of the learners was at the basic level. This outcome is likely attributed to the substantial proportion of learners who are at the emergent and basic literacy levels.

### 5.1.2 Language domains in Grade 2

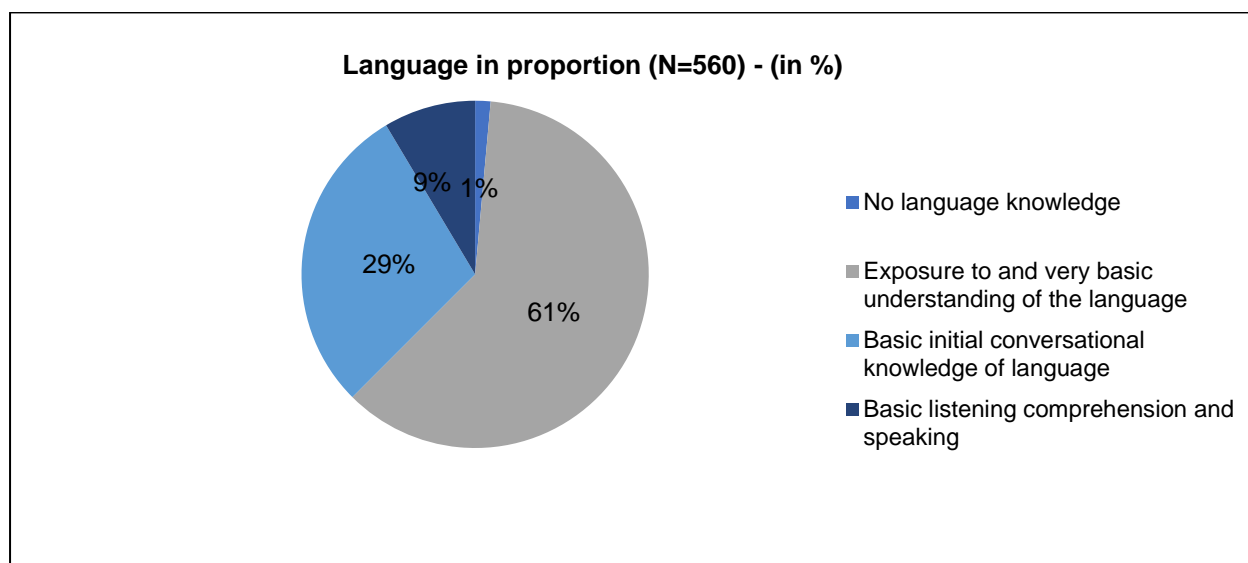
For language, the benchmarks were set based on the clustering of the items in terms of difficulty for the children. The skills associated with this were speaking, listening, reading and writing skills in Burmese.

**Table 17: Descriptions of language benchmarks**

Score	Level	Description
3	Basic listening comprehension and speaking	In addition to the below, learners at this level can describe a picture.
2	Basic initial conversational knowledge of language	In addition to the below, learners at this level can response to common greetings and questions and identify explicitly information in a spoken sentence.
1	Exposure to and very basic understanding of the language	In addition to the below, learners at this level can identify and write letters, follow spoken instructions and read and write some high frequency words.
0	No language knowledge	At this level learners have no or very little knowledge of the language.

Overall, 61% of participants exhibited exposure to and a very basic understanding of the language. Meanwhile, 29% demonstrated basic initial conversational proficiency, 9% possessed basic comprehension and speaking skills, and only 1.4% had no knowledge of the language. This distribution indicates that the majority had some degree of exposure to the language, with a notable portion advancing to conversational proficiency. For learners in Grade 2, the mean Social and Emotional Learning (SEL) score was 500, with a standard deviation of 100.

**Figure 14: Proportion of learners with language proficiency levels (Grade-2)**



### 5.1.3 Numeracy in Grade 2

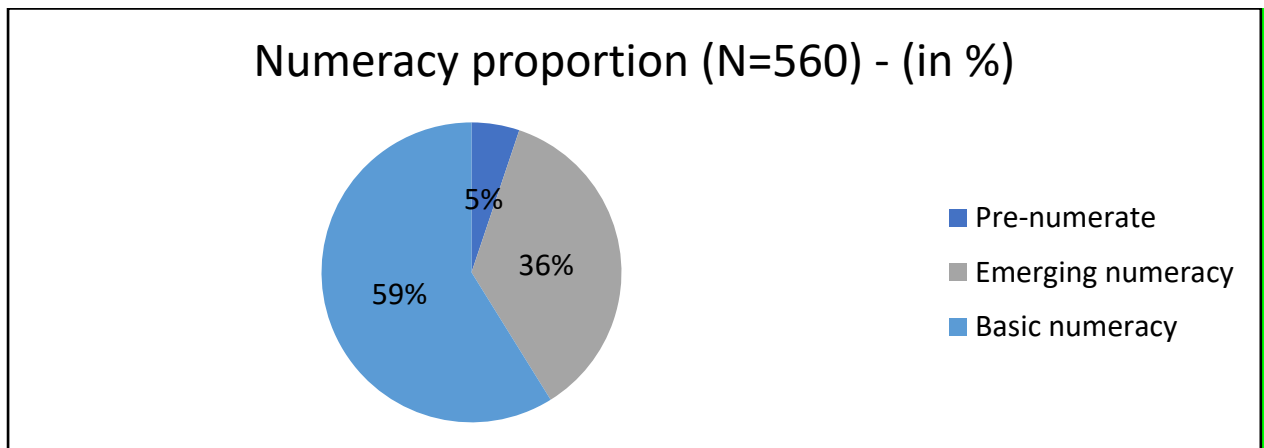
Based on decisions made in the benchmarking workshop with stakeholders, the numeracy proficiency levels are broadly defined as outlined in Table 18.

**Table 18: Numeracy benchmark definitions**

Score	Level	Description
2 and 3	Basic numeracy	In addition to the below, learners at this level can subtract numbers.
1	Emerging numeracy	In addition to the below, learners at this level can add and subtract numbers and count up to 1000.
0	Pre-numerate	Learners at this level can identify numbers, compare the magnitude of numbers, identify missing numbers.

**In terms of numeracy, the majority of learners attained the basic numeracy level, with 59% demonstrating basic numeracy skills. Specifically, 44% of learners achieved a score of 2, while 15% scored 3. Additionally, 36% of learners were at the emerging literacy level, and the figure for the pre-numeracy level was 5%. The mean numeracy score was 500, with a standard deviation of 100.**

Figure 15: Proportion of learners achieving numeracy proficiency levels (Grade-2)



#### 5.1.4 SEL domains in Grade 2

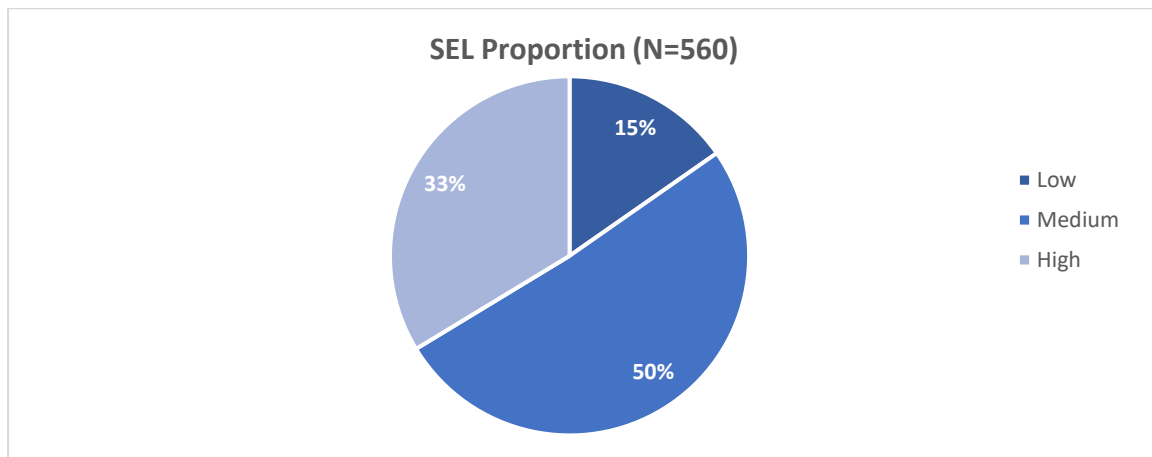
For SEL, the benchmarks were set based on the clustering of the items in terms of difficulty for the children based on the skills of empathy, self-awareness and self-management.

Table 19: Descriptions of SEL benchmarks

Score	Level	Description
2	High	In addition to the below, learners at this level are aware of their own strengths and weaknesses
1	Medium	In addition to the below, learners at this level understand emotions, accept others position, assign positive intentions to others and regulate an emotion in a given circumstance
0	Low	Learners at this level recognise emotions in others, and give a compassionate response

Half of the learners in the learning centres demonstrated medium SEL (50%) whereas only one-third reached high levels of SEL. The mean SEL score was 500 for the learners in Grade 2 (with a standard deviation of 100).

Figure 16: Proportion of learners with SEL proficiency levels (Grade-2)



## Analysis Learning Levels of Grade 5 Learners

The analysis for Grade 5, with a sample size of 120 learners comprising 93 boys and 27 girls, includes a very limited sample size for the girls' subgroup. Consequently, each individual girl in this subgroup represents approximately 4% of the total 680 learners (560 in Grade 2 and 120 in Grade 5) and about 6% of the girl learners. This small sample size could impact the reliability and generalizability of any percentage-based conclusions derived from this data. We have provided the 95% confidence interval for all statistical results related to Grade 5, specifically for gender disaggregation.

### 5.1.5 Literacy in Grade 5

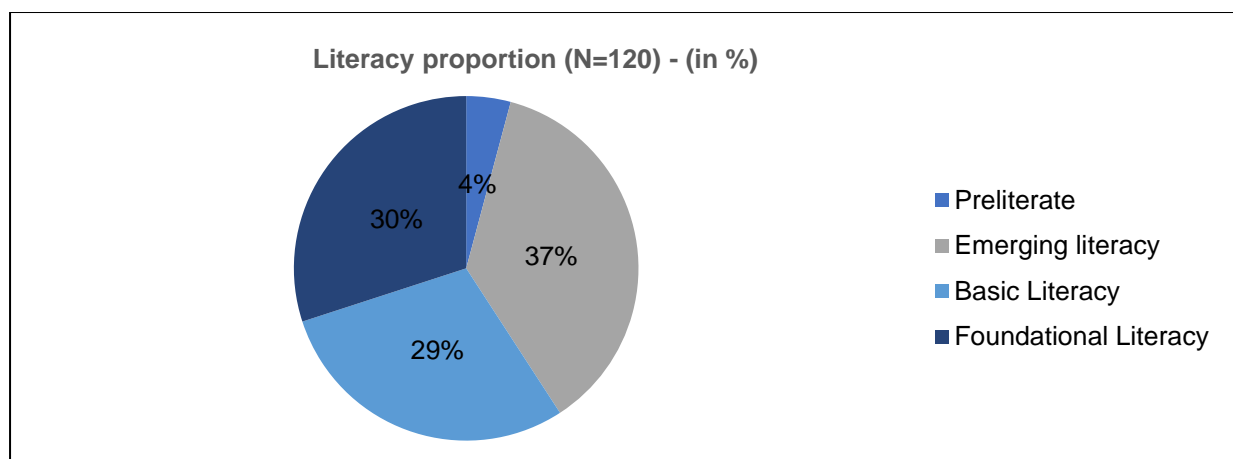
The language of administration for literacy assessment was chosen by the learner. Among the 120 learners in Grade 5, 117 chose English and 3 chose Burmese. Based on decisions made in the benchmarking workshop with stakeholders, the literacy proficiency levels are broadly defined as outlined in table below.

**Table 20: Literacy benchmark definitions**

Score	Level	Description
3	Foundational literacy	In addition to the below, learners at this level can read questions based on a story and answer them and write words beyond high frequency words
2	Basic literacy	In addition to the below, learners at this level can revise sentences using basic punctuation, read a story aloud
1	Emerging literacy	In addition to the below, learners at this level can write high frequency words like "on" and "the"
0	Pre-literate	Learners at this level can answer questions based on a narrated story, follow spoken instructions and understand and use countable nouns

**In Rohingya Camp Learning centres, 30% of the learners in Grade 5 performed at the established foundational literacy level.** 29% learners were at the basic literacy level and 43% at the emergent literacy level. The three (3) learners who opted Burmese for literacy assessment, positioned at basic literacy level.

**Figure 17: Proportion of learners achieving literacy proficiency levels (Grade-5)**



The mean literacy score, calculated as 500 on the Literacy Scale with a standard deviation of 99.6, indicates that the average learner was at the basic literacy level. This score was influenced by a considerable number of learners who were at the emerging literacy level, which affected the overall distribution of scores. The standard deviation of 99.6 highlights the variability in literacy abilities among learners, suggesting a broad range of literacy levels.

### Language domains in Grade 5

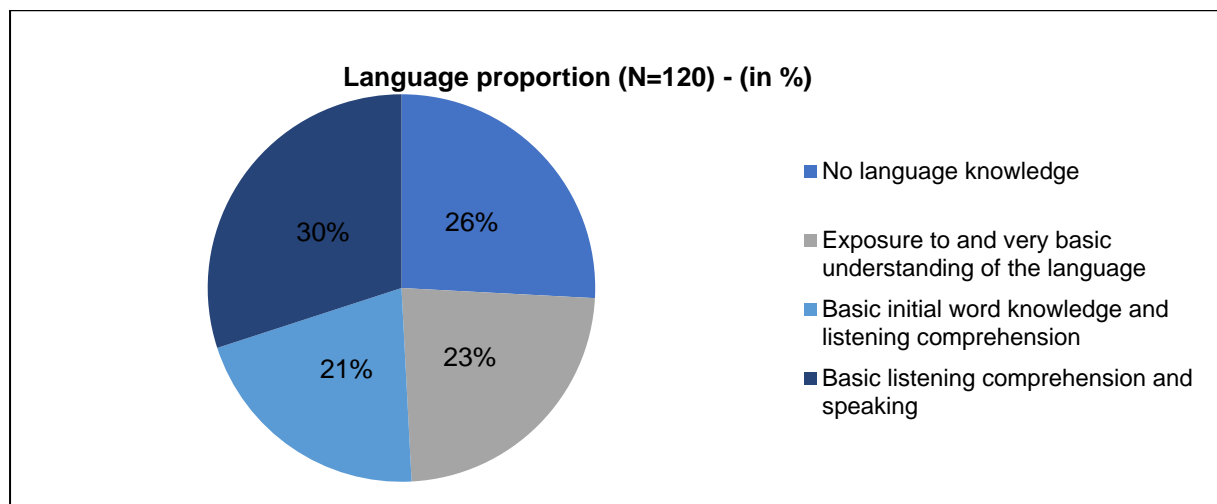
In Grade 5, language domains were benchmarked based on the clustering of items according to their difficulty for the children. The skills evaluated included speaking, listening, reading, and writing in Burmese.

**Table 21: Descriptions of language benchmarks**

Score	Level	Description
3	Basic listening comprehension and speaking	In addition to the below, learners at this level can describe a picture and write high frequency words.
2	Basic initial word knowledge and listening comprehension	In addition to the below, learners at this level can identify words to make meaningful sentences and identify explicit information in a story
1	Exposure to and very basic understanding of the language	Learners in this level can read high frequency words and follow spoken instructions
0	No language knowledge	At this level learners have no or very little knowledge of the language

**In Grade 5, 30% of learners had exposure to and a very basic understanding of the language, 21% demonstrated basic initial conversational knowledge, 23% exhibited basic listening comprehension and speaking skills, while 26% had no knowledge of the language.** The mean Social and Emotional Learning (SEL) score for Grade 5 learners was 500, with a standard deviation of 99.6.

**Figure 18: Proportion of learners with language proficiency levels (Grade-5)**



### 5.1.6 Numeracy in Grade 5

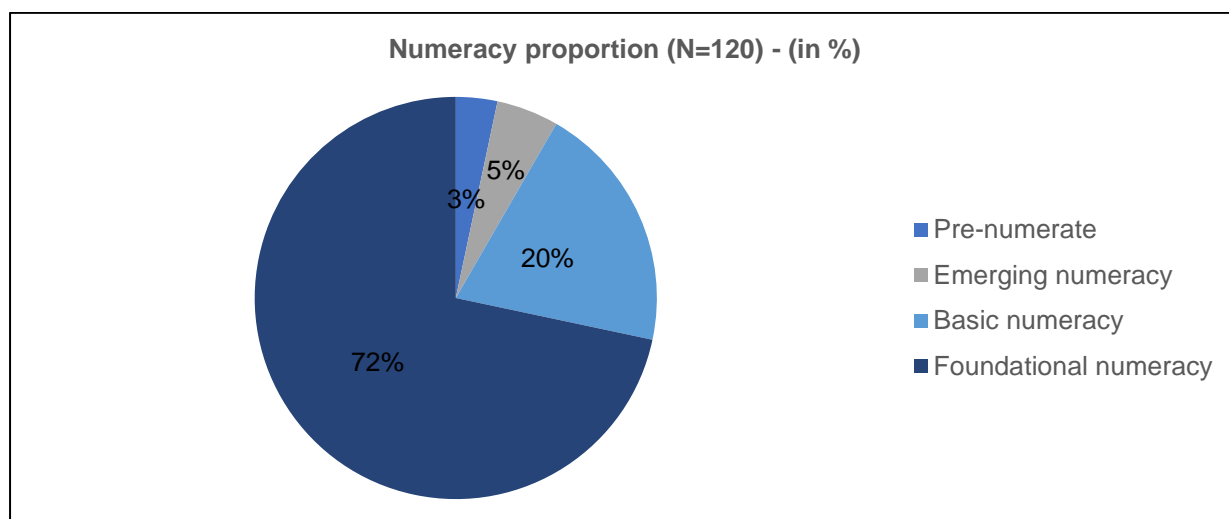
Based on decisions made in the benchmarking workshop with stakeholders, the numeracy proficiency levels are broadly defined as outlined in Table 18 below.

Table 22: Numeracy benchmark definitions

Score	Level	Description
3	Foundational numeracy	In addition to the below, learners at this level can divide a single digit number from a double-digit number, identify missing numbers in a more complex number pattern and add proper fractions
2	Basic numeracy	In addition to the previously mentioned skills, learners at this level can multiply two one-digit numbers, add three-digit numbers, subtract a three-digit number from another three-digit number, divide a single-digit number by another single-digit number, and subtract a four-digit number from another four-digit number, including borrowing.
1	Emerging numeracy	In addition to the below, learners at this level can compare the magnitude of fractions and add three three-digit numbers
0	Pre-numerate	Learners at this level can compare the magnitude of numbers, measure the length of objects, add two-digit numbers together and subtract a two-digit number from a two-digit number.

For numeracy, most learners reached the foundational numeracy level, with 72% demonstrating the same. 20% of learners were in the basic numeracy level, 5% in emergent numeracy level, and 3% were pre-numerate. The mean numeracy score was 500 (with a standard deviation of 99.6).

Figure 19: Proportion of learners achieving numeracy proficiency levels (Grade-5)



### 5.1.7 SEL domains in Grade 5

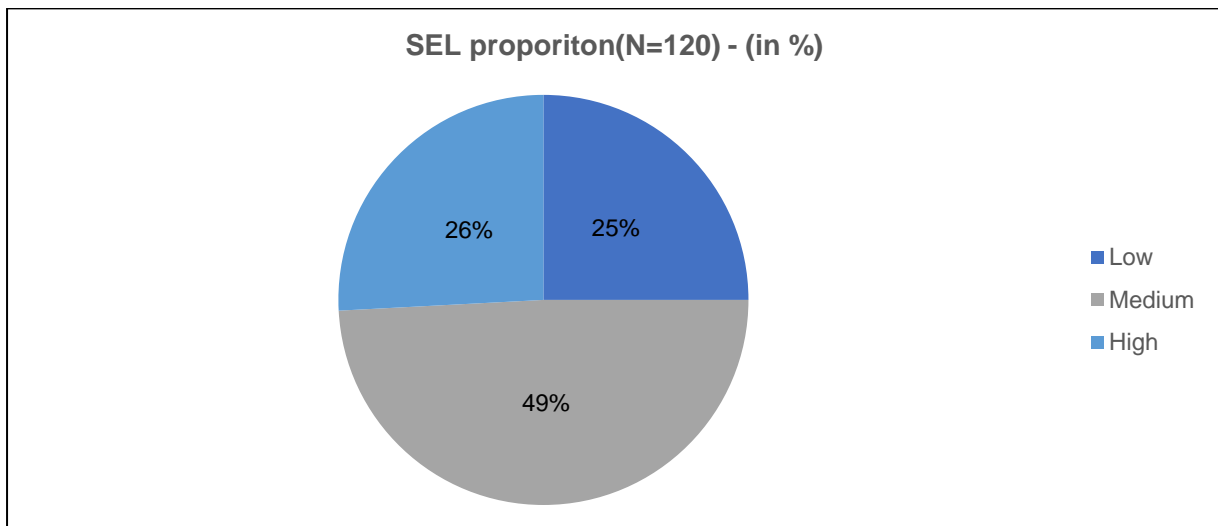
For SEL, the benchmarks were set based on the clustering of the items in terms of difficulty for the children based on the skills of empathy, self-awareness and self-management.

*Table 23: Descriptions of SEL benchmarks*

Score	Level	Description
2	High SEL	In addition to the below, learners at this level can identify others' view of their weaknesses and do not assume ill intent from others.
1	Medium SEL	In addition to the below, learners at this level can accept others' points of view, recognise a problem another has, has developed a strategy to cope with stress, can identify what others think they are good at, reflect ethically on situations, has a goal for life and understand the consequences of actions.
0	Low SEL	Learners at this level can describe a specific situation showing impulse control and concentration, articulate their emotions, recognise emotions in others, derive solutions to problems and identify their own strengths

**Half of the learners in the learning centres demonstrated medium SEL (49%) whereas 26% had reached high levels.** The mean SEL score was 500 for the learners in Grade 5 (with a standard deviation of 99.6).

*Figure 20: Proportion of learners with SEL proficiency levels (Grade-5)*



## 5.2 How are girls learning compared with boys in the learning centres?

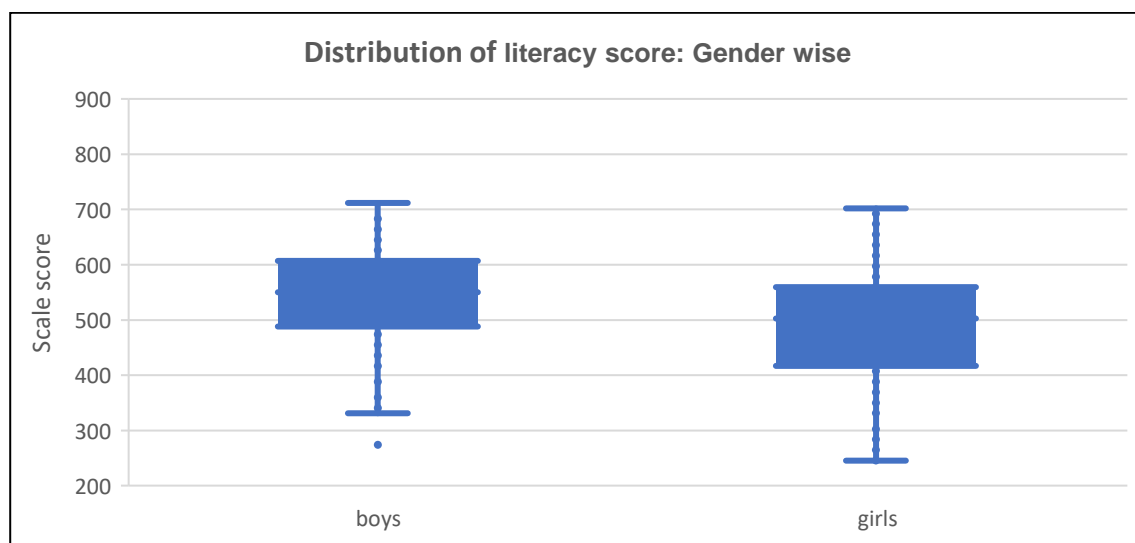
This section reports on learning levels by gender, beginning with mean scores, followed by the proportion of learners at each learning level for each domain, specifically for Grade 2 and Grade 5. The significant differences in the broader sample are highlighted. Initially, the variation in learning levels among Grade 2 learners is presented, followed by Grade 5.

### Grade 2: Learning Level by Gender

#### 5.2.1 Literacy in Grade 2

Gender differences in average literacy scores for Grade 2 learners across learning centres were statistically significant. In learning centres, the average mean scores ranged from 539 for boys (with a standard deviation of 85.7) to 488 for girls (with a standard deviation of 101.1) based on Literacy Scale Scores. A two-sample t-test with unequal variance confirmed this disparity, indicating that boys scored significantly higher than girls (mean difference = 50.8,  $t = 5.7$ ,  $p < 0.01$ , Satterthwaite's degrees of freedom = 256.3). This finding suggests a significant gender impact on literacy scores, with boys outperforming girls within these educational contexts.

**Figure 21: Distribution of Literacy Scale Scores, by gender (Grade-2)**



**Boys mean score: 539 (standard deviation=85.7); Girls mean score: 488 (standard deviation=101.1)**

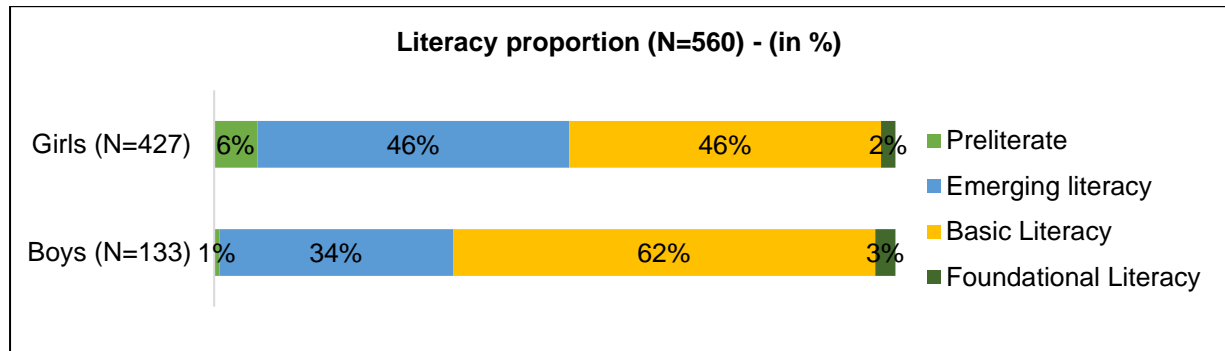
In terms of learning levels, for the literacy assessment the mean scores suggest that, on an average, both girls and boys performed at the basic literacy level.

**There are discernible differences in the distribution of boys and girls across various learning levels, and this variance is statistically significant. A Cramér's V of 0.162 suggests a moderate association, indicating that gender accounts for a moderate portion of the variation in literacy scores. This implies that while the differences are programmatically significant, the scope of interventions may vary.**

Only 2.1% of girls attained the highest literacy level, termed established foundational literacy, compared to 3.0% of boys. At the basic literacy level, 46% of girls are represented versus 62%

of boys, while at the emergent literacy level, the figures are 46% for girls compared to 34% for boys. At the lowest literacy level, pre-literacy, the proportion of girls is 6.3%, whereas it is 0.75% for boys.

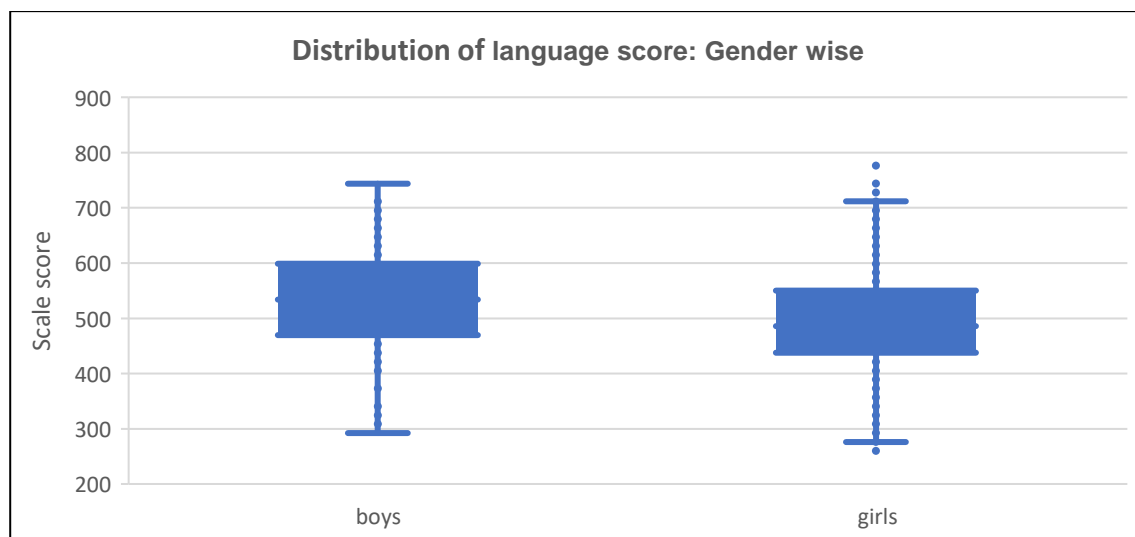
**Figure 22: Proportion of learners within literacy proficiency levels by gender (Grade-2)**



### 5.2.2 Language in Grade 2

The gender differences in average scores were statistically significant across learning centres in language for Grade 2 learners. In learning centres, the mean scores ranged from 529 for boys (with a standard deviation of 91.5) to 491 for girls (with a standard deviation of 100.9) based on Language Scale Scores. A two-sample t-test with unequal variance confirmed this disparity, indicating that boys scored significantly higher than girls (mean difference = 38.9,  $t = 4.1$ ,  $p < 0.01$ , Satterthwaite's degrees of freedom = 240.2). This finding suggests a significant gender impact on language scores, with boys outperforming girls within these educational contexts.

**Figure 23: Distribution of language Scale Scores, by gender (Grade-2)**

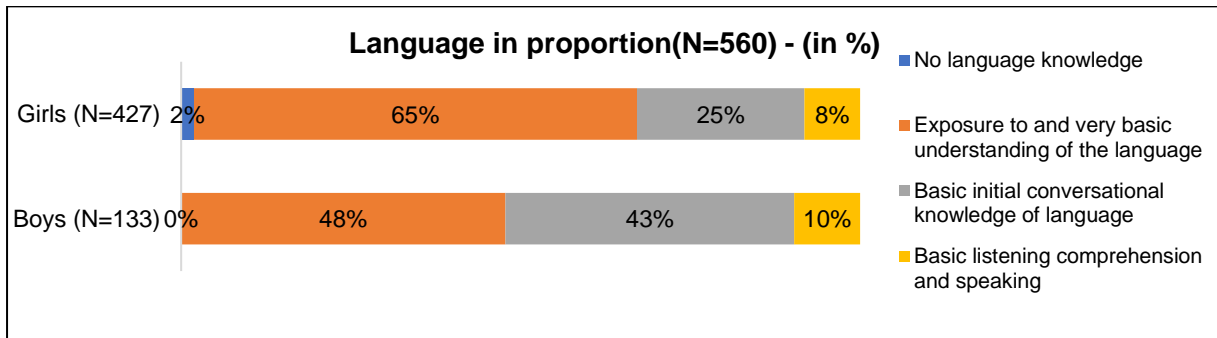


**Boys mean score: 529 (standard deviation=91.5); Girls mean score: 491 (standard deviation=100.9)**

In terms of language proficiency, 10% of boys and 8% of girls exhibited basic listening comprehension and speaking skills. Moreover, 43% of boys had attained basic initial conversational knowledge of the language, compared to 25% of girls. Conversely, a higher proportion of girls (65%) demonstrated exposure to and a very basic understanding of the language, as opposed to 48% of boys. The incidence of having no language knowledge was

minimal, with no boys lacking language knowledge, while 1.9% of girls reported having no language knowledge. The gender differential in language proficiency levels was statistically significant. **A Cramér's V of 0.188 indicates a moderate association, suggesting that gender accounts for a moderate portion of the variation in language scores. This implies that while the gender differences are programmatically significant, the scope of intervention may vary.**

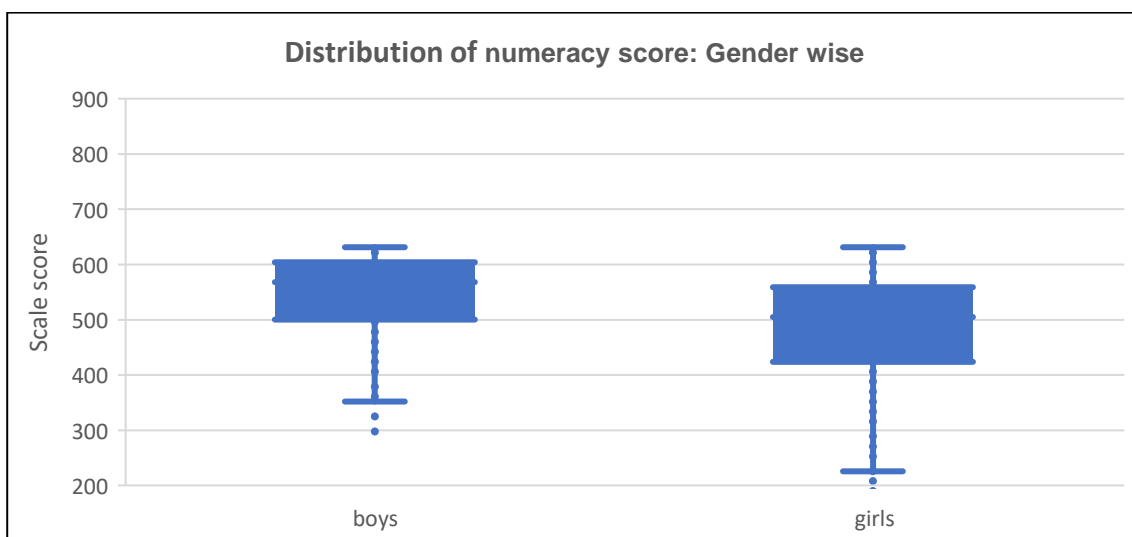
**Figure 24: Proportion of learners with language proficiency levels, by gender (Grade-2)**



### 5.2.3 Numeracy in Grade 2

**Gender differences in average numeracy scores for Grade 2 learners were statistically significant across learning centres.** In learning centres, the mean scores ranged from 544 for boys (with a standard deviation of 78.7) to 486 for girls (with a standard deviation of 102) based on Numeracy Scale Scores. A two-sample t-test with unequal variance confirmed this discrepancy, indicating that boys scored significantly higher than girls (mean difference = 58,  $t = 6.9$ ,  $p < 0.01$ , Satterthwaite's degrees of freedom = 282.3). This finding suggests a substantial gender impact on numeracy scores, with boys outperforming girls within these educational settings.

**Figure 25: Distribution of Numeracy Scale Scores, by gender (Grade-2)**

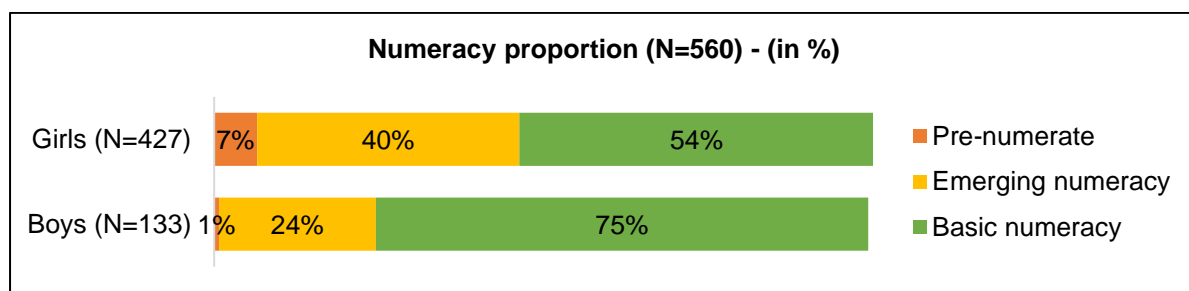


**Boys mean score: 544 (standard deviation=78.7); Girls mean score: 486 (standard deviation=102)**

In terms of numeracy, the mean scores position the average boy and girl within the same learning level of basic numeracy, as this category encompasses all learners scoring a benchmark of 2 or higher.

**Approximately 54% of girls achieved the basic numeracy level**, with 44% scoring 2 and 10% scoring 3. In comparison, this proportion was higher among boys at 75%, where 43% scored 2 and 32% scored 3. While 40% of girls were at the emerging numeracy level, the corresponding figure for boys was 24%. The percentage of boys and girls at the lowest learning levels was notably smaller, with 6.6% of girls and 0.75% of boys at the pre-numeracy level. The gender difference in numeracy level was statistically significant. **A Cramér's V of 0.288 indicates a moderate association, suggesting that gender accounts for a moderate portion of the variation in numeracy scores. This implies that while the differences are programmatically significant, the scope for intervention may vary.**

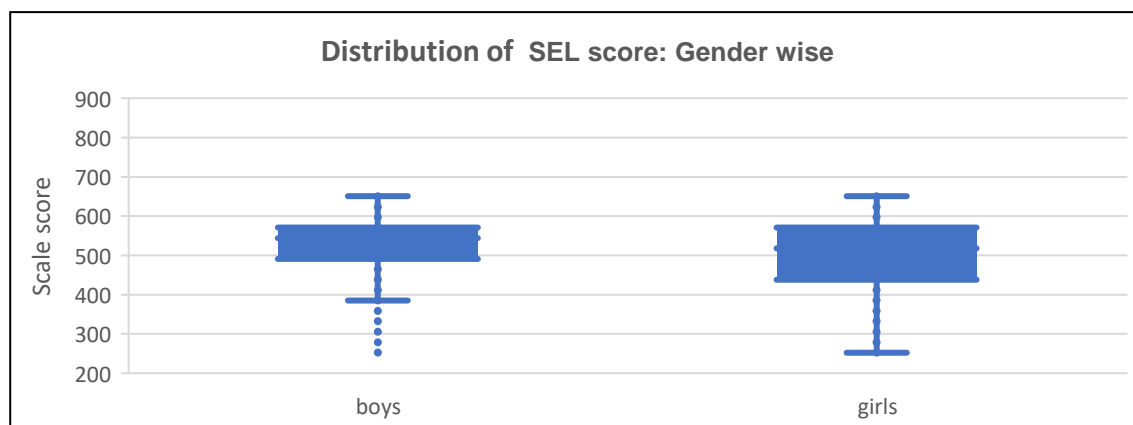
**Figure 26: Proportion of learners within numeracy proficiency levels, by gender (Grade-2)**



### 5.2.4 SEL in Grade 2

**Gender differences in average SEL scores for Grade 2 learners were statistically significant across learning centres.** In learning centres, mean scores ranged from 520 for boys (with a standard deviation of 82) to 494 for girls (with a standard deviation of 104.2) based on SEL Scale Scores. A two-sample t-test with unequal variance confirmed this discrepancy, showing that boys scored significantly higher than girls (mean difference = 27,  $t = 3.1$ ,  $p = 0.002$ , Satterthwaite's degrees of freedom = 276.8). This finding indicates a substantial gender impact on SEL scores, with boys outperforming girls in SEL within these educational contexts.

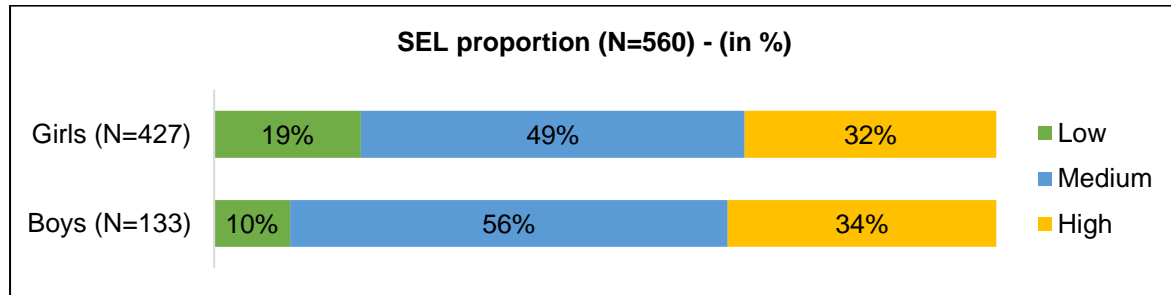
**Figure 27: Distribution of SEL Scale Scores, by gender (Grade-2)**



**Boys mean score: 520 (standard deviation=82); Girls mean score: 494 (standard deviation=104.2)**

**Close to one-third of girls (32%) and boys (34%) achieved high levels of Social and Emotional Learning (SEL) scores across the learning centres.** A marginally higher proportion of boys (56%) attained the middle level of SEL compared to girls (49%). At the lowest SEL levels, the proportions were 10% for boys and 19% for girls. The gender differential in SEL levels was statistically significant. However, the analysis of gender differences in SEL levels revealed a weak association, as indicated by a Cramér's V of 0.103, and was not statistically significant ( $p > 0.05$ ). Consequently, gender does not significantly explain the variation in SEL scores, suggesting that SEL may be a lower priority for gender-based program interventions.

**Figure 28: Proportion of learners with SEL proficiency level, by gender (Grade-2)**



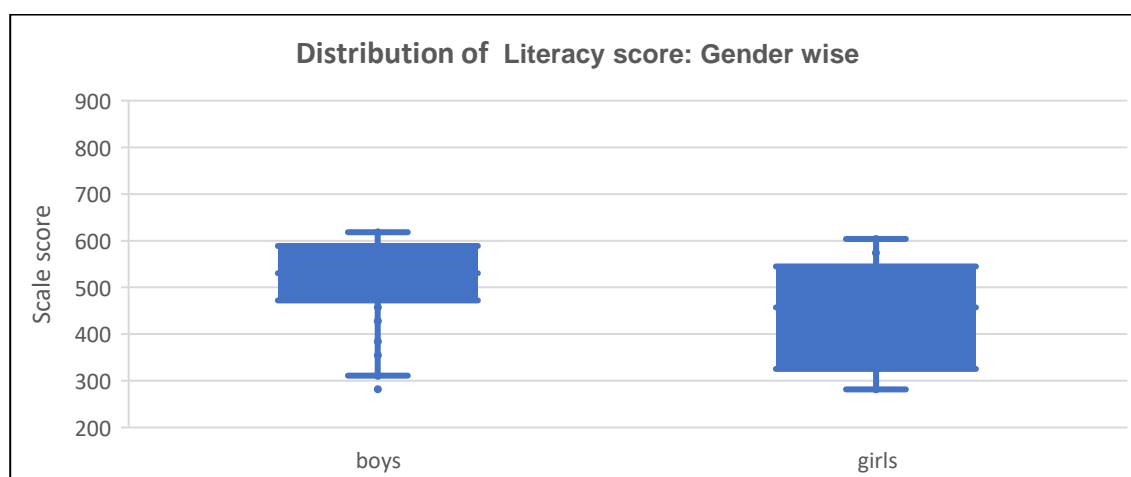
## Grade 5: Learning Levels by Gender

*This sub-section presents the performance of the male and female learners in literacy, numeracy, language and SEL assessments. Please note that due to the small sample size for girls (n=27), these estimates are subject to a high degree of uncertainty, which should be considered when interpreting the results.*

### 5.2.5 Literacy in Grade 5

**Gender disparities in average literacy scores were statistically significant among Grade 5 learners across learning centres.** In learning centres, the mean scores ranged from 531 for boys (with a standard deviation of 80.1 and a 95% confidence interval of [515, 548]) to 392 for girls (with a standard deviation of 85.7 and a 95% confidence interval of [359, 425]) in terms of Literacy Scale Scores. A two-sample t-test with unequal variance confirmed this difference, revealing that boys scored significantly higher than girls, with a mean difference of 139.7 ( $t = 7.6$ ,  $p < 0.01$ , Satterthwaite's degrees of freedom = 40.2). This suggests a notable gender impact on literacy outcomes, indicating that boys outperform girls in literacy within these educational contexts.

**Figure 29: Distribution of Literacy Scale Scores, by gender (Grade-5)**



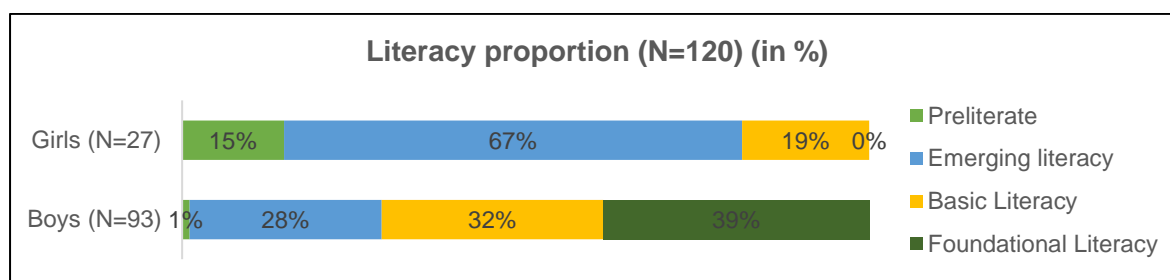
**Boys mean score: 531 (standard deviation=80.1); Girls mean score: 392 (standard deviation=85.7)**

In terms of learning levels, the literacy assessment revealed that the mean scores indicate both the average girl and boy performed at the basic literacy level.

However, there are significant differences in the distribution of boys and girls across learning levels, with these differences being statistically significant. A Cramér’s V of 0.499 indicates a strong association, suggesting that gender substantially contributes to the variation in literacy scores. This finding highlights the urgent need for comprehensive programming interventions aimed at improving literacy performance among girls.

While 39% of boys reached the foundational literacy level, none of the girls achieved this level. Additionally, 19% of girls compared to 32% of boys were at the basic literacy level, while 67% of girls versus 28% of boys were at the emergent literacy level. At the lowest literacy level, termed pre-literacy, the proportion of girls was 15%, compared to 1.1% for boys.

**Figure 30: Proportion of learners within literacy proficiency levels in learning centres, by gender**



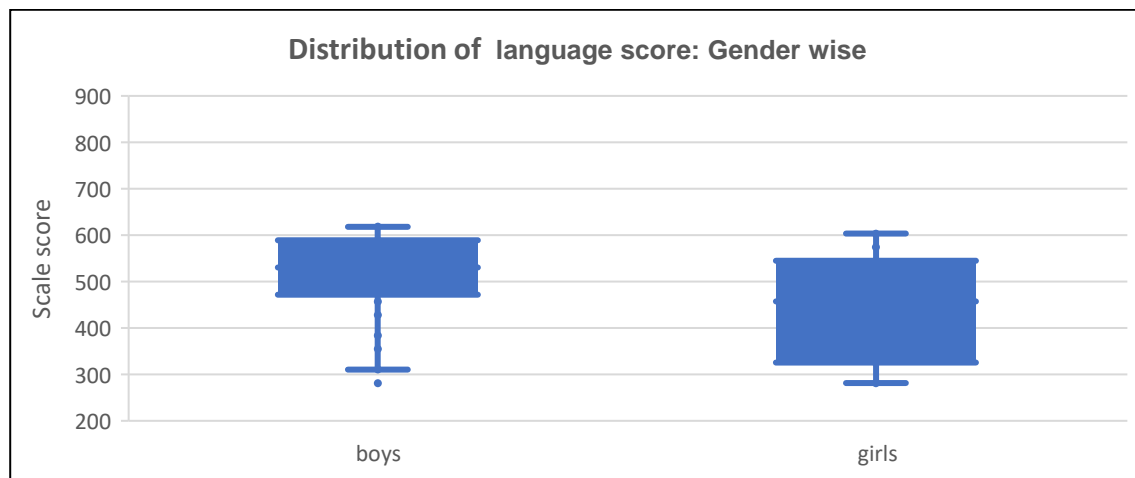
The below table outlines the proportion of learners at 95% CI for each of Literacy learning levels. The range for the assessment is provided in bracket calculated 95% CI.

Literacy level	Preliterate with 95% CI	Emerging literacy with 95% CI	Basic Literacy with 95% CI	Foundational Literacy with 95% CI
<b>Boys</b>	1% (0%, 1%)	28% (19%, 38%)	32% (23%, 43%)	39% (29%,49%)
<b>Girls</b>	15% (4%, 34%)	67% (46%, 83%)	19% (6%, 38%)	0% (0%,0%)

## 5.2.6 Language in Grade 5

**Gender differences in average language scores for Grade 5 learners were statistically significant across learning centres.** In centres, the average mean scores were 518 for boys (with a standard deviation of 86.3 and a 95% confidence interval of [392, 483]) compared to 438 for girls (with a standard deviation of 119.1 and a 95% confidence interval of [500, 536]) based on Language Scale Scores. A two-sample t-test with unequal variance confirmed this difference, indicating that boys scored significantly higher than girls, with a mean difference of 80.4 ( $t = 3.3$ ,  $p = 0.003$ , Satterthwaite's degrees of freedom = 34.3). This finding suggests a significant gender impact on language scores, with boys outperforming girls in these educational settings

**Figure 31: Distribution of language Scale Scores, by gender (Grade-5)**

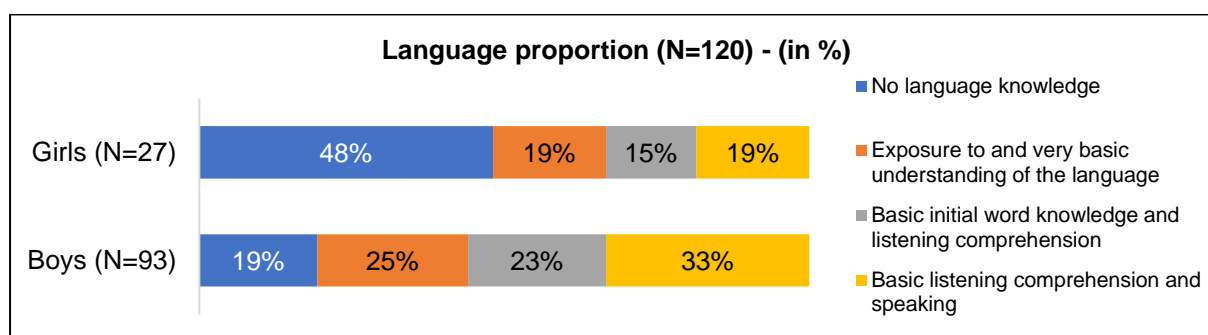


**Boys mean score: 518 (standard deviation=86.3); Girls mean score: 438 (standard deviation=119.1)**

In terms of language skills, 33% of boys and 19% of girls exhibited basic listening comprehension and speaking abilities. Additionally, 23% of boys had attained basic initial conversational proficiency, compared to 15% of girls. Furthermore, 25% of boys and 19% of girls had some exposure to and a very basic understanding of the language. A notably higher proportion of girls (48%) had no language knowledge compared to boys (19%). The gender differential in language proficiency levels was statistically significant.

**A Cramér's V of 0.277 indicates a moderate association, suggesting that gender accounts for a moderate portion of the variation in language scores. This finding implies that while the gender differences are programmatically significant, the scope of interventions may vary.**

Figure 32: Proportion of learners with language proficiency levels, by gender (Grade-5)



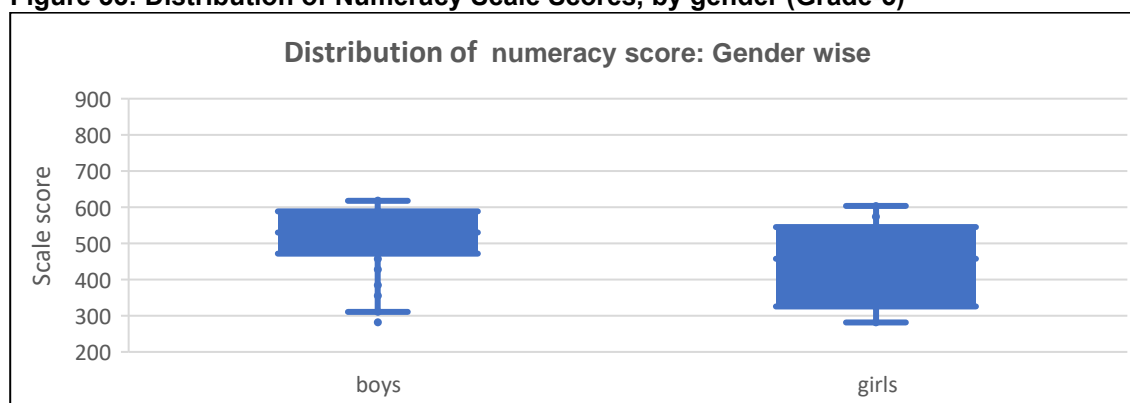
The below table outlines the proportion of learners at 95% CI for each of language learning levels. The range for the assessment is provided in bracket calculated 95% CI.

Language level	No language level with 95% CI	Exposure to and very basic understanding of the language with 95% CI	Basic initial word knowledge and listening comprehension with 95% CI	Basic listening comprehension and speaking 95% CI
<b>Boys</b>	19% (12%, 29%)	25% (16%, 35%)	23% (15%, 32%)	33% (24%, 44%)
<b>Girls</b>	48% (29%, 68%)	19% (6%, 38%)	15% (4%, 34%)	19% (6%, 38%)

## 5.2.7 Numeracy in Grade 5

**Gender differences in average scores were statistically significant across learning centres in numeracy for Grade 5 learners.** In learning centres, the mean scores ranged from 533 for boys (with a standard deviation of 69.7 and a 95% confidence interval of [518, 547]) to 388 for girls (with a standard deviation of 108 and a 95% confidence interval of [347, 429]) based on Numeracy Scale Scores. A two-sample t-test with unequal variance confirmed this discrepancy, revealing that boys scored significantly higher than girls, with a mean difference of 144.9 ( $t = 6.6$ ,  $p < 0.01$ , Satterthwaite's degrees of freedom = 32.5). This finding indicates a substantial gender impact on numeracy scores, with boys outperforming girls in these educational contexts.

Figure 33: Distribution of Numeracy Scale Scores, by gender (Grade-5)



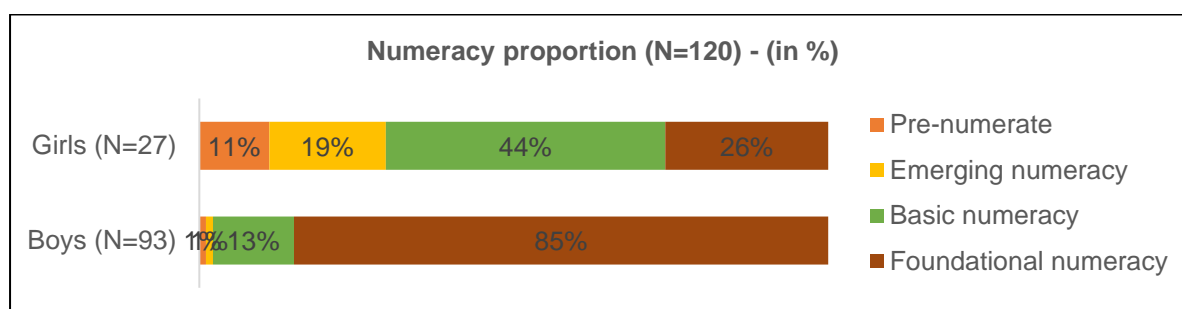
**Boys mean score: 533 (standard deviation=69.7); Girls mean score: 388 (standard deviation=108)**

For numeracy, mean scores locate the average boy and girl in the same learning level of basic numeracy.

**While 85% of the boys had reached basic numeracy, 26% of the girls had reached the same highest level of numeracy. A Cramér's V of 0.575 signifies a strong association, implying that gender substantially accounts for the variation in numeracy scores. This underscores the necessity for urgent and expansive programming interventions focusing on enhancing girls' numeracy performance.**

For basic numeracy level, the proportion was higher in case of girls (44%) than boys (13%). The proportion of boys and girls at the lowest learning levels was smaller, with 11% of girls and 1.1% of boys at the pre-numeracy level. The gender difference in numeracy level was statistically significant.<sup>14</sup>

**Figure 34: Proportion of learners within numeracy proficiency levels, by gender (Grade-5)**



The below table outlines the proportion of learners at 95% CI for each of numeracy learning levels. The range for the assessment is provided in bracket calculated 95% CI.

Numeracy level	Pre-numerate with 95% CI	Emerging numeracy with 95% CI	Basic numeracy with 95% CI	Foundational numeracy with 95% CI
<b>Boys</b>	1% (0%, 6%)	1% (0%, 6%)	13% (7%, 21%)	85% (76%,92%)
<b>Girls</b>	11% (2%, 29%)	19% (6%, 38%)	44% (25%, 65%)	26% (11%,46%)

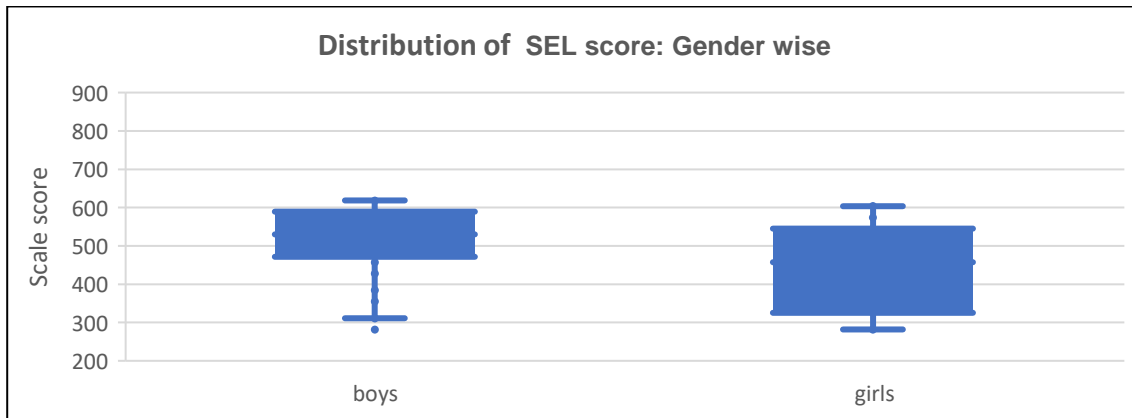
### 5.2.8 SEL in Grade 5

**Gender differences in average scores for Social and Emotional Learning (SEL) among Grade 5 learners were statistically significant across learning centres.** In learning centres, the mean scores ranged from 520 for boys (with a standard deviation of 85.3 and a 95% confidence interval of [501, 538]) to 430 for girls (with a standard deviation of 115.9 and a 95% confidence interval of [385, 474]) based on SEL Scale Scores. A two-sample t-test with unequal variance confirmed this disparity, revealing that boys scored significantly higher than girls, with a mean difference of 90.5 (t = 3.8, p < 0.01, Satterthwaite's degrees of freedom =

<sup>14</sup> Chi square 39 p<0.01 significant at 5% level and Cramér's V: 0.575 Strong association

34.6). This finding indicates a substantial gender impact on SEL scores, with boys outperforming girls in SEL within these educational contexts.

**Figure 35: Distribution of SEL Scale Scores, by gender (Grade-5)**

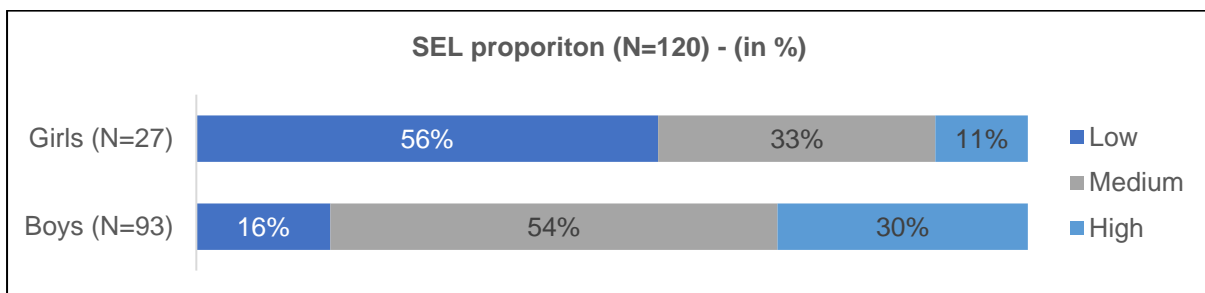


**Boys mean score: 520 (standard deviation=85.3); Girls mean score: 430 (standard deviation=115.9)**

An analysis of Social and Emotional Learning (SEL) scores across various learning centres reveals a pronounced gender disparity. **Specifically, 30% of boys attained high SEL scores, compared to only 11% of girls.** Furthermore, a greater proportion of boys (54%) achieved middle-level SEL scores, in contrast to 33% of girls. At the lowest levels of SEL, 16% of boys and a significant 56% of girls were represented. The gender differential in SEL levels was statistically significant.

**The Cramér’s V statistic of 0.384 indicates a strong association, suggesting that gender significantly contributes to the variation in SEL scores. These findings highlight the urgent need for comprehensive intervention programs aimed at enhancing SEL outcomes, particularly for girls.**

**Figure 36: Proportion of learners with SEL proficiency levels in learning centres, by gender**



*The below table outlines the proportion of learners at 95% CI for each of SEL learning levels. The range for the assessment is provided in bracket calculated 95% CI.*

SEL level	Low SEL with 95% CI	Medium SEL with 95% CI	High SEL with 95% CI
<b>Boys</b>	16% (9%, 25%)	54% (43%, 64%)	30% (21%, 41%)
<b>Girls</b>	56% (25%, 75%)	33% (17%, 54%)	11% (2%, 29%)

## 5.2.9 Summary of Gender gaps

Table 1 presents the chi-square statistics, p-values, and Cramér's V for each domain, facilitating a comprehensive comparison of gender-based associations across different grades. This analysis identifies areas where targeted interventions may be warranted based on the magnitude of gender gap effect sizes.

In Grade 2, moderate differences exist between boys and girls in numeracy, language, and literacy, while the differences in SEL are minimal

In Grade 5, the data reveals that gender differences are especially pronounced in numeracy. A strong association (Cramér's V of 0.575) indicates that a much higher proportion of boys reach basic numeracy compared to girls. Literacy and SEL outcomes also show strong gender disparities—with Cramér's V of 0.499 for literacy and 0.384 for SEL—suggesting that boys consistently outperform girls in these areas. Language differences, while still significant, are more moderate (Cramér's V of 0.277). However, it is important to note that the Grade 5 findings are based on a relatively small sample (only 120 learners, with 27 girls), which introduces wider confidence intervals and greater uncertainty in the estimates. Despite this limitation, these findings suggest that interventions for Grade 5 should particularly focus on boosting girls' numeracy skills, while also addressing literacy and SEL gaps. Programming should be tailored to these specific needs, with the understanding that further research is needed to confirm these trends in a larger, more representative sample.

**Table 24: Summary table for Gender Gaps in Assessment**

Learner's Grade	Domain	Chi-square	p-value	Interpretation	Cramér's V	Interpretation
Grade 2	Numeracy	46.3	p<0.01	Significant at 5% level	0.288	Moderate Association
	Language	19.8	p<0.01	Significant at 5% level	0.188	Moderate Association
	Literacy	14.6	p<0.01	Significant at 5% level	0.162	Moderate Association
	SEL	5.9	0.052	Not significant at 5% level	0.103	Weak Association
Grade 5	Numeracy	39	p<0.01	Significant at 5% level	0.575	Strong Association
	Literacy	29.8	p<0.01	Significant at 5% level	0.499	Strong Association
	SEL	17.7	p<0.01	Significant at 5% level	0.384	Strong Association
	Language	9.2	0.027	Significant at 5% level	0.277	Moderate Association

**Note: The domains are arranged as per highest effect size for each grade separately. It should be noted that the stronger the effect size, the more attention that domain requires in subsequent program design and resource allocation. Further, a “strong association” (Cramér's V > 0.35) between gender and numeracy performance indicate a need for urgent and targeted interventions for girls. A “moderate association” (Cramér's V around 0.15–0.3) might still be programmatically significant, but perhaps the scope of intervention can differ.**

## 5.3 What are the important contextual factors associated with high and low levels of learning?

The third research question addresses **the important contextual factors associated with low and high levels of learning**. These might include background characteristics of learners, teachers, and learning centres, how often learner goes to learning centre, and how they relate to children’s assessment outcomes other than parents’ education and occupation.

In addition to gender, learner characteristics considered include age, grade, language spoken, whether the learner speaks the language of teacher and scores in literacy, numeracy, SEL and language.

Regarding teacher characteristics, variables included their gender, age, teacher’s years of experience, language spoken by teachers, educational status, training status and whether a resident of Bangladesh.

#### How to interpret regressions:

1. Regression analysis involves analysing all the factors that influence an outcome, within the model.
2. Regression analysis looks at the factors that influence outcomes ‘holding all other variables constant’.
3. This means that while there might be a statistically significant difference in learning outcomes by gender, for example, in a regression gender may not appear as a statistically significant factor.
4. This might seem contradictory, but the reason for this is that when ‘holding all other variables constant’, girls and boys are performing similarly.
5. The regression specifies if gender would be associated with higher or lower learning outcomes if the average boy and the average girl were the same on all other factors in the model.
6. For example, in a setting, girls could be scoring well below boys. However, many more girls in the sample might be overage, being taught in larger learning centres, being taught by less qualified teachers, etc.
7. In a regression model, by holding all other variables constant, the regression controls for these difference across the other variables and isolates gender as a contributing factor if all else was equal.

Learning facility level variables were number of children in class, basic infrastructure (fan, light, bench, desk, ground mat, blackboard, chalk, whiteboard), learner welfare infrastructure (toilet, drinking water, medical supplies such as first aid boxes etc.), learning aids, whether SEL and extracurricular classes take place, number of teachers in learning centre (digital computer, learning charts, library, art, projector etc.), any teaching aid used for teaching (through flash card, stick and stone, books, art and craft, audio etc.).<sup>15</sup>

The variables that are associated to learning outcomes vary according to the domain of interest. The following table presents the regression results.

**Table 25: Contextual factors: Regression results**

	Literacy	Numeracy	Language	SEL
<b>Learner level variables</b>				
Girls (Ref: Boys)	-17.1* (-20.6, -13.6)	-17.6* (-31.5, -3.7)	-7.8 (-24.7, 9.1)	-14.4 (-33.4, 4.6)
Age (in years)	1.8	3.9*	2.2	2

<sup>15</sup> In order to test whether these variables have significant associations with learning results when controlling by other characteristics, regressions were run. The regression analyses used a mixed effects model to control for the fact that learners are clustered within their learning centres, which means their results are unlikely to be fully independent from those of their classmates.

	Literacy	Numeracy	Language	SEL
	(-3.3, 6.9)	(0.38, 7.4)	(-2.1, 6.5)	(-2.9, 6.9)
Grade 5 (Ref: Grade 2)	-23.5* (-45.3, -1.7)	-2.3 (-22.9, 18.3)	-11.9 (-51.2, 25.4)	-12 (-42.8, 18.8)
Literacy score obtained	-	0.53* (0.45, 0.61)	0.4* (0.20, 0.60)	0.08 (-1.8, 2.0)
Language score obtained	0.26* (0.20, 0.32)	0.16* (0.10, 22)	-	0.01 (-0.09, 0.11)
Numeracy score obtained	0.54* (0.46, 0.62)	-	0.25* (0.05, 0.45)	0.41* (0.29, 0.53)
SEL score obtained	0.03 (-0.03, 0.09)	0.24* (0.18, 30)	-0.01 (-0.08, 0.06)	-
Father's education level: Literate (Ref: Illiterate)	0.93 (-11.2, 13.1)	4.2 (-8, 16.4)	-1.8 (-16.3, 12.7)	-2.2 (-18.7, 14.3)
Father's occupation: (Ref: Unemployed)				
Labour related	1.6 (-19.6, 22.8)	1.2 (-20.2, 22.6)	-2.7 (-28.2, 22.8)	-10.4 (-39.6, 18.8)
Small business related	-10.5 (-36, 15)	6.3 (-19.4, 32.1)	-1.3 (-31.9, 29.3)	7.1 (-28, 42.2)
Teacher	2.4 (-24.8, 29.6)	2.2 (-25.5, 29.6)	7.6 (-25.1, 40.3)	-12.9 (-50.6, 24.8)
Job/Social (NGO)/Voluntary/Other skilled jobs	2.5 (-21.6, 26.6)	2.7 (-21.6, 27)	4.3 (-24.7, 33.3)	-10.3 (-43.7, 23.1)
Miscellaneous	-11.1 (-41.9, 19.7)	30.5* (-0.68, 61.7)	-14.9 (-52, 22.2)	-22.6 (-65.2, 20)
Mother's education level: Literate (Ref: Illiterate)	14.1* (2.5, 25.7)	10.5* (-1.3, 22.3)	0.64 (-13.3, 14.6)	12.6 (-3.5, 28.7)
Mother's occupation: Working (Ref: Housewife)	2.1 (-17.7, 21.9)	7.8 (-12.2, 27.8)	-6.5 (-30.6, 17.6)	-3.7 (-31.1, 23.7)
Language learner speaks (Ref: Only Rohingya)				
Rohingya and Burmese	31.2* (8.7, 53.8)	-	-1.1 (-28.5, 26.3)	-
Rohingya and English	6.3 (-17.6, 30.2)	-	11.8 (-17.4, 41)	-
Burmese and English	28* (11.3, 44.7)	-	12.7 (-8.5, 33.9)	-
Support in learning received at home	-15.3 (-34.3, -6.3)	5.4 (-13.8, 24.6)	4.9 (-18.3, 28.1)	24.3* (-1.8, 50.4)
Access to learning material at home	-10.2 (-122.7, 102.3)	-15.8 (-130.1, 98.5)	-41.3 (-176.7, 94.1)	49.5 (-105.5, 204.5)

	Literacy	Numeracy	Language	SEL
Learner went to learning centre in last 7 days everyday (Ref: Not all days)	8.2 (-7.5, 23.9)	0.37 (0.27, 0.47)	-0.2 (-19.2, 18.8)	-4.2 (-25.8, 17.4)
<b>Teacher's characteristics</b>				
Teachers' age	-1.5* (-2.6, -0.38)	-0.32 (-1.3, 0.66)	1.7 (-0.26, 3.7)	-
Teacher's gender – Female (Ref: Male)	-22.9* (-43.3, -2.5)	9.4 (-9.6, 28.4)	-2.8 (-40.1, 34.5)	-
Teacher's working experience	1.8 (-0.74, 4.3)	0.5 (-1.8, 2.8)	-3.9 (-8.4, 0.61)	-
Teacher's education status (Ref: Not Completed High School)				
High-school diploma/SSC	-0.15 (-20.5, 20.2)	-17.5 (-36.3, 1.3)	-18.1 (-55, 18.8)	-
Higher secondary/HSC and above	1.5 (-22.2, 25.2)	-16 (-37.8, 5.8)	-12.6 (-55.6, 30.4)	-
Teacher received training	11.4 (-19.4, 42.2)	13.1 (-15.1, 41.3)	-29.2 (-87.2, 28.8)	-
Teacher resident of Bangladesh	-4.5 (-30.8, 21.8)	35.3* (11, 59.6)	-30.8 (-77.1, 15.5)	-
Teacher speaks same language as learner	-1.6 (-23.6, 20.4)	19.4* (-0.98, 39.8)	-26.3 (-65.5, 12.9)	-
<b>Learning facility level factors</b>				
Number of learners enrolled	0.3 (-0.1, 0.7)	0.9 (0.50, 1.3)	-0.1 (-0.70, 0.50)	0.2 (-0.4, 0.8)
Learning centres with teaching aid	9.1 (-3.1, 21.3)	-1.7 (-13.1, 9.7)	-9.9 (-31.3, 11.5)	-3 (-22.2, 16.2)
Social emotional learning classes offered at learning centres	20.3* (2.5, 38.1)	4.8 (-11.9, 21.5)	-29.4 (-61.9, 3.1)	20.9* (-5, 46.8)
Extracurricular activities offered at learning centres	-8.2 (-31.9, 15.5)	-7.4 (-29.4, 14.6)	43.8* (0.09, 87.5)	4.7 (-33.7, 43.1)
Total teachers in learning centres	-0.5 (-17.8, 16.8)	5 (-10.9, 20.9)	-25.5 (-57.1, 6.1)	17.1 (-10.7, 44.9)
Basic classroom scoring of learning centre infrastructure	2.6 (-2.5, 7.7)	-5.3* (-10, -0.60)	3.9 (-5.3, 13.1)	3.4 (-4, 10.8)
Learner welfare essential facilities score of learning centre infrastructure	-11.6* (-23.4, 0.16)	0.8 (-10.4, 12)	22.4 (1.2, 43.6)	9 (-10, 28)
Learning materials scoring of learning centre infrastructure	1.6 (-9, 12.2)	-2.3 (-12.1, 7.5)	3.9 (-15.1, 22.9)	10.9 (-5.6, 27.4)
Constant	86.1 (-58.1, 230.3)	9.6 (-133, 152.2)	219.1 (19.6, 418.7)	59.7 (-130.1, 249.5)
N	515	515	515	544
Log likelihood	-2794.9	-2799.6	-2905.3	-2970.9
ICC	0.02	1.18e-21	0.19	0.1

Note: \* indicates, p-value is significant at 5%. The brackets in parentheses indicate 95% Confidence Interval.

### 5.3.1 Literacy

In examining literacy outcomes, when controlling for other variables, factors such as gender, grade level, maternal educational attainment, and the language spoken by learners emerged as significantly associated with results. Specifically, when holding all other factors constant, boys exhibited superior literacy performance, scoring on average 17.1 points higher than girls. This disparity may be reflective of cultural biases, differential access to educational resources, variations in teaching methodologies, or societal expectations that distinctly affect boys and girls. As learners progress from lower to higher grades, for instance, from Grade 2 to Grade 5, there is an observed reduction in average literacy scores by 23.5 points. This decline indicates potential challenges related to curriculum complexity and foundational knowledge gaps, suggesting a need for enhanced support and reinforcement of basic skills, as well as a more gradual escalation in curriculum difficulty to align with grade-level expectations.

Conversely, a positive correlation was identified between having a literate mother and an increase in literacy scores by an average of 14.1 points, highlighting the advantageous impact of parental education on learners' academic achievement. Furthermore, there was a positive association between language and numeracy proficiency and literacy scores, with each point increase in language proficiency contributing an estimated 0.26 points and numeracy proficiency contributing 0.54 points to literacy scores.

Learners attending centres offering Social and Emotional Learning (SEL) classes demonstrated increased literacy scores by an average of 20.3 points. This finding can be understood through the framework of integrated learning approaches, where SEL classes cultivate essential skills such as emotional regulation, empathy, and social interaction, significantly enhancing learners' engagement with academic content. These skills can improve concentration, reduce anxiety, and foster a positive learning disposition, all of which are conducive to improved literacy outcomes.

The intraclass correlation coefficient (ICC) revealed that only 2% of the variance in literacy scores could be attributed to the learning centres attended by the learners. This suggests that the majority of variation in literacy performance is likely due to individual or other external factors rather than the specific educational environment provided by the centres.

### 5.3.2 Language

In evaluating language scores while controlling for other variables, **several educational factors were significantly associated with the outcomes.** Notably, learners' literacy and numeracy skills were positively correlated with enhanced language performance. Specifically, each point increase in numeracy and literacy scores was associated with an average increase in language scores by 0.25 and 0.40 points, respectively. This underscores the interconnected nature of these academic skills and their reciprocal impact on language proficiency. Additionally, certain extracurricular activities demonstrated a potential link with language performance.

Learners from centres equipped with essential welfare facilities, such as toilets, drinking water, and medical supplies, generally scored 22.4 points higher than those without access to such amenities. Access to these basic facilities likely enhances learners' capacity to focus and learn

effectively by addressing fundamental needs, minimizing health-related interruptions, and fostering a more supportive educational environment.

The intraclass correlation coefficient (ICC) was determined to be 19%, indicating that a portion of the variance in language scores could be attributed to differences among learning centres.

### 5.3.3 Numeracy

**In analysing numeracy outcomes while controlling for other variables, factors such as age, gender, and various educational elements displayed significant associations with results.** Holding other variables constant, an increase in age was positively correlated with enhanced numeracy scores, with each additional year contributing approximately 3.9 points to numeracy performance. This finding suggests an age-related improvement in numeracy likely attributable to the accumulation of skills over time. However, girls scored on average 17.6 points lower than boys, indicating a substantial gender gap in numeracy achievement. This gap may reflect societal biases or disparities in educational support. Proficiency in language, literacy, and Social and Emotional Learning (SEL) was positively associated with numeracy scores, contributing an average increase of 0.16, 0.53, and 0.24 points, respectively. This highlights the interconnectedness of these academic skills and their synergistic effect on numeracy performance.

**Certain teacher characteristics also significantly affected numeracy outcomes.** The analysis revealed that learners benefitted when they spoke the same language as their teacher, emphasizing the importance of linguistic alignment in educational settings. Learners sharing the teacher's language scored, on average, 19.4 points higher than those taught by teachers speaking a different language. Teachers who were residents of Bangladesh positively influenced numeracy scores, resulting in an average increase of 35.3 points. Moreover, learning centres equipped with basic infrastructure elements such as chalk, dusters, fans, and lighting may not sufficiently support numeracy learning. Inadequate or poor-quality classroom facilities could lead to distractions, discomfort, or inefficiencies that hinder learners' focus and performance in numeracy tasks. This underscores the necessity of not only providing adequate infrastructure but also ensuring it complements dynamic and interactive teaching strategies to enhance learner engagement and numeracy outcomes. The intraclass correlation coefficient (ICC) was low, suggesting that variance in numeracy scores is not attributable to differences in learning centres.

### 5.3.4 SEL

In evaluating Social and Emotional Learning (SEL) assessments, teacher variables were excluded from the regression analysis, as SEL is not tied to specific subject domains and lacks a singular teacher whose characteristics could be directly associated with the results.

**When controlling for other variables, notable factors such as the support received at home for learning and the educational outcomes of learners showed significant associations with SEL scores.** Specifically, maintaining other variables constant, home support for learning positively influenced SEL scores, with a significant coefficient of 24.3 points. This highlights the essential role of a nurturing home environment in promoting social and emotional learning. Additionally, learners from centres offering SEL classes exhibited an average increase of 20.9 points in literacy scores. Academic competencies also demonstrated

a notable impact, with numeracy scores contributing an increase of 0.41 points to SEL scores, reflecting the interconnectedness of these skills. The intraclass correlation coefficient (ICC) indicated that 10% of the variance in SEL scores could be attributed to the learning centres attended by the learners.

## 6 Discussion and Summary/ Recommendations

A comprehensive assessment conducted across learning centres in the Rohingya Camps in Cox's Bazar has unveiled several critical insights that provide a nuanced understanding of the educational landscape. The data reveals robust learner attendance, with an average rate of 90%; however, there is a discernible disparity in curriculum offerings, particularly the underrepresentation of arts and civics in Grade 5 centres. This observation points to an opportunity for curriculum expansion to ensure a holistic educational experience for learners.

Resource availability remains a significant challenge, as many centres lack basic amenities such as fans and lights, which are present in only about half of the centres. This scarcity underscores the urgent need for infrastructural improvements to foster a conducive learning environment.

The teacher demographic is predominantly young and diverse, with a significant representation from the Rohingya community. This diversity suggests a multicultural teaching environment, which could positively influence pedagogical approaches. However, a considerable number of teachers have not completed high school, highlighting the necessity for enhanced educational qualifications and training.

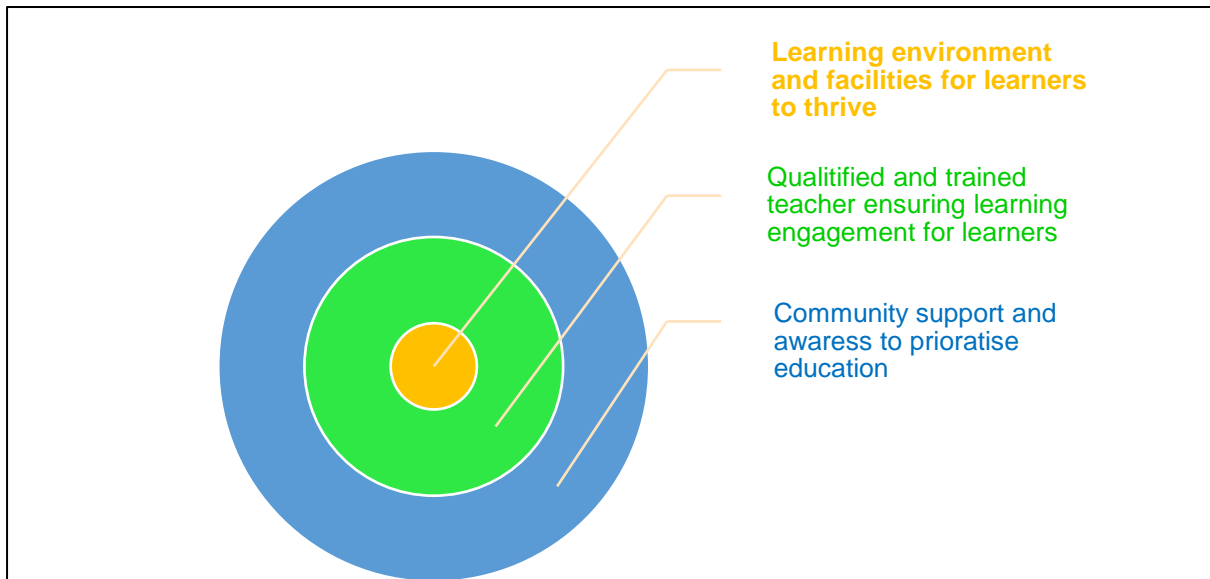
Gender disparities in learning outcomes are evident, with boys consistently outperforming girls across various assessments. This gap is particularly pronounced in literacy and numeracy, underscoring the need for targeted interventions to support girls' education and bridge the performance divide.

Contextual factors such as parental education, the language spoken at home, and access to learner welfare facilities play crucial roles in shaping academic performance. These findings emphasize the interconnected nature of educational inputs and the importance of addressing both individual and structural elements to improve learning outcomes. The below table summarises the contextual factors based on the regression analysis.

**Table 26: Contextual factors: Summary**

Domain	Significant Factors
Literacy	Mother's Education, Language Proficiency, SEL Classes, Grade of learner and Teacher's age
Numeracy	Teacher Residency, Literacy score, Language score, Mother's Education
Language	Literacy and Numeracy Proficiency
SEL	Numeracy Proficiency, Home Support, SEL classes in Center

To improve the learning levels of learners, it is essential to implement focused interventions at the learner, teacher, and community levels.



## 6.1 Learner focused Interventions:

1. Engaging older Learners: Recognizing the diverse age range of learners in lower grades, it is crucial to implement age-appropriate engagement strategies. Tailoring educational content to fit the cognitive and emotional maturity of different age groups can enhance learning effectiveness. Establishing adolescent groups within the community to discuss aspirations and connect these discussions back to learning centres can foster motivation and relevance in their education.
2. Focus on Female Learners: The findings indicate female learners lagging behind in all assessments. There is a significant difference in their scores in numeracy in compared to male learners in both grades. This underscores the necessity for prioritizing targeted interventions for girls. This requires focused understanding of challenges of girls including cultural dynamics as well as their classroom attendance and participation. This would help plan focused learning session that would help female learners.
3. Infrastructure development: Improving access to well-equipped and comfortable learning environments is essential for effective learning. Investing in infrastructure enhancements, such as proper lighting, ventilation, and ergonomic seating, can create a conducive atmosphere for learning. Having standard guidelines on minimum basis infrastructure facility to be available in learning centres is important to ensure the facilities are monitored and maintained.
4. Extracurricular activities: Considering the space and time availability in learning centres, creating tailored small activities that can provide a variety of extracurricular activities can enrich the educational experience, promoting holistic development. Activities like group games, arts, and cultural events encourage creativity, teamwork, and physical health. These opportunities allow learners to explore interests outside the

academic curriculum, contributing to a well-rounded education. These activities may be done on weekly basis allowing learners to choose what they are interested in and plan and coordinate the activities.

5. **Reflective social and emotional learning:** Although SEL activities are mentioned at learning centres, the current performance of learners in SEL necessitates a focused approach. Incorporating reflective practices in SEL can help learners develop self-awareness and empathy. Activities such as journaling, role-play scenarios, breathing exercises, group reflection time, and peer feedback sessions that encourage learners to reflect on their emotions and social interactions foster emotional intelligence and resilience. This approach supports the development of essential life skills, preparing learners for diverse social environments.
6. **Recognising the complexity of language dynamics and focus on language development through engaging activities:** In the camp environment, language use is complex. Although Burmese is being promoted, many learners struggle with the language due to insufficient resources and capabilities for improving language skills. Furthermore, while learners comprehend Bangla, its use is prohibited within the camp. While the children are required to learn in a language they do not understand, and many teachers lack proficiency in Myanmar language, limiting effective education delivery. It is essential to carefully assess the on-ground situation when promoting a specific language and consider the long-term implications of such decisions.

Emphasizing language development through engaging methods like storytelling and word enriching games, comprehension activities can significantly enhance learners' linguistic abilities. These interactive approaches encourage active participation, improve listening skills, and expand vocabulary. Integrating such activities into the curriculum can make language learning more enjoyable and effective.

## 6.2 Teacher focused Interventions:

1. **Teachers' Capacity Building:** Although most teachers have participated in subject-level training, they have expressed a need for additional support. Identifying specific areas where teachers require assistance is crucial for effective capacity building. Tailored training programs should be developed to address these needs, focusing on both pedagogical skills and subject matter expertise. Providing access to digital resources and e-materials can help teachers stay abreast of the latest educational content and methodologies, thereby enhancing their teaching effectiveness and confidence.

Further, a limited number of teachers reported receiving training on psychosocial aspects and Social Emotional Learning (SEL). Despite not being highlighted as a major training need by the teachers themselves, it is crucial to emphasize the importance of SEL and ensure that essential training is provided to them.

2. **Teacher Motivation:** While it is vital to create opportunities for teachers to pursue higher education and learn new teaching techniques, it is equally important to understand and address discontent related to teacher compensation. Addressing

compensation issues is essential for enhancing motivation and facilitating professional development.

Moreover, since higher education incentives may not be applicable to Rohingya teachers, who constitute the majority of the teaching force in camps, alternative strategies such as localized professional development workshops and peer mentoring programs should be explored to support their growth and inspire innovative teaching practices.

3. **Teacher Engagement Activities:** Establishing platforms for teachers to engage in open discussions about their challenges and strengths can cultivate a supportive community of practice. Regular meetings or forums where teachers can share innovative practices and experiences from their centres can foster a culture of continuous improvement and collaboration. These engagement activities can also serve as a venue for teachers to exchange ideas and solutions, ultimately benefiting learner outcomes.

### 6.3 Community Focused Interventions:

1. **Involvement of Parents During Centre Activities:** Encouraging parental involvement in learning centre activities can provide valuable insights into their children's educational journey and foster stronger community ties. Inviting parents to witness and participate in various centre activities, such as open days, exhibitions, and parent-teacher meetings, can enhance their understanding of the educational process. This involvement can also motivate learners by showing them that their parents are interested and invested in their education.
2. **Community Awareness Through Success Stories:** Sharing case studies of children who are excelling in their education can serve as powerful testimonials to the benefits of education. These success stories can be shared in community meetings, local media, or through social platforms to inspire other families and communities. Highlighting the achievements of learners can emphasize the importance of education and encourage greater community support and engagement in educational initiatives.

### 6.4 Recommendations for Future Assessments:

Considering the experiences and methodologies employed during the assessment, several considerations for future learning assessments are proposed.

1. **Enhance integrated analysis in future research:** Our analysis reveals persistent gender differences in numeracy even after controlling for other variables, but the limited sample size—especially for Grade 5 girls—constrains our confidence in these findings. Future research should use larger, more representative samples. Representative samples of Grade 5 girls require robust population level data, which was not available for this study. Therefore, a listing activity may be required before such a representative sample can be selected.

Future studies should explicitly connect simple comparisons (e.g., the unadjusted gender gaps in numeracy) with more complex, adjusted analyses (which account for

factors like age, domestic responsibilities, parental education, and teacher support). This integrated approach will help determine how much of the observed disparity is associated with a range of factors. For instance, our current analysis shows a strong gender gap in numeracy with a high effect size, and regression analysis confirms that this gap persists even after controlling for other factors, making girls' lower numeracy scores a clear priority for intervention.

By systematically comparing unadjusted and adjusted analyses, future assessments will better identify the key drivers of these disparities and provide clearer guidance for targeted interventions, improved program design, and more effective resource allocation.

2. **Use of Standardized Tools and consistency in measurement:** The baseline learning assessment tools were developed collaboratively, adhering to scientific rigor. These tools underwent pilot testing to establish their reliability and validity. Future assessments should maintain consistent use of these same tested assessment tools to accurately track longitudinal changes in learner outcomes. Using these standardized tools consistently will help us determine whether improvements in learner outcomes are due to program interventions rather than changes in measurement. In addition, we recommend documenting any updates to these tools to ensure transparency and comparability across assessment rounds.
3. **Observation of Infrastructure and Classroom:** The current study revealed lack of access to basic amenities and consistent availability of teaching aid materials across learning centers. Future assessments may incorporate observations of infrastructure and classroom settings. The assessment can be guided by an inclusive infrastructure guideline for learning centers. This focus will enhance understanding of equitable classroom engagement and provide detailed insights to plan activities that consider the availability of accessible and gender-responsive resources.
4. **Qualitative Research:** Future assessments should include qualitative methods such as focus group discussions and in-depth interviews with learners, teachers, and parents. These methods would explore cultural expectations, attendance patterns, and language-of-instruction barriers—factors that may help explain the observed disparities. By combining these qualitative insights with the quantitative data, we can better identify the root causes of the gender gaps and design more effective, context-specific interventions.
5. **Teacher Competency Test:** While a teacher competency test was originally planned but not executed due to on-ground challenges, it is important for future assessments to include such evaluations. A brief, standardised competency test can help identify gaps in teacher skills and inform targeted training programs. This will ensure that professional development efforts are aligned with the actual needs of educators, ultimately benefiting learner outcomes. Future assessments should also document teachers' training needs and experiences more comprehensively to help refine our support strategies.
6. **Strengthen documentation of sampling adaptations and protocols:** While the current assessment implemented a revised sampling plan due to operational constraints—selecting sites based on sector criteria and adjusting the number of centres and learners accordingly—it is important that future assessments continue to document any modifications to the initial sampling strategy. Specifically, future assessments should provide a clear, comprehensive summary of:

- The original sampling plan and any deviations made in response to changes in centre availability or learner numbers.
- The methods used for random selection within centres, ensuring transparency about how learners were chosen.
- A detailed account of the final sample's characteristics relative to the target population (MYRP sites), acknowledging that while the sample is not representative of the broader population, it accurately reflects the operational context.
- Ongoing database maintenance procedures to track centre availability and learner demographics over time.

7. **Enhance Intersectional Analysis:** Future assessments should integrate an intersectional approach by ensuring assessment tools and methodologies are inclusive of disability, gender, and diverse SOGIESC (Sexual Orientation, Gender Identity and Expression, and Sex Characteristics) identities. This includes adapting tools for accessibility, training enumerators on inclusive data collection, and disaggregating data to analyse how overlapping factors shape learning outcomes.

## CONFORMITY TO ISO STANDARD SLIDE

1. This work was undertaken in accordance with the standards laid out in ISO 20252:2019 and ISO 27001:2022, ensuring a consistent quality of work to the highest standards in the industry. Ipsos's processes are annually audited by external certified to external accredited quality assessors.
2. Ipsos has over 18,000 plus employees across 90 markets and 5000+ clients.
3. Ipsos is member of most key market research bodies, and we abide by their quality standards
4. In case of any information security queries please reach out to us at [IN-INFOSEC@IPSOS.COM](mailto:IN-INFOSEC@IPSOS.COM)



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