

## **Acknowledgements**

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#### List of acronyms

**CNDH** National Human Rights Commission

**COMAR** Mexican Commission for Refugee Aid

**CONAFE** Mexican National Council for the Promotion of Education

**DOF** Official Gazette of the Federation

**HALDO** Holistic Assessment of Learning and Development

Outcomes

**HALDO on the Move**Adaptation of HALDO for assessing learning and

development outcomes in children on the move

**IDMC** Internal Displacement Monitoring Centre

**IDPs** Internally displaced persons

**INEGI** National Institute of Statistics and Geography

**IOM** International Organization for Migration

**LGDNNA** General Law for the Rights of Children and Adolescents

**SEL** Social Emotional Learning

**SEP** Mexican Ministry of Public Education.

**SIPINNA** National System for the Comprehensive Protection of

Children and Adolescents

**UN** United Nations

**UNHCR** United Nations High Commissioner for Refugees

**UNICEF** United Nations Children's Fund

**UPMRIP** Unit for Migration Policy, Registration and Identity

of Persons

## **Executive summary**

The global learning crisis has disproportionately affected forcibly displaced children, yet foundational learning outcomes in these populations remain severely under researched. In Latin America and the Caribbean, forced displacement is rising. Children on the move face heightened barriers to education that compromise both academic progression and psychosocial development.

Mexico, traditionally a country of origin and transit, has become a key destination for asylum-seeking and refugee children. Over 140,000 asylum applications were filed in Mexico in 2023 and children represented nearly a quarter of all applicants (Save the Children and UNHCR, 2024). Despite legal frameworks guaranteeing their right to education, forcibly displaced children in Mexico continue to face institutional, linguistic and socioeconomic barriers to school enrolment and learning continuity. In this context, the United Nations High Commissioner for Refugees (UNHCR) and Save the Children launched an initiative in 2024 to measure foundational competencies in literacy, numeracy, Social Emotional Learning and executive functioning among children on the move. This report presents the findings from the implementation of HALDO on the Move, an adapted version of the original Holistic Assessment of Learning and Development Outcomes (HALDO) tool. HALDO is a culturally responsive diagnostic tool developed by Save the Children, designed to assess learning outcomes in crisis settings and inform inclusive education strategies.

The tool was adapted for the context of the migration situation in the Latin America and the Caribbean region, incorporating progressive question design, contextualized content and recommendations aligned with each child's results. The assessment captures both the learning status and individualized development needs of refugees, and asylum-seeking and internally displaced children aged 4 to 18.

#### Methodology and sample

HALDO on the Move assesses four core domains (literacy, numeracy, Social Emotional Learning and executive functioning) through adaptive tasks that increase difficulty depending on each child's performance. Designed to be culturally and linguistically relevant, the tool features tailored content informed by the Global Competency Framework for Literacy and Mathematics, as well as national curricula from countries of origin in Central America.

In 2024, the tool was applied in three Mexican cities with high numbers of arrivals of forcibly displaced persons: Tapachula (Chiapas), Tijuana (Baja California) and Monterrey (Nuevo León). These locations represent different stages of migration: Tapachula serves as an entry point on the southern border, where most asylum claims are registered; Tijuana is a northern border city, a destination for human mobility groups and a transit hub; and Monterrey is an emerging destination for settlement and integration. Save the Children Mexico implemented the tool with technical support from UNHCR, using a harmonized application protocol across cities.

A total of 433 children participated in the assessment, ranging in age from 4 to 18 years old. The sample was purposefully selected based on participation in education-related programming and presence in Save the Children's asylum-seeking, refugee, and migrant programmes across the three sites. While the tool is typically applied to children aged between 5 and 18, younger children aged 4 were included at the request of local teams. Their data were integrated into the 4–8 age group with appropriate interpretation of age-based expectations.

The sample included nearly equal representation of boys (49 per cent) and girls (51 per cent). Children came from 15 countries, including 299 from the Northern Triangle of Central America, 50 from Haiti, 19 from Mexico and 65 from other countries in the Latin American region.

Data were aggregated and analysed by age group (4–8, 9–13, 14–18), gender and nationality. This analytical design aims to highlight developmental trends, reveal gaps in foundational learning and explore patterns associated with educational trajectories and experiences of displacement. While the findings offer valuable insights into the learning needs of children on the move, it is important to note that the sample is not representative but rather reflects children engaged in targeted programmes and services. Nonetheless, the study offers a meaningful snapshot of learning outcomes in displacement settings and generates actionable evidence to inform policy and programming.

#### Main findings

The HALDO on the Move assessment revealed key insights into foundational learning outcomes among refugee, asylum-seeking and internally displaced children in Mexico. Results show consistent trends across domains (literacy, numeracy, Social Emotional Learning (SEL) and executive functioning) highlighting both age-related progression and concerning stagnation during adolescence.

- Foundational skill development improves with age, but plateaus during adolescence. While younger children (ages 4–8) display early-stage competencies, older groups (ages 9–13 and 14–18) perform better than younger children in all domains. However, differences between the two older age groups are marginal, suggesting that learning progression slows during early adolescence.
- Children across all age groups perform well on basic tasks but face increasing difficulty with complex ones. This pattern is observed in all domains: initial questions are answered correctly by most participants, but performance drops notably as tasks become more demanding. For example, while 90 per cent of 14 to 18-year-olds can understand the meaning of individual words, only 60 per cent demonstrate full reading comprehension.
- Social Emotional Learning and executive function show early strengths but limited gains in older age groups. SEL indicators, such as empathy and self-concept, reveal that while younger children struggle with complex emotional reasoning, older groups are not substantially more advanced. Only 42 per cent of 14 to 18-year-olds demonstrate the two highest levels of empathy. Executive functioning follows a similar trend. Although short-term memory improves with age, working memory stagnates, with nearly 90 per cent of adolescents unable to recall and reverse four or more elements.
- Age is a strong predictor of performance; gender is not. Across all domains, statistical analysis confirms that age is a significant correlation to skill development. In contrast, gender differences were not statistically significant, suggesting boys and girls perform similarly.
- The performance of children from Haiti was lower, on average, than for other groups, likely due to language barriers. Haitian children showed steeper declines in literacy and numeracy assessments, particularly in reading comprehension and complex arithmetic. However, the first languages for Haitian children are either Creole or French and the tool was applied exclusively in Spanish. This outcome underscores the need for tools like HALDO on the Move to be adapted for use in different languages.

Learning gaps and stagnation in older adolescents highlight the risk of exclusion from formal education. A considerable share of 14 to 18-year-olds remain in lower competency categories, including 27 per cent with only basic numeracy. This suggests that older children may require tailored support to recover missed learning opportunities and successfully integrate into educational pathways.

These findings demonstrate that forcibly displaced children in Mexico possess learning potential across all domains of development. However, ensuring their continued development, especially during adolescence, will require sustained, age-appropriate and inclusive educational interventions.

#### Recommendations

Findings from the HALDO on the Move assessment reveal both academic potential and gaps in foundational skills for refugee, asylum-seeking and displaced children in Mexico. We propose the following recommendations for Save the Children Mexico, and any other organization working in this space, to enhance the educational inclusion of this population and strengthen assessment tools and methodologies:

#### 1. Ensure continuity of learning through targeted interventions.

Strengthen Education in Emergencies programming in temporary support spaces to mitigate learning loss during displacement. Reinforce strategies that promote school enrolment, scholar continuity and participation, including support to community-based learning spaces, such as after-school learning and homework clubs. These efforts should aim to bridge the gap between temporary and formal education systems, particularly for adolescents who are at risk of falling behind.

#### 2. Tailor assessments and interventions to diverse age and protection profiles.

Refine the HALDO on the Move tool to enhance developmental alignment with younger children (ages 4–8) and to capture the competencies of adolescents more effectively, particularly beyond foundational levels. Include adjustments for children with disabilities and consider developing multilingual versions of the tool, particularly in Haitian Creole and French, to improve validity and inclusion.

#### 3. Expand data collection to inform inclusive education strategies.

Disaggregate findings by protection status and nationality in future implementations to inform differentiated interventions. Strengthen the use of HALDO on the Move to capture trends across demographic profiles and develop longitudinal studies to monitor learning progress over time.

#### 4. Promote parental and institutional engagement.

Develop strategies to strengthen families' understanding of individualized learning results and equip caregivers with tools to support home-based learning. Increase collaboration with local education authorities, the Mexican Refugee Commission (Comisión Mexicana de Ayuda a Refugiados) (COMAR) and host communities to promote school enrolment and recognition of prior learning.

#### 5. Strengthen institutional capacity and coordination.

Continue building capacity among enumerators and education personnel through peer-topeer exchanges and structured training on the use of HALDO on the Move. Continue fostering partnerships between non-governmental organizations and government entities to ensure education remains a central component of protection and integration efforts.

These recommendations emphasize a need for scalable, inclusive and adaptive educational strategies that are grounded in evidence and capable of responding to the realities faced by children on the move.

# 1. Purpose and rationale of the report

A growing body of international evidence documents the global learning crisis and the many children who do not attain foundational learning skills. However, very few studies have measured foundational skills among forcibly displaced individuals. This report is part of the Measuring Holistic Learning Outcomes for the Forcibly Displaced Project. The project aims to address the learning crisis, contribute to establishing a baseline on the learning outcomes of refugee children and strengthen the global evidence base on learning in contexts of forced displacement.

This report was developed in the context of the increasing flows of forced displacement in Mexico, particularly in the border cities of Tapachula, Tijuana and Monterrey, which have a high number of children in need of international protection. These children face multiple challenges, including barriers to accessing formal education, disruptions to academic and social emotional development, and limited resources and educational infrastructure in contexts of emergency and displacement.

In line with the commitment of Save the Children and UNHCR to promote the right to education for all asylum-seeking and refugee children, this report presents the results of implementing HALDO on the Move. This tool is an adaptation of the original HALDO, developed by Save the Children, to assess children's learning and holistic development in crisis and disaster contexts.

HALDO on the Move assesses the academic and social emotional core competencies of children on the move, focusing on literacy, numeracy, Social Emotional Learning and executive function. The assessment aims to address data gaps on their learning status and generate evidence-based recommendations to inform the design of inclusive public policies and effective education programmes. The relevance of this study lies in its ability to provide contextualized information considering variables such as gender and protection status. It also aims to contribute to the development of regional and national strategies that promote educational inclusion and enhance access to quality services for this vulnerable population.

This report is structured to provide an analysis of the learning outcomes of children on the move in Mexico. The report begins with an overview of its purpose and rationale, followed by a background section that outlines the context of forced displacement in Mexico and the national education sector. The subsequent section details the implementation sites —Tapachula, Monterrey, and Tijuana — highlighting demographic and educational characteristics. The research framework outlines the study's objectives and guiding research questions.

While the methodology section describes the HALDO on the Move tool, the sampling criteria and the limitations encountered during data collection. The findings section analyses the assessment results. These are complemented by insights from the tool's enumerators on observed changes in the educational environment, which are included as part of recommendations to improve the design of the HALDO on the Move tool and its administration. Finally, the report concludes with specific recommendations to improve educational inclusion, including programme, policy and research recommendations.

## 2. Background

Currently, Latin America and the Caribbean are experiencing a complex human mobility context with an increase in the forced displacement of children that has had a critical impact on their rights, including access to education (Save the Children and HIAS, 2024). This impact not only hinders the development of new skills but can also lead to the loss of previously acquired knowledge, affecting children's ability to reintegrate and fully develop, both educationally and socially (Save the Children and HIAS, 2024).

#### 2.1. Context of forced displacement in Mexico

Since 2019, Mexico has experienced a significant increase in the arrivals of forcibly displaced persons due to conditions in the countries of origin and Mexico's geographic location on the migration route to North America (United Nations (UN) Mexico, 2023).

The UNHCR 2023 Results Report, 'Hope for a New Home', highlights that more than half of the people on the move identified violence, insecurity and threats as the primary reasons for leaving their countries of origin (UNHCR, 2023). The same report states that 66 per cent of people indicated that their life, safety or freedom would be in danger if they were returned to their countries of origin, which has led them to seek refuge in Mexico (UNHCR, 2023). The sustained increase in the number of asylum applications registered by the COMAR is also evidence that Mexico is not only a country of origin and transit for people on the move, but also a country of destination for people in need of international protection.

#### 2.1.1. Forced displacement profiles

The 1951 Refugee Convention defines a refugee as someone who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion is outside the country of their nationality and is unable or, owing to such fear, is unwilling to avail themself of the protection of that country (UNHCR, 1951). Similarly, an asylum-seeker is a person who has left their country of origin and has applied for international protection in another country but whose application has not yet been assessed (UNHCR, 2024).

Mexico has become a key destination for displaced populations, ranking among the top 10 countries worldwide with the highest number of asylum applications. In 2023 alone, over 140,000 asylum requests were registered (Save the Children and UNHCR, 2024). The recognition rate for refugee status has increased in recent years, with the COMAR reporting a rise from 65 per cent in 2022 to 69 per cent in 2023 (UNHCR, 2024). Over the past three years, the total number of asylum applications in Mexico has surpassed 335,000 (COMAR, 2024).

Of the total number of asylum-seekers, 58 per cent are male and 42 per cent are female (all ages included). 24 per cent of this total are children (male and female). There were 32,560 accompanied and 1,391 unaccompanied children in 2023 alone (COMAR, 2024). Asylum applications from children in Mexico increased from 25,529 in 2022 to 34,951 in 2023, with 19,684 recorded in 2024 (COMAR, 2024). Additionally, as of 30 June 2024, Mexico hosted 136,445 recognized refugees (UNHCR, 2024).

The primary drivers of displacement reported by asylum-seekers in Mexico reflect a mix of violence, insecurity, economic hardship and political instability in their countries of origin. According to the 2023 Protection Monitoring Report, 51 per cent of surveyed individuals cited violence, insecurity and threats as their main reasons for fleeing, with higher rates reported among Haitians (71 per cent) and Hondurans (69 per cent) (UNHCR, 2024). Other significant contributing factors included a lack of economic opportunities, reported by 35 per cent of respondents, and political persecution, affecting 12 per cent of those surveyed. Children are among the most vulnerable within these displaced populations, often facing forced recruitment by criminal groups, gender-based violence and family separation as key factors compelling them to flee (UNHCR, 2024). Children travelling alone or separated from their families face heightened risks of exploitation and abuse during their migration journey (UNHCR, 2024).

According to the UN Guiding Principles, "Internally Displaced Persons (IDPs) are those persons who, individually or as a group, have been forced or obliged, expressly or tacitly, to flee or leave their homes or places of habitual residence, in particular as a result of or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized border." These principles establish international standards for protecting IDPs (*Gobierno de México*, n.d.). This definition is taken up in the National Analysis of Internal Forced Displacement in Mexico (National Human Rights Commission (*Comisión Nacional de Derechos Humanos*) (CNDH), n.d.).

Mexico faces internal challenges, including violence linked to organized crime and vulnerabilities to climate-related hazards due to its geographic location. The Mexican government's recognition of forced internal displacement in 2019 marked a significant step in addressing this issue, acknowledging the pressures and risks faced by displaced populations (UNHCR, 2024). In that year, a public statement marked the official acknowledgement of internal displacement in Mexico, signalling the State's commitment to prevent, address and repair the consequences suffered by IDPs. While this recognition did not establish a formal legal status, it affirmed that internal displacement occurs in Mexico and underscored the Mexican State's obligation to respond accordingly (*Unidad de Política Migratoria, Registro e Identidad de Personas* (Unit for Migration Policy, Registration and Identity of Persons) (UPMRIP), 2019). According to figures from the Internal Displacement Monitoring Centre (IDMC), by the end of 2023, 392,000 people were internally displaced in Mexico due to conflict and violence, representing a 145 per cent increase over 10 years. Additionally, 196,000 people were internally displaced due to weather-related disasters in 2023, with flooding being the greatest cause of internal displacement for disasters caused by natural phenomena since 2008, followed by storms and earthquakes (IDMC, 2024).

It is important to highlight the different needs, risks and lack of access to rights that forcibly displaced populations face, especially children, who are one of the most vulnerable groups in this situation. Children face significant barriers to meeting their basic needs, including access to food, health services and decent housing. According to the CNDH, there are children on the move who live in extremely precarious conditions, with limited access to drinking water and sanitation, which makes them more vulnerable to disease and malnutrition. Children on the move are also exposed to dangers such as human trafficking, exploitation, gender-based violence, physical and psychological abuse and the constant risk of family separation. These factors affect their physical safety and have long-term consequences for their emotional and psychological development (CNDH, 2023). Constant mobility and a lack of stability in their environments also prevent them from developing a sense of belonging, which affects their well-being and social skills (CNDH, 2023).

In particular, access to fundamental rights, such as education, is one of the most frequent areas of concern for people affected by human mobility and forced displacement. Children on the move in Mexico face multiple barriers to accessing inclusive and quality education. According to the United Nations Children's Fund's (UNICEF) 'Participatory Assessment of Barriers to Inclusive Education', these difficulties include a lack of awareness of their educational rights, discrimination, prejudice in host communities and limitations in school infrastructure and resources to address their specific needs (UNICEF, 2021). In addition, constant mobility and instability in their migratory situation complicate their educational continuity, affecting their comprehensive development and future opportunities (UNICEF, 2021).

#### 2.2. National education sector context

In Mexico, the education sector demonstrates significant coverage, particularly at the compulsory education levels. According to the Mexican Ministry of Public Education (*Secretaría de Educación Pública* (SEP)), over 25 million students were enrolled in compulsory education in the 2022/23 school year. According to the *Prontuario Nacional de Indicadores Educativos* 2025, school dropout rates during the 2022/23 academic year showed an upward trend from the primary to the secondary level. At the national level, the dropout rate in primary education was just 0.1 per cent, rising to 3.2 per cent in lower secondary and reaching 11.2 per cent in upper secondary education. The latter figure also reveals gender disparities, with 13.5 per cent of male students in upper secondary school dropping out, compared to 9.1 per cent of female students (SEP, 2025).

National net enrolment coverage for the 2023/24 school year varies by educational level. Enrolment coverage was 65.7 per cent for preschool (ages 3 to 5), 95.5 per cent for primary education (ages 6 to 11), 81.4 per cent for lower secondary (ages 12 to 14) and 63.3 per cent for upper secondary education (ages 15 to 17) (SEP, 2025). At the federal level, the government has implemented measures to address the educational needs of children on the move. The 2019 General Law of Education reform and the School Control Regulations introduced provisions to reinforce universal access to education. These include enabling the enrolment of all children, regardless of nationality or migration status, to exercise their right to education under the same conditions as national students. Article 9 of the General Law of Education outlines strategies to facilitate enrolment and retention in the national education system. Additionally, in collaboration with international organizations such as UNICEF, the government implemented the Protocol for Migrant Children's Access to Education. This protocol aimed to guarantee children the right to education without discrimination based on their migration or protection status (*Gobierno de México*, 2023). It addressed key barriers, including the lack of official documentation, frequent mobility and communities, which often prevent school access.

Despite these efforts, there is still a lack of disaggregated statistical data on the educational inclusion of children affected by forced displacement. The lack of detailed information prevents an accurate assessment of the effectiveness of implemented policies and strategies. It also limits the visibility of their situation and makes it difficult to plan effective solutions. This constraint becomes particularly critical at the locations selected for this assessment, where displacement dynamics present specific and distinct challenges.

#### 2.3. Context in target locations

In 2024, HALDO on the Move was implemented in three key cities in Mexico: Tapachula, Monterrey and Tijuana. This initiative, funded by UNHCR and carried out in collaboration with Save the Children, aimed to assess the educational and developmental needs of children in diverse migratory contexts.

<sup>1</sup> In Mexico, compulsory education spans from ages 0 to 17, encompassing pre-primary, primary, secondary and upper secondary education according to the Constitution. Early childhood education (ages 0 to 3) is also mandatory; however, coverage remains very low, reaching less than 20 per cent of children in this age group (National Institute of Statistics and Geography (INEGI),2024).

Tapachula, located on Mexico's southern border and a primary entry point for people from Central America, is where most asylum applications are submitted. In the industrial north, Monterrey is one of the destination cities for UNHCR's Local Integration programme; it has seen an increasing number of recognized refugees due to its economic opportunities. On Mexico's northern border, Tijuana is a key transit and destination city for asylum-seekers, refugees and IDPs. The implementation of HALDO on the Move in these cities provided valuable insights to inform evidence-based strategies that address the needs of children on the move, while supporting the local communities hosting them.

#### 2.3.1. Tapachula in the State of Chiapas

Located in the State of Chiapas on Mexico's southern border, Tapachula is one of the main gateways into Mexico for people on the move, most of whom come from Central America (Save the Children and UNHCR, 2024). Approximately 77,375 people applied for refugee status in Tapachula in 2023. In 2024, there were 50,742 asylum applications (COMAR, 2025). Over the last five years, the majority of individuals who have arrived in Tapachula under these circumstances have come from Guatemala, Honduras and El Salvador (COMAR, 2025).

Under Mexican refugee law, asylum-seekers must remain in the State where they apply for refugee status while their claim is processed. This requirement has contributed to a growing presence of asylum-seekers in Tapachula, a city with 354,000 inhabitants, according to the 2020 Census (INEGI, 2020). This creates challenges for local authorities and civil society organizations.

In addition to the increased number of asylum-seekers and refugees, Tapachula has also been the starting point for groups of migrants attempting to cross Mexico to reach the United States of America (US) (National Institute of Migration (*Instituto Nacional de Migración*) (INM), 2023). These large-scale mobilizations have underscored the need for public policies that balance the protection of human rights for people on the move with the security and well-being of local communities (INM, 2023). Shelters and essential services in the city have been overwhelmed, requiring additional measures to address the growing humanitarian needs (International Organization for Migration (IOM) Mexico, 2023).

According to the International Rescue Committee (IRC) (2024), the most urgent needs for people on the move in Tapachula are food, shelter and transportation. These challenges exist alongside the vulnerabilities of the local population; in 2020, 41.4 per cent of Tapachula's residents lived in moderate poverty, 17.1 per cent in extreme poverty and 22.3 per cent lacked access to healthcare and basic services (Secretaría de Bienestar, 2024).<sup>2</sup>

In 2020, the most common levels of educational attainment among Tapachula's general population were middle school, with 59,400 individuals (26.2 per cent of the total), followed by primary school, with 56,800 individuals (25.1 per cent) and upper secondary school, with 54,400 individuals (24 per cent). Among the population aged 15 and older, 13 per cent of women and 12.1 per cent of men completed primary school. Similarly, 14.6 per cent of women and 11.7 per cent of men finished middle school, while 11.8 per cent of women and 12.2 per cent of men attained upper secondary school. This comparison highlights slight gender disparities in educational attainment, with women generally showing higher completion rates for primary and middle school. At the same time, men have a marginally higher rate at the upper secondary level (SEP, 2024).

<sup>2</sup> Mexico's official source of demographic data is the Population and Housing Census, conducted by INEGI. The most recent census was carried out in 2020.

During the 2022/23 school year, in Chiapas the net enrolment rate was 101.1per cent³ for primary school, 68.7 per cent for middle school and 47 per cent for upper secondary school. In Tapachula, in one term, out of 38,436 primary school students and 11,037 middle school students only 28 were identified as 'migrants'⁴ (National Commission for the Continuous Improvement of Education (*La Comisión Nacional para la Mejora Continua de la Educación*) (MEJOREDU), 2024). This low number underscores persistent barriers to enrolment for children on the move. These challenges, rooted in systemic discrimination and insufficient teacher training, highlight the broader impact of structural inequalities on refugee and asylum-seeking children (UNICEF Mexico, n.d.).

Strengthening initiatives are essential to bridge these gaps and ensure equitable education for refugees and asylum-seekers. In Chiapas, agencies such as the UNHCR have implemented programmes to enhance the capacities of local schools and improve educational conditions. For example, by refurbishing school infrastructure and donating school furniture to benefit asylum-seeking and refugee students, as well as the local communities hosting them. In addition, the Ministry of Education of Chiapas has implemented non-formal education initiatives in Tapachula to address learning gaps of children on the move, including sessions facilitated by the Chiapas' Migrant Education Program at the Community Development Center (*Centro de Desarrollo Comunitario*, CEDECO), and the Temporary Educational Centre for Children on the Move (*Secretaría de Educación de Chiapas*, 2023).

Another relevant initiative is the School Access Route for Refugees and Asylum-seekers in Chiapas, launched in 2019 to address challenges that hindered the enrolment of asylum-seeking and refugee children. This effort, led by the Ministry of Education of Chiapas in collaboration with regional teachers, emerged from a broader discussion on the challenges children face on the move, the lack of institutional knowledge of the regulatory framework and the specific needs of those seeking international protection. As a result, the General School Control Standards were developed, outlining clear steps for enrolling children in the national education system, even in cases where they lack proof of studies or identity documents (UNHCR, 2019).

Tapachula serves as a critical entry point into Mexico, reflecting the intersection of diverse migration dynamics and local vulnerabilities, including significant poverty and limited access to essential services. Its position along Mexico's southern border underscores its significance in addressing the challenges faced by populations on the move and host communities.

#### 2.3.2. Monterrey in the State of Nuevo León

Monterrey is the capital city of the northern border State of Nuevo León. In 2018, the city joined Saltillo in the State of Coahuila and Guadalajara in the State of Jalisco as destinations within UNHCR's Relocation, Job Placement and Local Integration Program. Nuevo León has become a key destination due to its strong industrial infrastructure, growing job market and competitive wages compared to other regions in Mexico (UPMRIP, 2024). As a result, many people on the move have chosen to settle in Monterrey and its metropolitan area, benefiting from the city's economic opportunities and humanitarian support services, including shelters, legal assistance and psychosocial support (UPMRIP, 2024). The State has recently recorded an increase in the number of people on the move. In 2023, 2,436 persons applied for refugee status, while 2,362 did so in 2024 (COMAR, 2025).

In 2020, 17.5 per cent of Monterrey's population lived in moderate poverty, while 1.77 per cent experienced extreme poverty, ranking Monterrey among the five municipalities with the lowest levels of poverty and extreme poverty nationwide. However, 35.2 per cent of residents were classified as socially

<sup>3</sup> The net enrolment rate is calculated based on the State's total population within the theoretical age range for the corresponding education level. When students from other age groups or those coming from other states or countries are included, the rate may exceed 100 per cent.

<sup>4 &#</sup>x27;Migrants' is the terms used by the source, MEJOREDU.

deprived, and 4.89 per cent faced income-related vulnerability. The main social challenges identified in Monterrey that year included limited access to social security, inadequate health services and insufficient food availability (Secretaría de Bienestar, 2024).

In 2020, the most common levels of educational attainment among Monterrey's general population were middle school, with 230,000 individuals (25.9 per cent of the total), and upper secondary school, with 156,000 individuals (17.6 per cent). Among the population aged 15 and older, 7.8 per cent of women and 6 per cent of men completed primary school. For middle school, 12.8 per cent of women and 13.1 per cent of men achieved this level, while 8.3 per cent of women and 9.2 per cent of men completed upper secondary school. This comparison reveals slight gender differences in educational attainment. Women surpass men only in primary school completion, while men exhibit higher completion rates at middle and upper secondary school levels (Secretaría de Economía, 2020).

In Nuevo León, during the 2022/23 school year, the net enrolment rate reached 92.7 per cent for primary schools, 81.4 per cent for middle schools and 55.6 per cent for upper secondary schools. In Monterrey, 101,406 students attended primary school and 40,313 enrolled in middle school during this period. However, data on refugee and asylum-seeking children is unavailable (MEJOREDU, 2024). This gap highlights the need for enhanced data collection and reporting to inform policies that promote the educational inclusion of children on the move. While more people have begun to arrive in Monterrey in recent years, the conditions to address the education demand from children on the move remain insufficient. INEGI data from 2023 show that despite having a significant number of schools, Nuevo León has a higher concentration of students per school, as educational infrastructure in the State has not expanded at the same pace as student enrolment. This potentially places pressure on school services, particularly in densely populated urban areas like Monterrey. However, steps have been taken, such as the establishment of the Department of Migrant Education (*Departamento de Educación Migrante*), a government office dedicated to guiding access to primary and middle school for children on the move who arrive in the State.

As one of Mexico's most economically developed cities, Monterrey attracts people on the move seeking stability and opportunities. Its industrial infrastructure and access to humanitarian services enable it to support both incoming populations and long-term residents. However, the city's unique socioeconomic context, marked by rapid development and underlying social challenges, underscores the complexities of fostering inclusion and ensuring equitable access to resources for all.

#### 2.3.3. Tijuana in the State of Baja California

In recent years, Tijuana, located on the Mexico-US border in the northern State of Baja California, has seen a growing influx of people on the move. This includes asylum-seekers, refugees and internally displaced Mexicans from other states and regions (UPMRIP, 2022). According to the Analysis of Human Mobility in Baja California, published by the UPMRIP within the Ministry of Interior (Secretaría de Gobernación), the State has become a key hub for various forms of human mobility, serving as a point of origin, transit, destination and return for displaced populations. In Baja California, 4,092 people applied for refugee status in 2023, and 1,121 applications were registered in 2024 (COMAR, 2025).

Over the past five years, most people in mobility situations (migrants, persons in need of international protection, IDPs, refugees, asylum-seekers, mixed movements) arriving in Tijuana have come from the US, Central America, Venezuela and Haiti. According to the 2020 Population and Housing Census, Baja California has a population of 3.7 million people, with 1.5 million born in another State, making it the third-largest recipient of out-of-state migrants in Mexico. This underscores its role as a key hub for national and international migration.

The movement dynamics in Baja California have prompted the development of institutional and legal frameworks to address the challenges of human mobility. In February 2021, the Assistance, Protection of Rights, and Support of Migrant Persons of the State of Baja California Law (*Ley para la Atención, Protección de los Derechos y Apoyo a las Personas Migrantes*) was approved. It aimed to improve coordination with federal authorities to safeguard the rights of people on the move while also considering the challenges faced by the local population (*Cámara de Diputados Baja California*, 2021).

In 2020, 21.8 per cent of Tijuana's population lived in moderate poverty, while 1.8 per cent experienced extreme poverty. Additionally, 38.1 per cent of residents faced social deprivation, and 6.7 per cent were considered vulnerable due to low income levels (*Secretaría de Bienestar*, 2024). Although these figures are lower than the national average, they highlight ongoing gaps in access to essential services and economic opportunities for the local population.

In 2020, the most common levels of educational attainment among Tijuana's general population were middle school, with 453,000 individuals (32.4 per cent); upper secondary school, with 378,000 individuals (27 per cent); and primary school, with 270,000 individuals (19.3 per cent) (Secretaría de Economía, 2020). Among individuals aged 15 and older, 10.2 per cent of women and 9.1 per cent of men completed primary school, while 16.2 per cent of women and men finished middle school. However, 12.4 per cent of women and 14.6 per cent of men completed upper secondary school (Secretaría de Economía, 2020). These figures highlight slight differences in educational attainment by gender. Women had higher completion rates at the primary level, whereas men were more likely to complete upper secondary education. Meanwhile, middle school completion rates were identical for both genders.

In Baja, California, the net enrolment rate for the 2022/23 school year was 95.4 per cent for primary school, 82.4 per cent for middle school and 64.6 per cent for upper secondary school (MEJOREDU, 2024). For the same period, in Tijuana, 190,306 students were in primary school, and 66,579 were in middle school (as of 2024). There is no available desegregation for refugee and asylum-seeking children.

As a transit and destination city, Tijuana faces significant challenges in providing education and protection services for children on the move. The city is recognized as a hub for diverse migrant populations, which presents challenges when providing them with assistance and protection (lbero-American University, 2023). Nevertheless, local education authorities have implemented various initiatives, including specific protocols and strategies, to ensure that children on the move gain access to education and are enrolled in schools.

In July 2022, in collaboration with UNICEF, the Ministry of Education (*Secretaría de Educación*) of Baja California presented the Protocol for Access to Basic Education for Migrant Children in Baja California. This protocol establishes that asylum-seeking and refugee children cannot be denied access to education due to a lack of documents. It allows for enrolment at any time during the school year (*Secretaría de Educación de Baja California*, 2022). Additionally, the Baja California Multi-Purpose Service Center – *Frontera Solidaria* – is a comprehensive support space in Tijuana that promotes the protection, integration and coexistence of refugees, asylum-seekers and the local community. This centre operates through the collaboration of 19 government institutions, international organizations and civil society groups, including UNHCR, COMAR and the Binational Migrant Education Program (*Programa Binacional de Educación Migrante*, PROBEM). Among its services, the centre facilitates the enrolment of children in public schools in Tijuana, ensuring their access to education and fostering their integration into the local community (UNHCR, 2024).

<sup>5</sup> This protocol is based on the federal protocol (Protocolo para el Acceso de Niñas, Niños y Adolescentes Migrantes al Sistema Educativo Nacional), which outlines the same regulations for ensuring educational access for migrant children.

Tijuana's role as a border city has positioned it as an intersection for diverse migration flows and a major transit and destination hub. Its legal and institutional initiatives reflect the city's ongoing efforts to address the needs of both residents and populations on the move in an ever-changing context.

## 2.4. Education policy for refugee and asylum-seeking children in Mexico and practical measures

Mexico has made significant efforts to guarantee the right to education for refugee and asylum-seeking children through a combination of legal frameworks, governmental initiatives and collaborative efforts with international organizations. National education policy aligns with international human rights instruments, ensuring access to education as a fundamental right, regardless of an individual's migration status. Additionally, various governmental and non-governmental measures have been implemented to facilitate school enrolment, support educational continuity and address the specific challenges faced by children on the move. This section provides an overview of the regulatory framework governing access to education for this population, as well as the practical strategies adopted to support their integration into the school system.

#### 2.4.1. Regulatory framework

In Mexico, the right to education is outlined within a national and international framework that provides guidelines for actions by government agencies, educational institutions and organizations.

This framework includes provisions specifically related to the education of children on the move.

The relevant international framework comprises multiple instruments, as detailed below:

- Universal Declaration of Human Rights: Establishes the basis that everyone must respect human rights everywhere.
- American Declaration of the Rights and Duties of Man: Article XII establishes the Right to Education, considering equal opportunities.
- International Covenant on Economic, Social and Cultural Rights: Article 13 recognizes everyone's right to education.
- Convention on the Rights of the Child: Article 28 indicates the Right to Education.
- 2030 Agenda and the Sustainable Development Goals: Goal 4 aims to ensure inclusive and equitable quality education, promoting lifelong learning opportunities for all.
- World Declaration on Education for All: Compulsory education is the foundation for lifelong learning and human development.
- Andrés Bello Agreement: An integration tool to facilitate student mobility processes.
- 1951 Refugee Convention, article 22: The right to access public education as favourably as possible, as well as the recognition of foreign school certificates, diplomas and degrees.
- Global Compact on Refugees: To expand and enhance the quality and inclusiveness of national education systems to facilitate access by refugee and host community children, adolescents, and youth to primary, secondary, and tertiary education to minimize the time refugee children spend out of education, ideally a maximum of three months after arrival.

In addition, the Mexican national legal framework contains the following components:

- Article 3 of the Political Constitution of the United Mexican States: It recognizes and regulates the right to education, establishing it as universal, free and inclusive for all individuals, from early childhood education to upper secondary education. It emphasizes the State's obligation to guarantee education based on equality and human rights, free from discrimination based on origin, migration status or social condition.
- General Law of Education: Articles 5 to 7 support this right by specifying that education must promote equity and eliminate any barriers that prevent the full exercise of the right to education, with a focus on inclusion and equity. Article 9 promotes the adoption of measures, with independence to their nationality and migratory status, for children to use public education services, enjoy the rights and benefits as nationals and facilitate their incorporation and permanence in the national education system.
- General Law for the Rights of Children and Adolescents (Ley General de los Derechos de Niñas, Niños y Adolescentes (LGDNNA)): Articles 57, 58, and 59 complement this constitutional mandate by establishing that children's best interests must prevail in any educational policy or action affecting them. It calls for coordinated policies across levels of government to ensure access to and retention in the education system for children.
- School Control Standards for Basic Education (Normasde control escolar para Educación Básica): Article III translates the right to education into concrete actions, ensuring all children can access, remain in and complete basic education under equitable conditions while respecting diversity.
- New Mexican School (*Nueva Escuela Mexicana*): An educational model articulating the right to education through a critical, humanistic, community-focused, inclusive and transformative approach. Its goal is to ensure that education in Mexico serves as a driver of social justice and collective well-being.
- State Constitutions: In alignment with the Federal Constitution, they recognize the right of all individuals to receive an education and include specific mechanisms in State legislations to make this right effective within their jurisdictions.
- State Education Laws: They provide a framework to ensure inclusive, equitable and quality education within each State, promoting social participation and respect for human rights.
- **State Development Plans:** These plans highlight the educational transformation principles under the New Mexican School (*Nueva Escuela Mexicana*) model, promoting inclusive, equitable and high-quality education through active participation from the educational community and society.

The regulatory framework outlines Mexico's approach to ensuring the right to education for all. By incorporating both national policies and international standards, these provisions establish guidelines to facilitate access to education for children on the move.

#### 2.4.2. Governmental and non-governmental measures

The Mexican government has collaborated with international agencies and civil society organizations to improve access to education for children on the move, particularly in high-migration areas such as Tapachula and Tijuana.

One key initiative implemented is the Comprehensive Protection Route for the Rights of Migrant Children and Adolescents, created by the National System for the Protection of Children and Adolescents (Sistema Nacional de Protección de Niñas, Niños y Adolescentes, (SIPINNA)) and the Commission for the Comprehensive Protection of Migrant and Asylum-seeking Children and Adolescents (Comisión

para la Protección Integral de Niñas, Niños y Adolescentes Migrantes y Solicitantes de la Condición de Refugiado) (SIPINNA, 2020). This framework establishes a structured plan to protect children on the move in Mexico, grounded in national and international legal instruments, including the Convention on the Rights of the Child, the Convention Relating to the Status of Refugees and the Mexican Constitution. Additionally, national laws, including the LGDNNA and the Refugee Act, reinforce the principle of the child's best interests and guarantee their fundamental rights, including access to education (Official Gazette of the Federation (DOF), 2011).

The Protection Route outlines government measures that involve cooperation between various federal and State agencies, as well as international organizations such as UNICEF and UNHCR (SIPINNA, 2020). Through this collaboration, the SEP seeks to ensure access to, and certification of, inclusive education for children on the move. At the same time, the National System for Integral Family Development (Sistema Nacional para el Desarrollo Integral de la Familia (DIF)) provides alternative care in designated shelters (DIF, 2024).

Another relevant initiative is the New Mexican School which promotes comprehensive and meaningful learning from early childhood. This educational model incorporates elements that can benefit children on the move, such as their inclusion regardless of their social or migratory status. Additionally, Resolution 10/09/23, issued by the SEP, establishes specific guidelines for student assessment, accreditation and progression within the compulsory education system, facilitating continued enrolment and educational mobility (DOF, 2023).

The Mexican National Council for the Promotion of Education (Consejo Nacional de Fomento Educativo (CONAFE)) has also established education programmes in shelters, providing temporary access to multigrade education for children on the move (CONAFE, 2024). The type of education provided by CONAFE, known as community-based education, offers a more flexible framework than the traditional general education system. CONAFE programmes, as part of the national education system, serve as a temporary measure for children on the move, eventually allowing them to transition to regular schools.

International agencies and non-governmental organizations have also implemented various measures independently and in coordination with government agencies. Since 2021, multi-stakeholder sessions led by UNHCR and Save the Children have been conducted, bringing together host community families, education authorities and teachers. These sessions address critical issues, including access to education, raising awareness about the experiences of refugees and asylum-seekers and the importance of study revalidation. They also highlight administrative barriers faced by children on the move. These activities aim to humanize the experiences of displaced persons, foster empathy and encourage better integration into school communities (UNHCR, 2023).

While these efforts demonstrate progress in addressing the educational needs of children on the move, they also underscore the need for sustainable strategies that ensure long-term pedagogical and social integration, as well as full access to formal education. Ensuring continuity and alignment between temporary educational solutions and permanent schooling remains a key challenge for achieving meaningful inclusion.

## 3. Research framework

Understanding the educational experiences and learning outcomes of children on the move requires a structured and evidence-based approach. This section outlines the research framework that guided the study, including its objectives, research questions, methodology and data collection processes. The research aims to provide an in-depth analysis of the foundational skills of refugee and asylum-seeking children, examining their performance in literacy, numeracy, Social Emotional Learning and executive functioning. Additionally, the study explores variations in learning outcomes based on key demographic factors and identifies challenges that may affect their educational integration. The methodological approach ensures that findings are robust, reliable and relevant to informing educational strategies and policy interventions for this population.

#### 3.1. Aims and research questions

This report seeks to answer the following research questions:

- 1. How do refugee and asylum-seeking children perform on an assessment of foundational skills?
- 2. How does children's performance vary by gender, age, grade level and country of origin?
- 3. What are the key learning gaps and academic challenges faced by children on the move in Mexico?

This analysis aims to provide an overview of the study's context, methodology and findings to inform and guide actions towards the educational inclusion of refugee and asylum-seeking children.

#### 3.2. Data and methods

This section presents the main technicalities of HALDO and HALDO on the Move, as well as the sampling, methodology, limitations, and other sampling and implementation considerations.

HALDO is a Save the Children tool developed to assess children's learning and holistic development in crisis and disaster contexts. HALDO evaluates fundamental skills, including literacy and numeracy, as well as Social Emotional Learning and executive functioning competencies. The elements for each of these domains are derived from validated assessment tools that have been widely used across diverse contexts and age groups. These include the International Development and Early Learning Assessment

(IDELA), the International Social and Emotional Learning Assessment (ISELA) and evaluations from Save the Children's common approaches, Literacy Boost and Numeracy Boost. These areas are addressed in a balanced manner, supported by a validated methodological foundation that ensures the reliability of the data across diverse contexts.

The tool is designed to provide a snapshot of the current learning status of participating children. Results are presented in a way that informs decision-making processes and generates evidence to prioritize policies, investments and discussions around educational accessibility within local communities. The learning expectations embedded in HALDO are derived from a synthesis of elements from internationally recognized learning assessment tools, perspectives and relevant educational frameworks.

#### 3.3. HALDO on the Move

HALDO on the Move is an adaptation of the original HALDO tool, specifically designed to assess the learning needs of children who are on the move. This version takes into account the changing and fragmented nature of the educational development of children on the move, ensuring a flexible assessment tailored to their reality. Unlike HALDO's standard version, HALDO on the Move incorporates a culturally and linguistically adapted design, including progressive vocabulary and context-specific adjustments. It is particularly relevant in displacement settings such as those observed along the Central American migratory route, as well as in Mexico. For this version, additional frameworks were integrated, including a review of the Global Framework of Competencies: Literacy and Numeracy, as well as an analysis of the national curricula of Guatemala, Honduras, El Salvador, Costa Rica and Panama.

Key adaptations include adjustments to the tool's questions and expanding the age range of children it can assess, from 5 to 18 years old. The tool features an adaptive design where children are first presented with a task of moderate difficulty. If they respond correctly, the evaluator introduces a more advanced task, constructing an individualized capacity profile for each child. This profile includes a personalized list of recommendations<sup>6</sup> for families or caregivers to improve or reinforce the child's current capacities. Identifying signs associated with specific needs, such as health, protection or nutrition, is also possible. Additionally, the results contribute to a database that supports the generation of knowledge for relevant stakeholders.

The tool enables enumerators to measure improvement over time by creating a baseline and an endline. It can be applied multiple times, with a minimum interval of three weeks between assessments, to track how participants' capacities evolve and provide evidence of progress. HALDO on the Move also generates critical inputs to strengthen coordination between humanitarian and national actors, promoting educational continuity in adverse conditions. The tool requires vocabulary adaptations for each implementation context.

The tool provides information to support children's transition into more stable educational contexts by addressing the specific needs of those on the move. It promotes interventions that address the educational rights and needs of children on the move, while fostering cooperation among local, national and cross-border actors. Through consistent and comparable data, HALDO on the Move can enable the design of inclusive and evidence-based educational strategies, promoting the integration of children into formal and non-formal learning systems.

In 2024, HALDO on the Move was implemented in Mexico to comprehensively assess the basic academic and social emotional competencies of children on the move. This initiative aligns with the commitment of Save the Children and the UNHCR to uphold the right to education for all asylum-seeking and refugee children.

<sup>6</sup> The database used for this analysis is fully anonymized. Upon completion of the assessment, the tool generates individualized recommendations for each child, which are shared with the accompanying adult via email, if they have voluntarily provided an email address. These contact details are collected solely to deliver tailored guidance to parents and caregivers. They are not used for any other programmatic, research or organizational purposes beyond the implementation of HALDO.

#### 3.3.1. Technical components

The tool is divided into the following sections:

Table 1: The tool's sections

Section	Subsection	Description			
1. Introduction and consent					
2. Social Emotional Learning (SEL)					
	Social Emotional Learning A: Self-concept	Self-concept encompasses the ability to understand and express personal preferences, feelings, thoughts, skills, strengths and areas for improvement. It also involves developing independence and confidence in daily activities. This dimension helps assess self-awareness, relationships with others, understanding of the environment, the ability to envision a hopeful future and the capacity to identify realistic support and barriers to achieving that future.			
	Social Emotional Learning B: Empathy	Empathy refers to the ability to understand and recognize the emotions and perspectives of others. It involves identifying others' feelings, showing compassion, adopting another person's perspective in ambiguous situations and avoiding tendencies to attribute hostility to them.			
3. Literacy co	ompetencies				
	Letter identification	This subsection assesses a child's ability to recognize individual uppercase and lowercase letters.			
	Letter identification	This subsection evaluates the child's ability to combine letters into syllables and syllables into words.			
	Reading with comprehension	This subsection measures the child's ability to read and understand sentences or a reading passage.			
4. Numeracy	competencies				
	Numeracy A: One-to-one correspondence	This subsection examines whether children can grasp the concept of numbers by associating them with objects.			
	Numeracy B: Number identification	This subsection assesses children's ability to recognize single-digit numbers presented visually.			
	Simple operations	This subsection assesses the child's ability to perform basic addition and subtraction using single-digit numbers. This provides insight into foundational numeracy skills necessary for more advanced problem-solving.			
	Hard operations	Evaluate the child's ability to solve more advanced mathematical problems involving two-digit numbers, such as addition, subtraction and one-digit multiplication.			
	Numeracy C: Word problems	This section evaluates a child's ability to apply mathematical reasoning and problem-solving skills to real-world scenarios. It assesses their capacity to interpret problems, identify the necessary operations and execute calculations accurately.			

Section	Subsection	Description				
5. Executive	5. Executive functioning					
	Executive functioning A: Short-term memory	This subsection evaluates a child's ability to retain and recall information over a short period. It assesses their capacity to remember sequences of numbers or objects, or elements, in the correct order, providing insights into cognitive development and foundational memory skills.				
	Executive functioning B: Working memory	This subsection assesses a child's working memory capacity: the ability to temporarily store and manipulate information for complex cognitive tasks. This skill is crucial for problem-solving, critical thinking and learning.				
6. Backgroui	nd questions					
7. Child satis	faction survey					
8. Parent or caregiver satisfaction survey						
9. Questions for field personnel						

The implementation guide includes a series of recommendations for setting up the space, addressing parents or caregivers and applying the tool.

Sections 2 to 5 assess children's foundational learning. The scoring system measures the progression of difficulty, requiring children to answer a less challenging question before progressing to more complex tasks.

The scoring system includes three possible values:

- 1: Correct answer
- 0: Incorrect answer or "don't know"
- 999 or No Answer: used when respondents explicitly refuse to answer or show discomfort with the question.

 $These \ scores \ contribute \ to \ developing \ the \ respondents' \ profiles \ and \ individualized \ recommendations.$ 

The tool includes guidelines on child safeguarding and consent.<sup>8</sup> There are three main perspectives:

#### **■ Ethical training for enumerators**

All enumerators must undergo ethical training to prepare for conducting HALDO evaluations. This includes recognizing children's concerns, addressing them appropriately and referring cases to a supervisor when necessary.

#### ■ Parent/guardian consent

Before assessing children under 18, consent from a parent or guardian must be obtained. The consent form explains the study's purpose and requests permission for the child's participation in the study. If a guardian cannot read the form, the enumerator may provide a verbal explanation and collect a signature or fingerprint as confirmation.

<sup>7</sup> In HALDO on the Move, when a child is unable to answer all items in a block correctly, the total score for that block is recorded as 0 (incorrect). Partial scores (e.g., 2 out of 5) are not recorded, unlike the original HALDO version. This method allows for a simplified analysis of progressive mastery across tasks.

<sup>8</sup> The child safeguarding and consent protocols applied in this assessment are based on Save the Children's institutional guidelines.

#### Child Assent

Even after obtaining guardian consent, enumerators must ask children for their agreement to participate. The assent script is read to them, and they can either agree verbally or refuse without consequence.

Basic safeguarding measures include ethical training, obtaining consent and assent, and providing families with contact information for follow-up questions and concerns. These steps ensure that children's rights and well-being are protected during the assessment process.

#### 3.4. Methodology

The analysis of results in each category follows a structured approach to capture different dimensions of children's performance and progression. This approach consists of three complementary elements: (a) the progression of correct answers, (b) the children's performance level and (c) a set of other statistical techniques to deepen the analysis. Together, these components provide a robust framework for understanding the underlying patterns in literacy, numeracy, social emotional and executive function competencies.

#### A. Progression of correct answers

First, we present a graph showing the percentage of correct answers across the progressive items for each section. In other words, this shows the proportion of children who could proceed to more difficult questions in the assessment. The structure of HALDO on the Move was designed to be adaptive, with increasing levels of difficulty as the assessment progresses. For each HALDO on the Move section, children need to answer all items/parts of a given question correctly to move forward to the next question. If they fail to do so, they are assigned a score of zero for that question and do not proceed to the next level of difficulty within each section/domain.

For example, in the case of literacy, only the children that can identify 20 letters or more in the first literacy item (LIT 1) advance to answer the questions from the second literacy item (LIT 2). Only those who correctly answer the second question of the second item should advance to answer the questions for the third literacy item (reading and comprehension).

Numeracy consists of three sets of items (number recognition, basic operations and hard operations). Only the children who can do number recognition advance to answer the basic operations questions which include one-digit addition and subtraction. Then only those who can complete this task can proceed to harder operations (two-digit addition and subtraction, and simple multiplication).

The Social Emotional Learning section has a different format from literacy and numeracy. This section consists of two sets of questions (self-concept and empathy); there was no conditioning between the two sections as they were applied independently. This means that children were assigned questions from Social Emotional Learning A (self-concept) and advanced as far as they provided the correct answers. Then, all children were provided with questions from Social Emotional Learning B (empathy), following the same procedure. The same logic applied to the two sets of items from executive function (short-term memory and working memory), as they were not conditioned between them. The two of them were applied to all children, who, again, advanced within the section as far as they had the right answers.

Results of the progressive rates of correct answers were categorized by sex, age group and country of origin (nationality).

**Sex:** There was only one eight-year-old child who chose to identify as neither male nor female for their sex. The rest of them identified as male or female in equal proportions. The analysis by sex is conducted on these two latter categories.

Age groups: The analysis considers three age groups: 4–8 years old, 9–13 years old and 14–18 years old. This classification reflects key developmental stages in learning and cognitive growth. Younger children (aged 4–8) are in early foundational learning years, while those aged 9–13 typically consolidate academic skills and social-emotional competencies. Adolescents (14–18 years old) face increasing academic demands and transitions toward higher education or the workforce. These groups enable a more precise understanding of skill progression and potential gaps across various stages of development.

Nationality: Children were categorized into four nationality groups for analysis: Mexicans, Haitians, children from the Northern Triangle of Central America (Guatemala, El Salvador and Honduras) and those from other Latin American countries. The reason for this is that Mexicans represent the local population. At the same time, people from Haiti may face unique language and cultural barriers, and their sample size was sufficient to form a single group (n=50). Children from Guatemala, Honduras and El Salvador are often grouped, as these countries form what experts call the Northern Triangle of Central America – a region with integrated migration patterns, similar economic challenges and shared cultural backgrounds. The rest of the children came from different countries in Latin America (e.g., Ecuador, Colombia, Venezuela), although in smaller proportions for each of them. Therefore, to increase the sample size, they were grouped into a single category, "Other Latin American Countries."

The visualization of the progression of the rate of correct answers by these mentioned groups allows us to observe how children advance through the assessment and where significant drop-offs occur. The logic behind this representation is that once a child answers a question incorrectly, they are automatically excluded from subsequent items in that section. A steep decline in the percentage of correct answers suggests a high proportion of children who receive zero scores at a particular stage. This means that a substantial proportion of children could not answer the question correctly and therefore did not progress beyond that point. Conversely, a gradual decline indicates that only a small fraction of respondents was left out of the next items, suggesting stronger overall performance in the section.

These progressions are fundamental, as they serve as the empirical basis for categorizing children into competency levels, ranging from 1 to 5 for literacy and numeracy, and 0 to 5 for Social Emotional Learning and executive functioning.

#### B. Performance level by age group

To complement the progression graphs, we present a table summarizing the distribution of participants across competency levels, disaggregated by age group. Unlike the graphs, which show a progressively decreasing pattern in the percentage of correct responses as items become more challenging, the table provides a structured overview of what children can and cannot do throughout the assessment, categorizing children's performance by level.

The classification follows a stepwise logic: children must correctly answer all items within a given question before progressing to the next. If they fail to do so, they receive a score of zero for that question and are not assessed on subsequent, more advanced items. This results in a distribution where the majority of younger children (4-8 years old) might tend to cluster in the lower categories, while older children (9-13 and 14-18 years old) might be more dispersed across the full range of competencies.

Each column in the table corresponds to a specific age group (4-8, 9-13 or 14-18), with percentages totalling 100 per cent for each age group. This allows for a clear comparison of how learning outcomes shift with age. This structured distribution highlights developmental trends for each of the HALDO domains, such as the concentration of younger children in the foundational levels, indicating early-stage skills like identifying basic emotions. In comparison, older children tend to exhibit more advanced competencies. The table therefore serves as a complement to the progression graphs. Although they derive from the same data, the table complements the graphs, offering a broader perspective on how children of different ages navigate the learning continuum.

#### C. Other statistical analysis

To quantify the influence of demographic factors (age, sex and nationality) on competency levels, an Ordinal Regression Model was applied, with key findings and full results available in the Annex. Additionally, school grade analysis used descriptive statistics and a LOESS model to examine educational progression and lag, treating grade as a continuous variable for more flexible trend visualization. Correlation matrices and Cronbach's alpha were employed to assess relationships between indicators and their internal consistency. Together, these methods provide a comprehensive, statistically validated understanding of how demographic and educational factors influence the development of social emotional, literacy, numeracy and executive function. Details on statistical results can be consulted in the Annex, although there are some key highlights in the main body of the text.

#### 3.4.1. Sampling, limitations and other considerations

Once the areas of intervention were defined, the sample was derived from the following two data sources:

- 1. Data published by the Migration Policy Unit in Mexico (2023) on the number of humanitarian visas granted to children aged 0 to 17 in the states where the selected cities are located.
- 2. Children aged 4 to 18 participating in activities implemented by Save the Children Mexico's Migration Program in the selected cities.

Public data from the Migration Policy Unit only reports foreigners documented with a Humanitarian Visitor Card at the state level. Therefore, it was agreed with UNHCR that the sample calculation for Tapachula and Tijuana would be based on children aged between 4 and 18 who took part in Save the Children Mexico's Migration Program activities between January and December 2023. For Tapachula, only refugee or asylum-seeking children in Mexico were included. In Tijuana, in agreement with UNHCR, the sample also included 19 internally displaced Mexican children who had participated in a Save the Children Mexico migration project.

In Monterrey, no active Migration Program projects were in place at the time. Therefore, for this city, the sample was based on data published by the Migration Policy Unit for the State of Nuevo León (2023) on foreigners documented with a Humanitarian Visitor Card. A proportional estimate was applied to determine the number of children between 4 and 18 years old, resulting in the following initial sample distribution:

Table 2: Children per sex and age group

Age group	Female	Male	Total
4 to 8 years <sup>9</sup>	84	91	175
9 to 13 years	100	90	190
14 to 18 years	38	30	68
Total	222	211	433

One child in the age group 4-8 declined to select male or female for their sex.

<sup>9</sup> Although the assessment was designed for children aged 5 to 18, it was also administered to some 4-year-olds. Given this, they were included within the 5 to 8 age range, which now effectively reflects a range of 4 to 8 years.

Table 3: Children by migration status

Migration status	Percentage of children
Refugee	62%
Asylum-seeker	34%
IDPs	4%
Total	100%

Table 4: Children by education status

Education status	Percentage of children
In school	24%
Participant in an educational alternative activity or programme <sup>10</sup>	37%
Out of school and not attending an educational alternative programme	37%
Did not answer	2%
Total	100%

Table 5: Children per sex and country

The children that participated represented 15 different countries of origin. However, most came from the Northern Triangle of Central America and Haiti:

Country	Female	Male	Total
Honduras	109	99	208
Haiti	25	25	50
El Salvador	30	18	48
Guatemala	20	23	43
Mexico	9	10	19
Cuba	11	6	17
Venezuela	3	8	11
Ecuador	2	6	8
Nicaragua	4	4	8
Colombia	4	1	5
Dominican Republic	2	4	6
Brazil	1	2	3
Chile	1	3	4
Argentina	0	1	1
Panama	1	1	2
Total	222	211	433

<sup>10</sup> Including: accelerated education programmes and non-formal education programmes.

Table 6: Number of children by country

Country	Total
Mexico	19
Haiti	50
Northern Triangle of Central America	299
Other Latin American countries	65
Total	433

Seven children were reported to have some level of disability.

While the data provide valuable insights into development patterns among programme participants, the sample is not representative of the population of refugee and displaced children in Mexico. This is because it primarily includes children who have access to specific Save the Children programmes in the three cities mentioned. Therefore, while the findings contribute to understanding cognitive and foundational learning skills in this particular group, they should not be extrapolated to the entire population of refugee and displaced children in Mexico without considering these important limitations.

Illustration 1: Map of implementation locations





## 4. Findings

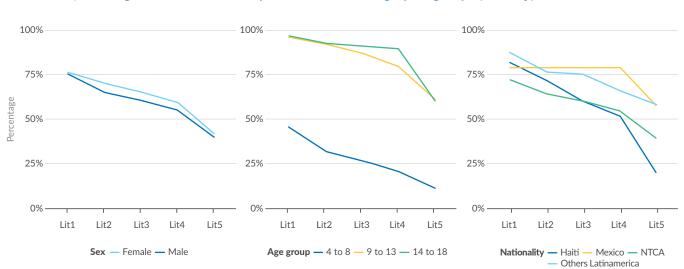
This section presents the key findings from the HALDO on the Move assessment. This provides a structured assessment of learning outcomes, offering measurable insights into literacy, numeracy, social emotional and executive function skills among children on the move. These findings offer an insight into the learning status and foundational skills of children on the move in Mexico.

#### 4.1. Quantitative results: HALDO on the Move assessment

Detailed results for each section, beginning with literacy and numeracy and ending with the Social Emotional Learning and executive function sections, are presented below. A general summary of the findings can be found in Section 5.

#### 4.1.1. Literacy

The literacy assessment categorizes children's literacy skills into six levels, ranging from no letter recognition to basic reading comprehension. Therefore, this section assesses children's ability to recognize letters, form syllables, read words and ultimately comprehend a basic reading passage which includes a set of five different questions. The exact performance categories can be found in the following table. The results were analysed by the different approaches mentioned in the methodology. However, the analysis is centred around the performance of the different age groups.



Graph 1: Progression of correct responses across demographic groups (Literacy)

The three-panel graph illustrates the progression of correct answers, or the proportion of children who could progress to the next questions, throughout the literacy assessment, segmented by sex, age group and nationality.

The analysis of literacy performance across sex, age groups and nationality reveals distinct patterns in competency levels. Regarding sex differences, both males and females exhibit a steady decline in the percentage of correct responses as the test progresses in difficulty, with minimal variation between them.

In terms of age group differences, the youngest children (4–8 years old) struggle the most. They are starting at a lower proficiency level – only 46 per cent of this group answered the first question correctly – and experienced a sharp decline in performance from the second question onward. In contrast, nearly all children aged 9–13 and 14–18 correctly answer the first question, which assesses letter recognition, and maintain higher success rates throughout most of the test. However, both older groups experience a significant drop in performance on the final question, which assesses reading comprehension. This suggests that while they develop initial literacy skills (such as letter and word recognition), basic reading comprehension remains a challenge.

When analysing differences by nationality, Haitian children, whose mother tongues are French or Creole, demonstrate the most pronounced decline in correct responses. Their sharp dropoff in the final question may indicate language barriers. They perform comparably to their peers in letter identification but may struggle with Spanish vocabulary, sentence structure and overall comprehension. Mexican children and those from other Latin American countries exhibit more consistent performance across questions, indicating a steadier progression in literacy. However, children from the Northern Triangle of Central America struggle more throughout the test despite not facing the same language barriers as Haitian students, indicating broader educational challenges.

The following table summarizes literacy competency into five different categories, illustrating the comparative reading skills among children from various age groups, from childhood to adolescence.

As addressed earlier in the text, the values do not progressively decrease, as illustrated in the graphs, because they represent the proportion of children within each age group assigned to that competency level category. Fifty-four per cent of children aged 4-8 were assigned zero scores, as they could not answer the first question correctly, and categorized into performance level 0 (46 per cent answered the first question correctly). Although those who could answer the first question correctly proceeded to the next question, 14 per cent of them failed to answer the following question (recognizing syllables) and were assigned a zero score. These together account for 68 per cent under the performance level 1 (Table 7). Five per cent of children aged 4 to 8 could answer the second question, meaning they were able to recognize the combination of vowels and consonants as independent syllables, but were not able to advance any further. As illustrated in the graph, the rate of correct responses for the last question is 12 per cent. This is the only value that coincides with that of the table, as 12 per cent of the children of this age group ended up being categorized into the highest literacy level. The same logic can be applied to interpret the remaining percentage values.

Table 7: Distribution of percentages per age group that fall into each literacy performance category.

The values of each age group total 100 per cent.

Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
1	Cannot identify letters or can identify letters but cannot combine syllables.	68%	8%	7%
2	Can combine vowels and consonants as independent syllables but cannot read whole words.	5%	5%	1%
3	Can read whole words but cannot understand simple sentences.	6%	7%	1%
4	Can read independently and understand simple sentences but cannot demonstrate reading comprehension	9%	18%	29%
5	Can read and comprehend the overall meaning of written texts.	12%	61%	60%
Total		100%	100%	100%

The categorical distribution table highlights differences in literacy development across age groups. Among the youngest children (4–8 years old), more than half (54 per cent) do not recognize the alphabet, and only 12 per cent reach the highest literacy category, which involves reading and understanding simple texts. This suggests that many children in this age range are still in the early stages of literacy acquisition. It is important to note that significant developmental changes typically occur between the ages of four and eight, and children aged seven and eight are more likely to have already acquired the expected competencies.

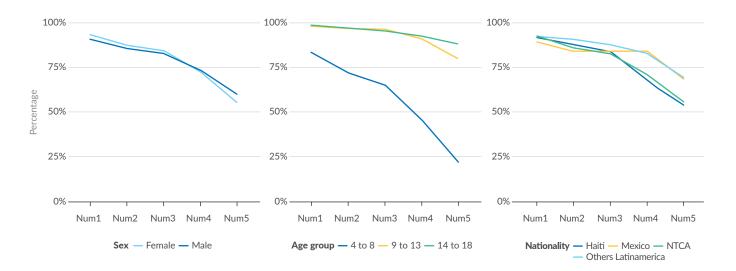
For children aged 9 to 13, there is a significant improvement. A large proportion (61 per cent) reach the highest reading comprehension level, compared to just 12 per cent in the youngest group. Among older adolescents (14–18 years old), 60 per cent achieved the highest proficiency level in the HALDO on the Move assessment, meaning they understand the ideas behind simple texts. Their distribution closely resembles that of the 9–13 age group. This suggests that most major literacy improvements occur before age 10 and that there might be a plateau in development in early and late adolescence. It also indicates that a substantial 30 per cent of adolescents can read simple sentences or instructions but do not have reading comprehension capacity. While another worrisome 10 per cent are limited to letter, syllable and word recognition.

#### 4.1.2. Numeracy

This section assesses children's ability to understand and work with numbers at different levels. The assessment begins with fundamental numerical recognition, where children must associate numbers with corresponding objects, demonstrating their ability to grasp the basic concept of quantity. It then progresses to assessing their capacity to recognize, write and order numbers, ensuring they can identify numerical symbols and their correct sequence up to three or four digits. Finally, more advanced numerical competencies, such as working with two-digit and three-digit numbers, are tested, indicating a deeper understanding of numerical structures and place values.

#### Numeracy A

This subsection assesses children's ability to understand the concept of numbers. The evaluation involves a task designed to measure children's counting skills, their ability to establish a one-to-one correspondence between numbers and objects and to identify numbers and their orders, which is a fundamental aspect of early numerical understanding. This includes the use of materials such as stones, pencils or cubes. During the assessment, children are asked to select a specific number of objects from a pile (e.g., "Give me nine cubes"). The assessment also includes identifying simple numbers from one to five and more complex numbers up to 1,000.

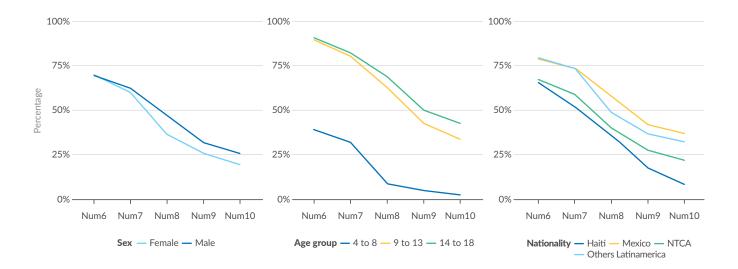


Graph 2: Progression of correct responses across demographic groups (Numeracy A)

The progression of correct responses in Numeracy A follows a clear pattern across all groups, with a steady decline in the percentage of children advancing through higher levels of numerical understanding. However, we can see that for the age groups 9-13 and 14-18, most children answer all questions correctly. However, age group 4-8 shows a steep decline, as only 22 per cent of them correctly answered the last question (identifies and writes numbers with hundreds and thousands). Again, the children in this age group who answered all or most questions correctly are closer to the eight-year-old mark. Male and female participants are observed to advance at the same rates.

#### Numeracy B

This subsection evaluates children's ability to perform basic arithmetic operations, including addition, subtraction and simple multiplication. As the difficulty increases, the test includes two-digit addition and subtraction. The highest category includes understanding multiplication tables. The progression in this section helps identify patterns in mathematical learning across various age groups and demographic categories.

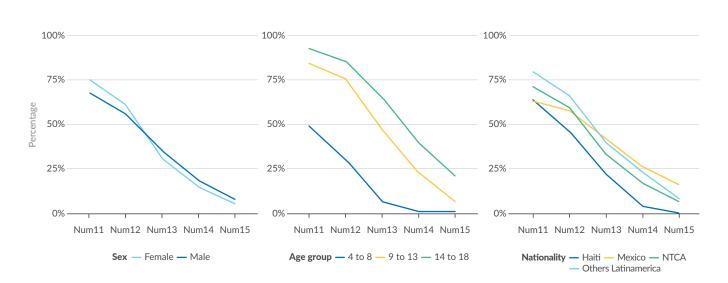


Graph 3: Progression of correct responses across demographic groups (Numeracy B)

According to the three-panel graph, the percentage of participants successfully advancing through each level declines as the test becomes more complex, decreasing more steeply than in Numeracy A. From these progression lines, we can see that, in this case, males present a slight advantage over females from the second question (NUM 7) onward. This is particularly the case in more advanced operations, such as two-digit addition and subtraction, and multiplication tables. We can also see that the line for children from Haiti begins and remains at lower results levels than their peers.

# Numeracy C

This section assessed a child's ability to apply mathematical reasoning and problem-solving skills. It assesses their capacity to interpret problems, identify the necessary operations and execute calculations accurately. The assessment includes progressively complex tasks, from basic addition to multi-step subtraction and multiplication problems. Mastery of these skills indicates a solid foundation in numerical reasoning, which is crucial for more advanced mathematical understanding.



Graph 4: Progression of correct responses across demographic groups (Numeracy C)

The performance of males and females follows a similar downward trend, indicating a clear decrease in the percentage of correct answers as item difficulty increases. There is a clear distinction among age groups. The 4–8 age group has the lowest percentage of correct answers, with a sharp decline as items progress, reaching almost no correct answers from the third question (Num13) onwards. In this case, the difference in performance between the 9-13 and 14-18 age groups is clearer than in the previous numeracy items, suggesting a greater development in adolescents for the skills in this section: the application of mathematical reasoning to problem-solving skills. Haitian students exhibit the lowest performance, particularly as item difficulty increases, reflecting greater challenges in numeracy.

Table 8 was constructed by synthesizing data from the first two numeracy sections described in the assessment tool, which evaluate children's ability to understand and manipulate numbers. To create the table, children's responses were categorized into five distinct competency levels based on their highest demonstrated proficiency levels. Those who could not grasp numbers or count objects were placed in Levels 1 and 2, while children who recognized numbers but could not perform simple operations were assigned to Level 3. Levels 4 and 5 distinguish between children who could complete simple operations and those capable of handling more advanced operations, specifically two-digit addition and subtraction, and simple multiplication. The resulting distribution provides a structured overview of how numerical skills develop across different age groups, illustrating both gradual progression and areas where learning gaps persist.

Table 8: Distribution of percentages per age group that fall into each numeracy performance category.

Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
1	Cannot grasp the concept of numbers.	17%	2%	1%
2	Can only count objects correctly or identify simple numbers (1-5).	18%	3%	2%
3	Can identify harder numbers (up to 1,000) but cannot do simple operations (addition or subtraction of one-digit numbers).	5%	1%	1%
4	Can do simple operations (addition or subtraction of one-digit numbers) but cannot do harder operations.	47%	29%	23%
5	Can do harder operations (two-digit addition, subtraction, or one-digit multiplication).	13%	65%	73%
Total		100%	100%	100%

Among children aged 4 to 8, a proportion (17 per cent) struggle with even the most basic numerical concepts, unable to grasp numbers at all. An additional 18 per cent can only count objects correctly or recognize simple numbers between 1 and 5, showing early but still limited numerical awareness. While 5 per cent of this group can identify harder numbers up to 1,000, they lack the ability to perform even basic arithmetic operations. The most common competency level in this group is the ability to perform simple one-digit addition and subtraction (47 per cent). In comparison, only 13 per cent demonstrate the ability to complete more advanced calculations, such as two-digit operations or basic multiplication. This highlights the considerable variation within this younger age group, with many still in the early stages of numerical comprehension.

For children aged 9 to 13, there is a marked improvement in numerical skills. The proportion of children struggling with the basic concept of numbers drops dramatically to just 2 per cent, while only 3 per cent remain limited to simple counting and number recognition. By this stage, most children have surpassed the early levels of numerical literacy, with only 1 per cent still struggling to identify numbers up to 1,000. The majority of children in this age group (65 per cent) are now proficient in more complex operations, such as two-digit addition, subtraction and simple multiplication, showing significant cognitive and educational development compared to their younger counterparts. However, nearly one-third (29 per cent) of children in this group remain at the level of performing only basic one-digit arithmetic operations. This suggests that while progress is evident compared to the younger age group, a proportion of children may still require additional support to reach higher levels of numerical proficiency. Among adolescents aged 14 to 18, numerical competency is even more consolidated. Only 1 per cent of this group struggles with basic numerical concepts, and just 2 per cent are limited to recognizing and counting simple numbers. At this stage, nearly three-quarters (73 per cent) of adolescents can successfully perform more complex arithmetic operations, such as two-digit addition and subtraction or simple multiplication, indicating that numerical proficiency becomes highly standardized within this group. The proportion of students still limited to simple one-digit arithmetic (23 per cent) is lower than in the younger group. However, it remains notable, suggesting that, while the majority have reached higher levels of numerical understanding, some adolescents may still require additional educational support to master more complex mathematical concepts fully.

# 4.1.3. Social Emotional Learning (SEL)

Developing strong social emotional skills is essential for children's overall well-being and long-term success. The ability to recognize and express emotions, navigate social interactions and build resilience is crucial in their personal and academic development. This section focuses on two fundamental aspects of Social Emotional Learning (SEL): self-concept and empathy. While self-concept shapes a child's sense of identity, self-awareness and confidence, empathy fosters meaningful relationships by enhancing their ability to understand and respond to the emotions of others. Together, these competencies contribute to emotional regulation, social integration and the ability to adapt to new environments, making them particularly relevant for children on the move.

# Social Emotional Learning A

This assessment includes a series of 10 questions designed to measure different levels of self-awareness. It focuses on self-concept, defined as the ability to understand and express personal preferences, feelings, thoughts, skills, strengths and areas for improvement. Additionally, self-concept involves developing independence and confidence in daily activities, which in turn contributes to self-awareness, healthy relationships with others and an understanding of their environment. This dimension also helps assess the children's ability to envision a hopeful future and identify realistic supports and barriers to achieving it. The first set of five questions for this section does not include skip rules, as they were applied independently of the answers and relate to the personal information of the respondent: name, age, the person they are traveling with, the last city they lived in and their birth country. As expected, most children answer these questions correctly, with almost all rates above 90 per cent correct. The specific values can be seen in the following table:

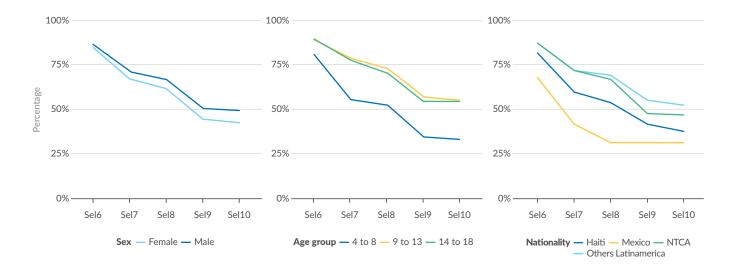
Table 9: Distribution of percentages per total, age group and sex that answered correctly each of the following questions:

Question	% of children who answered the question correctly	% of males who answered the question correctly	% of females who answered the question correctly	% of children aged 4 to 8 years who answered the question correctly	% of children aged 9 to 13 years who answered the question correctly	% of children aged 14 to 18 years who answered the question correctly
SEL1 (name)	96%	94%	97%	90%	99%	100%
SEL2 (age)	98%	97%	99%	97%	99%	100%
SEL3 (travel companion)	96%	94%	97%	91%	99%	100%
SEL4 (last city in which they lived)	90%	88%	90%	79%	96%	98%
SEL5 (birth country)	95%	94%	96%	91%	97%	100%

From this table, we can see that most children are aware of their personal information, although we observe lower rates for correct answers in question SEL4: 'Name the last city in which they lived.' This might be due to some confusion in the travel process, and their answers not aligning with those given by the parents. We can also see that the rate of correct responses is almost 100 per cent for all questions for the elder children.

Although the following section includes questions from SEL1 through SEL10, the analysis is centred on questions SEL6 to SEL10.

Graph 5: Progression of correct responses across demographic groups (Social Emotional Learning A)



The graph shows a clear pattern in the percentage of participants successfully advancing through each level of the Social Emotional Learning self-knowledge assessment. This set of questions (SEL6 to SEL10) includes asking the child to list one of their positive traits and something they would like to improve, as well as about their future aspirations. As expected, the proportion of correct responses declines as the questions become more demanding, indicating a natural increase in difficulty. This downward trend is seen across all demographic groups, but with some notable differences. Both male and female participants follow a similar trajectory, showing a steady decrease in correct responses as they progress through the evaluation. However, females appear to perform slightly better than males at every level, suggesting a possible small advantage in self-knowledge competencies. While this difference is visible in the graph, the ordinal regression model does not confirm it as statistically significant. Additionally, we observe that children from the youngest age group struggle the most with this skill.

Table 10: Distribution of percentages per age group that fall into each Social Emotional Learning (self-awareness) performance category.

The values of each age group total 100 per cent.

Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
0	Cannot describe or identify a positive aspect of themselves.	19%	11%	10%
1	Can describe a positive aspect of themselves, but not what they can do to improve themselves.	25%	11%	12%
2	Can recognize a positive aspect of themselves and what they can do to improve themselves but cannot identify their future aspirations.	3%	6%	7%
3	Can envision at least one positive future aspiration.	18%	16%	16%
4	Can identify their future aspirations and potential obstacles that may hinder their achievements.	2%	2%	0%
5	Can identify obstacles and resources or support systems that could help them achieve their desired future.	33%	55%	54%
Total		100%	100%	100%

As mentioned, age plays a crucial role in the development of self-knowledge, as reflected in the progressive improvement seen across age groups. The youngest group, aged 4 to 8 years old, faces the greatest challenges in this area. A substantial proportion (19 per cent) of these children struggle to describe themselves or identify even one positive personal trait. Additionally, a quarter of this group (25 per cent) can only describe themselves using a single positive trait and cannot answer more demanding questions. These findings suggest that self-awareness is still in an early developmental stage for many younger children. However, a third of them reached the highest category, where they can identify resource or support systems that can help them achieve their desired future.

There is a significant shift in self-awareness development that begins in the 9 to 13-year-old age group. The proportion of children unable to describe a positive aspect of themselves drops from 19 per cent to 11 per cent, indicating progress on this measure. More importantly, 55 per cent of participants in this group reach the highest level of competence (Category 5). This might represent a key developmental milestone in their social emotional growth.

For older adolescents (14 to 18-years-old), 54 per cent of participants in this group achieved Category 5, a similar proportion to that of the 9 to 13-year-old group. This suggests that while improvement continues with age, there is a degree of stagnation in developing self-awareness skills. This could indicate that while more than half of adolescents in this group have developed stronger self-knowledge compared to the younger ones, additional gains at this stage may be more gradual for others.

# Social Emotional Learning B

This section assesses participants' ability to recognize emotions and exhibit empathy. The tool defines empathy as: "understanding and recognizing the emotions and perspectives of others. It involves identifying others' feelings, showing compassion, adopting another person's perspective in ambiguous situations and avoiding tendencies to attribute hostility."

This assessment also consists of progressively challenging questions, and participants are categorized into different competency levels based on their performance. We intend to gain insights into empathy development by examining the progression of correct responses, the performance levels and the results of an ordinal regression model.



Graph 6: Progression of correct responses across demographic groups (Social Emotional Learning B)

The three panels illustrate a clear trend: as the assessment progresses, the percentage of participants answering correctly and advancing to the next level steadily declines across all groups. This pattern is expected, given the increasing complexity of the tasks. Both male and female participants exhibit similar trajectories throughout the assessment, though females appear to maintain a slight advantage in the later stages. However, according to the ordinal regression model, this difference in performance between sexes was not statistically significant.

Table 11: Distribution of percentages per age group that fall into each Social Emotional Learning (ability to recognize emotions and exhibit empathy) performance category.

The values of each age group total 100 per cent.

Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
0	Cannot recognize emotion in the image presented.	6%	3%	3%
1	Can identify emotion in the image presented but cannot express empathy.	21%	14%	19%
2	Can identify emotion and demonstrate empathy.	7%	5%	3%
3	Can identify emotion in an image, demonstrate empathy and formulate effective proposals to improve others' emotional well-being.	31%	27%	32%
4	Can demonstrate empathy and rationalize others' actions.	4%	6%	4%
5	Can demonstrate empathy without direct information (e.g., through imagination).	30%	45%	38%
Total		100%	100%	100%

The table indicates that 30 per cent of children aged 4 to 8 reach the highest competency level (Category 5), meaning they can demonstrate empathy without direct information. These percentages are higher for the 9 to 13-year-old group and the 14 to 18-year-old group, at 45 per cent and 38 per cent, respectively. This pattern suggests that while empathy-related skills generally improve with age, there may be a plateau in development during adolescence.

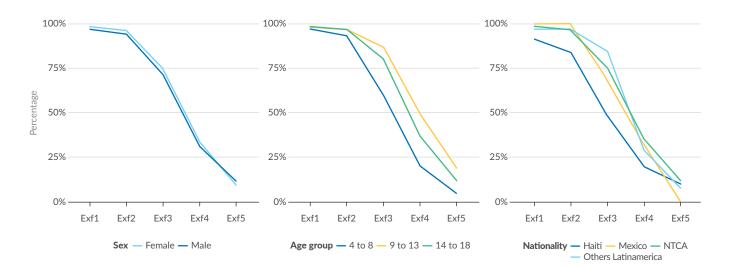
A small percentage of children in all age groups (3 to 6 per cent) struggle to identify emotions (Category 0). For this question, an image of a crying child was presented. Children were asked to describe what they thought the girl was feeling, providing a visual prompt to assess their basic emotional recognition. Twenty-one per cent of the youngest group could only identify emotions presented in the image but could not achieve more demanding questions (Category 1). Across all age groups, most participants fall within categories 3 to 5, indicating that more than half possess at least a moderate ability to recognize emotions, demonstrate empathy and take appropriate actions based on emotional cues. This distribution suggests that while some younger children may struggle with complex emotional reasoning, an overall ability to empathize and respond effectively is present in most participants.

#### 4.1.4. Executive function

Executive functioning skills are essential for learning, problem-solving and adapting to new challenges. These cognitive abilities allow children to process, store and manipulate information, directly impacting their capacity for reasoning, decision-making and academic performance. This section examines two key components: short-term memory and working memory. Short-term memory enables children to retain and recall information over brief periods, forming the foundation for learning and comprehension. Meanwhile, working memory supports more complex cognitive tasks by allowing children to hold and manipulate information while engaging in problem-solving and decision-making. Strengthening these skills is particularly crucial for children on the move, as they navigate changing environments and educational transitions.

#### Executive function A

This section evaluates short-term memory capacity, such as a child's ability to retain and recall information over a short period. The assessment measures their capacity to recall sequences of pieces of information or elements in the correct order, providing insight into cognitive development and foundational memory skills. Memory retention and sequential recall are essential cognitive functions that contribute to learning, problem-solving and overall intellectual development. This assessment provides a structured way to examine how well children at different age levels can retain and accurately reproduce information.



Graph 7: Progression of correct responses across demographic groups (Executive function A)

In the first panel, which compares memory recall between males and females, both groups follow a similar downward trend. This indicates that, as the difficulty of the recall task increases (i.e., the sequences of information pieces become longer), the percentage of children who succeed decreases. However, there is no substantial difference between the two lines, reinforcing the statistical result that sex is not a significant predictor of memory performance. While slight variations can be observed, they remain within a close range, suggesting that both males and females perform similarly in this task. The second panel, which examines differences by age group, reveals a more pronounced distinction. The youngest age group (4 to 8 years old) exhibits the steepest decline, indicating that they struggle the most with higher levels of recall. The third panel, which displays differences by nationality, presents another compelling pattern. Overall, there is a sharp decline in performance as the sequences become longer, indicating that they are more likely to struggle with recalling larger sequences of information, a result similar to those observed across sex and age groups.

If we analyse the values in Table 12, we observe that the results indicate a slow developmental progression in memory retention and recall abilities. Among the youngest age group (4 to 8 years old), only a small proportion (3 per cent) could recall one or zero pieces of information, while 39 per cent could recall up to four pieces in order. Among the 9 to 13 age group, a slightly higher percentage (43 per cent) successfully remembered up to four pieces of information, while 25 per cent could recall up to five pieces of information. The oldest group (14 to 18 years old) showed similar level of memory retention, with 37 per cent able to recall up to four pieces of information and 31 per cent capable of remembering up to five pieces of information in order.

Table 12: Distribution of percentages per age group that fall into each executive function (short-term memory) performance category.

The values of each age group total 100 per cent.

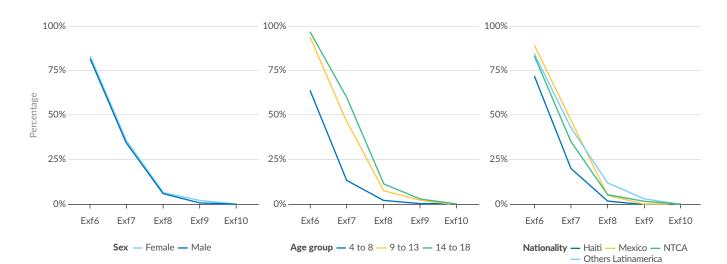
Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
0	Can recite only one item or none of the given information in order.	3%	2%	1%
1	Can recite two items of the given information in order.	4%	2%	1%
2	Can recite three items of the given information in order.	33%	16%	10%
3	Can recite four items of the given information in order.	39%	43%	37%
4	Can recite five items of the given information in order.	15%	25%	31%
5	Can recite six items of the given information in order.	5%	12%	19%
Total		100%	100%	100%

When analysing differences based on sex, the coefficient for male participants suggests that there is no significant advantage for either males or females in memory retention. This is indicated by the p-value which shows a lack of statistical significance. However, age remains a strong predictor of memory performance, as both the 9 to 13-year-old age group and the 14 to 18-year-old age group exhibit significantly higher recall abilities compared to the youngest cohort.

Nationality also appears to influence memory performance. Children from the group Other Latin American countries and those from the Northern Triangle (Guatemala, Honduras and El Salvador) demonstrated significantly better memory recall than their peers from Haiti. This may be an issue of language, as the assessment was done in Spanish, which these Haitian children may not be proficient in. The group from Mexico appears to perform at the same level as their peers from the Northern Triangle and Other Latin American countries. But they did not present a statistically significant difference, likely due to the small sample size of the group (n = 19).

# Executive function B

This section evaluates a child's working memory capacity, which refers to the ability to hold and manipulate information temporarily to complete complex cognitive tasks. Strong working memory skills contribute to enhanced learning and comprehension. While deficits in this area may lead to difficulties in organizing thoughts, remembering sequences and maintaining focus during tasks. By assessing a child's ability to recall and manipulate sequences of elements, this measure provides insight into the developmental progression of working memory and its variations across different age groups and backgrounds.



Graph 8: Progression of correct responses across demographic groups (Executive function B)

Table 13: Distribution of percentages per age group that fall into each executive function (working memory) performance category

The values of each age group total 100 per cent.

Level	Description of level	Age 4-8 (%) n=175	Age 9-13 (%) n=190	Age 14-18 (%) n=68
0	Can recite only one item or none of the given information in reverse.	36%	6%	3%
1	Can recite two items of the given information in reverse.	50%	48%	37%
2	Can recite three items of the given information in reverse.	11%	38%	49%
3	Can recite four items of the given information in reverse.	2%	6%	9%
4	Can recite five items of the given information in reverse.	1%	2%	3%
5	Can recite six items of the given information in reverse.	0%	0%	0%
Total		100%	100%	100%

The categorical breakdown of working memory performance reveals significant differences across age groups. Younger children demonstrate limited recall abilities and older children exhibit slower progress in retaining and manipulating information. Among children aged 4 to 8, the majority (86 per cent) can only recall two or fewer elements, indicating an early stage of working memory development. Only 3 per cent of this group can recall sequences of four or more elements, reflecting the cognitive limitations typical of early childhood. In contrast, children in the 9 to 13-year-old age group demonstrate a more advanced working memory capacity, with nearly 46 per cent capable of recalling and reversing sequences of three or more elements. The 14 to 18-year-old group shows a slightly greater proficiency, with over 60 per cent able to manipulate three or more elements, suggesting a more mature and refined ability to retain and process information.

In terms of nationality, children from Mexico and Other Latin American countries show significantly higher working memory performance compared to Haitian children. This may be due to the language constraints during the assessment. However, gender does not appear to be a significant predictor. The coefficient for males is close to zero and not statistically significant, indicating no meaningful difference in working memory abilities between males and females.

The three-panel graph visually reinforces these trends, showing that younger children and those from Haiti have slightly lower success rates across all levels of working memory tasks. The sharp decline in recall ability beyond two elements for the youngest group highlights the early limitations in working memory. In contrast, the steady improvement in the older age groups underscores cognitive growth. The similarity in male and female performance trends further confirms the statistical finding that gender differences are not significant.



# 5. Discussion

# 5.1. Student learning outcomes and educational challenges

The assessment findings show that children in all age groups perform better with easier questions but struggle as questions become more demanding. Across all domains, performance differences exist between the 4-8 age group and the older age groups, indicating that learning development occurs at different stages. Younger children possess early-stage skills, while older children exhibit higher competencies. However, although the older age group performs better, the questions are not advanced, considering their age and expected grade levels. In addition, learning gains between the 9 to 13-year-olds group and the 14 to 18-year-olds group are limited across different domains, suggesting stagnation in later adolescence. This may be related to interrupted school trajectories and limited educational opportunities for older adolescents.

Student performance improves progressively with age across all domains assessed. In literacy, most 4 to 8-year-olds are not yet able to recognize all 20 letters assigned in the first literacy question. As students age, their skills improve: 61 per cent of 9 to 13-year-olds and 60 per cent of 14 to 18-year-olds demonstrate reading comprehension skills, compared to 12 per cent for 4 to 8-year-olds. In numeracy, 13 per cent of 4 to 8-year-olds can perform two-digit addition and subtraction, while these percentages for 9 to 13-year-olds and 14 to 18-year-olds are 65 per cent and 73 per cent, respectively. In terms of Social Emotional Learning, basic empathy skills are evident in the majority of children. More than 90 per cent of children across all age groups can recognize feelings and emotions when presented with an image of a child expressing sadness. However, as the complexity of the questions increases, performance tends to decline. Only 34 per cent of the youngest group can reach the highest performance level (level 4 and 5) for the empathy questions. This means they can demonstrate empathy and rationalize others' actions from the given context or through indirect information These percentages are 51 per cent and 42 per cent for the 9-13 and 14-18 age groups, respectively.

In executive function, children from all age groups find working memory more challenging than short-term memory assessment. Only a small percentage can recite up to five items in reverse order (between 1 and 3 per cent). The results also show that no major performance differences were found between genders. However, nationality appears to influence performance. Students from Haiti performed lower on average, especially in literacy and numeracy, which may be attributed to the assessment being administered in Spanish while their primary language is Haitian Creole or French.

# 5.2. Study design and implementation considerations

The HALDO on the Move instrument offers a structured approach for effectively assessing core skills and a range of foundational competencies. Its design allows for quick implementation, making it particularly useful in contexts of displacement and educational disruption. The study's results suggest that early learning progression is captured. However, skill development appears to slow down in later adolescence. This finding is critical for designing targeted educational interventions that ensure continued skill acquisition beyond early childhood.

The automatic scoring and skipping patterns may hide elements of students' knowledge, limiting opportunities for them to show the full range of their abilities. A key feature of HALDO is its automated scoring system, which assigns students a zero on more complex tasks if they fail simpler ones. While this design ensures efficiency, it may underestimate students' partial competencies by limiting opportunities for them to demonstrate emerging skills.

For example, in the HALDO on the Move literacy assessment, students who correctly identified fewer than 20 simple letters were not allowed to proceed to more challenging letter identification tasks, even though they may have been capable of recognizing some of them. Similarly, in numeracy, students who struggled with early number recognition were automatically excluded from attempting higher-level arithmetic tasks. While this structure allows for rapid assessment of core competencies, it does not capture the full range of student abilities, particularly among those who fall between predefined proficiency levels.

Sample composition and age distribution differences should be considered when interpreting the results. The study included a diverse population of children on the move, but variations in sample composition across protection status and age groups present challenges for direct comparisons. Certain subgroups were more represented than others, which should be considered when analysing the findings.

Additionally, differences in age distribution across locations may have influenced aggregate performance trends. Some sites had a higher concentration of younger or older children, which may have affected overall learning outcomes. Future applications of HALDO on the Move could explore further disaggregation of findings by protection status and age group to refine targeted interventions.

These findings underscore the importance of structured, targeted educational interventions that address foundational learning gaps in early childhood and ensure continued skill development into adolescence. While some children on the move demonstrate academic potential, structural barriers such as uneven educational access, administrative hurdles and gaps in targeted support persist. The results underscore the importance of policies that promote school integration, personalized learning pathways and support mechanisms that acknowledge the strengths and challenges faced by displaced children and adolescents in Mexico.



# 6. Recommendations

This section presents recommendations based on the study's findings and the experience of implementing the HALDO on the Move tool. These recommendations aim to inform programme designs that support the learning of forcibly displaced children and enhance the implementation of the tool and research. The recommendations are organized into the following categories:

- Tool recommendations
  - Technical recommendations
  - □ Implementation recommendations
  - Lessons learned
- Programme and policy recommendations
- Research recommendations

# 6.1. Tool Recommendations

The following recommendations are based on the experience of implementing the HALDO on the Move tool in Mexico. This aims to strengthen the use of the HALDO on the Move tool, targeting the education of refugee and asylum-seeking children.

# 6.1.1. Technical recommendations

The following technical recommendations aim to optimize the tool for inclusive and accurate assessment of children's learning on the move. These recommendations emphasize enhancing its design, adaptability and scope by incorporating specific adjustments to address the needs of various age groups, linguistic contexts and profiles of forced displacement. Additionally, they aim to promote more comprehensive and representative data collection.

Adapt the tool for different age groups: Modify the tool to ensure it is age-appropriate for each group. For example, adjust questions where children are asked to identify all 20 letters to proceed to the next question. This may be too many letters and inappropriate for five and six-year-olds.

**Incorporate characterization questions:** Add specific questions to the general questionnaire to capture key aspects, such as the protection status of participating children.

Make adjustments for children with disabilities: Make specific adjustments to the tool to include children with disabilities, ensuring their full and meaningful participation. This could include accessible assessment versions and adjustments to methodologies that better assess their learning.

**Develop multiple language versions:** Design versions of the tool in the children's first language, such as Creole or French for Haitian children. This would ensure the effective participation of non-Spanish-speaking children and improve the validity of the results obtained. For the literacy skill assessment, the language could be based on the language of instruction if children are enrolling in school.

# 6.1.2. Implementation recommendations

The following recommendations aim to enhance the tool's implementation in mobility contexts, ensuring its effectiveness in data collection and learning assessment. These suggestions focus on improving operational processes, fostering collaboration among enumerators and addressing contextual barriers children face to promote a more inclusive and efficient application.

**Conduct peer-to-peer exchanges:** Promote exchange sessions among enumerators before, during, and after the assessment process to share experiences, identify challenges and adjust strategies in real-time.

**Conduct ongoing exchange sessions:** Organize regular meetings for enumerators to discuss challenges, share lessons learned and develop joint recommendations regarding the administration of the tool and the issues observed during piloting and actual data collection.

Broaden the scope to include diverse protection profiles: Adapt the tool's implementation to encompass children with varying protection statuses who face significant educational barriers. This adjustment would ensure they benefit from both the assessment process and the evidence generated to inform policy and interventions.

Strengthen parents' and caregivers' understanding of personalized recommendations: Whenever possible, ensure that parents and caregivers fully understand the individualized recommendations generated by the tool based on their child's results. Dedicating time to explaining these findings can enhance their ability to support learning during emergencies. Additionally, exploring the possibility of a Save the Children-led workshop on how to support child's learning in emergencies could provide structured guidance for families facing educational challenges in crisis situations.

#### 6.1.3. Lessons learned

The implementation of HALDO on the Move in Mexico provided valuable insights for future assessments in forced displacement contexts. Peer-to-peer exchanges among field teams, both before and during data collection, proved effective for sharing strategies, addressing emerging challenges and standardizing the application process. Close coordination between Save the Children Mexico, UNHCR and COMAR facilitated referrals and highlighted the importance of early inter-institutional collaboration. Additionally, the tool's ability to generate personalized recommendations helped strengthen engagement with families. However, implementation also revealed the need for adaptations to better include children with disabilities and refine the design of age-appropriate questions. These insights should inform future improvements to ensure inclusivity, efficiency and contextual relevance.

# 6.2. Programme and policy recommendations

Various needs were identified based on the experiences of Save the Children and UNHCR teams in supporting access to inclusive and quality education in Mexico. This section aims to provide guidance on strengthening and designing public policies. The focus is on ensuring access, including raising awareness of the right to education, promoting school retention, encouraging active participation and creating safe environments that respect cultural and linguistic diversity.

#### Promote access to school:

- Reinforce the implementation of information campaigns: Information campaigns should be developed and shared with displaced families, authorities, teachers and local communities to raise awareness of children's right to education. They should dispel misinformation stating that children cannot be enrolled in school if families are in transit or awaiting migratory or asylum procedures. These campaigns should aim to ensure that families understand that children's enrolment in local schools is valid for as long as they remain in the region, without the need for duplicate procedures in future destinations.
- Develop family guidance strategies: Strategies to guide families should be provided to restore children's access to education, tailored to regional contexts and the structure of local education authorities. This should be done by school authorities, such as regional delegations, school supervisors and school principals, in collaboration with the school administration department and civil society organizations,

#### **Promote school continuity:**

- Strengthen the provision of school kits: The Ministry of Education (Secretaría de Educación Pública), in collaboration with State and local authorities, should provide education kits and additional copies of public-school textbooks for children on the move in key locations.

  Since textbook distribution is typically based on the number of enrolled students from the previous year, schools with children on the move may face shortages. Additionally, collaboration with local and international organizations could support the provision of educational kits, ensuring that children have the necessary learning materials to participate fully in their education.
- Share success stories on access to education: This includes success stories of children who have successfully entered Mexico's education system or those from other countries. Parents' opinions and experiences on the enrolment of their children might also be useful. These stories can be disseminated through official Save the Children channels, as well as institutional websites of key stakeholders such as UNHCR and SEP, in coordination with strategic partners across the three levels of government. Additionally, they can be shared locally with school directors at all levels using the directories available in each Save the Children office.
- Strengthen coordination between education programmes: Coordination should be enforced between compensatory and/or emergency education programmes, such as those implemented by CONAFE, to promote the integration of children on the move into the formal education system. This coordination should support a smoother transition and promote continuity in their educational trajectories within the local community.
- Promote community-based learning spaces: Strengthen strategies that enable children's school continuity and active participation in school life. Implement initiatives that strengthen existing community-based learning spaces, such as learning and homework clubs, to support academic engagement and reinforce inclusive environments. These strategies should foster healthy social interactions free from discrimination, enhance peer learning and strengthen social cohesion. They will also ensure that children on the move can access consistent educational support within their communities, which plays a key role in fostering their long-term academic success.

# Improve or modify the Education in Emergencies activities provided by Save the Children Mexico or any other organization based on these findings:

Adapt the implementation of Education in Emergencies activities within temporary support spaces, such as child-friendly spaces, to help children on the move recover their learning during emergencies. This approach would provide continuity while they transition into formal education, ensuring that the assessment findings inform strategies that mitigate learning loss and facilitate educational reintegration. A key priority should be addressing the learning plateau observed in adolescents, ensuring that interventions support continued progress beyond foundational skills.

# 6.3. Research recommendations

Recognizing the knowledge gaps surrounding the educational situation of children on the move, these recommendations aim to guide future research efforts toward generating evidence to understand children's needs, barriers and learning outcomes. The proposals emphasize the importance of comparing population profiles, enhancing statistical analysis and fostering collaboration among stakeholders to support the development of inclusive education policies and programmes.

- Comparing profiles regarding access to services and rights: Conduct comparative studies to examine further differences in the proficiency levels of children with different protection statuses. This analysis will help identify specific gaps and differentiated needs among these groups, providing a strong foundation for designing public policies and programmes tailored to their unique circumstances.
- Expand and prioritize research on the state of learning: Promote and prioritize research on the learning outcomes of children on the move through coordinated multi-stakeholder efforts. Recognize this area as critical and focus on generating robust evidence to inform decision-making and the design of inclusive educational interventions, addressing existing gaps in access to and quality of education for this population.

These recommendations address existing barriers and will contribute to the development of a more inclusive, accessible and responsive education system for children on the move. Achieving these goals will require coordinated efforts among governments, international organizations, civil society and communities, and an acknowledgment that ensuring the right to education for all is crucial to fostering a more equitable and sustainable future.

# 7. Conclusions

The findings of this study provide a clearer understanding of the learning competencies and challenges faced by children on the move in Mexico. While student performance improves with age, younger children demonstrate early-stage skills while older children exhibit higher competencies — this is part of natural cognitive progression. The assessment included four-year-olds, a group that would not typically be expected to master certain literacy and numeracy skills, reinforcing the need for age-appropriate interventions. Adolescents still face challenges, particularly in more complex mathematical operations, such as two-digit addition and subtraction, and single-digit multiplication, as well as in reading comprehension. This suggests that while many children on the move have the potential to integrate into formal education, targeted interventions are necessary to sustain their learning and prevent skill stagnation.

In addition to academic performance, the study shows patterns in social emotional and executive functioning skills. Children demonstrate relatively sound social emotional skills. About 65 per cent of children aged 4-8 could demonstrate empathy or rationalize others' emotions and actions, either directly from the given context or indirectly from their imagination (Level 3, 4 and 5 in the performance table). For the executive functioning assessment, children in all age groups find working memory tasks particularly challenging, with no one in this age group being able to recall and reverse the order of six elements. These findings highlight the importance of addressing and further strengthening academic learning gaps, as well as cognitive and social emotional development, to ensure children possess the necessary skills for long-term educational success.

The study also provides valuable insights into the strengths and limitations of the HALDO on the Move assessment. While efficient, automated scoring and skipping patterns may hide students' full knowledge and potential, particularly for those who demonstrate emerging competencies. In some cases, students who could identify some letters or numbers were not allowed to attempt more advanced tasks, potentially underestimating their full abilities. Future assessments could refine these scoring mechanisms to capture the full spectrum of student competencies more effectively.

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# 9. Annex

# Ordinal logistic regression

# Literacy: Reading and writing

#### Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.04765	0.19161	0.249	0.804	
Age group: 9 to 13	3.18027	0.24953	12.745	< 2e-16	***
Age group: 14 to 18	3.35443	0.32372	10.362	< 2e-16	***
Nationality: Mexico	1.40518	0.55254	2.543	0.011	*
Nationality: Other Latin America	2.10113	0.38522	5.454	4.91E-08	***
Nationality: Northern Triangle	1.23185	0.29583	4.164	0.0000313	**

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

#### **Numeracy A: Basic arithmetic**

#### Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.3183	0.21	1.516	0.129621	
Age group: 9 to 13	2.778	0.2531	10.975	< 2e-16	***
Age group: 14 to 18	3.5098	0.4338	8.092	5.89e-16	***
Nationality: Mexico	0.6275	0.6377	0.984	0.325109	
Nationality: Other Latin America	1.6268	0.4426	3.675	0.000238	***
Nationality: Northern Triangle	1.0659	0.3441	3.098	0.00195	**

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

# **Numeracy B: Math operations**

Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.4813	0.1941	2.48	0.013131	*
Age group: 9 to 13	2.2751	0.2428	9.371	< 2e-16	***
Age group: 14 to 18	2.7343	0.3243	8.433	< 2e-16	***
Nationality: Mexico	1.1909	0.5501	2.165	0.030393	*
Nationality: Other Latin America	1.522	0.3796	4.009	0.000061	***
Nationality: Northern Triangle	1.0562	0.3134	3.37	0.000751	***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

### **Numeracy C: Problem-solving**

Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.08903	0.17692	0.503	0.615	
Age group: 9 to 13	2.24493	0.21889	10.256	< 2e-16	***
Age group: 14 to 18	3.29129	0.30905	10.65	< 2e-16	***
Nationality: Mexico	0.81221	0.54934	1.479	0.139	
Nationality: Other Latin America	1.71221	0.35806	4.782	0.00000174	***
Nationality: Northern Triangle	1.42444	0.29937	4.758	0.00000195	***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

### **Social Emotional Learning A: Self-concept**

Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	-0.1465	0.1802	-0.813	0.4163	
Age group: 9 to 13	0.9935	0.2004	4.959	0.00000071	***
Age group: 14 to 18	1.0956	0.2808	3.901	0.0000957	***
Nationality: Mexico	-0.7347	0.4963	-1.48	0.1388	
Nationality: Other Latin America	0.793	0.352	2.253	0.0243	*
Nationality: Northern Triangle	0.7121	0.284	2.507	0.0122	*

Signif. codes: 0 '\*\*\* 0.001 '\*\* 0.01 '\* 0.05 '. 0.1 ' 1

# **Social Emotional Learning B: Empathy**

#### Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.02286	0.18558	0.123	0.90196	
Age group: 9 to 13	2.11204	0.23796	8.876	< 2e-16	***
Age group: 14 to 18	2.72419	0.31426	8.669	< 2e-16	***
Nationality: Mexico	1.34948	0.51806	2.605	0.00919	**
Nationality: Other Latin America	1.72918	0.38465	4.495	0.00000694	***
Nationality: Northern Triangle	1.50987	0.31833	4.743	0.0000021	***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

### **Executive function A: Short-term memory**

#### Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	-0.1049	0.1772	-0.592	0.554	
Age group: 9 to 13	1.0887	0.2016	5.401	6.61e-08	***
Age group: 14 to 18	1.7288	0.2806	6.162	7.17e-10	***
Nationality: Mexico	0.7595	0.4927	1.542	0.123	
Nationality: Other Latin America	1.5746	0.3662	4.3	1.71e-05	***
Nationality: Northern Triangle	1.6022	0.3115	5.144	2.69e-07	***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' '

### **Executive function B: Working memory**

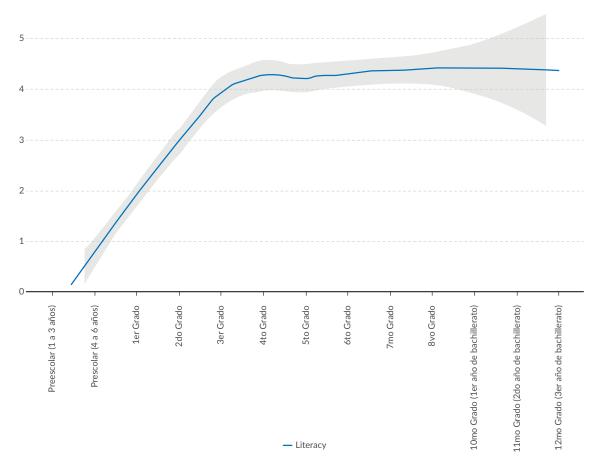
## Coefficients:

Variable	Estimate	Std. Error	z value	Pr(> z )	Significance
Sex: Male	0.02286	0.18558	0.123	0.90196	
Age group: 9 to 13	2.11204	0.23796	8.876	< 2e-16	***
Age group: 14 to 18	2.72419	0.31426	8.669	< 2e-16	***
Nationality: Mexico	1.34948	0.51806	2.605	0.00919	**
Nationality: Other Latin America	1.72918	0.38465	4.495	6.94e-06	***
Nationality: Northern Triangle	1.50987	0.31833	4.743	2.10e-06	***

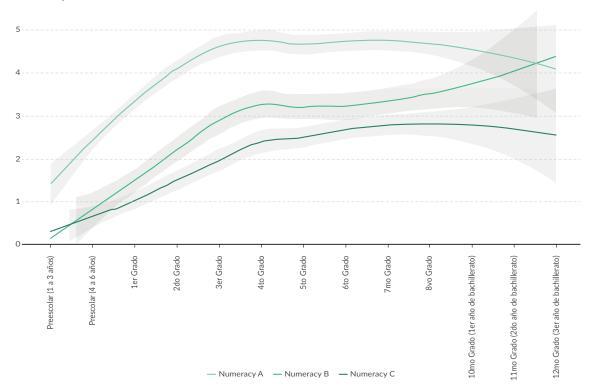
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# **LOESS**

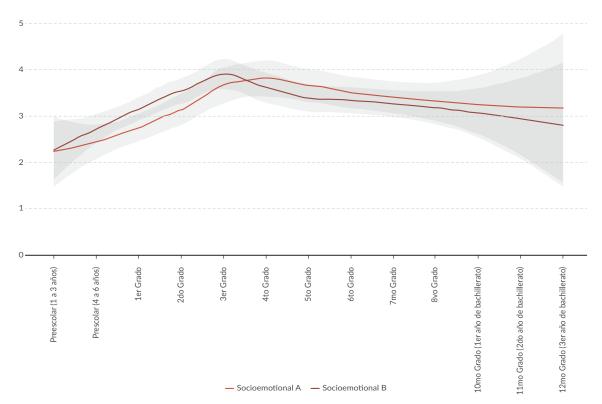
# Literacy



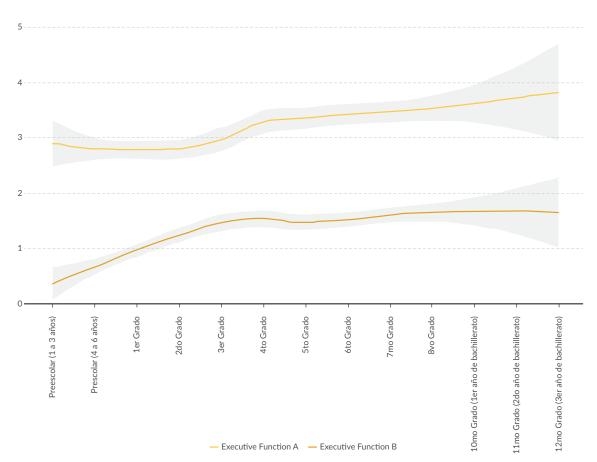
### Numeracy



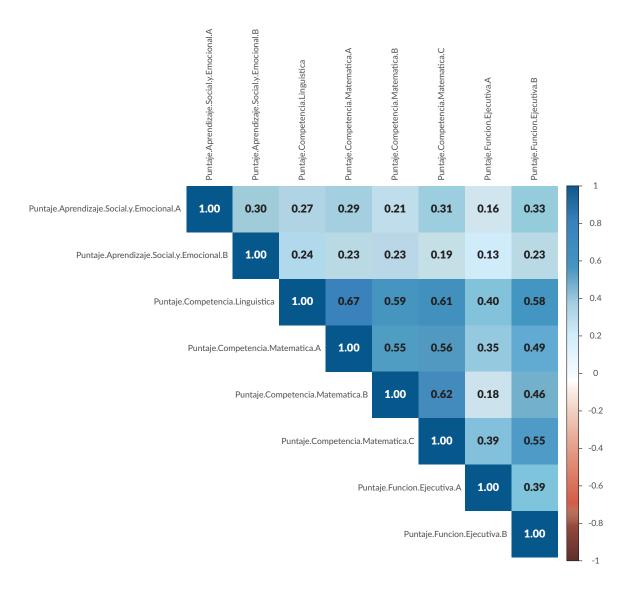
#### **Socioemotional**



## **Executive function**



# **Correlation matrix**



# Cronbach's Alpha

Metric	<b>V</b> alue
raw_alpha	0.8
std.alpha	0.83
G6(smc)	0.83
average_r	0.38
S/N	4.8
ase	0.014
mean	2.8
sd	1.1
median_r	0.34

