# ENDLINE IMPACT EVALUATION REPORT

# ENTREPRENEURSHIP-FOCUSED SOCIOEMOTIONAL SKILLS FOR THE MOST VULNERABLE YOUTH IN RURAL MONGOLIA PROJECT (2019-2025)

## ENDLINE IMPACT EVALUATION REPORT

Ulaanbaatar
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# LIST OF ACRONYMS

| | |
|---|---|
| **AV/AVs** | Anchoring Vignette/Anchoring Vignettes |
| **ESEL** | Entrepreneurship-focused Socioemotional Skills Learning |
| **FA** | Factor Analysis |
| **FGDs** | Focus Group Discussions |
| **JSDF** | Japan Social Development Fund |
| **LLEC** | Lifelong Learning Education Center |
| **MES** | Ministry of Education and Science |
| **M&E** | Monitoring and Evaluation |
| **OECD** | Organization for Economic Co-operation and Development |
| **PCA** | Principal Component Analysis |
| **SBE** | School-Based Enterprise |
| **SCJM** | Save the Children Japan, Mongolia Office |
| **ToT** | Training of Trainers |
| **TVET** | Technical and Vocational Education and Training |
| **WB** | World Bank |

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# EXECUTIVE SUMMARY

The primary objective of the endline impact evaluation survey was to assess the impact of the "Entrepreneurship-focused Socioemotional Learning" (ESEL) training program on its target beneficiaries. Specifically, the evaluation examined improvements in entrepreneurship and socioemotional knowledge, skills and mindset among participating children and youth that can be attributed to the ESEL training program. The overarching research question guiding the evaluation was: *How, and to what extent, the ESEL training program contributed to improved skills development outcomes among target youth.*

The findings of this impact evaluation provide valuable insights for project implementers, donors, and policymakers, offering a foundation for reflection and learning that can inform future interventions.

To address the research question, MEC LLC (survey firm) conducted both quantitative and qualitative surveys and analyzed the data by comparing the baseline and endline results, as well as treatment and control groups.

The **quantitative survey** included two groups: (i) A total of 1,979 children and youth, encompassing participants from the baseline (those who participated in ESEL training sessions 1 and 3, as well as control group members who did not receive training), and new participants from training session 4; and (ii) 397 teachers who served as classroom teachers for those surveyed.

While the initial sample target was 2,012 respondents, due to participant unavailability, 1,979 individuals were successfully surveyed—representing 98% of the target sample.

The **qualitative component** sought to explore two sub-questions:

1. What are the key contributing factors to the improvement of ESEL knowledge and skills?

2. How do youth apply the skills learned through the ESEL training program in school, work, and everyday life?

A total of 192 children and youth and 86 ESEL teachers/counsellors participated in Focus Group Discussions (FGDs).

Regarding the **sampling strategy,** the sample framework was developed by Save the Children Japan, Mongolia (SCJM) and the World Bank (WB) experts. As the implementing partner, MEC LLC followed this methodology.

The **theory of change** posits that core interventions, namely the ESEL training, Pitch competitions, and small project implementation—would enhance entrepreneurship-focused socioemotional skills among children and youth in the treatment group. These skills are expected to positively influence participants' livelihoods, entrepreneurial activities, and future life trajectories, particularly for rural youth.

To enhance reliability, an **Anchoring Vignettes (AVs)** technique was applied. This method mitigates biases common in self-reporting by presenting respondents with fictional characters to benchmark responses. It improved the objectivity and robustness of the data by enhancing respondent comprehension and reducing social desirability bias.

## Key Findings

**ESEL Knowledge:** A comparison between treatment and control groups showed a 2.47 percentage point improvement in knowledge scores among the treatment group from baseline to endline, underscoring the program's positive impact.

**ESEL Skills and Mindset:** In the skill and mindset assessment (covering 8 skill areas: Self-awareness, Social and Cultural Awareness, Creativity and Innovation, Communication, Teamwork, Critical Thinking, Growth Mindset, and Entrepreneurial Mindset), lower scores indicated better outcomes due to the survey's coding. The treatment group showed stronger results than the control group, particularly in **Entrepreneurial Mindset** (score: 1.84), while **Communication** showed the weakest performance (score: 2.23). Compared to baseline, improvements were observed in Communication, Critical Thinking, Growth Mindset, and Entrepreneurial Mindset.

Additionally, **robustness checks** were conducted using **Cronbach's Alpha** and **Principal Component Analysis (PCA).** The results confirmed that the quantitative data on ESEL knowledge, skills, and mindset met reliability standards. However, comprehension issues were noted in the Life Aspiration questionnaire.

- PCA results grouped the questions into 11 clusters, accounting for 61% of the original variance, a sufficient proportion.

- Business planning and financial literacy questions formed four clusters, capturing 58% of the data.

- PCA also grouped questions on Mobilizing Resources, Implementing Plans, and Digital Literacy into four clusters covering 61% of the variance.

These findings support the reliability of the ESEL-related instruments, while the Entrepreneurship and Life Aspiration components were found to be satisfactory.

For deeper insights, a **cohort subset analysis** was conducted using data from participants who completed both the baseline and endline surveys. Their responses were also adjusted using the AVs method. This sample consisted of 785 respondents aged 13–19 (Mean age = 15.7), with 39.4% male (309) and 60.6% female survey respondents (476).

### Demographic Insights:

- **ESEL knowledge** was higher among female survey participants and those aged 16–19.

- Gender differences in ESEL skills and Life Aspirations observed at baseline narrowed following the participation in the training.

When adjusting for AV, treatment group participants outperformed the control group in **Social and Cultural Awareness, Communication,** and **Growth Mindset.**

### Regression Analysis:

To understand the drivers of skill and mindset development, a regression analysis included variables such as ethnicity, location, training status, life aspiration, parental education, age, and gender.

Only three variables significantly predicted ESEL Skill Mindset:

**ESEL Skill Mindset = 1.802 - 0.019 × (ESEL Knowledge) + 0.398 × (Life Aspiration) - 0.021 × (Age)**

Interpretation:

- Higher ESEL knowledge and older age are associated with better (lower) Skill Mindset scores.

- Interestingly, higher Life Aspiration scores correlate with poorer Skill Mindset outcomes. This may indicate that youth with greater aspirations either have higher expectations and self-awareness about their skill gaps or have had real-world experiences that make them more critical in self-assessment.

Overall, the treatment group demonstrated **significantly greater ESEL knowledge** than the control group. However, no notable differences were found in Life Aspiration or ESEL skills/mindset scores between groups at the endline.

### Qualitative Insights:

FGD participants confirmed the ESEL training's positive influence on behavior, particularly in areas like teamwork, communication, time management, leadership, and responsibility. Female participants showed especially notable transformations. Respondents also reported improved emotional expression, listening skills, and entrepreneurial capabilities.

Despite initial challenges related to group dynamics, participants developed strong team cohesion and reported increased openness, pro-social behavior, and communication skills.

While the FGDs may carry confirmation bias—since only treatment group participants were involved—the quantitative survey data (with 98% sample coverage) reinforces the key qualitative findings.

## Chapter 1.

# PROJECT BACKGROUND AND RATIONALE

## 1.1. Project background

The Entrepreneurship-Focused Socioemotional Skills for the Most Vulnerable Youth in Rural Mongolia Project (2019–2025) is a school-based, community-driven initiative aimed at training vulnerable and disadvantaged youth across 29 of the poorest rural soums[1] in five (5) Mongolian aimags[2]. The project's development objective is to enhance entrepreneurship-focused socioemotional knowledge and skills among 8,000 school-enrolled and out-of-school youth. These skills are not only critical for academic success but are also increasingly valued in the labor market.

The project responds to a significant gap in the availability of socioemotional and entrepreneurship skills development in rural areas where labor market opportunities are scarce, and youth inactivity is high. In these regions, employment is largely characterized by traditional herding, unpaid family labor, and informal self-employment. Implemented by the Save the Children Japan, Mongolia Office (SCJM) and managed by the World Bank (WB) since November 2019, the project is funded through a US$2.75 million grant from the Japan Social Development Fund (JSDF).

This initiative represents a key step toward equipping vulnerable rural youth with the tools they need to thrive both in school and in the labor market. By fostering entrepreneurship-focused socioemotional skills (ESEL), the project aims to improve life prospects for these young people and contribute to a more hopeful and sustainable future.

The project is structured around three interrelated components, each designed to strengthen ESEL development among Mongolia's rural youth:

- **Component I:** Focuses on the development and implementation of a community-driven, locally tailored, and innovative socioemotional learning (ESEL) program for the target youth. An ESEL curriculum was developed, and 594 teachers were trained as ESEL teachers/counselors to deliver it. Since spring 2021, the program has reached 8,773 children and youth through seven (7) training sessions. The primary delivery modality is classroom-based instruction; however, in response to the COVID-19 pandemic and to better meet the needs of out-of-school youth, a blended learning modality combining in-person and distance learning was introduced in October 2022.

- **Component II:** Aims to create opportunities for youth to apply the skills acquired through ESEL training in real-world settings, aligned with local market demands. Pitch events are organized at the soum level, allowing ESEL graduates to present their business ideas and compete for financial support. Within the scope of the project, eight (8) pitch events have involved more than 3,000 children and youth. Close to half of the participants have received small grants and have been actively implementing their business projects. This component also supports the establishment and operation of school-based enterprises (SBEs), leveraging underutilized school resources to promote economic engagement among students.

- **Component III:** Seeks to strengthen the enabling policy environment for entrepreneurship education through evidence-based advocacy and public awareness campaigns. It also supports participatory monitoring and evaluation (M&E) and overall project management. Under this component, two baseline surveys were conducted to assess pre-project conditions and lay the groundwork for subsequent project evaluations.

## 1.2. Objectives of the endline impact evaluation

The primary objective of the endline impact evaluation is to assess the project's impact on its target beneficiaries. Specifically, the evaluation measures improvements in entrepreneurship and socioemotional knowledge and skills (ESEL) among children and youth that can be attributed to participation in the ESEL training program.

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[1] Soum = the smallest administrative unit
[2] Aimag = a provincial municipality/administrative subdivision (referred to as province)

The central research question guiding this evaluation is: *How, and to what extent, did the ESEL training program contribute to improved skill development outcomes among target youth?*

The findings from this evaluation are intended to inform project implementers, donors, policymakers, and other stakeholders, enabling them to assess the program's results and incorporate lessons learned into future planning and interventions.

To carry out the endline evaluation, the MEC survey firm was contracted to conduct a mixed-methods study, incorporating both quantitative and qualitative data collection and analysis.

The **quantitative survey** was guided by the overarching research question and targeted two groups:

i.  A total of 1,979 children and youth, including:

- Participants from the baseline survey (children who took part in ESEL training sessions 1 and 3, as well as those who did not participate and served as the control group), and

- Participants of ESEL training session 4.

ii. A total of 397 teachers served as classroom teachers for the surveyed students.

Although the initial sample target was 2,012 respondents, due to the unavailability of some individuals listed in the sample, the final number surveyed was 1,979, representing 98% of the target.

The **qualitative survey** aimed to explore two key sub-questions:

1.  What are the key contributing factors to the improvement of ESEL knowledge and skills?

2.  How are the skills and knowledge gained through the ESEL training program being applied by youth in school, work, and daily life?

The qualitative component involved **Focus Group Discussions (FGDs)** with two groups:

1.  Children and youth from the 29 target soums who either completed only the ESEL training or also received small grants; and

2.  ESEL teachers and counselors who facilitated the training.

In total, **192 children and youth and 86 ESEL teachers/counselors** participated in the FGDs.

# 1.3. Theoretical framework

The overarching objective of the project is to enhance entrepreneurship-focused socioemotional knowledge and skills among 8,000 school-enrolled and out-of-school youth in rural Mongolia. These skills are essential not only for academic success but also for improving employability and long-term labor market outcomes.

The theoretical framework underpinning this project centers on the impact of two core interventions:

**1. Component I – ESEL Training Program:**

A community-driven, locally tailored, and innovative socioemotional skills program was developed and implemented for the target youth. Since its launch in spring 2021, 594 teachers have been trained as ESEL teachers/counselors to deliver the ESEL training program. 8,773 children and youth have received ESEL training through seven (7) sessions. While the primary mode of delivery has been classroom-based, a blended modality combining in-class and distance learning was introduced in October 2022 to better accommodate out-of-school youth and to adapt to the challenges posed by the COVID-19 pandemic.

**2. Component II – Applied Learning through Pitch Events and School-Based Enterprises (SBEs):**

This component focuses on providing youth with practical opportunities to apply their ESEL training by meeting local market demands and exploring entrepreneurship. Soum-level pitch events allow children and youth to present business ideas for funding. Within the scope of the project, eight (8) Pitch events were organized and more than 3,000 participants, with nearly half of them receiving small grants to implement their project ideas. Additionally, six (6) School-Based Enterprises (SBEs) have been supported to promote the use of local school resources and further foster economic opportunities at the school level.

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**Inputs**

- **Component I:** Delivery of ESEL training since Spring 2021, with 594 trained teachers reaching 8,773 children and youth.

- **Component II:** Organization of eight (8) Pitch events at the soum level involving over 3,000 youth, enabling them to develop, present, and—if awarded—implement their business projects.

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**Outputs**

The theory of change posits that participation in the ESEL training program—especially when combined with teamwork, Pitch competitions, and project implementation—will enhance socioemotional and entrepreneurial skills among youth in areas with limited labor market opportunities and high youth inactivity.

These expected outcomes are measured through improvements in:

- ESEL skills and mindset

- Life aspirations

- Overall ESEL knowledge

> **Impact**
>
> By addressing the critical gap in socioemotional and entrepreneurship skill development in these underserved rural areas, the project seeks to provide vulnerable youth with tools to succeed academically and economically.
>
> This intervention represents a meaningful step toward improving the livelihoods of young people in rural Mongolia. Through the promotion of entrepreneurship-focused socioemotional competencies, the project contributes to greater self-reliance, confidence, and opportunity for youth in some of the country's most economically challenged communities.

This can be illustrated in the following scheme:

**Input:** ESEL training program (ESEL Knowledge and Life Aspiration, Pitch Competition, Small project implementation)

**Output:** Enhanced Entrepreneurship-focused Socioemotional Skills (Better ESEL Knowledge, Life Aspiration and Socioemotional Skills)

**Impact:** Youth's mindset improved and thus their livelihood and their entrepreneurial efforts
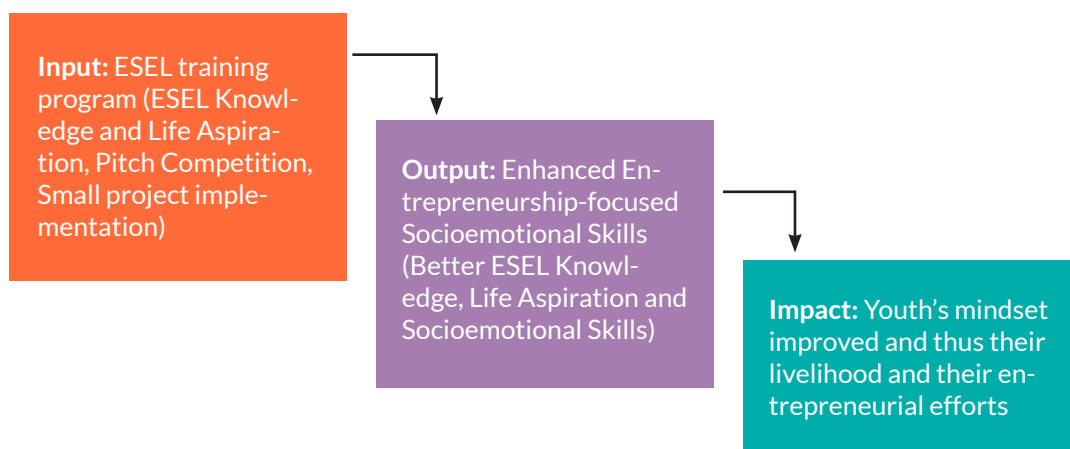
# 1.4. Methodology

To assess the impact of the ESEL training program, the survey questionnaire used in the endline evaluation was developed by building upon the baseline instrument, with several enhancements made in close consultation with SCJM, experts from the WB, and additional consultants.

New sections and question types were incorporated to deepen the evaluation, including *Anchoring Vignettes (AVs)* questions proposed by Ms. Sainsanaa Khurelbaatar, National psychometric consultant and international experts. These additions focused on measuring individual skills, mindset, and socioemotional development related to entrepreneurship. A pilot test of the revised survey instrument was conducted to assess its effectiveness and clarity. Based on the results of the piloting, the final version of the questionnaire was validated and structured into five core sections:

- General background information of the respondents
- Entrepreneurship-based individual skills and knowledge

- Life aspirations
- Anchoring vignettes (AVs) questions
- ESEL training program experience and content alignment

The survey instrument was carefully designed to align with the core content and objectives of the ESEL training program. It focused on assessing the specific knowledge and skills expected to be acquired by participating children and youth.

**Use of Anchoring Vignettes (AVs):** A common challenge in assessing socio-emotional and soft skills is the reliance on self-reported data, which is often prone to response biases, such as the tendency to select socially desirable or extreme responses. These biases can significantly reduce the reliability and cross-group comparability of survey results.

To mitigate these issues, the team adopted the **Anchoring Vignettes (AVs)** technique, originally introduced by King and colleagues in 2004. AVs involve presenting respondents with short, systematically varied descriptions of fictional individuals (vignettes), each representing different levels of a given trait or characteristic. Respondents are then asked to rate these fictional individuals using the same scale that they use for rating themselves.

This approach improves the comparability of responses across individuals and groups by helping to adjust for different interpretations of response categories (e.g., what constitutes "strongly agree" or "very confident"). Additionally, AVs serve as a tool to assess respondent comprehension and engagement with the survey.

# 1.5. Survey limitation

In collaboration with the project team members of SCJM, the research team compiled a list of potential respondents primarily based on baseline survey data. While the majority of secondary school students remained in their respective soums, there were several exceptions. Some students had transferred to schools in aimag centers or Ulaanbaatar, the capital city of Mongolia, while others, particularly high school students, had temporarily relocated to the capital such as to attend foreign language training programs and were on leave from their schools.

Reaching the youth respondents posed a greater challenge. Many were residing in remote rural areas engaged in herding or had migrated to urban areas—including Ulaanbaatar—or to mining sites for employment. In several cases, the phone numbers provided in the original dataset were no longer in service. Despite repeated attempts, feedback from these respondents was limited, making it difficult to reach them. Youth engaged in herding often lacked reliable mobile connectivity, and many others had relocated for work or marriage, making contact through available means ineffective. In line with the research protocol, the team attempted to contact substitute (replacement) respondents where the original individuals were unavailable. However, similar challenges persisted—many of these substitutes had also

moved away or were unreachable by phone.

Despite these difficulties, the field researchers made every effort to contact and survey individuals through in-person and phone interviews wherever possible. As a result, the team successfully surveyed **1,979 respondents** out of the initially targeted **2,012,** achieving **98% coverage** of the intended sample. Given this high response rate, the research team considers the sample size adequate for robust data analysis and representative of the study population.

# 1.6. Sampling strategy and sampling

The quantitative survey targeted two main groups: approximately **2,000 children and youth,** including (i) those who had participated in the baseline studies (specifically cohorts from ESEL training sessions 1[3] and 3[4]), and (ii) new participants from ESEL training session 4[5]. In addition, their **class teachers** were also surveyed.

To minimize attrition and improve survey efficiency, the research team conducted a pre-survey verification process between January 9 and March 1, 2023. This involved reaching out to sampled children, youth, and their teachers by phone to verify the accuracy of contact information and confirm their availability to participate in the survey. Through this process, 62% of the intended respondents were successfully contacted, and their participation was confirmed as of March 2023. This proactive approach contributed significantly to reducing the risk of non-response and logistical delays.

The **sampling strategy** was developed by team members from the SCJM and the World Bank. The implementation of this sampling strategy was delegated to MEC LLC, the contracted survey firm, which adhered strictly to the prescribed sampling framework provided by the project stakeholders (Refer to Table 1 for the detailed sampling structure).

Despite considerable efforts to reach the remaining **38%** of the sample, the team faced several constraints, including inactive phone numbers, network unavailability in remote locations, or numbers having been reassigned to new users. These issues posed a potential risk to achieving the **95% response rate** outlined in the Terms of Reference (ToR) and MEC LLC's technical proposal.

Nevertheless, through persistent field efforts, including both in-person visits and follow-up calls, the research team successfully surveyed **1,979 respondents,** achieving **98%** of the original target sample size of **2,012 respondents.** This high response rate is a strong indicator of the quality and reliability of the dataset for subsequent analysis.

At the conclusion of the endline impact evaluation survey, the sampling distribution is summarized as follows:

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[3] 400 survey participants
[4] 1,000 survey participants
[5] 600 survey participants

**Table 1.** Survey Sampling by soums

| # | Aimags | | | Soums | Cohort 4 | | | Cohort 1 | | | Cohort 3 | | | GRAND TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Main | Replacement | Total | Main | Replacement | Total | Main | Replacement | Total | Main | Replacement | Total |
| 1 | Gobisumber | 1 | 1 | Sumber | 60 | 13 | 73 | 27 | 6 | 33 | 40 | 0 | 40 | 127 | 19 | 146 |
| | | 2 | 2 | Shiveegobi | 20 | 4 | 24 | 23 | 7 | 30 | 40 | 0 | 40 | 83 | 11 | 94 |
| | | | | Total | 80 | 17 | 97 | 50 | 13 | 63 | 80 | 0 | 80 | 210 | 30 | 240 |
| 2 | Khovd | 3 | 1 | Altai | 14 | 3 | 17 | 12 | 6 | 18 | 40 | 0 | 40 | 66 | 9 | 75 |
| | | 4 | 2 | Bulgan | 44 | 10 | 54 | 13 | 2 | 15 | 38 | 0 | 38 | 95 | 12 | 107 |
| | | 5 | 3 | Jargalant[6] | 12 | 3 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 3 | 15 |
| | | 6 | 4 | Zereg | 14 | 4 | 18 | 19 | 6 | 25 | 36 | 0 | 36 | 69 | 10 | 79 |
| | | 7 | 5 | Mankhan | 14 | 3 | 17 | 6 | 1 | 7 | 40 | 0 | 40 | 60 | 4 | 64 |
| | | 8 | 6 | Must | 14 | 4 | 18 | 17 | 3 | 20 | 40 | 0 | 40 | 71 | 7 | 78 |
| | | 9 | 7 | Uyench | 14 | 3 | 17 | 18 | 9 | 27 | 40 | 0 | 40 | 72 | 12 | 84 |
| | | | | Total | 126 | 30 | 156 | 85 | 27 | 112 | 234 | 0 | 234 | 445 | 57 | 502 |
| 3 | Sukhbaatar | 10 | 1 | Baruun-Urt[7] | 12 | 3 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 3 | 15 |
| | | 11 | 2 | Bayandelger | 20 | 4 | 24 | 5 | 1 | 6 | 37 | 0 | 37 | 62 | 5 | 67 |
| | | 12 | 3 | Munkhkhaan | 35 | 7 | 42 | 15 | 3 | 18 | 40 | 0 | 40 | 90 | 10 | 100 |
| | | 13 | 4 | Ongon | 21 | 4 | 25 | 7 | 2 | 9 | 40 | 0 | 40 | 68 | 6 | 74 |
| | | 14 | 5 | Erdenetsagaan | 20 | 4 | 24 | 16 | 4 | 20 | 40 | 0 | 40 | 76 | 8 | 84 |
| | | | | Total | 108 | 22 | 130 | 43 | 10 | 53 | 157 | 0 | 157 | 308 | 32 | 340 |
| 4 | Uvurkhangai | 15 | 1 | Arvaikheer[8] | 14 | 2 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 2 | 16 |
| | | 16 | 2 | Guchin-Us | 0 | 0 | 0 | 15 | 4 | 19 | 28 | 0 | 28 | 43 | 4 | 47 |
| | | 17 | 3 | Bat-Ulzii | 29 | 8 | 37 | 19 | 8 | 27 | 40 | 0 | 40 | 88 | 16 | 104 |
| | | 18 | 4 | Bogd | 25 | 6 | 31 | 15 | 4 | 19 | 40 | 0 | 40 | 80 | 10 | 90 |
| | | 19 | 5 | Sant | 7 | 2 | 9 | 16 | 1 | 17 | 39 | 0 | 39 | 62 | 3 | 65 |
| | | 20 | 6 | Uyanga | 35 | 10 | 45 | 23 | 4 | 27 | 40 | 0 | 40 | 98 | 14 | 112 |
| | | 21 | 7 | Kharkhorin | 38 | 10 | 48 | 27 | 7 | 34 | 80 | 0 | 80 | 145 | 17 | 162 |
| | | 22 | 8 | Khujirt | 14 | 4 | 18 | 19 | 4 | 23 | 40 | 0 | 40 | 73 | 8 | 81 |
| | | | | Total | 162 | 42 | 204 | 134 | 32 | 166 | 307 | 0 | 307 | 603 | 74 | 677 |
| 5 | Zavkhan | 23 | 1 | Bayantes | 14 | 3 | 17 | 22 | 4 | 26 | 40 | 0 | 40 | 76 | 7 | 83 |
| | | 24 | 2 | Ikh-Uul | 20 | 5 | 25 | 14 | 3 | 17 | 40 | 0 | 40 | 74 | 8 | 82 |
| | | 25 | 3 | Tosontsengel | 45 | 10 | 55 | 24 | 3 | 27 | 40 | 0 | 40 | 109 | 13 | 122 |
| | | 26 | 4 | Telmen | 15 | 4 | 19 | 14 | 6 | 20 | 40 | 0 | 40 | 69 | 10 | 79 |
| | | 27 | 5 | Tes | 14 | 3 | 17 | 10 | 6 | 16 | 40 | 0 | 40 | 64 | 9 | 73 |
| | | 28 | 6 | Tudevtei | 8 | 2 | 10 | 4 | 3 | 7 | 30 | 0 | 30 | 42 | 5 | 47 |
| | | 29 | 7 | Uliastai[9] | 12 | 3 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 3 | 15 |
| | | | | Total | 128 | 30 | 158 | 88 | 25 | 113 | 230 | 0 | 230 | 446 | 55 | 501 |
| | TOTAL | | | | 604 | 141 | 745 | 400 | 107 | 507 | 1008 | 0 | 1008 | 2012 | 248 | 2260 |

Please find the detailed respondents' list: Appendix C: Respondents list and Explanation of the unavailable respondents

**Table 2**. Summary of the Sampling implementation

| Key indicators of the sample | Number of respondents | Percentage |
|---|---|---|
| Surveyed respondents from replacement pool | 90 | |
| Surveys taken from | 1979 | 98% |
| Original survey target | 2012 | 100% |
| Missing from the target amount | 33 | 2% |

The sampling of **class teachers** was determined after finalizing the list of children and youth to be surveyed. The number of class teachers selected was based on the **number of children** within each soum and the number of teachers responsible for their education. This approach ensured that the sample accurately represented the **population of class teachers** who were involved with the youth and children selected for the survey.

**Qualitative Survey Sampling**

For the **qualitative survey, Focus Group Discussions (FGDs)** were conducted in each soum where the quantitative surveys were administered. These FGDs targeted two groups:

1. **Children and youth** from the 29 target soums who had either completed the ESEL training or had participated in both the ESEL training program and received small grants. The selection for FGDs was made from the same cohorts as those surveyed in the quantitative phase (ESEL Training Sessions 1, 3, and 4).

2. **ESEL teachers/counselors** who delivered the ESEL training sessions.

Each soum was expected to hold two FGDs, one for the youth and one for the ESEL teachers/counselors. This method ensured that the qualitative data was representative and provided insights from both the students and the teachers involved in the project.

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[6] Aimag center
[7] Aimag center
[8] Aimag center
[9] Aimag center

# 1.7. Geographical scope of the survey

The endline impact evaluation, which included both quantitative and qualitative surveys, was conducted across **29 soums** in **five (5) aimags.** This geographical coverage ensured that the project's impact was assessed across a diverse set of rural and urban areas. The breakdown of the geographical scope is as follows:

- **Sukhbaatar aimag:** Bayandelger, Munkhkhaan, Ongon, Erdenetsagaan, and Baruun-Urt soums;

- **Gobisumber aimag:** Sumber and Shiveegobi soums;

- **Uvurkhangai aimag:** Bat-Ulzii, Bogd, Guchin-Us, Kharkhorin, Khujirt, Sant, Uyanga, and Arvaikheer soums;

- **Khovd aimag:** Altai, Bulgan, Mankhan, Must, Uyench, Zereg, and Jargalant soums;

- **Zavkhan aimag:** Bayantes, Ikh-Uul, Telmen, Tes, Tudevtei, Tosontsengel, and Uliastai soums.

The evaluation aimed to assess the project's impact on its target beneficiaries and measure improvements in **entrepreneurship** and **socioemotional knowledge and skills (ESEL)** among the target children and youth that were directly attributable to the **ESEL training program.**

**Figure 1.** Geographical scope of the survey

# 1.8. Challenges encountered during data collection

The endline survey implementation was informed by lessons learnt from the pilot survey. In terms of quantitative research, schools had limited classroom capacity, making it difficult to provide dedicated research rooms. Teachers and parents often disrupted the surveys by meeting with the social worker or training manager in the same room, which led to longer interview times as researchers had to repeat the questions.

It was also challenging to locate youth aged 14-25 who had completed secondary education but had not attended vocational schools or universities. Many had moved to the countryside or Ulaanbaatar for work, and the contact information provided by the teachers was often outdated or incorrect. Despite these challenges, the sampling strategy, including a pool of 248 replacement respondents, allowed us to achieve 98% of the target sample.

The questions posed to students and teachers in focus group interviews were often too complex or unclear, leading to fatigue and a lack of motivation. To address this, the questions were rephrased, but the process remained difficult for participants.

Finally, all survey questionnaires were printed in Ulaanbaatar and distributed through SCJM field offices, which helped reduce logistical delays.

# 1.9. Research ethics

MEC LLC is committed to ethical data collection that respects the rights of children, gender equality, minority groups, individuals with disabilities, and of diverse ethnic and religious backgrounds. Our approach is built on several key processes.

We begin with a robust informed consent process. We ensure that all participants, including children, understand the survey's purpose and their rights. Consent materials are crafted in clear, accessible language, tailored to local dialects when necessary. For minors, we obtain explicit consent from a parent or guardian, using engaging, age-appropriate explanations to foster understanding.

To protect child rights, our surveys are designed to be engaging and sensitive to the needs of younger participants. This includes utilizing interactive elements that resonate with children, making the survey process enjoyable and meaningful.

When addressing gender equality, we develop survey tools that avoid bias, using inclusive language that represents all gender identities. We may also conduct separate focus groups to provide a comfortable environment for sharing diverse perspectives.

For minority groups, we engage with local leaders during the survey design

phase to ensure cultural sensitivity and relevance. Our questions are carefully crafted to avoid stereotypes, promoting an inclusive atmosphere.

Recognizing the importance of accessibility for individuals with disabilities, we adapt our tools to accommodate various needs. This includes offering formats such as large print or audio and ensuring our survey environments are physically accessible.

We are mindful of ethnic and religious sensitivities, providing training for data collectors on cultural awareness. This training equips them to navigate sensitive topics respectfully, using neutral language throughout the survey.

Our data collection tools incorporate diverse question formats, including multiple-choice and open-ended options, to capture a wide range of experiences. Pilot testing allows us to identify and address potential biases before full deployment.

Finally, we established a feedback mechanism for participants to share their thoughts on the survey process, ensuring continuous improvement. An ethics review board oversees our practices, conducting regular audits to uphold our commitment to ethical standards.

Through these comprehensive processes, MEC strives to ensure that our data collection respects the dignity and rights of all participants, fostering an inclusive and ethical research environment.

<div style="background:teal;color:white;">**Chapter 2.**</div>

# QUANTITATIVE AND QUALITATIVE DATA ANALYSIS

## 2.1. ESEL Knowledge

In the survey, 8.8% of children reported having previously enrolled in a business course (Table 3). The proportion was similar across treatment status, with 8% in the control group and 9% in the treatment group indicating prior participation in a business course.

**Table 3.** Whether the children had taken a business course (Baseline, Endline)

| Business course | Control | | | | Treatment | | | |
|---|---|---|---|---|---|---|---|---|
| | Baseline | | Endline | | Baseline | | Endline | |
| | Freq | Percent | Freq | Percent | Freq | Percent | Freq | Percent |
| Yes | 41 | 12% | 29 | 8% | 69 | 11% | 48 | 9% |
| No | 291 | 88% | 312 | 92% | 570 | 89% | 489 | 91% |
| Total | 332 | 100% | 341 | 100% | 639 | 100% | 537 | 100% |

The survey questionnaire included 16 questions to assess ESEL knowledge, covering entrepreneurship fundamentals (7 questions), business planning and financial literacy (5 questions), and mobilizing resources and digital literacy (4 questions). Each correct answer received a score of 1, with a maximum possible score of 26. Table 4 presents the total scores of survey participants. On average, participants answered just over 6 questions correctly, with most scoring between five and nine. Although the treatment group had slightly higher average scores than the control group, the difference was not statistically significant.

**Table 4.** ESEL knowledge by treatment status

| Comparison of treatment and control groups | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| A person who is in charge of a specific location. | 13 | 4% | 22 | 4% | 35 | 4% |
| A person who works for someone else in order to learn skills. | 84 | 24% | 130 | 24% | 214 | 24% |
| A person who organizes and operates a business or businesses. | 137 | 40% | 232 | 43% | 369 | 42% |
| B&C | 77 | 23% | 133 | 25% | 210 | 24% |
| None of above | 3 | 1% | 12 | 2% | 15 | 2% |
| I do not know. | 27 | 8% | 8 | 2% | 35 | 4% |
| Total | 341 | 100% | 537 | 100% | 878 | 100% |

The majority of students (42%) correctly defined an entrepreneur as "a person who organizes and operates a business or businesses" in response to the question about the meaning of the term "entrepreneur." There was little variation between the Control and Treatment groups in their responses. Another common definition among students was "a person who works for someone else to learn skills" (24%), while a similar proportion (24%) associated the term with options 'B' and 'C.' These results indicate minimal disparity between the different groups.

The ESEL knowledge assessment results are summarized in Table 5.

**Table 5.** Success rate in ESEL knowledge attainment

| No | Questions | Control | Treatment | Total |
|---|---|---|---|---|
| **1** | **Entrepreneurship fundamentals** | | | |
| 1.1 | Which of the following are creating a value for the community? | 38% | 43% | 41% |
| 1.2 | What are the characteristics of a successful entrepreneur? | 34% | 37% | 36% |
| 1.3 | What are the roles of an entrepreneur? | 28% | 32% | 30% |
| 1.4 | What type of business does this image represent? | 88% | 94% | 92% |
| 1.5 | Which of the following cause risk to your business? | 45% | 48% | 47% |
| 1.6 | Who is your competitor if you are a restaurant owner? | 78% | 81% | 80% |
| **2** | **Business planning and financial literacy** | | | |
| 2.1 | What is a business plan? | 44% | 39% | 41% |
| 2.2 | Why do you need a business plan? | 32% | 30% | 31% |
| 2.3 | What is money paid to the government? | 55% | 58% | 57% |
| 2.4 | What are the benefits of keeping accurate financial records of business activities? | 61% | 64% | 63% |
| **3** | **Mobilizing resources, implementing plans and digital tools** | | | |
| 3.1 | Which of the following are resources needed for running a food canteen? | 36% | 41% | 39% |
| 3.2 | Which of the following are the effective ways to explore the unmet needs of a community? | 21% | 27% | 25% |
| 3.3 | What is the most appropriate software program for the cost estimation? | 26% | 29% | 27% |
| 3.4 | What are the benefits of using social media such as Facebook, Instagram or Tik Tok for your business? | 82% | 86% | 84% |

When analyzing the results, we find that out of the 16 questions, more than 50 percent of respondents answered 9 questions correctly, while 5 questions had an accuracy rate of less than 50 percent. The question "Why do you need a business plan?" had the lowest correct response rate, with only 22.9 percent of the participants providing accurate answers. In contrast, the question "What type of business does this image represent?" had the highest correct response rate, with 90.8 percent of the students answering correctly.

Looking at the difference between the Control and Treatment groups, the Treatment group, on average, showed a 2.47 percentage point improvement over the Control group compared to its own baseline. This suggests positive outcomes for the targeted groups.

*In this section, we have reviewed the key results of the ESEL knowledge responses from the endline survey for both the Treatment and Control groups.*

## 2.2. ESEL Skills

In the survey, children were presented with statements related to entrepreneurship and socioemotional learning (ESEL) and asked to choose from four options: *"Not at all or rarely," "Somewhat or sometimes," "Very or often," "Extremely or almost always,"* and *"Don't know."* For data entry, these responses were coded as follows: "Extremely or almost always" = 1, "Very or often" = 2, "Somewhat or sometimes" = 3, and "Not at all or rarely" = 4. **Therefore, lower scores indicate better performance.**

The questionnaire assessed six skills, and two mindsets associated with ESEL, including Self-awareness, Social and cultural awareness, Creativity and innovation, Communication, Teamwork and Critical thinking, as well as Growth and Entrepreneurial mindsets. Creativity and innovation skill which performed lowest among these skill measures is viewed as statistically not significant, therefore the analysis is not included in this report.

**Self-Awareness**

The following statements were used to assess self-awareness:

1. I know ways to make myself feel better when I am sad.
2. I know ways to calm myself down.
3. I think carefully about what I want to say before I speak.
4. I keep trying even after I get negative comments from people.
5. I do work right away, instead of waiting until the last minute.

For these five questions, the majority of students selected "Very or Often" as their response, followed by "Somewhat or Sometimes", with "Not at all or Rarely" receiving the fewest endorsements. Notably, there was little variation between the Control and Treatment groups in their responses to these questions. Detailed results are provided in Table 6.

**Table 6.** Self-awareness

| Self-Awareness indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| I know ways to make myself feel better when I am sad. | Extremely or almost always | 86 | 25% | 142 | 26% | 228 | 26% |
| | Very or often | 135 | 40% | 222 | 41% | 357 | 41% |
| | Somewhat or sometimes | 109 | 32% | 158 | 30% | 267 | 30% |
| | Not at all or rarely | 11 | 3% | 15 | 3% | 26 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I know ways to calm myself down. | Extremely or almost always | 109 | 32% | 184 | 34% | 293 | 33% |
| | Very or often | 136 | 40% | 207 | 39% | 343 | 39% |
| | Somewhat or sometimes | 90 | 26% | 136 | 25% | 226 | 26% |
| | Not at all or rarely | 6 | 2% | 10 | 2% | 16 | 2% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I think carefully about what I want to say, before I speak. | Extremely or almost always | 82 | 24% | 144 | 27% | 226 | 26% |
| | Very or often | 142 | 42% | 205 | 38% | 347 | 39% |
| | Somewhat or sometimes | 102 | 30% | 176 | 33% | 278 | 32% |
| | Not at all or rarely | 15 | 4% | 12 | 2% | 27 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I keep trying even after I get negative comments from people. | Extremely or almost always | 91 | 27% | 139 | 26% | 230 | 26% |
| | Very or often | 148 | 43% | 213 | 40% | 361 | 41% |
| | Somewhat or sometimes | 92 | 27% | 169 | 31% | 261 | 30% |
| | Not at all or rarely | 10 | 3% | 16 | 3% | 26 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I do work right away, instead of waiting until the last minute. | Extremely or almost always | 55 | 16% | 83 | 16% | 138 | 16% |
| | Very or often | 128 | 37% | 209 | 39% | 337 | 38% |
| | Somewhat or sometimes | 152 | 45% | 228 | 42% | 380 | 43% |
| | Not at all or rarely | 6 | 2% | 17 | 3% | 23 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

**Social and Cultural Awareness**

The following statements were used to assess social and cultural awareness:

1. I have the ability to have fresh perspectives on old problems.

2. I have the ability to deal with sudden changes and surprises.

3. I work hard to try to understand something new.

4. I stay focused on the same goal for several months at a time.

5. When working with other people, I come up with new ideas and different solutions.

For these questions, a consistent trend emerged: the majority of respondents selected "Very or Often" as their preferred response. Interestingly, for the first question, the Control group showed a 5-percentage point higher preference for "Very or Often" compared to the Treatment group. The remaining questions followed similar response patterns as seen in previous aspects. The detailed results are presented in Table 7.

**Table 7.** Social and cultural awareness

| Social and cultural awareness indicators | | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|---|
| | | | Freq | Percent | Freq | Percent | Freq | Percent |
| I know ways to make myself feel better when I am sad. | I have the ability to have fresh perspectives on old problems. | Extremely or almost always | 50 | 15% | 74 | 14% | 124 | 14% |
| | | Very or often | 170 | 50% | 225 | 42% | 395 | 45% |
| | | Somewhat or sometimes | 118 | 34% | 223 | 41% | 341 | 39% |
| | | Not at all or rarely | 3 | 1% | 15 | 3% | 18 | 2% |
| | | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I know ways to calm myself down. | I have the ability to deal with sudden changes and surprises. | Extremely or almost always | 63 | 18% | 98 | 19% | 161 | 18% |
| | | Very or often | 149 | 44% | 244 | 45% | 393 | 45% |
| | | Somewhat or sometimes | 120 | 35% | 178 | 33% | 298 | 34% |
| | | Not at all or rarely | 9 | 3% | 17 | 3% | 26 | 3% |
| | | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I think carefully about what I want to say, before I speak. | I work hard to try to understand something new. | Extremely or almost always | 127 | 37% | 216 | 40% | 343 | 39% |
| | | Very or often | 169 | 50% | 250 | 47% | 419 | 48% |
| | | Somewhat or sometimes | 42 | 12% | 69 | 13% | 111 | 13% |
| | | Not at all or rarely | 3 | 1% | 2 | 0.4% | 5 | 0.6% |
| | | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I keep trying even after I get negative comments from people. | I stay focused on the same goal for several months at a time. | Extremely or almost always | 80 | 23% | 127 | 24% | 207 | 23% |
| | | Very or often | 138 | 40% | 198 | 37% | 335 | 38% |
| | | Somewhat or sometimes | 113 | 33% | 197 | 37% | 310 | 35% |
| | | Not at all or rarely | 11 | 3% | 15 | 3% | 26 | 3% |
| | | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I do work right away, instead of waiting until the last minute. | When working with other people, I come up with new ideas and different solutions. | Extremely or almost always | 78 | 23% | 127 | 24% | 205 | 23% |
| | | Very or often | 170 | 50% | 262 | 49% | 432 | 49% |
| | | Somewhat or sometimes | 92 | 27% | 141 | 26% | 233 | 27% |
| | | Not at all or rarely | 1 | 0.3% | 7 | 1% | 8 | 1% |
| | | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

## Communication

The following statements were used to assess communication skills:

1. I carefully listen to other people who have different opinions than me.

2. When I'm angry with my friends, I can tell them how I feel.

3. I am good at persuading people.

4. I have the ability to communicate with others clearly and effectively.

5. I am good at preventing quarrels with other people.

For these five questions, three response options showed relatively consistent percentages. However, the "Not at all or rarely" option had higher responses for questions 2, 3, and 5. Notably, questions 1 and 4 stood out, with most respondents selecting "Very or Often". Overall, the variations in responses across the groups were minimal. A detailed breakdown of results is available in Table #8.

**Table 8.** Communication

| Communication indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| I carefully listen to other people who have different opinions than me. | Extremely or almost always | 132 | 38% | 222 | 41% | 354 | 40% |
| | Very or often | 163 | 48% | 250 | 47% | 413 | 47% |
| | Somewhat or sometimes | 44 | 13% | 63 | 12% | 107 | 12% |
| | Not at all or rarely | 2 | 1% | 2 | 0.4% | 4 | 1% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| When I'm angry with my friends, I can tell them how I feel. | Extremely or almost always | 78 | 23% | 113 | 21% | 191 | 22% |
| | Very or often | 111 | 33% | 190 | 35% | 301 | 34% |
| | Somewhat or sometimes | 114 | 33% | 191 | 36% | 305 | 35% |
| | Not at all or rarely | 38 | 11% | 43 | 8% | 81 | 9% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I am good at persuading people. | Extremely or almost always | 71 | 21% | 118 | 22% | 189 | 22% |
| | Very or often | 128 | 37% | 177 | 33% | 305 | 35% |
| | Somewhat or sometimes | 118 | 35% | 211 | 39% | 329 | 37% |
| | Not at all or rarely | 24 | 7% | 31 | 6% | 55 | 6% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I am able to communicate with others clearly and effectively. | Extremely or almost always | 58 | 17% | 97 | 18% | 155 | 17% |
| | Very or often | 184 | 54% | 280 | 52% | 464 | 53% |
| | Somewhat or sometimes | 97 | 28% | 157 | 29% | 254 | 29% |
| | Not at all or rarely | 2 | 1% | 3 | 1% | 5 | 1% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I am good at preventing quarrels with other people. | Extremely or almost always | 110 | 32% | 176 | 33% | 286 | 33% |
| | Very or often | 117 | 34% | 191 | 35% | 308 | 35% |
| | Somewhat or sometimes | 99 | 29% | 156 | 29% | 255 | 29% |
| | Not at all or rarely | 15 | 5% | 14 | 3% | 29 | 3% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |

**Teamwork**

The following statements were used to assess teamwork skills:

1. If needed, I am able to give and ask for support and help.

2. I like to participate in a discussion where new ideas are exchanged.

3. In order to achieve a goal, I break it down into smaller objectives.

4. When working with other people, I am open to receiving and giving feedback.

5. I work out disagreements with other people.

For all five questions, the response option "Very or Often" exceeded 45% for all except question 2. Notably, there were no significant differences observed across the groups. A detailed breakdown of the results can be found in Table 9.

**Table 9.** Teamwork

| Teamwork indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| **If needed, I can give and ask for support and help.** | Extremely or almost always | 110 | 32% | 200 | 37% | 310 | 35% |
| | Very or often | 181 | 53% | 265 | 49% | 446 | 51% |
| | Somewhat or sometimes | 49 | 14% | 72 | 13% | 121 | 14% |
| | Not at all or rarely | 1 | 0.3% | 0 | 0% | 1 | 0.1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **I like to participate in a discussion where new ideas are exchanged.** | Extremely or almost always | 147 | 43% | 226 | 42% | 373 | 42% |
| | Very or often | 129 | 38% | 201 | 37% | 330 | 38% |
| | Somewhat or sometimes | 56 | 16% | 93 | 18% | 149 | 17% |
| | Not at all or rarely | 9 | 3% | 17 | 3% | 26 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **In order to achieve a goal, I break it down into smaller objectives.** | Extremely or almost always | 93 | 27% | 135 | 25% | 228 | 26% |
| | Very or often | 154 | 45% | 242 | 45% | 396 | 45% |
| | Somewhat or sometimes | 82 | 24% | 145 | 27% | 227 | 26% |
| | Not at all or rarely | 12 | 4% | 15 | 3% | 27 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **When working with other people, I am open to receiving and giving feedback.** | Extremely or almost always | 90 | 26% | 157 | 29% | 247 | 28% |
| | Very or often | 155 | 46% | 241 | 45% | 396 | 45% |
| | Somewhat or sometimes | 85 | 25% | 129 | 24% | 214 | 25% |
| | Not at all or rarely | 11 | 3% | 10 | 2% | 21 | 2% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **I work out disagreements with other people.** | Extremely or almost always | 78 | 23% | 124 | 23% | 202 | 23% |
| | Very or often | 154 | 45% | 254 | 47% | 408 | 46% |
| | Somewhat or sometimes | 102 | 30% | 148 | 28% | 250 | 29% |
| | Not at all or rarely | 7 | 2% | 11 | 2% | 18 | 2% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

## Critical Thinking

The following statements were used to assess critical thinking skills:

1. I think about what might happen before making a decision.
2. I think of different ways to solve a problem.
3. I say "No" to a friend who wants to break the rules.
4. I reflect and analyze my and other people's actions and situations.
5. I have the ability to identify, select, and process information from a variety of resources.

For all five questions, the response "Very or Often" exceeded 47% in each case, except for question 3, where the responses were more evenly distributed, with a notable preference for "Not at all or rarely". No significant differences were observed across the groups. A detailed breakdown of the results can be found in Table 10.

**Table 10.** Critical thinking

| Critical Thinking indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| I think about what might happen before making a decision. | Extremely or almost always | 115 | 34% | 150 | 28% | 265 | 30% |
| | Very or often | 146 | 43% | 266 | 49% | 412 | 47% |
| | Somewhat or sometimes | 72 | 21% | 117 | 22% | 189 | 22% |
| | Not at all or rarely | 8 | 2% | 4 | 1% | 12 | 1% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I think of different ways to solve a problem. | Extremely or almost always | 68 | 20% | 127 | 24% | 195 | 22% |
| | Very or often | 187 | 55% | 267 | 50% | 454 | 52% |
| | Somewhat or sometimes | 83 | 24% | 135 | 25% | 218 | 25% |
| | Not at all or rarely | 3 | 1% | 8 | 1% | 11 | 1% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I say "No" to a friend who wants to break the rules. | Extremely or almost always | 130 | 38% | 196 | 36% | 326 | 37% |
| | Very or often | 147 | 43% | 223 | 42% | 370 | 42% |
| | Somewhat or sometimes | 62 | 18% | 107 | 20% | 169 | 19% |
| | Not at all or rarely | 2 | 1% | 11 | 2% | 13 | 2% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I reflect and analyze my and other people's actions and situations. | Extremely or almost always | 55 | 16% | 106 | 20% | 161 | 18% |
| | Very or often | 168 | 49% | 244 | 45% | 412 | 47% |
| | Somewhat or sometimes | 106 | 31% | 173 | 32% | 279 | 32% |
| | Not at all or rarely | 12 | 4% | 14 | 3% | 26 | 3% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |
| I have the ability to identify, select, and process information from a variety of resources. | Extremely or almost always | 78 | 23% | 124 | 23% | 202 | 23% |
| | Very or often | 155 | 45% | 241 | 45% | 396 | 45% |
| | Somewhat or sometimes | 105 | 31% | 159 | 30% | 264 | 30% |
| | Not at all or rarely | 3 | 1% | 13 | 2% | 16 | 2% |
| | Total | 341 | 100% | 537 | 100% | 878 | 100% |

# 2.3. ESEL Mindset

**Growth mindset**

The following statements were used to assess the growth mindset aspect:

1. I do not give up easily when confronted with obstacles and distractions.
2. I finish the work I started.
3. For me, mistakes are opportunities to learn.
4. I think life is a constant learning process.
5. I'm certain that I can master the skills being taught.
6. When I get stuck while learning something new, I try different ways.

Unlike previous aspects, this set of six questions revealed a significant number of respondents selecting "Extremely or almost always". For example, over 45% of participants answered, "Extremely or almost always" to questions 2, 3, and 4. Conversely, questions 1, 5, and 6 saw the majority of responses as "Very or often". For a detailed breakdown, refer to Table 11.

**Table 11. Growth mindset**

| Growth mindset indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| I do not give up easily when confronted with obstacles and distractions. | Extremely or almost always | 74 | 22% | 133 | 25% | 207 | 24% |
| | Very or often | 178 | 52% | 269 | 50% | 447 | 51% |
| | Somewhat or sometimes | 87 | 25% | 130 | 24% | 217 | 24% |
| | Not at all or rarely | 2 | 1% | 5 | 1% | 7 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I finish the work I started. | Extremely or almost always | 149 | 44% | 232 | 43% | 381 | 44% |
| | Very or often | 160 | 47% | 235 | 44% | 395 | 45% |
| | Somewhat or sometimes | 30 | 9% | 69 | 13% | 99 | 11% |
| | Not at all or rarely | 2 | 0.5% | 1 | 0.2% | 3 | 0.3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| For me, mistakes are opportunities to learn. | Extremely or almost always | 164 | 48% | 243 | 45% | 407 | 46% |
| | Very or often | 146 | 43% | 234 | 44% | 380 | 43% |
| | Somewhat or sometimes | 26 | 8% | 59 | 11% | 85 | 10% |
| | Not at all or rarely | 5 | 1% | 1 | 0.2% | 6 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I think life is a constant learning process. | Extremely or almost always | 186 | 55% | 265 | 49% | 451 | 51% |
| | Very or often | 99 | 29% | 187 | 35% | 286 | 33% |
| | Somewhat or sometimes | 52 | 15% | 78 | 15% | 130 | 15% |
| | Not at all or rarely | 4 | 1% | 7 | 1% | 11 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| I'm certain that I can master the skills being taught. | Extremely or almost always | 130 | 38% | 195 | 36% | 325 | 37% |
| | Very or often | 160 | 47% | 234 | 44% | 394 | 45% |
| | Somewhat or sometimes | 49 | 14% | 104 | 19% | 153 | 17% |
| | Not at all or rarely | 2 | 1% | 4 | 1% | 6 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| When I get stuck while learning something new, I try different ways. | Extremely or almost always | 67 | 19% | 128 | 24% | 195 | 22% |
| | Very or often | 192 | 56% | 264 | 49% | 456 | 52% |
| | Somewhat or sometimes | 77 | 23% | 134 | 25% | 211 | 24% |
| | Not at all or rarely | 5 | 2% | 11 | 2% | 16 | 2% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

**Entrepreneurial Mindset**

The following statements were used to assess the entrepreneurial mindset aspect:

1. I like to learn new things.
2. When I do things, I ask "how can I do it differently?"
3. I try to do things better than before.
4. Before beginning a task, I plan and set clear goals to achieve it.
5. I have to make risky decisions and take risks at times in order to be successful in life.

Among these five questions, an impressive 77% of participants indicated a high interest in learning new things by selecting "Extremely or almost always" for question 1, making it the highest response rate. Additionally, for question 3, 57.4% selected "Extremely or almost always". The remaining questions displayed relatively consistent response patterns, with notable exceptions in the "Not at all or rarely" category. For further insights, refer to Table 12 below.

**Table 12. Entrepreneur mindset**

| Entrepreneur mindset indicators | | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|---|
| | | Freq | Percent | Freq | Percent | Freq | Percent |
| **I like to learn new things.** | Extremely or almost always | 261 | 77% | 413 | 77% | 674 | 77% |
| | Very or often | 67 | 20% | 111 | 21% | 178 | 20% |
| | Somewhat or sometimes | 11 | 3% | 13 | 2% | 24 | 3% |
| | Not at all or rarely | 2 | 0.4% | 0 | 0% | 2 | 0.2% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **When I do things, I ask "how can I do it differently?"** | Extremely or almost always | 89 | 26% | 118 | 22% | 207 | 24% |
| | Very or often | 169 | 50% | 292 | 54% | 461 | 52% |
| | Somewhat or sometimes | 76 | 22% | 122 | 23% | 198 | 23% |
| | Not at all or rarely | 7 | 2% | 5 | 1% | 12 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **I try to do things better than before.** | Extremely or almost always | 199 | 58% | 295 | 55% | 494 | 56% |
| | Very or often | 118 | 35% | 203 | 38% | 321 | 37% |
| | Somewhat or sometimes | 21 | 6% | 38 | 7% | 59 | 7% |
| | Not at all or rarely | 3 | 1% | 1 | 0.2% | 4 | 0.5% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **Before beginning a task, I plan and set clear goals to achieve it.** | Extremely or almost always | 104 | 30% | 161 | 30% | 265 | 30% |
| | Very or often | 153 | 45% | 237 | 44% | 390 | 45% |
| | Somewhat or sometimes | 80 | 24% | 131 | 24% | 211 | 24% |
| | Not at all or rarely | 4 | 1% | 8 | 1% | 12 | 1% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |
| **I have to make risky decisions and take risks at times in order to be successful in life.** | Extremely or almost always | 108 | 32% | 171 | 32% | 279 | 32% |
| | Very or often | 138 | 41% | 221 | 41% | 359 | 41% |
| | Somewhat or sometimes | 83 | 24% | 128 | 24% | 211 | 24% |
| | Not at all or rarely | 12 | 3% | 17 | 3% | 29 | 3% |
| | **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

**The average scores across all components were slightly above or below 2, indicating that most responses fell under the category of "very or often".** In all components, the treatment group scored marginally higher than the control group, although none of these differences were statistically significant. This suggests that the ESEL training program may have had a positive effect on the development of these skills among the targeted youth.

For students who participated in the previous baseline study, ESEL scores were analyzed by treatment status. The survey questionnaire comprised 8 sections, each containing 5 questions with 4 response options. Responses were scored on a scale from 1 (best) to 4 (worst), where "Extremely or almost always" equated to 1, "Very often" to 2, "Somewhat or sometimes" to 3, and "Not at all or rarely" to 4. **The results show that lower average values in each section of the ESEL scores by treatment status indicate better performance.**

**Table 13.** Baseline survey: ESEL scores by treatment status

| ESEL skills and mindset | Total | | Treatment | | Control | |
|---|---|---|---|---|---|---|
| | Obs | Mean | Obs | Mean | Obs | Mean |
| Self-awareness | 985 | 2.17 | 596 | 2.18 | 389 | 2.16 |
| Social and cultural awareness | 985 | 2.02 | 600 | 2.03 | 385 | 2.02 |
| Creativity and innovation | 990 | 2.18 | 604 | 2.19 | 386 | 2.18 |
| Communication | 983 | 2.23 | 599 | 2.23 | 384 | 2.23 |
| Teamwork | 979 | 2.07 | 596 | 2.08 | 383 | 2.05 |
| Critical Thinking | 975 | 2.14 | 596 | 2.15 | 379 | 2.11 |
| Growth mindset | 964 | 1.91 | 588 | 1.92 | 376 | 1.9 |
| Entrepreneurial mindset | 968 | 1.84 | 590 | 1.84 | 378 | 1.83 |

*Source: Baseline survey report 2023.*

**Due to the survey coding, lower scores reflect better results.** Based on the results of the eight sections, a clear distinction is observed between the treatment and control groups. The Entrepreneurial Mindset showed the best result with a score of 1.84, while Communication skill had the highest average, indicating a poorer outcome with a score of 2.23.

Table 14 illustrates a comparison between the subsamples of both the baseline and endline surveys. When compared to the baseline, improvements were noted in Communication, Critical Thinking, Growth Mindset, and Entrepreneurial Mindset.

**Table 14.** Baseline survey: ESEL scores by treatment status (Baseline, Endline)

| ESEL skills and mindset | Total | | | | Treatment | | | | Control | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Baseline | | Endline | | Baseline | | Endline | | Baseline | | Endline | |
| | Obs | Mean | Obs | Mean | Obs | Mean | Obs | Mean | Obs | Mean | Obs | Mean |
| Self-awareness | 985 | 2.17 | 878 | 2.13 | 596 | 2.24 | 537 | 2.18 | 389 | 2.16 | 341 | 2.05 |
| Social and cultural awareness | 985 | 2.02 | 878 | 1.96 | 600 | 2.03 | 537 | 2.05 | 385 | 2.02 | 341 | 1.91 |
| Creativity and innovation | 990 | 2.18 | 878 | 2.18 | 604 | 2.19 | 537 | 2.16 | 386 | 2.18 | 341 | 2.19 |
| Communication | 983 | 2.23 | 878 | 2.12 | 599 | 2.23 | 537 | 2.11 | 384 | 2.23 | 341 | 2.13 |
| Teamwork | 979 | 2.07 | 878 | 2.01 | 596 | 2.04 | 537 | 1.93 | 383 | 2.05 | 341 | 1.98 |
| Critical Thinking | 975 | 2.14 | 878 | 2.05 | 596 | 2.15 | 537 | 2.04 | 379 | 2.11 | 341 | 2.07 |
| Growth mindset | 964 | 1.91 | 878 | 1.82 | 588 | 1.92 | 537 | 1.81 | 376 | 1.9 | 341 | 1.83 |
| Entrepreneurial mindset | 968 | 1.84 | 878 | 1.78 | 590 | 1.84 | 537 | 1.77 | 378 | 1.83 | 341 | 1.79 |

**Table 15.** Endline survey: ESEL scores by treatment status

| ESEL skills and mindset | Total | | Treatment | | Control | |
|---|---|---|---|---|---|---|
| | Obs | Mean | Obs | Mean | Obs | Mean |
| Self-awareness | 878 | 2.13 | 537 | 2.18 | 341 | 2.05 |
| Social and cultural awareness | 878 | 1.96 | 537 | 2.05 | 341 | 1.91 |
| Creativity and innovation | 878 | 2.18 | 537 | 2.16 | 341 | 2.19 |
| Communication | 878 | 2.12 | 537 | 2.11 | 341 | 2.13 |
| Teamwork | 878 | 2.01 | 537 | 1.93 | 341 | 1.98 |
| Critical Thinking | 878 | 2.05 | 537 | 2.04 | 341 | 2.07 |
| Growth mindset | 878 | 1.82 | 537 | 1.81 | 341 | 1.83 |
| Entrepreneurial mindset | 878 | 1.78 | 537 | 1.77 | 341 | 1.79 |

*Source: Data analyst's estimation.*

In the initial baseline study, the Control group had a lower average than the Treatment group. However, the endline study revealed a reversal, with the Treatment group now showing a lower average than the Control group. This suggests overall improvement in the results.

Upon further analysis, the Entrepreneurial Mindset category continues to yield the lowest average within the Treatment group, maintaining a score of 1.73. On the other hand, Communication skill exhibited the highest average, representing the least favorable performance, with a score of 2.10.

Comparing the mean values between the baseline and endline surveys provide valuable insights into the evolving trends and dynamics of the assessed parameters.

**Table 16.** Mean comparison test results

| ESEL skills and mindset | Baseline survey | | Endline survey | | t test statistics | | |
|---|---|---|---|---|---|---|---|
| | Obs | Mean | Obs | Mean | Mean dif | t | P-value |
| **Self-awareness** | 985 | 2.17 | 1979 | 2.09 | -0.0823 | -7.78*** | 0.000 |
| **Social and cultural awareness** | 985 | 2.02 | 1979 | 1.87 | -0.1518 | -15.29*** | 0.000 |
| **Creativity and innovation** | 990 | 2.18 | 1979 | 2.07 | -0.1104 | -10.37*** | 0.000 |
| **Communication** | 983 | 2.23 | 1979 | 2.10 | -0.1344 | -12.76*** | 0.000 |
| **Teamwork** | 979 | 2.07 | 1979 | 1.94 | -0.1337 | -12.29*** | 0.000 |
| **Critical Thinking** | 975 | 2.14 | 1979 | 2.01 | -0.1318 | -12.37*** | 0.000 |
| **Growth mindset** | 964 | 1.91 | 1979 | 1.79 | -0.1203 | -12.12*** | 0.000 |
| **Entrepreneurial mindset** | 968 | 1.84 | 1979 | 1.73 | -0.1071 | -11.06*** | 0.000 |

*Source: Data analyst's estimation.*

Note: *** statistically significant at 1%, ** statistically significant at 5%, * statistically significant at 10%.

In the initial baseline study, the Control group exhibited a lower average than the Treatment group. However, the endline study revealed a reversal, with the Treatment group now showing a lower average than the Control group, indicating an overall improvement in the latest study results.

Upon further analysis, the Entrepreneurial Mindset category continues to have the lowest average within the Treatment group, maintaining a score of 1.73. Conversely, Communication skill exhibited the highest average, indicating the least favorable performance, with a score of 2.10.

The endline study results show a positive and significant improvement overall.

*In this section, we reviewed key response results of the ESEL skills and mindset through its 8 indicators, comparing results between the treatment and control groups, as well as baseline and endline assessments.*

# 2.4. Life Aspiration

The study surveyed children on their life aspirations, focusing on their goals, opportunities, self-efficacy, and agency. The questionnaire included a series of statements, asking children to indicate the extent of their agreement and the importance of each statement.

### Aspired Goals and Opportunities

The survey examined children's views on the importance of working for themselves versus working for someone else. The results revealed that nearly all of the children considered this to be important, although the degree of importance varied, as shown in Table 17.

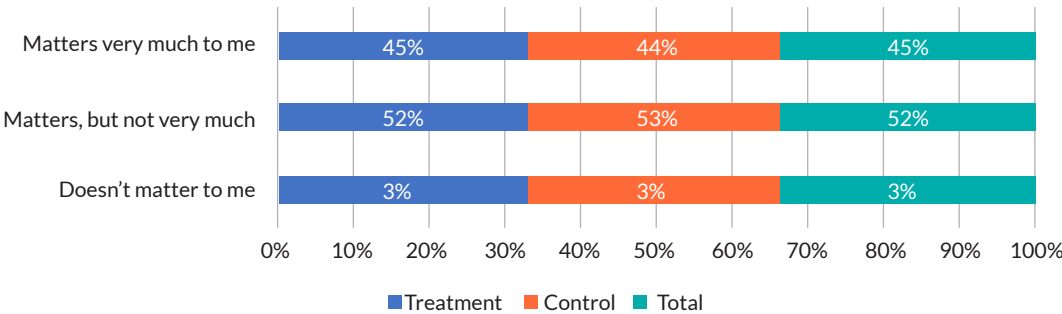**Figure 2.** Extent to which "Work for myself than to work for someone else" mattered.



**Table 17.** Extent to which "Work for myself than to work for someone else" mattered. (Baseline, Endline)

| Response types | Control | | | | Treatment | | | |
|---|---|---|---|---|---|---|---|---|
| | Baseline | | Endline | | Baseline | | Endline | |
| | Freq | Percent | Freq | Percent | Freq | Percent | Freq | Percent |
| Doesn't matter to me | 12 | 3% | 10 | 3% | 21 | 4% | 18 | 3% |
| Matters, but not very much | 187 | 48% | 180 | 53% | 292 | 48% | 280 | 52% |
| Matters very much to me | 192 | 49% | 151 | 44% | 293 | 48% | 239 | 45% |
| Total | 391 | 100% | 341 | 100% | 606 | 100% | 537 | 100% |

The results emphasize the importance of mentorship and collaboration with study partners for students, which were found to be more valuable than solitary study. However, no significant differences were observed between the baseline and endline results.

As shown in Table 18, most of the children surveyed viewed running their own business or company as highly important. This strong entrepreneurial spirit reflects a desire for autonomy and innovation, which could have positive implications for future economic growth.

Around 78% of the students highlighted the importance of starting their own businesses, underscoring the need for Entrepreneurship, Small Enterprise, and Leadership (ESEL) education to foster these aspirations.

**Table 18.** Extent to which "Running my own business/company" mattered.

| Response types | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Doesn't matter to me | 11 | 3% | 10 | 2% | 21 | 2% |
| Matters, but not very much | 58 | 17% | 113 | 21% | 171 | 20% |
| Matters very much to me | 272 | 80% | 414 | 77% | 686 | 78% |
| Total | 341 | 100% | 537 | 100% | 878 | 100% |

**Table 19.** Extent to which "Running my own business/company" mattered. (Baseline, Endline)

| Response types | Control | | | | Treatment | | | |
|---|---|---|---|---|---|---|---|---|
| | Baseline | | Endline | | Baseline | | Endline | |
| | Freq | Percent | Freq | Percent | Freq | Percent | Freq | Percent |
| Doesn't matter to me | 14 | 4% | 11 | 3% | 19 | 3% | 10 | 2% |
| Matters, but not very much | 83 | 21% | 58 | 17% | 143 | 23% | 113 | 21% |
| Matters very much to me | 294 | 75% | 272 | 80% | 447 | 73% | 414 | 77% |
| Total | 391 | 100% | 341 | 100% | 606 | 100% | 537 | 100% |

As shown in Table 20, over 83% of the surveyed children expressed optimism about their future, responding with either "Strongly agree" or "Agree." This indicates a strong sense of hope and confidence among the children regarding their potential. Notably, there were no significant differences between the baseline and endline survey results.

**Table 20.** Degree to which the children expect the best.

| Responses | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Strongly agree | 89 | 26% | 116 | 22% | 205 | 23% |
| Agree | 199 | 58% | 317 | 59% | 516 | 59% |
| Undecided | 34 | 10% | 47 | 9% | 81 | 9% |
| Disagree | 19 | 6% | 48 | 9% | 67 | 8% |
| Strongly disagree | 0 | 0% | 9 | 2% | 9 | 1% |
| Total | 341 | 100% | 537 | 100% | 878 | 100% |

**Table 21.** Degree to which the children expect the best. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 27% | 23% |
| Agree | 55% | 59% |
| Undecided | 12% | 9% |
| Disagree | 5% | 8% |
| Strongly disagree | 1% | 1% |
| Total | 100% | 100% |

Many of the children surveyed exhibit a positive outlook on their future. Optimism is a powerful motivator, enabling individuals to overcome challenges and pursue their goals with determination. It is encouraging to witness such hope and confidence among the children and youth, as it suggests they believe in their potential to succeed.

**Table 22.** Degree to which the children are optimistic about their future.

| Responses | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Strongly agree | 224 | 66% | 358 | 67% | 582 | 66% |
| Agree | 100 | 29% | 150 | 28% | 250 | 29% |
| Undecided | 11 | 3% | 18 | 3% | 29 | 3% |
| Disagree | 6 | 2% | 9 | 2% | 15 | 2% |
| Strongly disagree | 0 | 0% | 2 | 0.4% | 2 | 0.2% |
| Total | 341 | 100% | 537 | 100% | 878 | 100% |

As shown in Table #23, there is no significant difference in this attitude between the baseline and endline survey respondents, overall. However, when comparing the treatment group across both surveys, there is a slight increase in the percentage of respondents who selected "Strongly agree" (66% in the endline vs. 58% in the baseline). In contrast, there is no significant change observed in the control group between the baseline and endline surveys (Table #23).

**Table 23.** Degree to which the children are optimistic about their future. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 58% | 66% |
| Agree | 36% | 29% |
| Undecided | 4% | 3% |
| Disagree | 2% | 2% |
| Strongly disagree | 0% | 0.2% |
| **Total** | **100%** | **100%** |

**Table 24.** Degree to which the children are optimistic about their future. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 55% | 67% |
| Agree | 38% | 28% |
| Undecided | 5% | 3% |
| Disagree | 2% | 2% |
| Strongly disagree | 0% | 0.4% |
| **Total** | **100%** | **100%** |

**Table 25.** Degree to which the children are optimistic about their future. (Control)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 62% | 66% |
| Agree | 33% | 29% |
| Undecided | 4% | 3% |
| Disagree | 1% | 2% |
| Strongly disagree | 0% | 0.4% |
| **Total** | **100%** | **100%** |

As shown in Table 26, the majority of surveyed children emphasized the importance of keeping themselves busy. However, around 8% of the children did not consider staying busy to be important. This highlights an interesting variation in how children perceive the value of staying active and engaged in various activities.

**Table 26.** Degree to which it's important for children to keep busy.

| Responses | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Strongly agree | 113 | 33% | 150 | 28% | 263 | 30% |
| Agree | 168 | 50% | 287 | 54% | 455 | 52% |
| Undecided | 32 | 9% | 56 | 10% | 55 | 10% |
| Disagree | 27 | 8% | 44 | 8% | 71 | 8% |
| Strongly disagree | 1 | 0.3% | 0 | 0% | 1 | 0.1% |
| **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

**Table 27.** Degree to which it's important for children to keep busy. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 24% | 30% |
| Agree | 51% | 52% |
| Undecided | 15% | 10% |
| Disagree | 9% | 8% |
| Strongly disagree | 1% | 0.1% |
| **Total** | **100%** | **100%** |

**Table 28.** Degree to which it's important for children to keep busy. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 22% | 28% |
| Agree | 53% | 54% |
| Undecided | 15% | 10% |
| Disagree | 9% | 8% |
| Strongly disagree | 1% | 0.1% |
| **Total** | **100%** | **100%** |

**Table 29.** Degree to which it's important for children to keep busy. (Control)

| Responses | Baseline Percent | Endline Percent |
|---|---|---|
| Strongly agree | 27% | 28% |
| Agree | 47% | 54% |
| Undecided | 14% | 10% |
| Disagree | 10% | 8% |
| Strongly disagree | 2% | 0.4% |
| **Total** | **100%** | **100%** |

According to the survey, the majority of students (58%) indicated that they would pursue higher education after completing school, with little variation between the treatment and control groups, as shown in Table 30. Additionally, 22.1% of students planned to pursue vocational education, 10% aimed to start their own business, and just over 7.1% intended to seek employment.

**Table 30.** Possible routes children want to follow after finishing school by treatment status.

| Career visions after school graduation | Control Freq | Control Percent | Treatment Freq | Treatment Percent | Total Freq | Total Percent |
|---|---|---|---|---|---|---|
| Higher education | 195 | 57% | 317 | 59% | 512 | 58% |
| Vocational education | 71 | 21% | 125 | 23% | 196 | 22% |
| Gap year | 3 | 1% | 4 | 1% | 7 | 1% |
| Get a job | 24 | 7% | 36 | 7% | 60 | 7% |
| Start my own business | 41 | 12% | 47 | 9% | 88 | 10% |
| Become a herder | 1 | 0.3% | 1 | 0.2% | 2 | 0.2% |
| Start my own family | 2 | 1% | 1 | 0.2% | 3 | 0.3% |
| I am not in secondary school or TVET | 0 | 0% | 2 | 0.4% | 2 | 0.2% |
| Other | 4 | 1% | 4 | 1% | 9 | 1% |
| **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

When comparing this result to the baseline survey, there is a slight increase in the proportion of students choosing higher education after high school, from 50% to 58%. The increase is more notable in the treatment group (from 49% to 59%), while the change is minimal for the control group between the baseline and endline surveys, as shown in Table 31.

**Table 31.** Possible routes children want to follow after finishing school by treatment status. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Higher education | 50% | 58% |
| Vocational education | 25% | 22% |
| Gap year | 1% | 1% |
| Get a job | 12% | 7% |
| Start my own business | 8% | 10% |
| Become a herder | 1% | 0.2% |
| Start my own family | 1% | 0.3% |
| I am not in secondary school or TVET | 0% | 0.2% |
| Other | 1% | 1% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 32.** Possible routes children want to follow after finishing school by treatment status. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Higher education | 49% | 59% |
| Vocational education | 26% | 23% |
| Gap year | 1% | 1% |
| Get a job | 11% | 7% |
| Start my own business | 8% | 9% |
| Become a herder | 2% | 0.2% |
| Start my own family | 1% | 0.2% |
| I am not in secondary school or TVET | 0% | 0.4% |
| Other | 1% | 1% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 33.** Possible routes children want to follow after finishing school by treatment status. (Control)

| Responses | Baseline Percent | Endline Percent |
|---|---|---|
| Higher education | 51% | 57% |
| Vocational education | 23% | 21% |
| Gap year | 1% | 1% |
| Get a job | 12% | 7% |
| Start my own business | 8% | 12% |
| Become a herder | 2% | 0.3% |
| Start my own family | 0% | 1% |
| I am not in secondary school or TVET | 0% | 0% |
| Other | 1% | 1% |
| Unobserved | 2% | 0% |
| **Total** | **100%** | **100%** |

### Self-efficacy and agency

According to the survey, when respondents were asked to rate the statement "Working hard is important in life", 95% agreed or strongly agreed. The responses showed little variation between the treatment and control groups, as shown in Table 34. This highlights the strong value placed on hard work by the majority of respondents in achieving success in life.

**Table 34.** Extent to which children agree that working hard is important in life.

| Responses | Control Freq | Control Percent | Treatment Freq | Treatment Percent | Total Freq | Total Percent |
|---|---|---|---|---|---|---|
| Strongly agree | 214 | 63% | 326 | 61% | 540 | 62% |
| Agree | 110 | 32% | 174 | 32% | 284 | 32% |
| Undecided | 7 | 2% | 17 | 3% | 24 | 3% |
| Disagree | 7 | 2% | 20 | 4% | 27 | 3% |
| Strongly disagree | 3 | 1% | 0 | 0% | 3 | 0.3% |
| **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

However, when comparing these results between the baseline and endline surveys, there was a higher response rate for the endline (62%) compared to the baseline (54%). This suggests an increase in the recognition of the importance of hard work over time.

**Table 35.** Extent to which children agree that working hard is important in life. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 54% | 62% |
| Agree | 41% | 32% |
| Undecided | 4% | 3% |
| Disagree | 1% | 3% |
| Strongly disagree | 0% | 0.3% |
| **Total** | **100%** | **100%** |

**Table 36.** Degree to which it's important for children to keep busy. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 53% | 61% |
| Agree | 42% | 32% |
| Undecided | 4% | 3% |
| Disagree | 1% | 4% |
| Strongly disagree | 0% | 0% |
| **Total** | **100%** | **100%** |

**Table 37.** Degree to which it's important for children to keep busy. (Control)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Strongly agree | 56% | 63% |
| Agree | 38% | 32% |
| Undecided | 4% | 2% |
| Disagree | 2% | 2% |
| Strongly disagree | 0% | 1% |
| **Total** | **100%** | **100%** |

According to the survey, when asked about their views on the prospect of the overall socioeconomic situation improving in 5 years, the highest percentage of respondents (45%) chose the answer "A little better", followed by 31% who selected "Much the same," as shown in Tables 38 and 39, respectively. It is noteworthy that a significant portion of the surveyed children perceive a slight improvement in the socioeconomic situation.

**Table 38.** Extent to which children agree on the overall socioeconomic situation improving.

| Responses | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Much better | 55 | 16% | 76 | 14% | 131 | 15% |
| A little better | 148 | 44% | 251 | 47% | 399 | 45% |
| Much the same | 103 | 30% | 172 | 32% | 275 | 31% |
| A little worse | 31 | 9% | 27 | 5% | 58 | 7% |
| A lot worse | 4 | 1% | 11 | 2% | 15 | 2% |
| **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

**Table 39.** Extent to which children agree on the overall socioeconomic situation improving. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 21% | 15% |
| A little better | 50% | 45% |
| Much the same | 23% | 31% |
| A little worse | 4% | 7% |
| A lot worse | 1% | 2% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 40.** Extent to which children agree on the overall socioeconomic situation improving. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 21% | 14% |
| A little better | 52% | 47% |
| Much the same | 22% | 32% |
| A little worse | 4% | 5% |
| A lot worse | 1% | 2% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 41.** Extent to whch children agree on the overall socioeconomic situation improving. (Control)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 22% | 16% |
| A little better | 47% | 44% |
| Much the same | 24% | 30% |
| A little worse | 5% | 9% |
| A lot worse | 1% | 1% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

According to the survey, when asked whether the socioeconomic situation in their country would improve by the time they reached their parents' age, 61% of the children anticipated that it would be better. In contrast, 33% believed it would remain the same as during their parents' time (Table 42).

The responses from both the control and treatment groups were similar, with a negligible difference in the percentage of children choosing "a lot worse". It is interesting to note that a significant portion of the surveyed children are optimistic about the future socioeconomic situation in their country. When comparing the baseline and endline results, no significant difference was observed in the responses.

**Table 42.** How their socioeconomic situation will compare when they reach their parents' age.

| Visions regarding socioeconomic situation | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| Much better | 54 | 16% | 83 | 16% | 137 | 16% |
| A little better | 155 | 45% | 238 | 44% | 393 | 45% |
| Much the same | 112 | 33% | 177 | 33% | 289 | 33% |
| A little worse | 17 | 5% | 37 | 7% | 54 | 6% |
| A lot worse | 3 | 1% | 2 | 0.4% | 5 | 0.5% |
| **Total** | **341** | **100%** | **1638** | **100%** | **1979** | **100%** |

**Table 43.** How their socioeconomic situation will compare when they reach their parents' age. (Total)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 22% | 16% |
| A little better | 47% | 45% |
| Much the same | 27% | 33% |
| A little worse | 2% | 6% |
| A lot worse | 1% | 0.5% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 44.** How their socioeconomic situation will compare when they reach their parents' age. (Treatment)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 21% | 16% |
| A little better | 47% | 44% |
| Much the same | 28% | 33% |
| A little worse | 2% | 7% |
| A lot worse | 1% | 0.4% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 45.** How their socioeconomic situation will compare when they reach their parents' age. (Control)

| Responses | Baseline | Endline |
|---|---|---|
| | Percent | Percent |
| Much better | 22% | 16% |
| A little better | 48% | 45% |
| Much the same | 25% | 33% |
| A little worse | 3% | 5% |
| A lot worse | 1% | 1% |
| Unobserved | 1% | 0% |
| **Total** | **100%** | **100%** |

**Table 46.** In the long run, hard work leads to a better life.

| Hard work for better life | Control | | Treatment | | Total | |
|---|---|---|---|---|---|---|
| | Freq | Percent | Freq | Percent | Freq | Percent |
| 0 | 0 | 0% | 0 | 0% | 0 | 0% |
| 10 | 0 | 0% | 0 | 0% | 0 | 0% |
| 20 | 1 | 0.3% | 0 | 0% | 1 | 0.1% |
| 30 | 3 | 1% | 2 | 0.4% | 5 | 1% |
| 40 | 1 | 0.3% | 5 | 1% | 6 | 1% |
| 50 | 34 | 10% | 44 | 8% | 78 | 9% |
| 60 | 22 | 6% | 33 | 6% | 55 | 6% |
| 70 | 51 | 15% | 67 | 13% | 118 | 14% |
| 80 | 86 | 25% | 146 | 27% | 232 | 26% |
| 90 | 71 | 21% | 98 | 18% | 169 | 19% |
| 100 | 72 | 21% | 142 | 26% | 214 | 24% |
| **Total** | **341** | **100%** | **537** | **100%** | **878** | **100%** |

According to the survey, all groups—both control and treatment—strongly agreed with the statement, "In the long run, hard work leads to a better life". When asked to rate the statement on a scale from 0 to 100, the mean score for all groups was above 81.5, and the difference between the groups was not statistically significant. It's notable that all groups place high value on the importance of hard work in achieving a better life.

*In this section, we have reviewed the key response results for the Aspired goals and Opportunities, Self-efficacy and Agency indicators and compared the results between the treatment and control groups, as well as between the baseline and endline surveys.*

# Chapter 3.

# ANCHORING VIGNETTES ADJUSTMENT

The inclusion of the Anchoring Vignettes (AVs) technique in the endline survey serves multiple crucial purposes. Primarily, it addresses the inherent limitations and biases associated with traditional self-reporting measures, particularly in assessing social and emotional skills. By presenting respondents with brief descriptions of fictional individuals with systematically varied characteristics, the AVs technique provides a more nuanced and objective approach to evaluating these skills. This mitigates response biases, where respondents might be inclined to select socially desirable or extreme answers, thereby enhancing the reliability and validity of the survey data.

Moreover, the inclusion of AVs in the survey allows for an evaluation of survey engagement and comprehension, ensuring that respondents adequately understand and engage with the survey items. Overall, the incorporation of the AVs technique in the endline survey represents a strategic effort to improve the accuracy, fairness, and robustness of the assessment of social and emotional skills in the study population.

**Pilot Study:** A pilot study was conducted prior to the endline survey to ensure the validity and reliability of the newly developed AVs, which were specifically designed to assess the ESEL target skills and mindsets. This pilot study took place from March 1st to 4th, 2023, involving 350 participants aged 13 to 26 across two non-project aimags (Selenge and Tuv) and four soums (Bornuur and Bayanchandmani soums of Tuv aimag and Bayangol and Mandal soums of Selenge aimag). The pilot survey questionnaire underwent modifications, incorporating three sets of Avs categorized as high, medium, and low for each ESEL skill (self-awareness, social and cultural awareness, creativity and innovation, communication, critical thinking) and mindset (growth and entrepreneurial).

The findings of the pilot study indicated that the AV-corrected scales demonstrated higher reliability compared to the original scales. As a result, the newly developed AV items were incorporated into the endline study assessments. By including these AV items, the aim was to bolster the reliability of self-rated social and emotional skills assessments. Furthermore, the inclusion of AV items sought to mitigate gender biases that may have influenced respondents' self-evaluations. This strategic enhancement in the endline study aimed to achieve more accurate and unbiased measurements of participants' social and emotional skills, contributing to a more comprehensive understanding of the intervention's impact and fostering greater inclusivity and fairness in the assessment process.

**Development of Anchoring Vignette (AV) Items:** Due to time constraints in creating entirely new anchoring vignette items, it was more practical to utilize effective items from existing and freely available tools. In this study, anchoring vignettes were adapted from survey items employed to counteract reference bias in both the OECD's Study on Social and Emotional Skills and the Youth Power Action Youth Soft Skills Assessment tool. Careful selection ensured that the vignettes aligned with the self-rating items from the existing ESEL baseline questionnaire.

The updated assessment featured three anchor vignette items for each social and emotional skill and mindset: a high-level example ("high vignette"), a medium-level example ("medium vignette"), and a low-level example ("low vignette"). These vignettes were strategically designed to mitigate response scale bias across different contexts. Respondents' self-assessments were then compared to their evaluations of hypothetical individuals presented in the vignettes. To prevent response consistency or simplistic heuristics, the order of the vignettes was randomized or presented in a mixed order.

Additionally, self-assessment questions regarding each ESEL skill and mindset were posed before presenting the vignettes to prevent undesirable priming effects.

**Hypothetical Individuals' Names:** To improve respondent understanding, initial common Mongolian names were assigned to hypothetical individuals. However, concerns about gender bias led to a change to gender-neutral identifiers like "Student A, B, and C". Following advice from a WB consultant, AV items were grouped by respondent gender, using common Mongolian male names for male respondents and female names for female respondents. This adjustment aimed to minimize potential biases related to gender perceptions in survey responses.

Reliability of Anchoring Vignettes (AVs): The reliability of the AVs approach was evaluated by measuring Cronbach's Alpha for the internal consistency of the original and AV-corrected scores. Cronbach's Alpha increased significantly from .695 to .950 after the vignette correction, as shown in Table 47. This finding implies that the AVs approach has the potential to substantially improve the reliability of self-reported social and emotional skills.

**Table 47.** Reliability of Anchoring Vignettes (AVs)

| | Cronbach's Alpha for each scale | |
|---|---|---|
| | Original scale (self-ratings) | Corrected scale (AV corrected) |
| ESEL 6 skills, 2 mindsets | .695 | .950 |

# 3.1. Validity of Anchoring Vignettes

Two critical measurement assumptions are essential for determining the validity of the Anchoring Vignettes (AVs):

i.  **Response Consistency:** This assumption posits that the difference in self-ratings should be positively correlated with the difference in respondents' vignette ratings. Essentially, individuals should use the same thresholds when evaluating themselves (self-report) as they do when rating the hypothetical individuals in the vignettes. To investigate this, the correlation between the self-reported ratings and the vignette evaluations must be analyzed. A positive correlation would indicate that the individual applies consistent criteria when answering both types of questions, reinforcing the validity of the AVs method.

ii. **Vignette Equivalency:** This assumption suggests that each participant perceives and ranks the vignettes in the same way, implying that the vignettes are consistent in their representation of skill levels across all participants. To test this, the percentage of order violations within the rank-ordering of the vignettes can be assessed. The "anchor" package for R programming can be used to detect order violations. If order violations exceed 10% of the sample, this would suggest that a significant number of respondents are interpreting the vignettes differently, undermining the validity of the vignette ranking. In addition, finding the means and standard deviations of self-ratings and each of the three vignettes can further assess the vignette equivale ncy assumptions.

**Findings from the Analysis**

- **Vignette Orderings:** The vignette orderings were examined using the R program's "anchor" package. The most common ordering was Vignette 1 < Vignette 2 < Vignette 3, with 876 respondents (81%) rating the vignettes as intended. This suggests that there were no problematic vignettes in terms of the respondents' interpretation of the ranking. This finding supports the assumption of vignette equivalency, meaning that most respondents rated the vignettes in a consistent manner as intended.

- **Vignette Equivalency:** To further assess the equivalency assumption, the means and standard deviations of self-ratings and each of the three vignettes were analyzed, as shown in Table 48. The means of the vignettes demonstrate consistency in ordering: on average, the high vignette was rated higher than the medium vignette, and the medium vignette was rated higher than the low vignette. This consistent ranking of the vignettes supports the assumption of vignette equivalency, suggesting that all respondents understood the variable represented in the vignettes in the same way.

## Summary

The analysis of the vignette orderings and the means and standard deviations for self-ratings and each vignette indicates that both response consistency and vignette equivalency assumptions hold true. The positive correlation between self-reports and vignette ratings, as well as the consistent ranking of the vignettes, confirms that the AVs methodology is valid for assessing social and emotional skills in this study. This adds further robustness to the survey's findings, enhancing the reliability of self-reported data while minimizing potential biases.

**Table 48.** Description statistics of self-ratings and vignette ratings

| ESEL skills and mindset | Self-rating | | Vignette 3 (High) | | Vignette 2 (Medium) | | Vignette 1 (Low) | |
|---|---|---|---|---|---|---|---|---|
| | M | SD | M | SD | M | SD | M | SD |
| Self-awareness | 4.14 | .84 | 4.11 | .86 | 3.03 | 1.07 | 2.31 | 1.00 |
| Social and cultural awareness | 4.11 | .74 | 4.50 | .66 | 2.54 | .98 | 1.69 | .87 |
| Creativity and Innovation | 4.27 | .61 | 4.39 | .65 | 2.50 | .94 | 2.04 | .87 |
| Communication | 3.96 | .87 | 4.25 | .69 | 2.44 | .89 | 1.86 | .81 |
| Teamwork | 4.03 | .63 | 4.28 | .68 | 2.77 | .93 | 2.13 | .89 |
| Critical thinking | 3.96 | .73 | 4.16 | .75 | 3.38 | .95 | 2.35 | .93 |
| Growth mindset | 4.35 | .63 | 4.30 | .63 | 3.15 | 1.08 | 1.93 | 1.04 |
| Entrepreneurial mindset | 3.89 | .87 | 4.12 | .63 | 3.15 | .97 | 2.08 | .91 |

# 3.2. Correcting self-ratings using Anchoring Vignettes

To correct respondents' self-ratings using the Anchoring Vignettes (AVs) method, a simple non-parametric approach was employed. This method adjusts self-reported ratings based on how the respondent rates the hypothetical individuals in the vignettes, aiming to address potential biases in self-assessment. The procedure is guided by a rule known as 2J + 1, where J represents the number of vignettes used. In the context of this survey, three vignettes were used:

- **Vignette 1:** Low level of skill (representing a low degree of the assessed skill or mindset).

- **Vignette 2:** Medium level of skill (representing a moderate degree of the assessed skill or mindset).

- **Vignette 3:** High level of skill (representing a high degree of the assessed skill or mindset).

**Steps for Correcting Self-Ratings**

1. **Self-Rating:** Respondents first rate themselves on the skill or mindset being assessed using a 5-point Likert scale, where they select a response that reflects their own perceived level of skill.

2. **Vignette Rating:** Respondents then rate the three vignettes, each corresponding to different levels of skill (low, medium, and high). The vignettes are also rated on the same 5-point Likert scale.

3. **Rescaling Using Rules:** The respondents' self-ratings are then adjusted or corrected based on the comparison with the vignette ratings. The 2J + 1 rule ensures that each participant's self-rating is aligned with how they rate the vignettes. The final corrected score is computed by using this rescaling method, ensuring that the self-assessment takes into account the respondents' perceptions of others' skills as depicted in the vignettes.

**Table for Corrected Scores**

The adjustment formula and corrected scoring procedure is outlined in Table 49, which provides the specific rules for converting self-ratings into vignette-corrected scores. This rescaling ensures that the final scores are more accurate and less susceptible to bias, as it accounts for how respondents perceive themselves relative to the fictional individuals in the vignettes.

This method of vignette correction helps enhance the reliability of the self-reported data, making it more consistent and reducing the influence of potential biases such as social desirability, extreme responding, or over/underestimation of skills. By utilizing the AVs technique, the study ensures more valid and comparable measurements of social and emotional skills across participants.

**Table 49.** Rules of correcting self-ratings using anchoring vignettes (AVs)

| Relative order ratings | Adjusted scores |
|---|---|
| Self <Vignette 1< Vignette 2< Vignette 3 | 1 |
| Self = Vignette 1< Vignette 2< Vignette 3 | 2 |
| Vignette 1< Self < Vignette 2< Vignette 3 | 3 |
| Vignette 1< Self = Vignette 2< Vignette 3 | 4 |
| Vignette 1< Vignette 2 < Self < Vignette 3 | 5 |
| Vignette 1 < Vignette 2 < Self = Vignette 3 | 6 |
| Vignette 1 < Vignette 2< Vignette 3< Self | 7 |

To validate the AVs method, we assess response consistency, which suggests that respondents use similar standards when rating both themselves and the hypothetical individuals in the vignettes. A positive correlation between self-reports and vignette evaluations indicates that respondents apply consistent thresholds across both tasks.

**Method:**

Self-Report vs. Vignette Ratings: Correlation between self-reported ratings and vignette evaluations is calculated to check if respondents use consistent standards.

**Results:**

Tables 50 and 51 show the positive correlations between self-reports and vignette evaluations. A strong correlation supports the idea that respondents use the same reference points for both self-assessments and vignette evaluations, enhancing data reliability.

A positive correlation confirms that the AVs technique improves the consistency and accuracy of self-reported social and emotional skills assessments.

**Table 50.** Correlation between self-reported and adjusted scores on ESEL skills

| Self-reported score | Adjusted scores | | | | | |
|---|---|---|---|---|---|---|
| | Self-awareness | Social and Cultural awareness | Creativity and innovation | Communication | Teamwork | Critical thinking |
| Self-awareness | .406** | | | | | |
| Social Cultural awareness | | .525** | | | | |
| Creativity and innovation | | | .537** | | | |
| Communication | | | | .592** | | |
| Teamwork | | | | | .472** | |
| Critical thinking | | | | | | .518** |

*Note: *p<0.05; **p<0.01*

**Table 51.** Correlation between self-reported and adjusted scores on ESEL mindsets

| Self-reported score | Adjusted scores | |
|---|---|---|
| | **Growth mindset** | **Entrepreneurial mindset** |
| Growth mindset | .543** | |
| Entrepreneurial mindset | | .651** |

In the baseline assessment, gender-based differences were observed in social and cultural awareness, teamwork, critical thinking, communication skills, and entrepreneurial mindset. However, after adjusting the scores using the AVs, these gender differences were eliminated, with one exception: female students still scored higher in social and cultural awareness, reflecting greater empathy, respect, and ability to understand different perspectives.

The use of AVs effectively corrected gender-related biases in self-reported scores. As shown in Table 52, AVs neutralized the initial discrepancies in how male and female students evaluated their skills in self-awareness, creativity, and communication, ensuring a more accurate and unbiased assessment of ESEL skills and mindsets.

**Table 52.** Self-reported and AV adjusted scores by gender

| ESEL skills and mindset | Self-reported score | | | | | AV adjusted score | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | P value | Male | | Female | | P value |
| | Mean | St. Deviation | Mean | St. Deviation | | Mean | St. Deviation | Mean | St. Deviation | |
| Self-awareness | 2.84 | .50 | 2.85 | .49 | .388 | 6.01 | .73 | 6.00 | .74 | .427 |
| Social and cultural awareness | 3.05 | .43 | 3.18 | .43 | .001 | 5.62 | .63 | 5.74 | .64 | .005 |
| Creativity and Innovation | 2.89 | .48 | 2.91 | .44 | .189 | 5.90 | .65 | 5.87 | .65 | .250 |
| Communication | 2.88 | .47 | 2.92 | .45 | .062 | 5.77 | .64 | 5.83 | .63 | .089 |
| Teamwork | 2.99 | .48 | 3.08 | .47 | .005 | 5.78 | .63 | 5.79 | .58 | .400 |
| Critical thinking | 2.91 | .49 | 3.01 | .45 | .001 | 5.80 | .66 | 5.83 | .67 | .256 |
| Growth mindset | 3.16 | .44 | 3.20 | .41 | .148 | 6.02 | .68 | 6.04 | .61 | .393 |
| Entrepreneurial mindset | 3.22 | .43 | 3.27 | .41 | .050 | 5.91 | .63 | 5.85 | .62 | .097 |

There were significant statistical differences in self-awareness, communication skills, and entrepreneurial mindset scores based on school type, with secondary school students rating themselves higher than those from LLEC and TVET institutions. However, after adjusting these self-reported scores using AVs, these differences disappeared.

The AVs correction removed the statistical differences in these skills and mindsets across secondary school, LLEC, and TVET students, as shown in Table 53. This demonstrates the effectiveness of AVs in neutralizing initial disparities in how students from different educational backgrounds assessed their own proficiency in self-awareness, communication, and entrepreneurial mindset.

**Table 53. AV-corrected scores by school type**

| AV corrected score | Secondary School | | TVET | | LLEC | | P value |
|---|---|---|---|---|---|---|---|
| | Mean | St. Deviation | Mean | St. Deviation | Mean | St. Deviation | |
| Self-awareness | 6.00 | 1.85 | 5.91 | .66 | 5.50 | .70 | .568 |
| Social and cultural awareness | 5.69 | .63 | 5.91 | .51 | 6.00 | 1.41 | .379 |
| Creativity and Innovation | 5.88 | .65 | 6.00 | .73 | 5.87 | .70 | .353 |
| Communication | 5.81 | .63 | 5.91 | .79 | 5.92 | .70 | .271 |
| Teamwork | 5.78 | .60 | 6.08 | .79 | 6.00 | 1.41 | .212 |
| Critical thinking | 5.82 | .66 | 5.91 | .66 | 6.1 | .70 | .317 |
| Growth mindset | 6.03 | .63 | 6.08 | .90 | 6.2 | .70 | .573 |
| Entrepreneurial mindset | 5.87 | .62 | 6.25 | .62 | 6.12 | .71 | .043 |

There were no statistical differences in any baseline ESEL scores based on the presence of a male caregiver. However, after adjusting the self-reported scores with AVs, statistical differences emerged in skills like self-awareness, teamwork, and critical thinking between students with and without a male caregiver. Students with a male caregiver tended to rate themselves higher in these areas, as shown in Table 54.

Additionally, the education level of the father or male caregiver showed a statistical difference only in teamwork skills. Specifically, students whose fathers or male caregivers had no education rated their teamwork skills the lowest. The father's or male caregiver's occupation did not show any statistical differences in ESEL skills and mindsets.

**Table 54. AV-corrected scores by presence of male caregiver**

| AV-corrected score | Presence of male caregiver | | Absence of male caregiver | | P value |
|---|---|---|---|---|---|
| | Mean | St. Deviation | Mean | St. Deviation | |
| Self-awareness | 6.01 | .73 | 5.90 | .68 | .038 |
| Social and cultural awareness | 5.69 | .64 | 5.66 | .56 | .173 |
| Creativity and Innovation | 5.89 | .69 | 5.82 | .67 | .494 |
| Communication | 5.81 | .63 | 5.82 | .63 | .176 |
| Teamwork | 5.98 | .60 | 5.83 | .65 | .030 |
| Critical thinking | 5.92 | .66 | 5.79 | .69 | .017 |
| Growth mindset | 6.04 | .63 | 6.03 | .68 | .498 |
| Entrepreneurial mindset | 5.97 | .63 | 5.88 | .58 | .357 |

Similarly, there were no statistical differences in any ESEL scores based on the presence of a female caregiver when using only the self-reported baseline items. However, after adjusting for AVs, statistical differences emerged in skills such as social and cultural awareness and critical thinking between students with and without a female caregiver. Post-adjustment, it was evident that students with a female caregiver rated themselves higher in these specific skills, as shown in Table 55.

**Table 55. AV-corrected scores by presence of female caregiver**

| AV-corrected score | Presence of female caregiver | | Absence of female caregiver | | P value |
|---|---|---|---|---|---|
| | Mean | St. Deviation | Mean | St. Deviation | |
| Social and cultural awareness | 5.69 | .64 | 5.11 | .50 | .029 |
| Critical thinking | 5.82 | .66 | 5.59 | .72 | .047 |

As shown in Table 56, there was no statistical difference in ESEL skills and mindsets between the control and treatment groups when assessed using self-reported baseline items. However, after applying the AVs correction, the treatment group demonstrated statistically significant improvements in social and cultural awareness, teamwork, and critical thinking skills compared to the control group. This suggests that the intervention positively impacted these key skill areas, with participants in the treatment group showing better problem-solving, analysis, and decision-making abilities.

**Table 56.** AV-corrected scores by treatment and control group

| AV corrected score | Secondary school | | TVET | | LLEC | | P value |
|---|---|---|---|---|---|---|---|
| | Mean | St. Deviation | Mean | St. Deviation | Mean | St. Deviation | |
| Self-awareness | 6.00 | 1.85 | 5.91 | .66 | 5.50 | .70 | .568 |
| Social and cultural awareness | 5.69 | .63 | 5.91 | .51 | 6.00 | 1.41 | .379 |
| Creativity and Innovation | 5.88 | .65 | 6.00 | .73 | 5.87 | .70 | .353 |
| Communication | 5.81 | .63 | 5.91 | .79 | 5.92 | .70 | .271 |
| Teamwork | 5.78 | .60 | 6.08 | .79 | 6.00 | 1.41 | .212 |
| Critical thinking | 5.82 | .66 | 5.91 | .66 | 6.1 | .70 | .317 |
| Growth mindset | 6.03 | .63 | 6.08 | .90 | 6.2 | .70 | .573 |
| Entrepreneurial mindset | 5.87 | .62 | 6.25 | .62 | 6.12 | .71 | .043 |

In conclusion, the analysis of AV-corrected scores reveals several key insights into the assessment of ESEL skills and mindsets. The consistency in vignette orderings supports vignette equivalency, ensuring reliable comparisons across scenarios. Gender-based differences in social and cultural awareness, teamwork, critical thinking, communication skills, and entrepreneurial mindset were observed in baseline assessments. However, AVs correction mitigated these biases, with female students scoring higher in social and cultural awareness, demonstrating their enhanced empathy and respect for others.

The type of school initially showed statistical differences in self-awareness, communication skills, and entrepreneurial mindset, with secondary school students rating themselves higher than those from LLEC and TVET institutions. AVs correction eliminated these differences, demonstrating the tool's value in ensuring fair assessments across different educational backgrounds.

The presence of a male caregiver did not reveal baseline differences in ESEL scores, but the AVs correction showed significant variations in self-awareness, teamwork, and critical thinking, with students having a male caregiver rating themselves higher. The education level of the father or male caregiver affected teamwork skills, with the lowest scores found among students whose fathers had no education. The occupation of the male caregiver had no impact on ESEL skills. For female caregivers, no differences were found in baseline assessments, but AV-corrected scores revealed higher ratings in social and cultural awareness and critical thinking for students with a female caregiver.

Finally, while no overall differences were noted between control and treatment groups in self-reported baseline items, the treatment group showed significant improvements in social and cultural awareness, teamwork, and critical thinking. This highlights the positive impact of the intervention on these crucial skills, enhancing problem-solving, analysis, and decision-making abilities. Overall, these findings underscore the importance of AVs correction in providing accurate, unbiased assessments of ESEL skills and mindsets, ensuring fair evaluations across various demographics and educational contexts.

*In this section, we reviewed the purpose and importance of the AVs Adjustment to the responses, shared some interesting observations of the analysis and established adjustment techniques for our survey responses.*

# 3.3. Descriptive statistics

### Sample structure

To enhance the analysis, we focused on a subset of the cohort that was surveyed in both the baseline and endline surveys. Additionally, responses from this cohort were adjusted using the Anchoring Vignettes (AVs) methodology.

The survey included 785 respondents of ages ranging from 13 to 19 years (average age = 15.7). Of the total sample, 39.4% (309) were male, and 60.6% (476) were female.

**Figure 3.** Participants' age



| Percent | 3 | 106 | 302 | 184 | 128 | 59 | 3 |
| Obs | 3 | 106 | 302 | 184 | 128 | 59 | 3 |
| Age | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
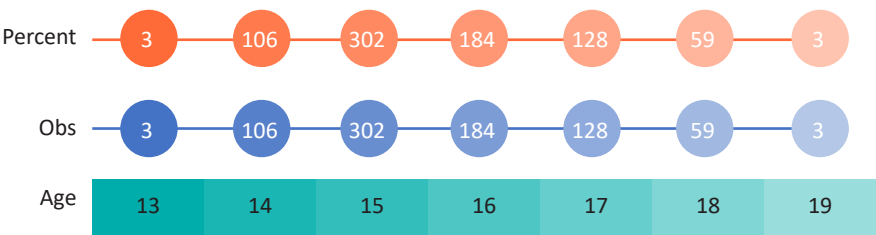
Seventy-six percent of the respondents were aged between 13 and 16 years. The youngest respondent was 13 years old, while the oldest was 19 years old. The median age of the respondents was 15 years.

**Figure 4.** Participants' living location



| Percent | 3.4 | .8 | 68.2 | 11.5 | 1.9 | .3 | 14.0 |
| Obs | 27 | 6 | 535 | 90 | 15 | 2 | 110 |
| Living location | Aimag center (at my home) | Aimag center (at host family) | Soum center (at my home) | Soum center (at host family) | Countryside (at my home) | Countryside (at host family) | Dormitory |
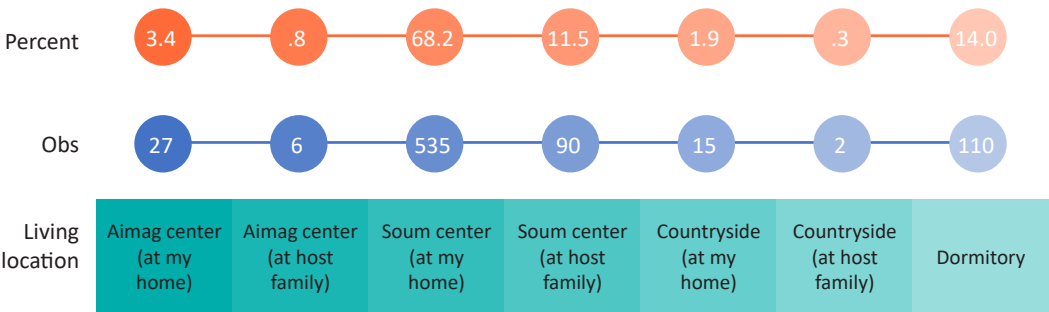
79.7%, the majority of the respondents, were either living at home in the soum center or staying with a different family within the soum center. Additionally, 56.1% of the children lived with both parents.

**Figure 5.** Administrative identity of the respondents
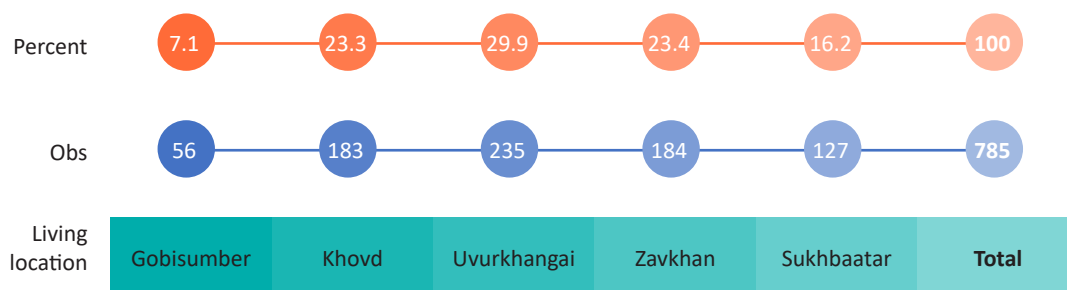


The survey had a large number of participants from Gobisumber, Uvurkhangai, Zavkhan, Khovd, and Sukhbaatar aimags.

**Table 57.** Provinces and groups

| Groups | Aimags | | | | | Total |
|---|---|---|---|---|---|---|
| | Gobisumber | Khovd | Uvurkhangai | Zavkhan | Sukhbaatar | |
| Control | 25 (7.9%) | 76 (24.1%) | 92 (29.1%) | 71 (22.5%) | 52 (16.5%) | **316** |
| Treatment | 31(6.6%) | 183 (23.3%) | 235 (29.9%) | 184 (23.4%) | 127 (16.2%) | **467** |

**Table 58.** Training status and provinces

| Groups | Aimags | | | | | Total |
|---|---|---|---|---|---|---|
| | Gobisumber | Khovd | Uvurkhangai | Zavkhan | Sukhbaatar | |
| Attended ESEL training | 30 (6.1%) | 126 (25.9%) | 146 (29.6%) | 112 (22.7%) | 79 (16%) | **493** |
| Not attended ESEL training | 26 (8.9%) | 57 (19.5%) | 89 (30.5%) | 72 (24.7%) | 48 (16.4%) | **292** |

**Table 59.** Parents' education, by percent

| Education | Father's education | | Mother's education | |
|---|---|---|---|---|
| | Obs | Percent | Obs | Percent |
| Primary school (Graduated 4th/5th grade) | 134 | 19.0 | 101 | 13.1 |
| Incomplete secondary school (Graduated 8th/9th grade) | 152 | 21.5 | 131 | 17.0 |
| Complete secondary school (Graduated 10th -12th grade) | 290 | 41.0 | 341 | 44.2 |
| Vocational training | 6 | .8 | 10 | 1.3 |
| College | 7 | 1.0 | 17 | 2.2 |
| University | 57 | 8.1 | 105 | 13.6 |
| Other (e.g., LLEC) | 1 | .1 | 13 | 1.7 |
| No education | 10 | 1.4 | 54 | 7.0 |
| I do not know | 50 | 7.1 | 101 | 13.1 |

*In this section, we reviewed descriptive statistics of the revised data which was already adjusted by the AVs analysis ready for inferential data analysis.*

# 3.4. Robustness checks (Reliability tests, Factor analysis and Principal component analysis)

**Cronbach Alfa test results**

**Table 60.** Cronbach Alfa reliability statistics

| | Reliability statistics (Cronbach's Alpha) |
|---|---|
| Knowledge of individual skills based on Entrepreneurship | 0.625 |
| ESEL skill and mindset | 0.895 |
| Life Aspiration | 0.428 |

As these statistical analysis results show, we can conclude that the quantitative data from the survey on individual skills related to Entrepreneurship, ESEL skills, and mindsets meet the reliability criteria. However, it was found that the questions or answers in the Life Aspiration questionnaire were not easily comprehensible to the study participants.

**Factor Analysis and Principal Component Analysis**

**Table 61.** Factor analysis

| | KMO and Bartlet's Test |
|---|---|
| Knowledge of individual skills based on Entrepreneurship | .407 (Sig.= 000) |
| ESEL skill and mindset | .922 (Sig.= 000) |
| Life Aspiration | .629 (Sig.= 000) |

*The Results of the Factor Analysis (FA) on the Knowledge of individual skills based on Entrepreneurship questionnaire*

We used Principal Component Analysis (PCA) for factor analysis to examine whether the questions on Entrepreneurship fundamentals could be grouped into one. The analysis results suggest that the questions are grouped into 11 clusters, which together account for 61% of the initial quantitative data, a sufficient proportion for reliable analysis.

**Table 62.** Entrepreneur fundamentals

| Entrepreneurship fundamentals (Q&A) | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Who is an entrepreneur?** | Delivering a quality food service at an affordable price | | 0.577 | | | | 0.679 | | | | | |
| Which of the following are creating a value for the community? (Select all that are correct) | Reducing opening hours of a shop | | | | | | | | | | 0.682 | |
| | Increasing a number of drink choices at a coffee shop | | | | | | | | | | | |
| | Making more friends | | | | | | | | | | | |
| | Increasing the ease of use of a product or a service | | | | | | -0.87 | | | | | |
| What are the characteristics of a successful entrepreneur? (Select all that are correct) | Motivated | 0.692 | | | | | | | | | | |
| | Takes very little risk | | | | | | | | | 0.633 | | |
| | Passionate | | | | | | | 0.825 | | | | |
| | Dedicated | | | | | | | -0.73 | | | | |
| | Raise fund | 0.657 | | | | | | | | | | |
| What are the roles of an entrepreneur? (Select all that are correct) | Organize and implement production | | | -0.57 | | | | | | | | |
| | Create new job opportunities | | | | | | | | | | | 0.77 |
| | Avoid market competitions | | | | | | | | | 0.716 | | |
| | Accept to make an unethical decision to reach goals | | | 0.504 | | | | | | | | |
| **What type of business does this image represent?** | | | | | | | | | | | -0.53 | |
| | Not being able to get a permission to open a café | | | | | 0.813 | | | | | | |
| Which of the following are risks to your business? (Select all that are correct) | Shortage of cotton to sew a bag | | | | 0.643 | | | | | | | |
| | Increased number of clients | | | 0.653 | | | | | | | | |
| | A need to open another branch for my shop | | | | | | | | 0.887 | | | |
| | Don't know | | | | 0.569 | | | | | | | |
| Who is your competitor if you are a restaurant owner? | | | | | | | | | | | | |

# Table 63. Entrepreneur fundamentals component

| Component | Who is an entrepreneur? | Which of the following are creating a value for the community? (Select all that are correct) | | | What are the characteristics of a successful entrepreneur? (Select all that are correct) | | | | What are the roles of an entrepreneur? (Select all that are correct) | | | | | What type of business does this image represent? | Which of the following are risks to your business? (Select all that are correct) | | | | Who is your competitor if you are a restaurant owner? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Delivering a quality food service at an affordable price | Reducing opening hours of a shop | Increasing the ease of use of a product or a service | Motivated | Takes very little risk | Passionate | Dedicated | Raise fund | Organize and implement production | Create new job opportunities | Avoid market competitions | Accept to make an unethical decision to reach goals | | Not being able to get a permission to open a café | Shortage of cotton to sew a bag | Increased number of clients | A need to open another branch for my shop | |
| 1 | | | | | ■ | | | | ■ | | | | | | | | | | |
| 2 | ■ | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | negative relations | | | ■ | | | | ■ | | |
| 4 | | | | | | | | | | | | | | | | ■ | | | ■ |
| 5 | | | | | | | | | | | | | | | ■ | | | | |
| 6 | | ■ | | negative relations | | | | | | | | | | | | | | | |
| 7 | | | | | | | ■ | negative relations | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | ■ | |
| 9 | | | | | | ■ | | | | | | ■ | | | | | | | |
| 10 | | | ■ | | | | | | | | | | | ■ | | | | | |
| 11 | | | | | | | | | | | ■ | | | | | | | | |

**Figure 6.** Scree Plot, Rotated Component Matrix (Entrepreneurship fundamentals)
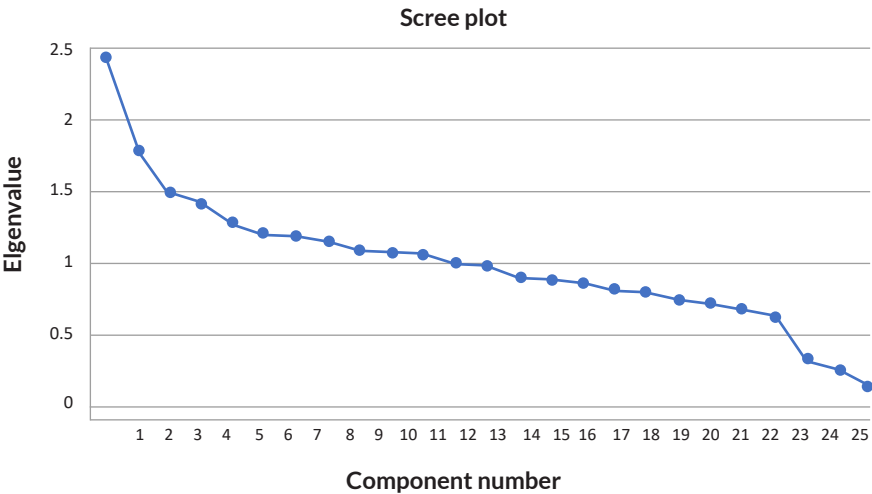


The results show that questions related to entrepreneurs' motivation and fundraising can be grouped together, while questions on making unethical decisions to achieve goals and increase client numbers form a separate group. This indicates a weak correlation between these questions, suggesting they did not fully meet the objective of clarifying a single concept.

For Business Planning and Financial Literacy, we used PCA to examine whether the questions could be grouped into one. The analysis results indicate that the questions are divided into 4 groups, which together account for 58% of the raw data, enough for reliable analysis.

**Figure 7.** Scree Plot, Rotated Component Matrix (Entrepreneurship fundamentals)
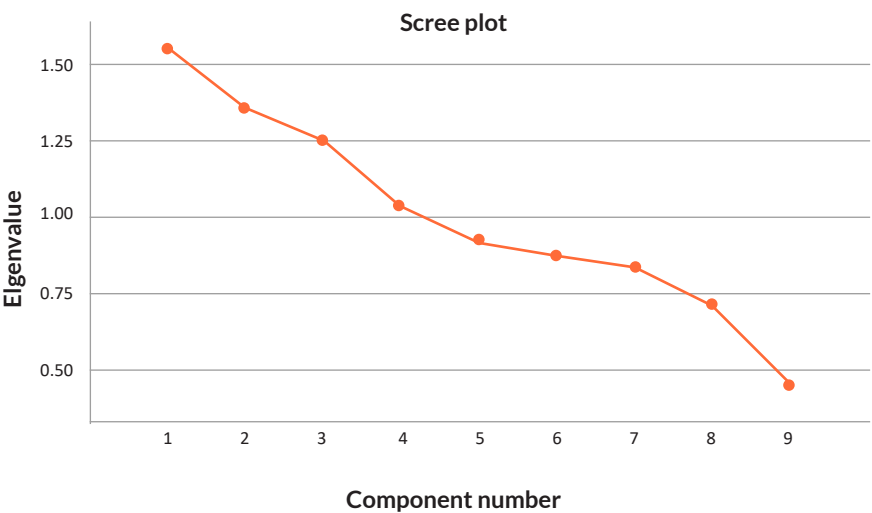
**Table 64.** Business planning and Financial literacy

| Business planning and financial literacy | | Component | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| What is a business plan? | | .517 | | | |
| Why do you need a business plan? | | .705 | | | |
| What must be included in a business plan document? | | .714 | | | |
| What are the benefits of keeping accurate financial records of business activities? (Select all that are correct) | Calculate profit/loss correctly | | .839 | | |
| | Estimate employee pay | | | .697 | |
| | Purchase new equipment | | | .778 | |
| | Sell more products | | | | .836 |

The results show that the initial three questions related to the benefits of keeping accurate financial records, calculating employee salaries, and affording new equipment are grouped together. This indicates that these questions are sufficiently compatible and align with the intended objective.

For Mobilizing Resources, Implementing Plans, and Digital Literacy, the PCA was conducted to verify if the questions could be grouped into one. The results indicate that these questions fit into 4 distinct groups, which together account for 61% of the raw data, a satisfactory level for reliable analysis.

**Figure 8.** Scree Plot, Rotated Component Matrix (Mobilizing resources, Implementing plans and Digital literacy)
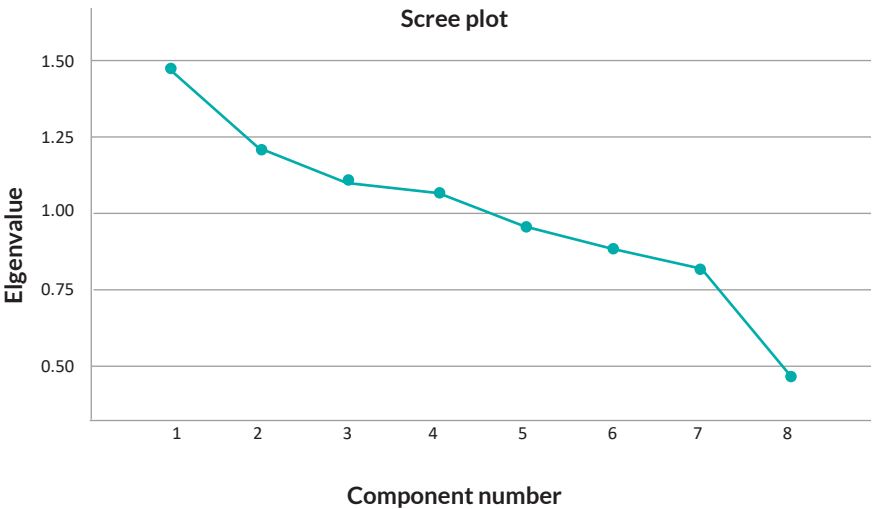
**Table 65.** Mobilizing resources, Implementing plans and Digital literacy component

| Mobilizing resources, implementing plans and digital literacy | | Component | | | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 |
| Which of the following are the resources needed for running a food canteen? | | | | | .614 |
| Which of the following are effective ways to explore the unmet needs of a community? | | | | .745 | |
| What is the most appropriate software program for cost estimation? | | | | .681 | |
| What are the benefits of using social media such as Facebook, Instagram or Tik Tok for your business? (Select all that are correct) | To promote one's business | -.737 | | | |
| | To watch funny videos | | | | .743 |
| | To reduce costs for marketing | | | .756 | |
| | To calculate my profit | | | .592 | |

These results indicate that the questions are collected into two main groups, with one item showing a negative correlation. Despite this exception, the linkage between the questions in each group is significantly sufficient, suggesting that the overall structure of the questions is robust and reliable for the intended analysis.

**Factor Analysis results of the ESEL skill and mindset questions**

The factor analysis of the ESEL skill and mindset questionnaire, which is divided into 8 parts, showed that each section accounted for more than 30% of the raw data, meeting the acceptable threshold for regression analysis in the context of social problems. Each section of the questionnaire formed a distinct group, indicating strong internal consistency and agreement within each set of questions. This suggests that the survey participants were able to comprehend and respond to the questions in a way that accurately reflected the intended meaning of each section. As a result, it can be concluded that the ESEL skill and mindset questionnaire successfully gathered reliable quantitative data aligned with its objectives.

**Table 66.** Principal Component Analysis (PCA) results

| ESEL skills and mindset | Extraction Sums of Squared Loadings (Cumulative %) | Component | Extraction Method: Principal Component Analysis |
|---|---|---|---|
| Self-awareness | 30.6 | 1 | 0.536 |
| Social and cultural awareness | 32.2 | 1 | 0.565 |
| Creativity and innovation | 36.7 | 1 | 0.605 |
| Communication | 31.2 | 1 | 0.556 |
| Teamwork | 37.2 | 1 | 0.606 |
| Critical thinking | 38.1 | 1 | 0.608 |
| Growth mindset | 32.9 | 1 | 0.573 |
| Entrepreneurial mindset | 34.9 | 1 | 0.589 |

**The results of the Factor analysis on Life Aspiration**

The results of the Factor Analysis (FA) on Life Aspiration indicate that most of the questions can be grouped together into one cluster, apart from the 2nd and 6th questions on Aspired Goals and Opportunities. These two questions did not align as strongly with the others. The average correlation among the questions is 0.539, indicating a moderate level of consistency within the group. However, question 1 exhibited a negative correlation, which suggests it may not be as well-aligned with the others.

For the Self-efficacy and agency questions, they were successfully grouped into one category, with an average correlation of 0.575. This shows relatively good consistency and coherence among the items in this section, indicating that the participants' responses were consistent across these questions.

**Table 67.** Results of the Factor Analysis on life aspiration

|  | Extraction Sums of Squared Loadings (Cumulative %) | Component | Extraction Method: Principal Component Analysis |
|---|---|---|---|
| Aspired goals and Opportunities (Questions 3,4,5 are grouped into one) | 20.4 | 1 | 0.539 |
| Self-efficacy and agency | 34.9 | 1 | 0.575 |

**Statistical analysis results on the Reliability: Conclusion**

The statistical analysis results, including Cronbach Alpha and Principal Component Analysis (PCA), indicate that the reliability of quantitative data from the ESEL skill and mindset questionnaire is relatively strong. Additionally, the reliability of the quantitative data concerning Knowledge of Individual Skills based on Entrepreneurship and Life Aspiration can be considered satisfactory. These points suggest that the survey effectively captures the intended constructs and provides reliable data for further analysis.

*This section describes the robustness checks including data reliability test through Cronbach-Alpha, Factor Analysis (FA) and Principal Component Analysis (PCA), and reports the results.*

## Chapter 4.

# COMPARATIVE ANALYSIS

## 4.1. Comparisons of Baseline and Endline results

The analysis involved 316 respondents from the control group and 467 respondents from the treatment group. To ensure a fair comparison, a re-sampling process was applied to the treatment group by deducting every third person, resulting in 316 respondents, matching the control group size. The baseline and endline survey results were then analyzed accordingly.

**ESEL knowledge results**

Statistical analysis revealed a significant difference in ESEL knowledge between the baseline and endline surveys, with a notable increase in ESEL knowledge after the training ($U = -21.53$; $p < 0.01$). Since the ESEL knowledge distribution was not normal ($p < 0.000$), a Mann-Whitney U non-parametric test was conducted to assess the differences. The results suggest that the training had a significant positive impact on ESEL knowledge.

**Table 68.** Comparison between baseline and endline results (ESEL knowledge)

| ESEL knowledge | Croups | Mean | Mann-Whitney U | P value |
|---|---|---|---|---|
| Entrepreneurship fundamentals | Baseline | 2.22 | -21.532 | 0.000 |
| | Endline | 6.88 | | |
| Business planning and financial literacy | Baseline | 1.77 | -17.448 | 0.000 |
| | Endline | 3.17 | | |
| Mobilizing resources, implementing plans and digital tools | Baseline | 0.91 | -15.318 | 0.000 |
| | Endline | 1.99 | | |
| ESEL knowledge | Baseline | 4.90 | -21.535 | 0.000 |
| | Endline | 12.04 | | |

The baseline and endline results on ESEL knowledge were compared based on gender, shown in the following graph.

**Figure 9.** ESEL knowledge average score, by gender
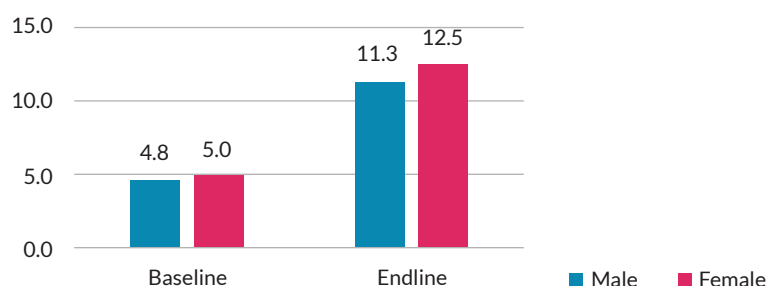


The endline survey results indicate a statistically significant difference in ESEL knowledge between female and male respondents. Female respondents had a higher mean score (M = 12.5) compared to male respondents (M = 11.3), with a p-value of 0.000, suggesting that gender plays a role in the acquisition of ESEL knowledge, with females outperforming males.

**Figure 10.** ESEL knowledge average score, by age
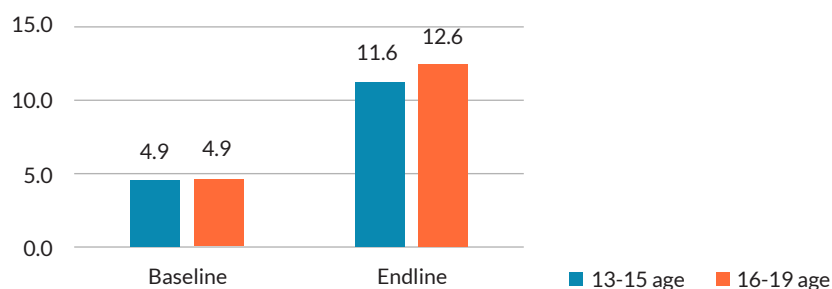
The endline results show a significant difference in ESEL knowledge between the two age groups. Participants aged 16-19 (M = 12.6) scored higher in ESEL knowledge compared to those aged 13-15 (M = 11.6), with a p-value of 0.001. Interestingly, no such difference was observed in the baseline results, suggesting that older participants gained more from the training.

### ESEL Skill and mindset results

The results for ESEL skills and mindset show significant improvement after the ESEL training. A comparison of baseline and endline results indicates that, overall, participants' ESEL skills and mindsets improved (U = -2.419; p < 0.05). Since the dispersion of ESEL knowledge was not normal (p < 0.000), Mann-Whitney U non-parametric analysis was used.

Further analysis by individual indicators reveals significant improvements in participants' social and cultural awareness, creativity and innovation, and communication skills following the training. This suggests that the ESEL training had a positive impact on these specific areas of development.

**Table 69.** Comparison between baseline and endline results (ESEL Skill and mindset)

| ESEL skills and mindset | Groups | Mean | Mann-Whitney U | P value |
|---|---|---|---|---|
| Self-awareness | Baseline | 2.09 | -.014 | 0.989 |
| | Endline | 2.11 | | |
| Social and cultural awareness | Baseline | 1.97 | -4.784 | 0.000 |
| | Endline | 1.86 | | |
| Creativity and innovation | Baseline | 2.13 | -2.629 | 0.009 |
| | Endline | 2.08 | | |
| Communication | Baseline | 2.18 | -4.493 | 0.000 |
| | Endline | 2.09 | | |
| Teamwork | Baseline | 1.94 | -.797 | 0.425 |
| | Endline | 1.95 | | |
| Critical thinking | Baseline | 1.98 | -.781 | 0.435 |
| | Endline | 2.01 | | |
| Growth mindset | Baseline | 1.77 | -.257 | 0.797 |
| | Endline | 1.79 | | |
| Entrepreneurial mindset | Baseline | 1.69 | -.024 | 0.981 |
| | Endline | 1.72 | | |
| ESEL Skill and mindset | Baseline | 3.67 | -2.419 | 0.016 |
| | Endline | 1.95 | | |

**Figure 11.** ESEL Skills and mindset, by gender
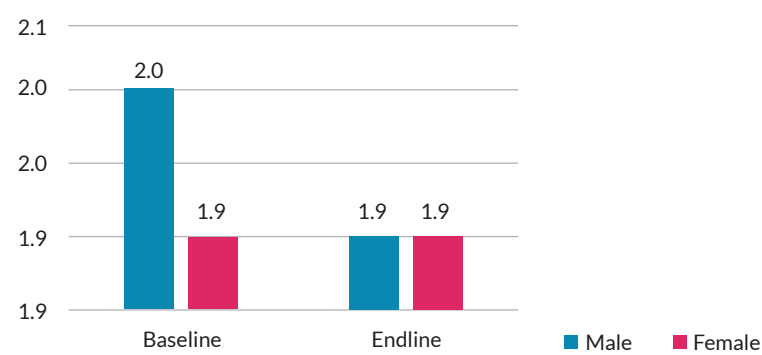


According to the baseline results, female participants had higher ESEL skills and mindset scores (M = 1.9) compared to male participants (M = 2.0), with a significant difference (p = 0.006). However, after attending the training, there was no longer a significant difference between male and female participants in terms of ESEL skills and mindset. Additionally, there was no significant difference observed between the age groups in the endline results.

**Life aspiration results**

The statistical analysis of the Life Aspiration results for the treatment group shows significant improvement before and after attending the training. Specifically, there was an improvement in Life Aspiration scores after completing the training (U = -6.721; p < 0.001; Mbaseline = 1.9, Mendline = 1.7).

Additionally, when analyzing each of the Life Aspiration indicators, there was a notable increase in Aspired Goals and Opportunities, indicating that participants view their future goals and opportunities more optimistically after the training.

**Table 70.** Comparison between baseline and endline results (Life Aspiration)

| ESEL knowledge | Croups | Mean | Mann-Whitney U | P value |
|---|---|---|---|---|
| Aspired goals and Opportunities | Baseline | 1.9 | -15.489 | 0.000 |
| | Endline | 1.5 | | |
| Self efficacy and agency | Baseline | 1.8 | -4.889 | 0.000 |
| | Endline | 1.9 | | |
| Life aspiration | Baseline | 1.9 | -6.721 | 0.000 |
| | Endline | 1.7 | | |

**Figure 12.** Life aspiration, by gender
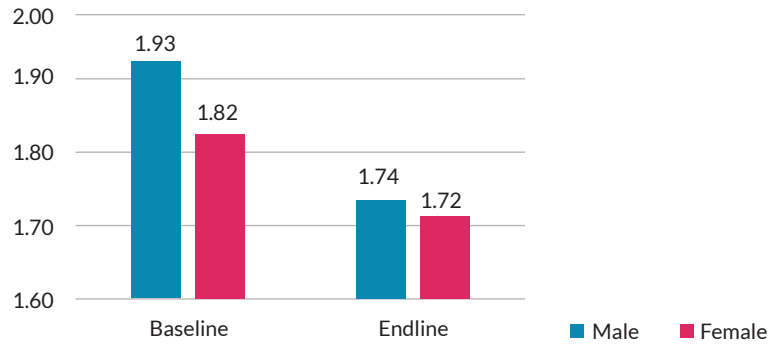


The baseline results show that female participants scored higher on Life Aspiration (M = 1.8) compared to male participants (M = 1.9) (p = 0.001). However, after attending the training, there was an overall improvement in Life Aspiration scores, and the gender-based difference disappeared, indicating that both male and female participants benefitted equally from the training.

# 4.2. Analysis of ESEL skills using self-ratings from AVs score

The statistical analysis using AVs adjustment revealed the following differences between the treatment and control groups in ESEL Skills and Mindsets:

- **Social and Cultural Awareness:** Participants in the treatment group performed significantly better than those in the control group (U = 45120; p = 0.027; M_treatment = 3.0, M_control = 3.2).

- **Communication:** Similarly, treatment group participants outperformed control group participants (U = 44816; p = 0.017; M_treatment = 2.9, M_control = 3.1).

- **Growth Mindset:** While the treatment group showed a better score than the control group, the difference was close to being statistically significant (U = 46221; p = 0.092; M_treatment = 2.8, M_control = 2.9).

- **Critical Thinking:** Surprisingly, the control group performed better than the treatment group (U = 45979; p = 0.073; M_treatment = 2.5, M_control = 2.3).

Note that the ESEL Skill and Mindset indicators are measured on a reverse scale, meaning that lower scores reflect better performance in the respective skills.

**Table 71.** ESEL Skills and Mindset AV adjusted score results, by group

| ESEL skills and mindset | Groups | Mean | Mann-Whitney U | P value |
|---|---|---|---|---|
| Self-awareness | Control | 2.7 | 47829 | 0.342 |
| | Treatment | 2.8 | | |
| Social and cultural awareness | Control | 3.2 | 45190 | 0.027 |
| | Treatment | 3.0 | | |
| Creativity and innovation | Control | 3.1 | 49228.5 | 0.742 |
| | Treatment | 3.1 | | |
| Communication | Control | 3.1 | 44816 | 0.017 |
| | Treatment | 2.9 | | |
| Teamwork | Control | 2.5 | 48821.5 | 0.595 |
| | Treatment | 2.5 | | |
| Critical thinking | Control | 2.3 | 45979 | 0.073 |
| | Treatment | 2.5 | | |
| Growth mindset | Control | 2.9 | 46221 | 0.092 |
| | Treatment | 2.8 | | |
| Entrepreneurial mindset | Control | 2.5 | 47248 | 0.225 |
| | Treatment | 2.6 | | |

**Figure 13.** Communication skills and Critical thinking, by gender
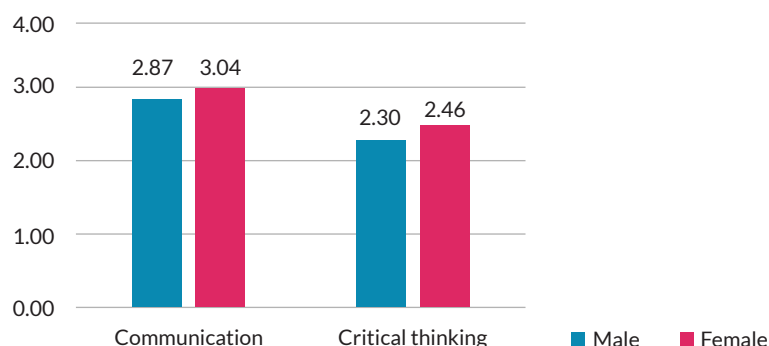


The statistical analysis on the AV-adjusted scores for **Communication and Critical Thinking** revealed the following gender differences:

- **Communication**: Male participants showed better communication skills than female participants ($U = 43721$; $p = 0.041$; $M\_male = 2.87$, $M\_female = 3.04$).

- **Critical Thinking:** Similarly, male participants outperformed female participants in critical thinking skills ($U = 43632$; $p = 0.043$; $M\_male = 2.3$, $M\_female = 2.46$).

These findings suggest that, after adjusting for self-reported scores using AVs, male participants scored higher than female participants in both communication and critical thinking skills.

**Summary**

The comparison between the treatment groups' baseline and endline results demonstrates significant improvements in ESEL knowledge and skills, as well as an optimistic view of life goals and opportunities.

- In terms of **ESEL knowledge,** female participants and those aged 16-19 showed higher levels of knowledge.

- For **Life Aspiration** and **ESEL skills,** there was an initial gender difference in the baseline survey. However, following the training, these differences were reduced, and overall skill levels and life goal indicators showed improvement across all groups.

Furthermore, when analyzing **ESEL skills** using the AV-adjusted scores, treatment group participants outperformed the control group in **Social and Cultural Awareness, Communication, and Growth Mindset.**

These findings highlight the effectiveness of the training in enhancing key skills and shifting participants' perspectives on life goals, with notable improvements across multiple indicators.

*The above section describes the key findings of the data analysis of the AV-adjusted baseline and endline survey results.*

# 4.3. Regression Analysis

A regression analysis was performed to assess the impact of various predictors on ESEL Skills and Mindset. The dependent variable in the analysis was **ESEL Skills and Mindset,** while the independent variables (predictors) included:

- Ethnic Group
- Living Location
- ESEL training Status
- Life Aspiration
- Living with Both Parents
- Father's Education
- Mother's Education
- Age
- Gender
- Soum (Locality)
- ESEL Knowledge
- Aimag (Region)
- Treatment or Control Group

This analysis aimed to identify which factors significantly influence the development of ESEL skills and mindsets and to examine the overall relationship between these predictors and the outcomes. The results would allow us to understand the relative contribution of each factor in shaping participants' skills and mindsets after adjusting for demographic and other relevant variables.

**Table 72.** Regression Estimation, Model Summary

| Model Summary[b] | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .519[a] | .270 | .255 | .288966264 |

a. Predictors: (Constant), ethnic group, age, aimag, living with both parents, Life aspiration, father's education, mother's education, gender, living location, soum, ESEL knowledge, ESEL Training status

b. Dependent Variable: Skills and mindset

- The **correlation** between ESEL Skills and Mindset and the following indicators: living location, training status, life aspiration, living with both parents, father's education, mother's education, age, gender, soum, ESEL knowledge, aimag, and treatment or control group is **0.519**. This indicates a moderate correlation, suggesting that these factors collectively influence the development of ESEL skills and mindset.

- The **ANOVA analysis** (F = 18.343, P = 0.000) shows that the independent variables (predictors) significantly affect ESEL skills and mindset, providing statistical evidence of the relevance of these factors in shaping the skills and mindset outcomes.

- **R Square = 0.270** indicates that the predictors used in the model explain 27% of the variation in ESEL skills and mindset, which suggests that while these factors are significant, other unmeasured variables may also contribute to shaping the outcome.

**Table 73.** Regression analysis, ANOVA

| ANOVA[a] | | | | | | |
|---|---|---|---|---|---|---|
| | Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 16.848 | 11 | 1.532 | 18.343 | .000[b] |
| | Residual | 45.592 | 546 | .084 | | |
| | Total | 62.440 | 557 | | | |

a. Dependent Variable: ESEL Skills and mindset

b. Predictors: (Constant), ethnic group, Age, Province, living with both parents, Life aspiration, Father's education, Mother's education, Gender, living location, soum, ESEL knowledge, Training status

**Table 74.** Regression analysis, Coefficients

| Coefficients[a] | | | | | |
|---|---|---|---|---|---|
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | B | Std. Error | Beta | | |
| 1 (Constant) | 1.802 | .211 | | 8.547 | .000 |
| Residential location | -.004 | .008 | -.019 | -.498 | .619 |
| Traning status | -.021 | .030 | -.032 | -.715 | .475 |
| Life aspiration | .398 | .034 | .430 | 11.635 | .000 |
| Living with both parents | .040 | .026 | .058 | 1.550 | .122 |
| Father's education | -.003 | .007 | -.018 | -.423 | .673 |
| Mother's education | .009 | .007 | .061 | 1.388 | .166 |
| Gender | -.019 | .026 | -.028 | -.751 | .453 |
| Age | -.021 | .011 | -.073 | -1.949 | .052 |
| ESEL knowledge | -.019 | .004 | -.208 | -5.396 | .000 |
| Aimag | .015 | .011 | .053 | 1.402 | .161 |
| Ethnic group | -.018 | .030 | -.027 | -.610 | .542 |

a. Dependent Variable: ESEL Skill and mindset

The regression analysis results provide the following equation for predicting ESEL Skill and Mindset: **ESEL Skill Mindset = 1.802 - 0.019 * (ESEL Knowledge) + 0.398 * (Life Aspiration) - 0.021 * (Age)**

**Interpretation of the coefficients:**

- **ESEL Knowledge:** A 1-point increase in ESEL knowledge is associated with a decrease of 0.019 points in the ESEL Skill Mindset score, suggesting that higher ESEL knowledge corresponds to better skill mindset.

- **Life Aspiration:** A 1-point increase in Life Aspiration is associated with an increase of 0.398 points in the ESEL Skill Mindset score, implying that greater life aspirations lead to a better mindset and improved skills.

- **Age:** A 1-year increase in age is associated with a decrease of 0.021 points in the ESEL Skill Mindset score, suggesting that older participants may have a lower ESEL Skill Mindset score.

- Higher ESEL knowledge and Life Aspiration positively influence the ESEL Skill Mindset, while older age seems to have a slightly negative effect. Since the ESEL Skill Mindset is coded so that l**ower scores** indicate better outcomes, these results show that as knowledge and aspirations increase, the overall ESEL mindset improves.

*This section describes the process and result of the regression analysis.*

# 4.4. Data Analysis Conclusion

- **ESEL Knowledge Improvement:** There was a significant difference between the Treatment and Control groups in ESEL knowledge. Participants who attended the ESEL training demonstrated higher ESEL knowledge compared to those who did not participate in it.

- **No Difference in Life Aspiration, ESEL Skills, and Mindset:** No significant difference was found between the Treatment and Control groups regarding Life Aspiration and ESEL Skills and Mindset. This suggests that the training did not have a direct impact on these areas, but the improvement in ESEL knowledge still occurred.

- **Effects on ESEL Skill Mindset:**

  o **ESEL Knowledge** and **Age** had a positive effect on improving ESEL Skills and Mindset, indicating that older participants and those with more ESEL knowledge had a better mindset and skills.

  o **Life Aspiration** had a **negative effect** on the ESEL Skills and Mindset. This could mean that youth with higher expectations may have higher demands for their skills and are more likely to critically assess their abilities, leading to a lower self-rating in skills and mindset.

  The negative effect of Life Aspiration suggests that young people with higher aspirations might set more demanding standards for themselves, thus perceiving a greater need for improvement in their ESEL skills.

- **Recommendations for Future Studies:**

  o Re-evaluating the methods used in this study is recommended, especially the survey questionnaires. The long length and unclear phrasing of questions could cause participant fatigue and result in general or inaccurate answers.

## Qualitative Insights from Focus Group Discussions

The qualitative findings from the Focus Group Discussions (FGDs) offer valuable insights into the perceived impact and real-world application of the ESEL training:

- **Positive Perceptions of ESEL Training:**

  o Both teachers and students expressed positive views on the flexibility and relevance of the ESEL training. Teachers appreciated the adaptability of the program to meet diverse student needs, and students showed high levels of engagement and interest.

- **Impact on Student Behavior:**

  o The ESEL training positively influenced key aspects of student behavior, such as teamwork, communication, responsibility, time management, and leadership. Female students exhibited noticeable improvements in these areas.

- **Content and Structure:**
  - The training content was considered effective, with a focus on tailoring the lessons to individual strengths and needs. There was a call for expanding the program's target demographic and integrating it into the official curriculum for wider access.

- **Team-Based Learning:**
  - A strong emphasis on peer learning and team-based activities was noted. Participants appreciated the team spirit fostered in the training, though there were some challenges related to scheduling conflicts and initial misunderstandings.

- **Teaching Methods and Teacher Attitudes:**
  - Teachers were praised for their communication skills, engaging teaching methods, and positive attitudes. The support and humor they provided helped create a positive learning environment, contributing to students' overall satisfaction.

- **Skills Acquired and Applied:**
  - Students acquired essential skills, such as team building, effective communication, project planning, and financial management. The practical application of these skills during the training led to observable improvements in behavior and performance.

- **Engagement in Project Initiatives and Sub-Grant Activities:**
  - Many participants actively engaged in the Pitch contest and received awards. The sub-grant projects provided an opportunity for hands-on experience and further motivated students, fostering entrepreneurial skills and community-building initiatives.

- **Call for Scaling and Expansion:**
  - Participants expressed a strong desire for the program to be scaled up. They emphasized the importance of increased funding and expanded scope, highlighting the positive impact the initiative had on individual skills development and community-building efforts.

The ESEL training program demonstrated positive impacts on knowledge acquisition, behavior change, and skill development, particularly in teamwork, communication, and leadership. While the training improved ESEL knowledge and self-awareness, the effects on ESEL Skills and Mindset were less direct. The qualitative findings suggest that the program's success lies in its ability to engage students, foster teamwork, and provide practical applications of learned skills. Expanding the program and refining the survey instruments could enhance its future effectiveness and reach.

# 5. CONCLUSIONS

## 5.1. Conclusions from the Comparisons of Treatment and Control Groups

The survey, which included 785 respondents aged between 13-19 (Mage = 15.7), highlighted the following significant findings:

- ESEL Knowledge: Participants who attended the training showed a clear advantage in ESEL knowledge compared to the control group. This was one of the main differences observed between the groups.

- No Significant Differences in ESEL Skills and Mindset: There was no notable difference between the Treatment and Control groups in terms of ESEL Skills and Mindset or Life Aspiration.

- Influence of ESEL Knowledge, Age, and Life Aspiration: The regression analysis revealed that ESEL knowledge, Life aspiration, and age significantly affect ESEL Skill Mindset. The equation for this relationship is:

$$\text{ESEL Skill Mindset} = 1.802 - 0.019 \times (\text{ESEL Knowledge}) + 0.398 \times (\text{Life Aspiration}) - 0.021 \times (\text{Age})$$

- As ESEL knowledge and age increase, the ESEL Skill Mindset improves.

- Conversely, as Life Aspiration increases, the ESEL Skill Mindset score increases, suggesting that youth with higher life aspirations may perceive their skills as needing more development.

- Quantitative Findings: The training contributed to significant improvements in entrepreneurial mindset and communication skills.

# 5.2. Conclusions from the Differences Observed Between Baseline and Endline Results

- Improvement in Knowledge and Skills: A clear improvement in knowledge and skills, particularly an optimistic outlook on life goals and opportunities, was observed in the treatment group after the training.

- Female Participants and Older Youth: Female participants and those aged 16-19 demonstrated higher ESEL knowledge compared to other groups. However, gender differences in ESEL skills and life aspirations were less significant after the training.

- ESEL Skills with AV-Adjusted Scores: The treatment group showed stronger performance in Social and Cultural Awareness, Communication, and Growth Mindset compared to the control group.

# 5.3. Integration of Quantitative and Qualitative Insights

- Behavioral Changes: The qualitative insights from the FGDs confirmed the statistical findings, with students reporting significant behavioral changes, including improved communication, responsibility, time-management skills, and a positive shift in life goals and opportunities.

- Team Building and Skill Development: Both teachers and students expressed positive reactions to the training, especially in terms of team-building and communication skills. The training was seen as effective in promoting self-awareness, effective expression, and financial skills.

- Student Engagement and Peer Learning: Students appreciated the team-oriented environment of the training. The challenges faced during group work were seen as opportunities to improve teamwork, leading to stronger personal and peer relationships.

# 5.4. Implications for Program Improvement

- Expand and Adapt Training Modalities: The success of blending in-class and distance learning, especially for out-of-school youth, suggests that hybrid learning models could be expanded, using more online or mobile-based learning for greater accessibility.

- Enhance Teacher Support: Ongoing teacher development, such as refresher courses and peer-to-peer mentorship, will improve the quality of instruction, particularly in rural and under-resourced areas.

- Focus on Lifelong Skills: While the program improved entrepreneurial mindset and communication, incorporating financial literacy, business planning, and digital literacy into the curriculum would further prepare youth for real-world challenges and career opportunities.

# 6. RECOMMENDATIONS

Based on the findings of the endline impact evaluation survey, the following reco mendations have been provided:

## 6.1. At the policy level

- **Integrate ESEL Training program into National Curricula:** To ensure consistent and broader access to ESEL skills, integrating the training into national education curricula would standardize socioemotional skills development.

- **Support Youth Entrepreneurship:** Policies supporting youth entrepreneurship, such as microfinancing programs and mentorship, will help youth transform ideas into successful businesses, contributing to local economies.

- **Promote Gender-Inclusive Approaches:** The success in fostering positive changes in both male and female participants suggests the importance of gender-responsive strategies to close gender gaps in education and economic opportunities.

## 6.2. Future Research Directions

- **Long-Term Impact Assessment:** Future studies should track the long-term outcomes of ESEL training on career success, income levels, and overall quality of life through longitudinal studies.

- **Role of Social Networks:** Future research should explore how youth leverage social networks (family, peers, community) to apply their skills in real-world settings, strengthening the impact of the training.

- **Scalability and Replicability:** Research on the scalability and replicability of the program in different regions with similar socio-economic challenges is critical. Understanding cultural differences, logistical constraints, and resource limitations will inform effective program adaptation and implementation in diverse contexts.

The findings suggest that the ESEL training program was successful in enhancing ESEL knowledge, entrepreneurial skills, and communication skills. While there was a positive impact, especially on knowledge and skills related to entrepreneurship, the improvement in ESEL Skill and Mindset was more nuanced. Key factors influencing improvement included age, ESEL knowledge, and Life Aspiration. The combination of quantitative and qualitative insights highlights the need for flexible learning models, teacher support, and gender-inclusive policies to maximize the program's reach and impact. Future research should focus on the long-term effects and the potential for broader implementation of the program.

# APPENDICES

## Appendix A: Survey Questionnaire for Youth and Children

**Questionnaire for Children and Youth** /For female participants/

## Statement of Consent

Save the Children Japan in Mongolia (Save the Children), in partnership with the Ministry of Education and Science (MES) of Mongolia has started to implement the project named **"Entrepreneurship-focused Socioemotional Skills for the Most Vulnerable Youth in Rural Mongolia"** from November 2019 to December 2023 under the World Bank's management. The project's targeted locations are Sumber and Shiveegobi soums of **Gobisumber** aimag, Mankhan, Uyench, Bulgan, Altai, Must, Zereg and Jargalant soums of **Khovd** aimag, Ongon, Bayandelger, Munkhkhaan, Erdenetsagaan and Baruun-Urt soums of **Sukhbaatar** aimag, Sant, Kharkhorin, Khujirt, Uyanga, Bogd, Bat-Ulzii, Guchin-Us and Arvaikheer soums of **Uvurkhangai** aimag, and Telmen, Tudevtei, Tes, Ikh-Uul, Tosontsengel, Bayantes and Uliastai soums of **Zavkhan** aimag.

The aim of the endline impact evaluation is to assess improvements in a set of entrepreneurship and socioemotional knowledge and skills (ESEL) among target children and youth that can be attributed to the ESEL training

## Confidentiality Statement

We follow the Mongolian Statistics Law and Law on Personal Privacy that govern the confidentiality of survey respondents. The responses to this questionnaire will be kept confidential and will only be used for research purposes. None of your personal information including your name, gender, age, grade, school, study, and employment will be mentioned in the research. We will code each survey, and findings will only be used for the purpose of survey objectives. Please complete this questionnaire by yourself, accurately and completely.

*(I have read carefully the information for this study. The purpose of the study has been clarified, and I have received comprehensive answers to questions I have asked. So, I am participating voluntarily in this survey and confirm that I have answered all questions to the best of my ability.)*

Signature of the respondent: _____          Date: _____/_____/_____

| For enumerator | | |
|---|---|---|
| 1. | Researcher name: | |
| 2. | Researcher code: | |
| 3. | Phone number: | |
| 4. | Date of survey taken: *(Year/Month/Day)* | |
| 5. | Survey start time: | |
| 6. | Survey end time: | |
| 7. | Aimag name: | |
| 8. | Soum name: | |
| 9. | Name of the school: | |
| 10. | Questionnaire number: | |
| 11. | Survey method: | a.  In-class    b. By phone    c. Individual meeting |

# One. ESEL knowledge, skills and mindset

## 1.1. ESEL KNOWLEDGE

*Instruction:* This questionnaire is not an exam and there is **no right or wrong answer**, so, please kindly keep that in mind.

*We will not disclose your answers, and your teachers, parents and/or others will not know how you answered the questionnaire. When you answer the questions, please reflect on your knowledge and experience as accurately as possible.*

*In the first part, we ask about entrepreneurship. Please read each question carefully and choose the answer(s) that you think is correct. You may ask for help if you do not understand the question.*

*Please circle your answer.*

### 1.1.1. Entrepreneurship fundamentals

**1. Who is an entrepreneur?**

    a) A person who is in charge of a specific location.

    b) A person who works for someone else in order to learn skills.

    c) A person who organizes and operates a business or businesses.

    d) B&C

    e) None of the above

    f) I do not know.

**2. Which of the following are creating a value for the community? (Select all that are correct)**

    a) Delivering a quality food service at an affordable price

    b) Reducing opening hours of a shop

    c) Increasing a number of drink choices at a coffee shop

    d) Making more friends

    e) Increasing the ease of use of a product or a service

    f) I do not know.

**3. What are the characteristics of a successful entrepreneur? (Select all that are correct)**

a) Motivated

b) Takes very little risk

c) Passionate

d) Dedicated

e) I do not know.

**4. What are the roles of an entrepreneur? (Select all that are correct)**

a) Raise funds

b) Organize and implement production

c) Create new job opportunities

d) Avoid market competition

e) Accepts making unethical decisions to achieve goals

f) I do not know.

**5. What type of business does this image represent?**

a) Manufacturing

b) Retail

c) Service

d) Wholesale

e) Farming

f) I do not know.

**6. Which of the following are risks to your business? (Select all that are correct)**

a) Not being able to get permission to open a cafe

b) Shortage of cotton to sew a bag

c) Increased number of clients

d) A need to open another branch for my shop

e) I do not know.

**7. Who is your competitor if you are a restaurant owner?**

a) Local residents

b) Nearby restaurant

c) Grocery supplier

d) Local tax office

e) Social insurance office

f) None of the above

g) I do not know.


### 1.1.2. Business planning and financial literacy

**1. What is a business plan?**

a) A written document that outlines the business practices of new business

b) A vision of achieving a business goal

c) A written document that describes business ownership

d) A written document that lays out all the necessary steps for opening and operating a successful business.

e) A written document that explains the financial aspects of the business

f) All of the above

g) I do not know.

**2. Why do you need a business plan?**

a) To explain your idea

b) To secure financing

c) To build a roadmap that sets out the objectives and goals of the business

d) To help reduce the risk of business failure

e) All of the above

f) I do not know.

**3. What must be included in a business plan document?**

a) Project goals

b) A product or service the project is expected to deliver

c) Required resources for implementing the project

d) Market survey

e) Marketing strategy

f) All of the above

g) I do not know.

**4. What are the benefits of keeping accurate financial records of business activities? (Select all that are correct)**

    a) Calculate profit/loss correctly

    b) Estimate employee pay

    c) Purchase new equipment

    d) Sell more products

    e) I do not know.

**5. What is money paid to the government?**

    a) Budget

    b) Fees

    c) Taxes

    d) Food stamps

    e) Deductions

    f) All of the above

    g) I do not know.

### 1.1.3.  Mobilizing resources, implementing plans and digital tools

**1. Which of the following resources are needed to run a food canteen?**

    a) Time

    b) Cook

    c) Business plan

    d) Money

    e) Raw material resources

    f) All of the above

    g) I do not know.

**2. Which of the following are effective ways to explore the unmet needs of a community?**

    a) Explore common complaints in the community

    b) Ask team members to vote on a list of unmet needs

    c) Circulate questionnaires via emails and social media platforms

d)  Ask people in the community

e)  Display posters on local news boards

f)  All of the above

g)  I do not know.

**3. What is the most appropriate software program for estimating costs?**

a)  Word

b)  Power Point

c)  Excel

d)  Facebook

e)  All of the above

f)  I do not know.

**4. What are the benefits of using social media such as Facebook, Instagram or Tik Tok for your business? (Select all that are correct)**

a)  To promote one's business

b)  To watch funny videos

c)  To reduce marketing costs

d)  To calculate my profit

e)  I do not know.

## 1.2. ESEL SKILLS

*Instruction:* This part focuses on the questions on skills and mindset. Please read each question carefully. Each question has 4 choices. So please pick only **ONE** answer that best describes you.

You may ask for help if you do not understand something or are not sure how to respond. Each question is followed by 4 choices. Choose one answer for each line and put a tick P on the answer of your choice.

Again, please remember this is not an exam. Try to answer the questions as accurately as possible. We will not disclose your answers, and your teachers, parents and/or others will not know how you responded.

| | Questions about you | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely |
|---|---|---|---|---|---|
| **1.** | **Self-awareness** | | | | |
| 1. | I know ways to make myself feel better when I am sad. | ☐ | ☐ | ☐ | ☐ |
| 2. | I know ways to calm myself down. | ☐ | ☐ | ☐ | ☐ |
| 3. | I think carefully about what I want to say, before I speak. | ☐ | ☐ | ☐ | ☐ |
| 4. | I keep trying even after I get negative comments from people. | ☐ | ☐ | ☐ | ☐ |
| 5. | I do work right away, instead of waiting until the last minute. | ☐ | ☐ | ☐ | ☐ |
| | **Questions about you** | **Extremely or almost always** | **Very or often** | **Somewhat or sometimes** | **Not at all or rarely** |
| **2. Social and cultural awareness** | | | | | |
| 1. | I learn from people with different opinions than me. | ☐ | ☐ | ☐ | ☐ |
| 2. | I feel bad for someone else when their feelings are hurt. | ☐ | ☐ | ☐ | ☐ |
| 3. | I compliment others' accomplishments. | ☐ | ☐ | ☐ | ☐ |
| 4. | When others disagree with me, I am respectful of their views. | ☐ | ☐ | ☐ | ☐ |
| 5. | I am able to stand up for myself without putting others down. | ☐ | ☐ | ☐ | ☐ |

| Questions about you | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely |
|---|---|---|---|---|
| **3. Creativity and innovation** | | | | |
| 1. I have the ability to have fresh perspectives on old problems. | ☐ | ☐ | ☐ | ☐ |
| 2. I have the ability to deal with sudden changes and surprises. | ☐ | ☐ | ☐ | ☐ |
| 3. I work hard to try to understand something new. | ☐ | ☐ | ☐ | ☐ |
| 4. I stay focused on the same goal for several months at a time. | ☐ | ☐ | ☐ | ☐ |
| 5. When working with other people, I come up with new ideas and different solutions. | ☐ | ☐ | ☐ | ☐ |
| **Questions about you** | **Extremely or almost always** | **Very or often** | **Somewhat or sometimes** | **Not at all or rarely** |
| **4. Communication** | | | | |
| 1. I carefully listen to other people who have different opinions than me. | ☐ | ☐ | ☐ | ☐ |
| 2. I talk to my friends about how I feel when I am upset with them. | ☐ | ☐ | ☐ | ☐ |
| 3. I am good at persuading people. | ☐ | ☐ | ☐ | ☐ |
| 4. I have the ability to communicate with others clearly and effectively. | ☐ | ☐ | ☐ | ☐ |
| 5. I am good at preventing quarrels with other people. | ☐ | ☐ | ☐ | ☐ |
| **Questions about you** | **Extremely or almost always** | **Very or often** | **Somewhat or sometimes** | **Not at all or rarely** |
| **5. Teamwork** | | | | |
| 1. If needed, I am able to give and ask for support and help. | ☐ | ☐ | ☐ | ☐ |
| 2. I like to participate in a discussion where new ideas are exchanged. | ☐ | ☐ | ☐ | ☐ |
| 3. In order to achieve a goal, I break it down into smaller objectives. | ☐ | ☐ | ☐ | ☐ |
| 4. When working with other people, I am open to receiving and giving feedback. | ☐ | ☐ | ☐ | ☐ |
| 5. I work out disagreements with other people. | ☐ | ☐ | ☐ | ☐ |

| Questions about you | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely |
|---|:---:|:---:|:---:|:---:|
| **6. Critical thinking** | | | | |
| 1. I think about what might happen before making a decision. | ☐ | ☐ | ☐ | ☐ |
| 2. I think of different ways to solve a problem. | ☐ | ☐ | ☐ | ☐ |
| 3. I say "No" to a friend who wants to break the rules. | ☐ | ☐ | ☐ | ☐ |
| 4. I reflect and analyze my and other people's actions and situations. | ☐ | ☐ | ☐ | ☐ |
| 5. I have the ability to identify, select, and process information from a variety of resources. | ☐ | ☐ | ☐ | ☐ |

## 1.3. ESEL MINDSET

| Questions about you | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely |
|---|:---:|:---:|:---:|:---:|
| **1. Growth mindset** | | | | |
| 1. I do not give up easily when confronted with obstacles and distractions. | ☐ | ☐ | ☐ | ☐ |
| 2. I finish the work I started. | ☐ | ☐ | ☐ | ☐ |
| 3. For me, mistakes are opportunities to learn. | ☐ | ☐ | ☐ | ☐ |
| 4. I think life is a constant learning process. | ☐ | ☐ | ☐ | ☐ |
| 5. I'm certain that I can master the skills being taught. | ☐ | ☐ | ☐ | ☐ |
| 6. When I get stuck while learning something new, I try different ways. | ☐ | ☐ | ☐ | ☐ |
| **Questions about you** | **Extremely or almost always** | **Very or often** | **Somewhat or sometimes** | **Not at all or rarely** |
| **2. Entrepreneurial mindset** | | | | |
| 1. I like to learn new things. | ☐ | ☐ | ☐ | ☐ |
| 2. When I do things, I ask "how can I do it differently?" | ☐ | ☐ | ☐ | ☐ |
| 3. I try to do things better than before. | ☐ | ☐ | ☐ | ☐ |
| 4. Before beginning a task, I plan and set clear goals to achieve it. | ☐ | ☐ | ☐ | ☐ |
| 5. I have to make risky decisions and take risks at times in order to be successful in life. | ☐ | ☐ | ☐ | ☐ |

# Two. Life Aspiration

*Instruction:* This part focuses on the questions about life aspirations of children and youth. Please read each question carefully and circle the answers in line with the instruction given per question. You may ask for help if you do not understand something or are not sure how to respond.

Again, as a kind reminder, this is not an exam but please try to answer as accurately as possible. We will not disclose your answers, and your teachers, parents and/or others will not know how you responded. We really appreciate you staying with us throughout this questionnaire.

## 2.1. Aspired goals and Opportunities

**1. Indicate how important it is for you to "Work for myself than to work for someone else"**

   0. Doesn't matter to me

   1. Matters, but not very much

   2. Matters very much to me

**2. Indicate how important it is for you to be "Running my own business/company"**

   0. Doesn't matter to me

   1. Matters, but not very much

   2. Matters very much to me

**3. In uncertain times, I usually expect the best.**

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

**4. I am always optimistic about my future.**

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

**5. It's important for me to keep busy.**

    a. Strongly agree

    b. Agree

    c. Undecided

    d. Disagree

    e. Strongly disagree

**6. If you are a secondary school or TVET student, which of the following options have you thought of as possible routes after you finish school? (Please choose only ONE answer)**

    a. Higher education

    b. Vocational education

    c. Gap year

    d. Get a job

    e. Start my own business

    f. Become a herder

    g. Start my own family

    h. I am not in secondary school or TVET

    i. Other (please specify) ...........................................

## 2.2. Self efficacy and agency

**1. Do you think that working hard is important in life? (Please choose only ONE answer)**

    a. Strongly agree

    b. Agree

    c. Undecided

    d. Disagree

    e. Strongly disagree

**2. Taking everything into account, what do you think the overall socio-economic situation in your country will be in five years time? (Please choose only ONE answer)**

    a. Much better

    b. A little better

   c.  Much the same

   d.  A little worse

   e.  A lot worse

**3. Compared to your parents, what do you think your socioeconomic situation will be in when you reach their age? (Please choose only ONE answer)**

   b.  Much better

   c.  A little better

   d.  Much the same

   e.  A little worse

   f.  A lot worse

**4. Do you believe that "In the long run hard work leads to a better life"? If yes, to what extent do you believe that (with 100 meaning you fully agree with the statement)? Please circle ONE number below.**

0     10     20     30     40     50     60     70     80     90     100

# Three. Anchoring vignettes

*Instruction:* In this section, we describe some students that you might know. Please read each statement carefully and circle **ONE** answer per question. You may ask for help if you do not understand something or are not sure how to respond.

Again, as a kind reminder, this is not an exam but please try to answer as accurately as possible. We will not disclose your answers, and your teachers, parents and/or others will not know how you responded.

## 3.1 ESEL skills

### 3.1.1 Self-awareness

| How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. I know ways to calm myself down. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. (Solongo) never looks stressed. She is always calm and knows how to calm herself even before an exam. How much do you agree that (Solongo) is emotionally stable? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. (Gerelee) is usually calm during classes, but there are a few moments when she can get upset and worry a lot. How much do you agree that (Gerlee) is emotionally stable? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. (Zaya) frequently appears quite depressed to other people. She gets nervous easily. How much do you agree that (Zaya) is emotionally stable? | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3.1.2 Social and cultural awareness

| How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. I know ways to calm myself down. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. (Khulan) often argues with her classmates and can be quite rude. She never helps her classmates, and she refuses to listen to others' points of view. How much do you agree that (Khulan) is respectful of others? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. (Nomin) is nice to almost everyone. She is always willing to help her classmates. Whenever there is an argument, she will try to understand others' points of view. How much do you agree that (Nomin) is respectful of others? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. (Bolor) is helpful to most of her friends, but there are a few of her classmates that find her unfriendly. When there is an argument, she will stand up for herself with little consideration of others' needs. How much do you agree that (Bolor) is respectful of others? | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3.1.3 Creativity and innovation

| How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. I work hard to try to understand something new. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. (Enkhjin) is sometimes interested in learning about other places and people but she rarely reads about different things. Whenever she has an idea, she will share it with others but never put it into action. How much do you agree that (Enkhjin) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. (Tuya) is not interested in learning about other places and people. She does not like to explore new places and does not like reading about different things. How much do you agree that (Tuya) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. (Khongoroo) is very interested in knowing about the world. She is curious about different places and people. She also loves reading about different things. She often tests her ideas and tries to put them into action. How much do you agree that (Khongoroo) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |

### 3.1.3 Creativity and innovation

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | I work hard to try to understand something new. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | (Enkhjin) is sometimes interested in learning about other places and people but she rarely reads about different things. Whenever she has an idea, she will share it with others but never put it into action. How much do you agree that (Enkhjin) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Tuya) is not interested in learning about other places and people. She does not like to explore new places and does not like reading about different things. How much do you agree that (Tuya) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | (Khongoroo) is very interested in knowing about the world. She is curious about different places and people. She also loves reading about different things. She often tests her ideas and tries to put them into action. How much do you agree that (Khongoroo) is a creative person? | ☐ | ☐ | ☐ | ☐ | ☐ |

### 3.1.4 Communication

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | I am good at preventing quarrels with other people. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | (Oyunaa) tends to agree with others, and she expresses her ideas well. Many people consider (Oyunaa) a good listener. How much do you agree that (Oyunaa) communicates well with others? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Jargal) is usually good at listening to other people's point of view, but sometimes she would interrupt others' conversation. When others disagree with her, she sometimes dismisses their thoughts. How much do you agree that (Jargal) communicates well with others? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | (Misheel) often disagrees with others. She doesn't pay attention to what the person is saying, and sometimes she starts quarreling. How much do you agree that (Misheel) communicates well with others? | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3.1.5 Teamwork

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | I work out disagreements with other people. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | (Anujin) is often rude to others. She does not always trust people, and sometimes she finds it difficult to cooperate with others. How much do you agree that (Anujin) gets along well with others on her team? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Naraa) is usually understanding and kind to others. She is often trusting and usually finds it easy to cooperate with others. How much do you agree that (Naraa) gets along well with others on her team? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | (Uyanga) can stand up for herself without putting others down. However, she sometimes finds herself unable to disagree with others without starting an argument. How much do you agree that (Uyanga) gets along well with others on her team? | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3.1.6 Critical thinking

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | I have the ability to identify, select, and process information from a variety of resources. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | (Bayarmaa) is trying to decide what to do after graduating current school. She put the decision off for a long time and planned to decide on the spot without getting careful thinking about it. She did not discuss it with other people or think about how the decision would affect her/his life. How much do you agree that (Bayarmaa) is good at decision-making? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Zulaa) is trying to decide what to do after graduating current school. She only talked with a few people, did a little bit of research by herself. How much do you agree that (Zulaa) is good at decision-making? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | When (Chimegee) was deciding what to do after graduating current school, she tried to learn about different possibilities by gathering information, talking to others, and thinking about how the decision would affect her and others. How much do you agree that (Chimegee) is good at decision-making? | ☐ | ☐ | ☐ | ☐ | ☐ |

# 3.2 ESEL mindset

## 3.2.1 Growth mindset

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | For me, mistakes are opportunities to learn. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | When (Urnaa) thought she did something well but was told by her friend that she did not do well. (Urnaa) did not like hearing that she did not do well but tried to remain calm. (Urnaa) took some time to reflect on her work, but she hesitated to continue the conversation. How much do you agree that (Urnaa) believes she can improve her ability by learning from her mistake? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Nomin) thought she did something well but was told by her friend that she did not do well. (Nomin) appreciated the feedback and remained calm and did not get angry by it. She continued the conversation and asked questions to learn more about what she might do differently. How much do you agree that (Nomin) believes she can improve her ability by learning from her mistake? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | (Suren) thought she did something well but was told by her friend that she did not do well. (Suren) did not like hearing that she did not do well and got angry and shouted at her friend. How much do you agree that (Suren) believes she can improve her ability by learning from her mistake? | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3.2.2 Entrepreneurial mindset

| | How much do you agree with the following sentences? (Please select one response in each row.) | Strongly disagree | Disagree | Neither agree nor Disagree | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1. | I have to make risky decisions and take risks at times in order to be successful in life. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | (Otgoo) is not afraid to meet new people or take on new responsibilities at school. When her classmates pick her to be the class leader, she is happy to do it. How much do you agree that (Otgoo) is a successful risk taker? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | (Bolormaa) never takes the first step to make new friends. She doesn't like to learn new things and never volunteers for any school roles. How much do you agree that (Bolormaa) is a successful risk taker? | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | (Enkhmaa) doesn't mind meeting new people, but when her classmates chose her to be the class leader, it took her a long time to decide if she wanted to take on new responsibilities. How much do you agree that (Enkhmaa) is a successful risk taker? | ☐ | ☐ | ☐ | ☐ | ☐ |

# Four. ESEL training program

**1. Did you participate in the ESEL training?**

1. Yes
2. No (End of the survey)

**2. Which type of ESEL training did you attend?**

1. Regular ESEL training (Face-to-face, In-class training)
2. Blended ESEL training (A combination of at-home and in-class training)

**3. Which round of regular/blended ESEL training did you attend?**

1. Regular ESEL training Round 1 (Spring 2021)
2. Regular ESEL training Round 2 (Autumn 2021)
3. Regular ESEL training Round 3 (Spring 2022)
4. Regular ESEL training Round 4 (Autumn 2022)
5. Blended ESEL training (Autumn 2022)

**4. If you have taken the regular (in-class only) ESEL training , how many days were you absent during the training period (excluding the days while the training was on pause due to school closures)?**

1. 1-3 days
2. 4-7 days
3. 1-2 weeks
4. More than 2 weeks
5. I was never absent.
6. Not relevant (I attended the blended ESEL training).

**5. Did you participate in the Pitch event?**

1. Yes
2. No (End of the survey)

**6. Did you receive the subgrant?**

1. Yes
2. No

| | | |
|---|---|---|
| 1. | First name: | |
| 2. | Surname: | |
| 3. | Ethnicity: | |
| 4. | Gender: | 1. Male   2. Female |
| 5. | Age: | 1. 11<br>2. 12<br>3. 13<br>4. 14<br>5. 15<br>6. 16<br>7. 17<br>8. 18<br>9. 19<br>10. 20<br>11. 21<br>12. 22<br>13. 23<br>14. 24<br>15. 25<br>16. 26<br>17. 27<br>18. 28 |
| 6. | Are you currently studying at a secondary school, LLEC or TVET? Please choose correspondingly. | **1. Secondary school**<br>1.1. Current grade:<br>1.2. School name:<br><br>**2. LLEC**<br>2.1. Last grade you attended:<br>2.2. Employment status<br>2.2.1. Public sector<br>2.2.2. Private sector<br>2.2.3. Self-employed<br>2.2.4. Herder<br>2.2.5. Unemployed<br>2.2.6. Other: ..................................<br><br>**3. TVET**<br>3.1. Current grade:<br>3.2. School name:<br>3.3. Current major:<br><br>**4. Not in secondary school, LLEC or TVET**<br>4.1. Last studied school<br>4.2. Employment status<br>4.2.1. Public sector<br>4.2.2. Private sector<br>4.2.3. Self-employed<br>4.2.4. Herder<br>4.2.5. Unemployed<br>4.2.6. Other: ............................. |
| 7. | Where do you live now? | 1. Aimag center (at my home)<br>2. Aimag center (at host family)<br>3. Soum center (at my home)<br>4. Soum center (at host family)<br>5. Countryside (at my home)<br>6. Countryside (at host family)<br>7. Dormitory |

| 8. | Who do you live with at home? Please circle everyone that lives with you in home. (Multiple Answers) | 1. With both of my parents<br>2. With father<br>3. With my mother<br>4. With my grandparents<br>5. With my grandfather<br>6. With my grandmother<br>7. My older brother(s)/sister(s)<br>8. My younger brother(s)/ sister(s)<br>9. With my female relative(s)<br>10. With my male relative(s)<br>11. Others (please specify) ............ |
|---|---|---|
| 9. | Have you taken any business course as an elective subject in secondary school in the past? | 1. Yes<br>2. No |
| 10. | If yes on the above question, when/what subject did you study? | Name of the business course in secondary school:<br><br>Year: |
| 11. | Have you got a father or male caregiver? | 1. Yes<br>2. No |
| 12. | What is the highest level of education successfully completed by your father/male caregiver? | 1. Primary school (Graduated 4th/5th grade)<br>2. Incomplete secondary school (Graduated 8th/9th grade)<br>3. Complete secondary school (Graduated 10th -12th grade)<br>4. Vocational training<br>5. College<br>6. University<br>7. Other (e.g., LLEC)<br>8. No education |
| 13. | What is your father's/male caregiver's occupation? | 1. Government organization<br>2. Company/The cooperative/NGO with wage<br>3. Company owner<br>4. Herder<br>5. Self-employed<br>6. Student<br>7. Pension<br>8. Benefits for loss of working capacity<br>9. Unemployed<br>10. Others /Please specify/ ........................... |
| 14. | Have you got a mother or female caregiver? | 1. Yes<br>2. No |
| 15. | What is the highest level of education successfully completed by your mother/female caregiver? | 1. Primary school (Graduated 4th/5th grade)<br>2. I ncomplete secondary school (Graduated 8th/9th grade)<br>3. Complete secondary school (Graduated 10th -12th grade)<br>4. Vocational training<br>5. College<br>6. University<br>7. Other (e.g., LLEC)<br>8. No education |

| 16. | What is your mother's/female caregiver's occupation? | 1. Government organization<br>2. Company/The cooperative/NGO with wage<br>3. Company owner<br>4. Herder<br>5. Self-employed<br>6. Student<br>7. Pension<br>8. Benefits for loss of working capacity<br>9. Unemployed<br>10. Others /Please specify/ ........................... |
|---|---|---|
| 17. | Your phone number: | |
| 18. | Your parents/caregiver's phone number: | |

😊 **THANK YOU FOR YOUR TIME, EFFORT AND THOUGHT
IN COMPLETING THIS QUESTIONNAIRE!**

# Appendix B. Survey Questionnaire for Teachers

## Statement of Consent

Save the Children Japan in Mongolia (Save the Children), in partnership with the Ministry of Education and Science (MES) of Mongolia has started to implement the project named **"Entrepreneurship-focused Socioemotional Skills for the Most Vulnerable Youth in Rural Mongolia"** from November 2019 to December 2023 under the World Bank's management. The project's targeted locations are Sumber and Shiveegobi soums of **Gobisumber** aimag, Mankhan, Uyench, Bulgan, Altai, Must, Zereg and Jargalant soums of **Khovd** aimag, Ongon, Bayandelger, Munkhkhaan, Erdenetsagaan and Baruun-Urt soums of **Sukhbaatar** aimag, Sant, Kharkhorin, Khujirt, Uyanga, Bogd, Bat-Ulzii, Guchin-Us and Arvaikheer soums of **Uvurkhangai** aimag, and Telmen, Tudevtei, Tes, Ikh-Uul, Tosontsengel, Bayantes and Uliastai soums of **Zavkhan** aimag.

The aim of the endline impact evaluation is to assess improvements in a set of entrepreneurship and socioemotional knowledge and skills (ESEL) among target children and youth that can be attributed to the ESEL training program. The survey findings will be used to evaluate the overall impact of the training intervention.

## Confidentiality Statement

We follow the Mongolian Statistics Law and Law on Personal Privacy that govern the confidentiality of survey respondents. The responses to this questionnaire will be kept confidential and none of your personal information including your name, gender, age, and work as well as the information that you provide for your students will be mentioned in the study. The responses will be coded specifically and will be used only for survey purposes.  Please complete this questionnaire by yourself, accurately and completely.

 (I have read carefully the information for this study. The purpose of the study has been clarified, and I have received comprehensive answers to questions I have asked.  I am participating voluntarily in this survey and confirm that I have answered all questions to the best of my ability.

Signature of the respondent: _____            Date: ____/_____/_____

| For enumerator | | |
|---|---|---|
| 1. | Researcher name: | |
| 2. | Researcher code: | |
| 3. | Phone number: | |
| 4. | Date of survey taken: *(Year/Month/Day)* | |
| 5. | Survey start time: | |
| 6. | Survey end time: | |
| 7. | Aimag name: | |
| 8. | Soum name: | |
| 9. | Name of the secondary school/LLEC/TVET: | |
| 10. | Name of the survey participant's student: | |
| 11. | Questionnaire number: | |
| 12. | Survey method: | a. Individual meeting   b. By phone |

# One. General Information

| | | |
|---|---|---|
| 1. | Surname: | |
| 2. | First name: | |
| 3. | Age: | |
| 4. | Gender: | 1. Male  2. Female |
| 5. | Highest education level completed: | 1. Primary (Grades 1-5)<br>2. Incomplete secondary (Grades 6-9)<br>3. Complete Secondary (Grades 10-12)<br>4. Technical and vocational education<br>5. Bachelor's<br>6. Master's<br>7. Other (Please specify): ...................... |
| 6. | Professional degree: | 1. Teacher<br>2. Pedagogical<br>3. Distinguished<br>4. Consultant |
| 7. | The total number of years teaching as a teacher: | |
| 8. | The school's number/Name of the TVET: | |
| 9. | The Class number: | |
| 10. | Total number of students in the participating student's grade: | |
| 11. | The number of years worked in this school: | |
| 12. | Name of the survey participant's student: | |
| 13. | Unique ID of the student (to be entered by the enumerator later): | |
| 14. | How long have you known the student? | 1. Not at all<br>2. Less than 1 year<br>3. <1 year<br>4. <2 years<br>5. <3 years<br>6. 3+ years |
| 15. | What is your relationship to the student? | I am her/his:<br>1. Homeroom teacher<br>2. Teacher of specialized subjects<br>3. Others: ............................ |
| 16. | Your phone number: | |

# Two. ESEL skills and mindset

*Instruction:* This survey is to help our organization effectively evaluate the impact of ESEL training program delivered to children and youth under the project. We are inviting you to provide information about your student who has been selected for this study. The survey is not an assessment of your student so there is **no wrong answer,** but we ask you to answer the questions honestly. Your responses are completely confidential, and will never be shared with your student, her/his parents and others.

**Please rate the child/youth to the best of your knowledge. If you do not know the child/youth at all, please check "Don't know" box.**

The questionnaire below is about a person's socio-emotional skills. Read each question carefully and choose only **ONE answer** from the four types of answers. Please tick ( P ) the box ☐ that best expresses your student. You may ask for help if you do not understand the question. Please remember that this survey is not an assessment of your student.

## 1. Self-awareness skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student knows ways to make himself/herself feel better when he/she is sad. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student knows ways to calm himself/herself down. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student thinks carefully about what he/she wants to say, before he/she speaks. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | My student keeps trying even after getting negative comments from people. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student does work right away, instead of waiting until the last minute. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 2. Social and cultural awareness skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student learns from people with different opinions than him/her. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student feels bad for someone else when their feelings are hurt. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student compliments others' accomplishments. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | When others disagree with him/her, my student is respectful of their views. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student can stand up for himself/herself without putting others down. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 3. Creativity and innovation skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student is able to have fresh perspectives on old problems. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student can deal with sudden changes and surprises. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student works hard to try to understand something new. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | My student stays focused on the same goal for several months at a time. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | When working with other people, my student comes up with new ideas and different solutions. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 4. Communication skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student carefully listens to other people who have different opinions than his/her. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student talks to his/her friends about how he/she feels when he/she is upset with them. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student is good at persuading people. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | My student can communicate with others clearly and effectively. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student is good at preventing quarrels with other people. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 5. Teamwork skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | If needed, my student is able to give and ask for support and help. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student likes to participate in a discussion where new ideas are exchanged. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | In order to achieve a goal, my student breaks it down into smaller objectives. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | When working with other people, my student is open to receiving and giving feedback. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student works out disagreements with other people. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 6. Critical thinking skill

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student thinks about what might happen before making a decision. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student thinks of different ways to solve a problem. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student says "No" to a friend who wants to break the rules. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | My student reflects and analyzes his/her and other people's actions and situations. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student can identify, select, and process information from a variety of resources. | ☐ | ☐ | ☐ | ☐ | ☐ |

## 7. Growth mindset

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student does not give up easily when confronted with obstacles and distractions. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | My student finishes the work he/she started. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | For my student, mistakes are opportunities to learn. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | My student thinks life is a constant learning process. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student is certain that he/she can master the skills being taught. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 6. | When getting stuck while learning something new, my student tries different ways. | ☐ | ☐ | ☐ | ☐ | ☐ |

# 8. Entrepreneurial mindset

| | Questions about your student | Extremely or almost always | Very or often | Somewhat or sometimes | Not at all or rarely | Don't know |
|---|---|---|---|---|---|---|
| 1. | My student likes to learn new things. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | When doing things, my student asks, "how can I do it differently?" | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | My student tries to do things better than before. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | Before beginning a task, my student plans and sets clear goals to achieve it. | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | My student thinks he/she must make risky decisions and take risks at times in order to be successful in life. | ☐ | ☐ | ☐ | ☐ | ☐ |

# Three. Life Aspiration

**Instruction:** *This part focuses on the questions about the life aspirations of children and youth. Please read each question carefully and circle the answers in line with the instruction given per question. You may ask for help if you do not understand something or are not sure how to respond.*

## 3.1 Aspired goals and Opportunities

1. **Indicate how important it is for your student to "work for him/herself than to work for someone else".**

   0. Doesn't matter to him/her

   1. Matters, but not very much

   2. Matters very much to him/her

   3. I don't know

2. **Indicate how important it is for your student to be "Running his/her own business/ company."**

   0. Doesn't matter to him/her

   1. Matters, but not very much

   2. Matters very much to him/her

   3. I don't know

3. **In uncertain times, your student usually expects the best. How much do you agree with that?**

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

4. **Your student is always optimistic about his/her future. How much do you agree with that?**

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

5. It's important for your student to keep busy. How much do you agree with that?

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

6. Which of the following options has your student thought of as possible routes after he/she finishes school? (Please choose only ONE answer)

   a. Higher education

   b. Vocational education

   c. Gap year

   d. Get a job

   e. Start his/her own business

   f. Become a herder

   g. Start his/her own family

   h. Other (please specify) ……………………………………

## 3.2 Self- efficacy and agency

1. Does your student think that working hard is important in life? (Please choose only ONE answer)

   a. Strongly agree

   b. Agree

   c. Undecided

   d. Disagree

   e. Strongly disagree

2. Does your student believe that "in the long run hard work leads to a better life"? If yes, to what extent does he/she believe (with 100 meaning he/she fully agrees to the statement)? Please circle ONE below.

   0      10      20      30      40      50      60      70      80      90      100

☺ **THANK YOU SO MUCH FOR YOUR PARTICIPATION IN THE SURVEY.**

# Appendix C: Explanation of the unavailable respondents

Target number of the sample is 2,012 respondents. We have created a replacement pool of respondents (248) in case of the unavailability of the original respondents. In total we had the list of 2,260 potential respondents.

| Aimags | Original target | Replacement pool | Total |
|---|---|---|---|
| Gobisumber | 210 | 30 | 240 |
| Khovd | 445 | 57 | 502 |
| Sukhbaatar | 308 | 32 | 340 |
| Uvurkhangai | 603 | 74 | 677 |
| Zavkhan | 446 | 55 | 501 |
| Total | 2012 | 248 | 2260 |

The following list enumerates the reasons of missing respondents and reports how the field team sources the replacement pool of respondents where available.

| Reasons | Number |
|---|---|
| Duplicated in the sample | 8 |
| Duplicated in the sample, and surveyed from replacement pool | 5 |
| Graduated and phone number was not found | 4 |
| Graduated 9th grade and whereabouts is unknown | 1 |
| Graduated. Living in Korea. | 1 |
| Graduated, surveyed from replacement pool | 2 |
| Had gone to the countryside home | 4 |
| In the countryside, herding livestock, phone numbers are not found | 23 |
| Living in the countryside, surveyed from replacement pool | 9 |
| In jail | 1 |
| In Korea | 2 |
| Living in the countryside. Farmer, phone number not found | 12 |
| Living in the countryside. surveyed from replacement pool | 2 |
| Lives in UB, phone number not found | 7 |
| Lives in UB, surveyed from replacement pool | 5 |
| Living in Japan | 2 |
| Moved to UB, phone number not found | 19 |
| Moved to UB, surveyed from replacement pool | 17 |
| Moved to another aimag, phone number not found | 5 |
| Moved to another aimag, surveyed from replacement pool | 1 |
| Moved to another soum, phone number not found | 8 |

| | |
|---|---|
| Moved to another soum, surveyed from replacement pool | 3 |
| Moved to aimag center, phone number not found | 4 |
| Moved to aimag center, surveyed from replacement pool | 5 |
| No information | 31 |
| No information surveyed from replacement pool | 7 |
| On leave to take part in a tournament in USA | 1 |
| On sick leave | 2 |
| On sick leave, surveyed from replacement pool | 4 |
| On a year's leave, phone numbers are not found | 2 |
| Out of school, surveyed from replacement pool | 2 |
| Participating in a competition in the province | 2 |
| Survey taken | 1979 |
| Student in Russia, phone number not found | 1 |
| Student in UB, phone number not found | 28 |
| Student in UB, surveyed from replacement pool | 14 |
| Student in another aimag, phone number not found | 3 |
| Student in another soum, surveyed from replacement pool | 2 |
| Temporarily in the countryside | 1 |
| Works in UB, phone number not found | 3 |
| Works in other aimag, phone numbers not found | 5 |
| Works in UB, surveyed from replacement pool | 2 |
| Went to countryside home | 3 |
| Went to the army | 3 |
| Went to the army, surveyed from replacement pool | 1 |
| Went to another aimag, phone number not found | 2 |
| Went to another aimag, surveyed from replacement pool | 5 |
| Went to Inner Mongolia | 1 |
| Went to the provincial central dance competition, surveyed from replacement pool | 4 |
| Refused | 2 |

## Summary

| Key indicators of the sample | Number of respondents | Percentage |
|---|---|---|
| Surveyed respondents from replacement pool | 90 | |
| Surveys were taken from | 1979 | 98% |
| Original survey target | 2012 | 100% |
| Missing from the target amount | 33 | 2% |

## LEARN TOGETHER
## CREATE TOGETHER

**Save the Children**