

# Reading Data with Children and Youth Initiative

## Outcome Assessment

*Kigali, May 2022*

## PREFACE

From 2005, the National Institute of Statistics of Rwanda (NISR) organizes seminars, workshops and outreaches to strengthen the public statistical literacy with an aim of making them users of statistical information for evidence based decision making and planning.

In this context, events and activities to develop children capability in Reading and understanding official statistics were introduced in the National Strategies for the Development of Statistics (NSDS). They include the Reading Data with Children and Youth Initiative.

Since the introduction of the Reading Data with Children and Youth Initiative in 2015, around 60 children and youth were invited every year in the context of African Statistics Day celebration to be exposed on the existing statistical information and to be trained on how to read and interpret them as future agents in national development discussions. As highlighted in different occasions where children and youth participated in these events, they consistently showed an interest in the initiative. This interest gives a hope that they will continue to be part of the initiative.

To make this initiative accessible to a bigger number of children and youth countrywide, Teachers were trained since 2017 with an objective of engaging them and making them facilitators of the Reading data with children and youth initiative in their respective schools. In that context, a “Teacher Guide for Reading Data with Children” was developed, printed and distributed in different schools countrywide. It was also published on NISR website for a wider dissemination. As result, Clubs of Statistics were created in different schools countrywide.

To ensure the number of these clubs is growing, on one hand, more teachers from schools were trained and requested to start new clubs at their schools. The outcome is now that the number of clubs of statistics grew from 11 clubs in 2020 to 29 in 2021.

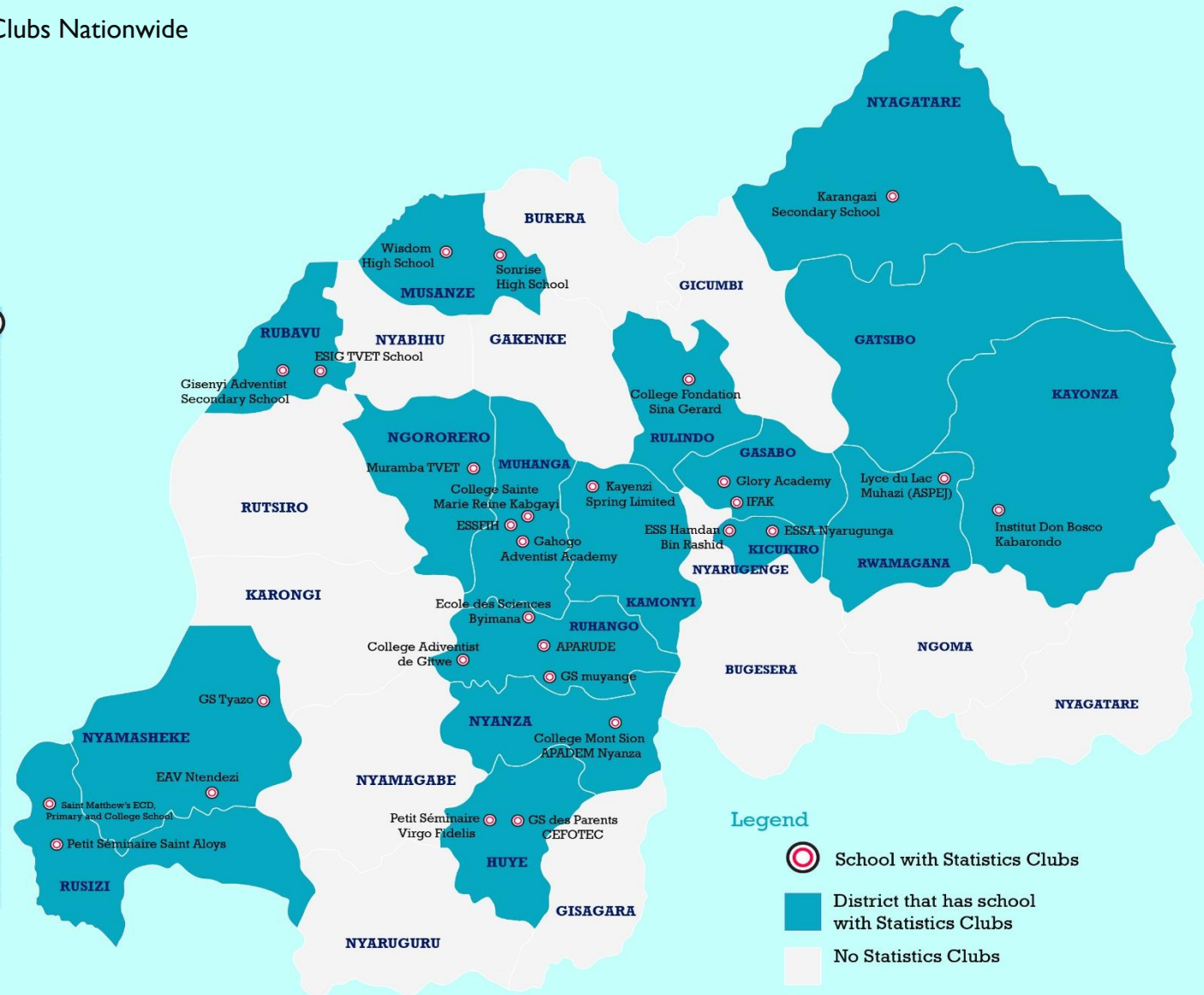
On the other hand, with the outbreak of COVID-19 pandemic, the NISR team and UNICEF realized that it is no longer easy to invite children and youth from different places and gather them in the same place as it was done previously because of different measures to contain the spread of the pandemic. Hence, the new idea of reaching them (children) at their statistics clubs in schools evolved.

As we are moving forward, clubs of statistics are becoming a new strategic channel to instill statistical literacy in the public, starting by nurturing the data driven mindset to the young generation. Furthermore, clubs of statistics are seen to becoming a channel that can be used for data dissemination. This is because trained teachers and young generations can take statistical information to their communities and households and incite others to discuss the country development through evidence based arguments, and share feedbacks that can enrich their understanding of importance of statistical information.

Almost 8 years after, it was worthy to assess the way this initiative contributes in developing the public statistical literacy, and in a particular way, the development of a data mindset among children and youth. This assessment therefore, aims at gauging to what extent children and youth are interested by Reading and discussing data with their peers, parents, and others communities members within their circle of influence; and how clubs of statistics are contributing in developing the spirit of evidence based decision making, informed discussions and debates among children and youth. The report is also providing recommendations that can help in improving the Reading Data with Children initiative to make it more useful and sustainable.

## Map: Visualized Statistics Clubs Nationwide

DISTRICT	Statistics Clubs established
KAYONZA	Institut Don Bosco Kabarondo
NYAGATARE	Karangazi Secondary School
RWAMAGANA	GS Nyinawajambo Lycee du Lac Muhazi (ASPEJ)
GASABO	IFAK-Kimuhurura Glory Academy
KICUKIRO	ESS HAMDAN BIN RASHID ESSA Nyarugunga
MUSANZE	WISDOM HIGH SCHOOL Sonrise High School
RULINDO	College Fondation Sina Gerard
HUYE	Petit Seminaire Petit Virgo Fidelis Butare Groupe Scolaire des Parents/CEFOTEC
KAMONYI	Kayenzi Spring Limited College Sanite Marie Reine Kabgayi
MUHANGA	ESSFIH/ MUHANGA Gahogo Adventist Academy
NYANZA	College Mont Sion APADEM Nyanza College GITWE
RUHANGO	College de Bethel /APARUDE GS muyange Ecole des Sciences Byimana
NGORORERO	MURAMBA TVET EAV Ntendezi
NYAMASHEKE	GS Tyazo
RUBAVU	Gisenyi Adventist Secondary School ESIG TVET School
RUSIZI	St. Mathews College Petit Seminaire St Aloys



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## ABBREVIATION AND ACRONYMS

EICV	Health Surveys and Integrated Household Living Conditions Surveys
NISR	National Institute of Statistics of Rwanda
NSS	National Statistical System
PPS	Probability proportional to size
PSUs	Primary Sampling Units
SDGs	Sustainable Development Goals
NSDS3	Third National Strategy for the Development of Statistics
OECD -DAC	Organization for Economic Co-operation and Development Assistance Committee



## EXECUTIVE SUMMARY

### Background and brief methodology

Since its creation in 2005, the National Institute of Statistics of Rwanda (NISR) placed statistical literacy among its annual and strategic elements to be included and implemented through the National Strategies for the Development of Statistics (NSDS). Children and youth are among the beneficiaries of these programs. Furthermore, in the era of data revolution, statistical literacy must include different categories of the public to ensure that no one is left behind. This will ensure that everyone draw on existing data demands and available new data sources to fully contribute to the existing efforts and increase their integration into well-illuminated process of decision making. Moreover, to reach a bigger and very disaggregated number of data users can help break the chain of illiteracy from a statistical perspective.

For information of any reader of this report, the Education Statistical Yearbook published by MINEDUC in April 2022, illustrates that the number of students enrolled in secondary increased between 2019 and 2020/21, from 732,104 to 782,846 students.

Therefore, NISR in collaboration with UNICEF decided to include children, youth and teachers in the journey of strengthening public statistical literacy by initiating the Reading Data with Children and Youth initiative. To make it as effective as possible, various materials were developed including a teachers' discussion guide that was developed as an instrument to facilitate sessions of Reading Data with Children and Youth in their schools.

The methodology of Reading Data with Children Initiative includes the use of children-friendly readable visualizations. Data are taken from NISR reports such as Labour Force Surveys, Rwanda Demographic and Health Surveys and Integrated Household Living Conditions Surveys. Since then, Reading Data with Children and Youth event showed that children are able to read, interpret and even present official statistics using their words and comments. The picture below illustrates how children can visualize data using their different skills'



For more than seven years now, the Reading Data with Children and Youth Initiative is being appreciated not only by children, youth and teachers, but also by parents and other observers. This outcome assessment helped to provide evidences on the relevance of Reading Data with Children initiative, its effectiveness, efficiency, and sustainability and it provides recommendations for further improvements and or additions to make this initiative more fruitful. In addition, as it is the first to be conducted in this area, this outcome assessment presents its self as the baseline for other assessments that will be conducted in the future.

Objectives of this Outcome Assessment include:

- To estimate to what extent children and youth are interested by Reading and discussing data with their peers, parents, and others within their circle of influence; and how statistics are being used for decision making and informed discussions and debates;
- To determine how easy or difficult it is to facilitate the Reading Data with children and Youth using the Teacher's Guide Booklet;
- To collect new ideas about other approaches and/or initiatives that can be used to build and develop skills and capacity to read data for evidence-based decision making in the future;
- To provide the level of teacher satisfaction with Reading data with Children and Youth Teachers guidelines booklet and available statistics in general (their awareness, accessibility and usage)
- To assess the extent to which children parents are interested in Reading official statistics.

## **Findings and discussion**

During this assessment, 92% of children testified that it is good for them to have participated at least once in their live in Reading Data with Children and Youth because there are many benefits to knowing how to read, interpret and use data; children can read, interpret, and use data for fun. In addition, more than 91% of respondents testified that statistics clubs are helpful to learn Reading, interpreting and using data.

More than 80% of teachers interviewed reported that it is good to have been trained in matters of the Reading data with Children and Youth Initiative because it is easy for them to lead and facilitate Reading data with children and youth clubs. They have been trained and use a teacher's guide for statistical literacy for Reading data with children, which was developed according to the needs of each facilitator of statistical clubs. As a result, statistics clubs have become one of the most important clubs in high school. Children are given several opportunities to ask and respond to questions, visualize their own data sets, provide insight on what can be done to address development gaps based on the data they read, and learn to link development facts to the SDGs. It was observed that 49.7% of children in the studied population are girls and approximately balanced with boys (50.3%) who participated in the

assessment. These percentages illustrate how well the initiative is gender inclusive and how both girls and boys are interested in acquiring statistical knowledge.

The assessment realized that Children and youth that participated in the assessment are interested and satisfied by the way teachers were able to facilitate the related sessions. It was realized that 81.7%, and 86.27% of the respondents recognize that instructors made the subject interesting as much as possible. About 79.3% of respondents, reported that instructors applied a good methodology during sessions of Reading data with children. In addition, 83.68% confirmed that instructors provided opportunities to ask questions and expression their thoughts.

About 91% of respondents believe parents should be involved in teaching/coaching their children how to read, interpret and use data. About 92.8% of the respondents reported that parents and teachers should work together to support children's Reading, interpreting, and using data.

## **Conclusion and Recommendations**

The assessment found that the “Reading Data with Children and Youth initiative” is a good initiative that has to be sustained because it plays an important role in developing the statistical literacy of children and young people. Children and teachers confirmed that through this initiative they are gaining skills and a lot of information about how the country is being developed especially in areas that affect children life.

However, the fact that statistics clubs are not in all schools is limiting their children and teachers interactions with their colleagues in discussions the country development and importance of official statistics. The problem of insufficiency of adequate materials to be used in sessions of Reading Data with Children and Youth will affect the quantity and the quality of initiative results.

Overall, the assessment realized that children and teachers are at high level satisfied with the initiative and confirmed they are ready to contribute in its extension in other schools.

In the light with the findings, the assessment makes recommendations to ensure the sustainability of this initiative and to make it more fruitful. The following are ones of them.

First, it is recommended to increase the number of statistics clubs by creating new ones in other schools and avail them adequate materials and equipment to be used in sessions of Reading data with children and youth.

Second, it is recommended that teachers who were trained contribute in training more teachers in skills that will help them to facilitate sessions of Reading data with Children and Youth in their schools and coach the statistics clubs.

Third, more children and youth should be invited in other statistical activities as an exposure to discussions related to the importance of official statistics, their availability and uses in evidence based decision making and planning.

# I. INTRODUCTION

## I.1 Overview of context and initiative

In the society full of huge amount and mixed information, skills to access, understand, select and use statistical information are becoming essential for everyone, not only to make evidence-based decisions in our everyday life, but also to effectively participate in highly competitive workplaces. The complexity of information of today is therefore leading to an increased attention to statistics and statistical literacy (von Roten & de Roten, 2013).

The production of timely and good quality statistics, if complemented by easy access, good understanding and use, will help governments to make evidence-based decisions, adequate resources allocations and to track progress and make sure their; they can also strengthen accountability. This is not just in public institutions, but also in international agencies, CSOs and private sector. They should also leverage the existing statistical information for their business planning.

The current phenomenon is dual: progress in using statistics goes hand in hand with increasing misuses and statistical fallacies (Lam et al., 2017). Hence, the National Institute of Statistics of Rwanda (NISR) placed statistical literacy among core activities in all National Strategies for the Development of Statistics (NSDS) for all ages of data users, current and future ones.

In collaboration with UNICEF, programs that aim at equipping children and youth with skills to access, understand and use of available statistical information in decision-making and debates were planned, and the “Reading Data with Children and Youth Initiative” was introduced in 2015. The purpose was to invite around 50 children and youth in the context of celebrating the African Statistics Day and train them in how to read official statistics, with an emphasis on the ones that are related directly to their lives. The methodology consists of using children friendly visualizations produced with data from NISR reports, and give children and youth in the room occasions to discuss and share their comments.

In general, the aim of this initiative is to develop the statistical literacy of the public, starting by children and young people as a future generation of data users, and to make statistics a part of Rwandan children.

However, it has been realized that a lot has to be done if we want to reach more children and strengthen their knowledge and competencies in accessing, Reading and using official statistics for evidence based decision making, considering the principle of not leaving anyone behind in this era of Sustainable Development Goals (SDGs). Therefore, in accordance with the third NSDS goal for what is concerning the statistical literacy, NISR seeks to develop the data-driven mindset among the young population and to equip them with basic competencies to use official statistics in designing their own future and the country's future. However, it may not be easy to reach all children and youth seeing the level of statistical literacy to achieve as soon as possible.

“Statistics is a general intellectual method that applies wherever data, variation, and chance appear. It is a fundamental method because data, variation, and chance are omnipresent in modern life. It is an independent discipline with its own core ideas rather than, for example, a branch of mathematics” (Anderson-Cook, 2006).

Therefore, to reach a bigger number of children and speed up the chain of literacy from a statistical perspective, NISR and UNICEF decided to involve teachers in this initiative of Reading Data with

Children and Youth. In that context, training programs for teachers were organized, and a teachers' discussion guide was developed to facilitate them in Reading Data with Children and Youth initiative.

For the Reading Data with Children and Youth methodology, the idea is to use children-friendly readable visualizations with data taken from NISR reports such as Labour Force Surveys, Rwanda Demographic and Health Surveys and Integrated Household Living Conditions Surveys (EICV). Since then, Reading Data with Children and Youth event showed that children could read, interpret, and present the data using their own narrations and visualizations.

More than 7 years now, the Reading Data with Children and Youth Initiative is becoming an occasion allowing teachers and children to interact with updated official statistics, and to instill the data driven in the public, which is contributing in the illuminated development planning and monitoring. It is time therefore to see how this initiative can be improved and sustained seeing the role it is playing in strengthening the public statistical literacy. This assessment will then sharpen original ideas and help orienting it in accordance with current development and challenges.

## 1.2 Snapshot of the indicators used in the Reading club

### SELECTED INDICATORS AND KEY MESSAGES

1. **Net Attendance Rate in Primary Schools (%)** - The dream of universal and complete primary education may soon be a reality in Rwanda. About 90% of boys and girls are at school but not all children; 1 out of 10 are still left behind (EICV).
2. **Poverty by District** - Some districts had higher poverty rates in 2013/2014 (EICV).
3. **Child Malnutrition (Under 5) by District** - More than 42% children under 5 years old were stunted in 10 districts in 2014/2015 (RDHS).
4. **Literacy Rate of Population 15-24 (%), According to Consumption Quintile** - Expanding access to education bearing fruits - even the youth from the poorest households catching up on literacy (EICV).
5. **Care Seeking for Childhood Illnesses (%)** - Mothers who are more educated are more likely to seek healthcare for their children (RDHS).
6. **Secondary School Net Attendance Rate (%), According to Wealth** - More children attend higher education; even the number of children from the poorest households has increased (EICV 4).
7. **Percentage of Population with Health Insurance by Wealth** - There is a need to support the poorest households in getting health insurance (EICV 4).
8. **Under 5 Mortality** - A significant reduction in child mortality: 50 compared to 196 - 15 years ago (per 1,000 live births) (RDHS).
9. **Fertility Rate** - Today Rwandan families have less children: children enjoy more attention and care from their parents (RDHS).
10. **Birth Registration** - A birth certificate identifies who you are and gives you access to social services. Every child has a right to have a birth certificate (RDHS).
11. **Ownership of Mosquito Nets (%)** - Since 2010, 8 out of 10 families have mosquito nets, but who are still left behind (RDHS)?
12. **Delivery at a Health Facility (%)** - Women enjoy safe motherhood in Rwanda: 91% of deliveries happened in health facilities in 2014/2015 (RDHS).
13. **Households Using Improved Sanitation (%)** - A visible progress: household's access to improved sanitation significantly increased, but regional disparity exists (EICV).
14. **Households Access to Improved Water Source (%)** - A visible progress: households' access to improved drinking water source significantly improved (EICV).
15. **Households Using Electricity as Main Source of Lighting (%)** - All children want to enjoy reading at night: More than 70% of households had access to electricity in Kigali City compared to 9% in South in 2013/2014 (EICV).
16. **Households Access to Internet (%)** - An internet access brings a huge opportunity for children's learning. From 2010/2011 to 2013/2014, the proportion of households which have access to internet almost tripled, however, only 1 out of 10 households had internet access in 2014 (EICV).

### TEACHERS' DISCUSSION GUIDE FOR READING DATA WITH CHILDREN



'OUR STORY - PAST, PRESENT AND FUTURE OF RWANDA, OUR CONTINENT AND OUR GLOBE'



unicef | for every child



### I.3 Initiative outcomes and indicators

After reviewing and consulting various documents including the Teachers' Guide for Reading Data with Children, and various archives related to the Reading data with children and youth initiatives, the following table illustrates the proposed result frameworks, with indicators that will be used to measure the intended objectives and outcome of the Reading data with children and youth initiative and will be discussed, updated, and validated during the process of this assignment.

**Table 1.** Reading data with children and youth initiative indicators

Statement	Indicators
<p><b>Goal</b> The spirit, data-driven mindset, and statistical literacy of Rwanda's young people are awoken, who will lead the country's future in the era of Sustainable Development Goals (SDGs).</p> <p><b>Outcome:</b> Improved statistical literacy and data-driven mindset of children and youth (boys and girls and children with disability).</p> <p><b>Indicator:</b></p> <ol style="list-style-type: none"> <li>1. Percentages (%) of children (girls, boys, and children with disabilities) demonstrating improved statistical literacy</li> <li>2. Percentages (%) of children (girls/boys) reported changes in their views about social indicators from Reading data</li> </ol>	
<p><b>Output 1:</b> The statistical capacity of young generations for evidence-based decision making improved</p>	1.1 Percentages (%) of children (girls, boys, and children with disabilities) report discussing the social indicators with teachers, parents, other children/youth, community (i.e. forum, ...)
	1.2. Percentages (%) of children participated in the statistics clubs for more than 75% of the sessions at the school level for the last term
	1.3. Percentages (%) of children (girls/boys) report having improved knowledge and skills in data literacy
<p><b>Output 2:</b> The uptake of official statistics up to the school levels strengthened</p>	2.1. Percentages (%) of children who reported improvement in understanding the use of data in the school community
	2.2 Percentages (%) of children reported using statistical information in the organised events (i.e. debates, children's participation events, Africa Statistics Day...)
<p><b>Output 3:</b> An adequate environment for all children, including ones with different disabilities, to interact and discuss statistical information provided</p>	3.1 Percentages (%) of children who reported having access to Reading data platforms
	3.2. Number (#) of statistics clubs having regular (i.e. weekly/biweekly in the term) meetings/sessions
	3.3. Number (#) of organised events to interact and discuss with other children at school
	3.4 Number (#) of statistic clubs having a sustainable organisational committee

## ABOUT THE OUTCOME ASSESSMENT

### 2.1 Objective of the assessment

The overall objective of this assessment is to provide evidences on relevance, effectiveness, efficiency, outcome, and sustainability of the Reading data with Children and Youth Initiative. It also presents the baseline value (current status) of interests of participants in the previous initiatives of Reading data with Children and Youth. By considering recommendations and lessons learn from the assessment, this assessment will help to improve the Reading data with the Children and Youth initiative.

Therefore, the initiative indicators are summarized in table 2.

**Table 2.** Reading data with the children's DAC criteria matrix

DAC <sup>1</sup> Criteria	Definition of the evaluation question
<b>Relevance</b>	<ul style="list-style-type: none"> <li>▪ To what extent did the children/youth/teachers contribute to implementing the initiative objectives?</li> <li>▪ To what extent does the Reading Data with Children and Youth provide opportunities to all children and youth in Rwanda, considering the differentiated needs of girls and boys?</li> </ul>
<b>Efficiency</b>	<ul style="list-style-type: none"> <li>• To what extent did the management of Reading Data with Children and Youth Initiative ensure timely and efficient utilization of resources to deliver the outputs from implementing the different interventions?</li> <li>• To what extent were the Reading Data with Children and Youth interventions coordinated with other capacity-building initiatives and statistical literacy?</li> <li>• To what extent has the provision of Reading Data with Children and Youth materials, and capacity development of teachers been efficient?</li> </ul>
<b>Effectiveness</b>	<ul style="list-style-type: none"> <li>▪ To what extent did the Reading Data with Children and Youth meet its objectives and outputs as stated in the program design document?</li> <li>▪ To what extent has the implementation of Reading Data with Children and Youth been in line with the principle of "Leaving No one behind" and adhering to quality standards and gender equality?</li> </ul>
<b>Outcome</b>	What were the drivers, barriers and bottlenecks to the Reading Data with Children and Youth's success that may support the policymakers and program designers' adjusted interventions?
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>▪ To what extent are the benefits of the Reading Data with Children and Youth interventions likely to continue after the program?</li> <li>▪ To what extent the outcomes and outputs achieved by the Reading Data with Children and Youth will contribute to leveraging more funding and resources from current and new donors to maintain or increase financial support for the initiative?</li> </ul>

This section examines the actual initiative management before examining the impact in the next chapter. While there has been a positive impact on the participants in question, this assessment has uncovered several key challenges in initiative implementation, which have likely impeded the initiative results – and thrown into question whether this initiative

<sup>1</sup> The Development Assistance Committee (DAC), is used to determine the relevance and fulfillment of objectives, developmental efficiency, effectiveness, impact (outcome) and sustainability (Holvoet et al., 2018; OECD, 2019)

benefitted the right people in the first place. Notably, the findings along these criteria highlight the following:

- **Relevance:** The extent to which the initiative's objectives and design respond to beneficiaries' global, country, partner, and institutional needs, policies, and priorities. That is, is the intervention doing the right things?
- **Effectiveness:** The extent to which the intervention achieved, or is expected to achieve, its objectives and results, including any differential results across groups. That is, is the intervention achieving its objectives? Objectives are defined quantitatively as expected outputs or results.
- **Efficiency:** The extent to which the intervention delivers, or is likely to deliver, results in an economical and timely way. That is, how well are the resources being used? A program is regarded as efficient if it utilises the least costly resources appropriate and available to achieve the desired outputs. The program funding, reporting, capacity, and challenges are now discussed.
- **Outcome** measures the extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects. That is, what difference does the intervention make? The findings are divided into quantitative and qualitative findings.
- **Sustainability:** The extent to which the net benefits of the intervention continue or Development Assistance Committee are likely to continue. Many interventions fail once the implementation phase is over, mainly because the beneficiaries and government do not have the financial resources, capacity, or motivation to continue the program activities. In evaluations, sustainability is a core theme as donors and international and national stakeholders emphasize autonomy, self-reliance, ownership, and long-term improvements.

As such, Organization for Economic Co-operation and Development Assistance Committee (OECD-DAC) criteria of Relevance, Effectiveness, Efficiency, Outcome and Sustainability will be addressed in this section, focusing on the internal processes of the initiative implementation.

### 3.2.1 Relevance

The relevance of this initiative has been assessed along with two overarching areas: the relevance to National Statistical System (NSS) and Reading data with children and youth initiative objectives. The contribution of the children/youth and teachers to implementing these objectives of the initiative and the alignment of the initiative to the data literacy context: overall, the initiative is relevant to NSS and Reading data objectives and the needs of the participant population but could be better attuned to the implementation environment.

#### Alignment of Reading data with children and youth initiative objectives to national and global strategies and programs

The initiative is successfully aligned with both NSS and Reading data with children and youth initiative objectives:



- The initiative falls under NSS Plan and specifically addresses the priorities of education and child/youth participation by increasing the accessibility of the evidence based on the indicators that describe in the table 1.
- It also aligns with Rwanda National Strategy Transformation (2017-2024), emphasizing the knowledge-based learning through capacity-building under 3 pillars: Economic Transformation, Social Transformation, and Transformational Governance.
- The initiative is also aligned with the SDGs principle of “No one can be left behind”.

The main objective of the National Strategy is 'to influence society's perception of children and childhood so that education becomes accepted as a universal norm'. *This assessment found that the Reading data with child and youth initiative was relevant to the needs and expectations of children participation, NISR's National Strategies for the Development of Statistics, information sharing and capacity building.*

### Relevance to children and youth's needs and expectations

With the importance of the perspectives and opinions of the children and youth on their interest in Reading data initiative. Thus, this initiative clearly is relevant to children's aspirations and expectations. Using statistic club is a resourceful, enjoyable, and exciting way to promote the Reading data with children and youth initiative at school level. Statistic club are one of the initiatives that bring together more children and youth from diverse areas, with a variety of talents and interests, all at the same time, therefore, clubs can play a significant role in promoting a positive attitude towards data literacy.



*I have facilitated the statistic club after the training related to Reading data with children initiative and have found that statistics is a child favorite because they see statistics from a completely different perspective. Combining statistics with other activities such as debates and school events that needs children's presentations are always a winner and learning some practical and reasoning that can challenge and entertain. – Teacher, KII*

Teacher respondents were largely in agreement that this initiative met the children and youth's needs and expectations. This suggests that, overall, participants found the initiative appropriate to their circumstances and that it addressed key needs of theirs. *However, as noted by head teachers, the overloaded school curricular reduce time allocated to extracurricular including this initiative – thus, training offered to their fellow teachers is appreciated and improved their teaching practices on the chapters related to statistics.*

### Appropriateness to the implementation context

The last component of relevance is how well the initiative was designed to suit the specificities of the implementation context. For instance, joining a statistics club is voluntary, but children and youth throughout the school are encouraged to enroll so they can experience learning statistics in different ways. Working with peers from other classes and age groups helps children develop their collaboration skills and cultivate their statistical development. Effective participation strengthen also the children communication skills.

Reading data with children and youth initiative through clubs are social occasions and play an important role in building positive relationships between teachers and children, besides enriching the data literacy. They are opportunities to showcase being a data literate champion and help children become Reading data catalysts and ambassadors themselves. Statistics clubs raise the prominence of statistics as a topic, they increase engagement and show children and youth that statistics can be playful, engaging and full of data wonder in global context. Holding a weekly statistics club take off the curriculum jacket and work more informally with children and youth while engaging them in a variety of activities for statistical sense-making.



*Explaining socio-economic stories statistics using numbers and charts, increase children's curiosity and provides novel contexts for learning new skills and supports statistics resilience. Statistics clubs as a channel to engage children in the Reading data with children initiatives are wealthy sources of enhancement and enrichment. They're a creative arm of statistics, designed for amusement and enjoyment where tricks take centre stage to engage in data literacy. – Teacher KII*

## 2.2 Outcome assessment design

Descriptive design using a mixed-methods approach was used for the assessment (qualitative and quantitative). This includes a review of the available literature, collection and analysis of qualitative data through key informant interviews at the national level, and quantitative data analysis to be collected using a structured questionnaire.

### 2.2.1 Sources of data and data collection

The outcome assessment used different approaches to get data from the targeted group, including a desk review of all available documentation including reports, articles, videos and other archives related to the Reading data with the Children and Youth initiative. In addition, interviews with selected individuals and stakeholders, including children, teachers and development partners were done to understand and assess the outcomes of the Reading data with children and youth initiative.

- **Document review:** during the data collection, a preliminary desk-based review of the existing literature on the Reading Data with the Children and Youth Initiative was performed. These included documents related to the initiative, such as program descriptions and existing reports and documentation, articles, and videos. This review helped to refine the study design, develop qualitative question guides, analyse, and interpret qualitative and quantitative data, review the stock of available data and identify information gaps to help guide data collection.
- **Key Informant Interviews:** In collaboration with NISR, we identified relevant key informants representing, including stakeholders, government, non-government, and development partners. The questionnaire focused on the perceptions and insights based on each informant's specific participation and knowledge of the Reading Data with Children and Youth Initiative.
- **Structured questionnaire:** the survey questionnaire was administered for one-on-one interviews with children that are familiar with the initiative. Some of the children are the ones that participate in statistics clubs or events. The questionnaire was developed to draw on participant experiences and generate helpful data in understanding the outcome and level of interest/satisfaction and knowledge about Reading and discussing data.

## 2.2.2 Sample size and target population

The primary sampling frame for the assessment was based on the current database of the beneficiaries (trained teachers and students within statistical clubs). They were contacted in collaboration with school leaders and trained teachers. The sample allocation across schools was performed with equal probability. The primary sampling units (PSUs) are schools using the Probability Proportional to Size (PPS), where children receive training from clubs. A sampling frame of children was used to sample the targeted population using gender as Strata. Finally, a simple random sampling technique is used within strata.

Based on references and discussions with the technical team, there is no exclusion for the targeted group, which helped determine the final sample size of this study. Using the existing sample frame, the study adopts systematic sampling where the respondents are selected following the interval between the first respondent and the second respondent. For a study design based on a systematic sampling rather than a simple random sample, the sample size was calculated according to the following formula: by default, in this study, we assume that declared all eligible participants, including children who are registered to be a member of statistics clubs in the selected schools and with a desire to get estimates at 95% where the significance is 5% and using a proportion of 50%, the sample size will be:

$$n_1 = \left( \frac{Z^2_{\alpha} * P(1-P)}{d^2} \right)$$

By adjusting the sample to the population size with the cluster effect, the sample size becomes

$$n_2 = Deff * \left( \frac{n_1}{1 + \frac{n_1 - 1}{N}} \right)$$

Including the sample size of all other indirect beneficiaries (non-trained teachers, parents/caregivers, and community, and non-participants in statistical clubs, classmates) in the listed schools are eligible from the sample size with a cluster effect, the probability of other actors equal to 13%. The adjusted total sample size becomes  $n = n_2 * 1.1 = 385 * 1.13 = 435$

Here,  $Z$  = Z-value (e.g. 1.96 for 95% confidence level),  $p$  = percentage picking a choice, expressed as decimal (.5 used for sample size needed) and  $d$  = Margin error, expressed as decimal (e.g., .05 = ±5%). The survey is needed to have a confidence level of 95% that the real value is within ±6% of the measured/surveyed value.

**Table 3.** Sample size and targeted population

	Targeted Population	Sample Size
Children (Trained)	20 children/School	200
Children (Non-Trained)	20 children/School	200
Former participants	10	10
Teachers (IDIs)	100	20
NISR/UNICEF	5	5
<b>Total</b>		<b>435</b>

### **2.3 Data Analysis**

The kobo toolbox served to collect the data from the targeted participants and download it into an Excel spreadsheet for decoding and preliminary data cleaning. The analysis focusses on descriptive statistics, such as frequency and cross-tabulations enabling cross-area (schools) comparisons using the Stata 17 SE. Hence, qualitative data collected during interviews were performed on structured themes central to the initiative.

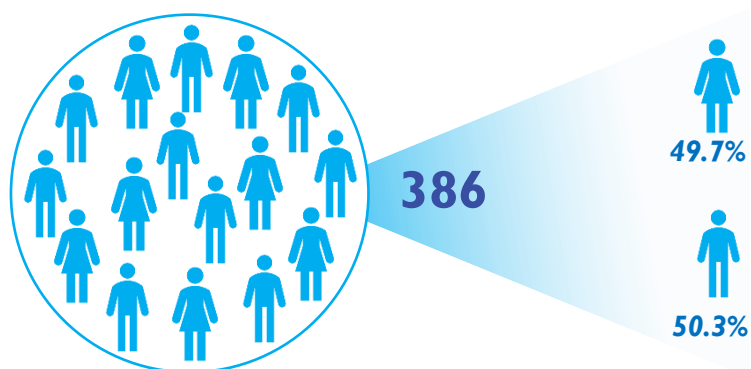
## OUTCOME ASSESSMENT FINDINGS

The findings are presented according to initiative beneficiaries and their characteristics, as well as the initiative contribution and achievements.

### 3.1 Initiative Beneficiaries and characteristics

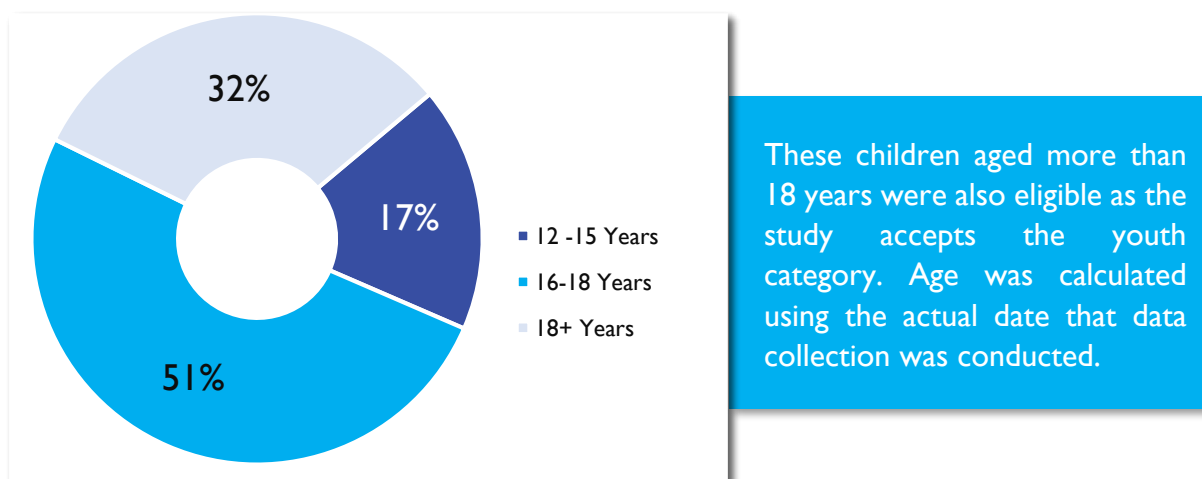
In the studied population, 49.7% of children are girls, while boys represent 50.3%.

**Figure 1:** Survey participation and gender characteristics



The age distribution of the children is not balanced, the category skewed to the children aged between 16 - 18 years of age (50.78%), followed by children aged more than 18 years and plus (32%), while 17.61% of the participants were aged between 12 and 15 years.

**Figure 2:** Age distribution of the children



## Equity and Inclusion in Reading data with children initiative

In this assessment, it was noted that attitude towards statistics clubs is almost the same among girls and boys. The percentages of girls that attend frequently statistics clubs is 77.39%, while it is 75.18% for boys. This high level of attendance (girls) could be viewed as an evidence of a high interest of girls in statistical interest.



*All children including those with disability who can reach school or who study in our school are welcomed into the statistic club. Boys and girls participate equally. No one is excluded in the statistic club. They are equally taken care of, and regarding children's performance, in general they perform well. – Teacher KII*

### 3.2.2 Efficiency

Children and Youth say that Reading Data with Children and Youth is an important approach to understand Rwandan development and how official statistics can influence policy, program, family, and individual decisions. In addition, this is initiativeed to ignite the spirit and data-driven mentality of Rwanda's young population who will direct the country's future in the era of Sustainable Development Goals.

Statistics clubs have become one of the most important clubs in high school. During statistics club sessions, children are facilitated by trained facilitators in the discussion about various thematic data, such as national rates of poverty and nutrition, challenges in education, and improvements in maternal and child health and how to use this information in future planning and decision making. Children are given several opportunities to ask and respond to questions, visualize their own data sets, and provide insight on what can be done to address development gaps based on the data they read, as well as learn to link development facts to the SDGs.

Every teacher interviewed testifies that statistics clubs and training have been an ideal asset in helping them gain advanced knowledge, owing to the fact that they study a lot and search for information before facilitating clubs and offering their courses in the classroom.



*Children participating in clubs love data, they frequently use them in answering school assignments, in discussions and debate with their peers, and find that they are interested in learning more.*

*– Teacher KII*

Furthermore, over 80% of teachers reported that it is easy for them to lead and facilitate Reading data with children and youth clubs, because they have been trained and use a teacher's guide for statistical literacy for Reading data with children, which was developed to be adaptable to the needs of each facilitator of statistical clubs.



*... as result of being statistics club facilitator, now it is easier for me to prepare and teach a course that requires the use of statistical information. I know where to get these types of information, and according to discussions in statistics clubs, I know how to explain these statistics to children in my classes by giving examples based on the actual information. At the end, it helps students to understand it very well. – Teacher KII*



Our goal is that school's teachers and children feel comfortable discussing data, and data literacy issue with children and fellow teachers, feel empowered by data and for statistics clubs to serve as a catalyst for developing data literacy in young population until their old age. – NISR Staff, KII

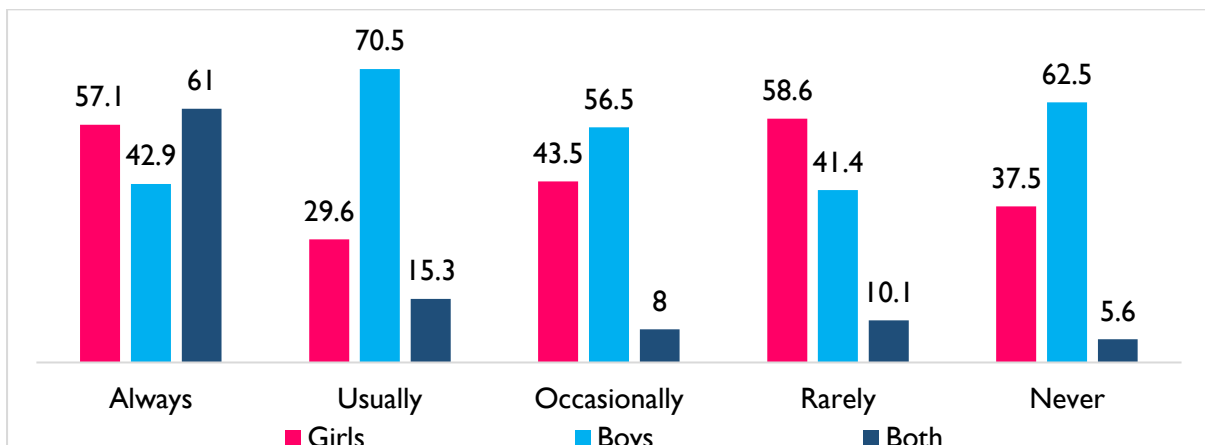
Instilling interest of statistical information in children and youth is a critical first step in fostering statistical literacy. Through various activities, Reading Data with Children and Youth Initiatives struck a good balance between supporting children to develop data literacy skills and understand the country transformation towards sustainable development.

### 3.2.3 Effectiveness

#### Attendance and participation in the statistics learning sessions

The Figure 3 shows that girls participate in statistics clubs more regularly boys (57.1% against 42.9%). Percentage of boys who have never attended sessions of statistics clubs is still higher than the percentage of girls who have never attended these sessions (62.5% against 37.5%). This is showing again how girls are interested in statistical information.

**Figure 3: Attendance in statistics clubs at school**



The self-reporting data of respondents shows that 5.7% of children attended the celebration of Statistics day at least once in their life. This percentage, if increased, can contribute in strengthening the children and youth interest in for statistics.

**Figure 4: Attendance in an official statistics day**



Only 5.7% (boys, 3.1% and girls, 8.3%) of the respondents have attended an official statistics day

## Children's knowledge and attitudes on Reading data

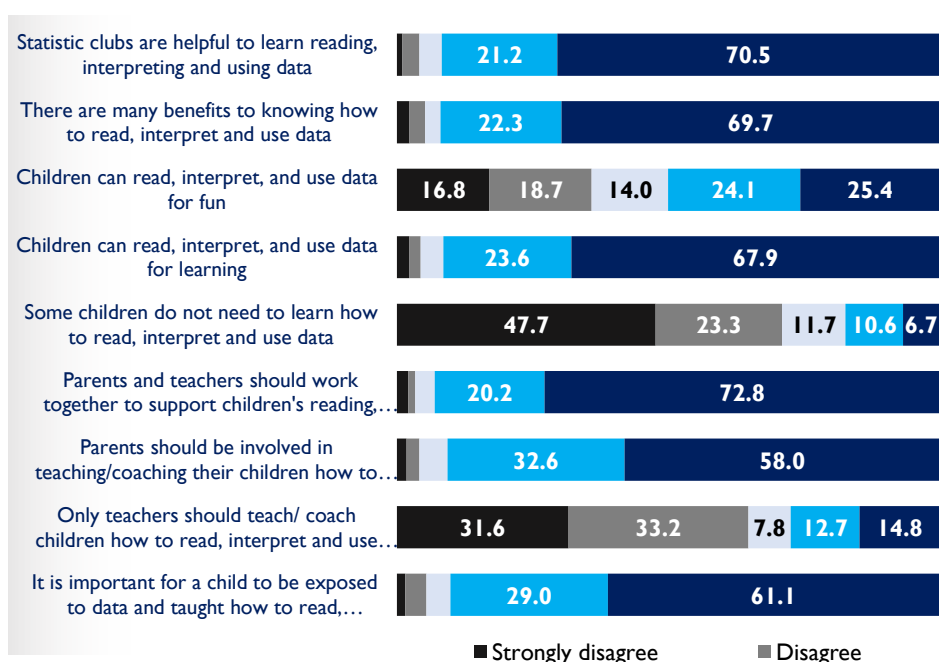
Reading data depends not only on cognitive abilities but also on emotional factors and attitudes as it plays a big role in decision making or based on the evidence. The assessment shows a high level of understanding of the clear picture of Reading data with children and youth initiative: 80% of children and youth.

**80%** of children and youth participants have a clear picture of the initiative

The figure 5 illustrates the children's knowledge and attitudes in each item. It shows that 90.2% of the respondents agree that it is important for a child to be exposed to data and taught how to read, interpret, and use it from a young age. 64.8% of the respondents reported that only teachers should teach/ coach children how to read, interpret and use data. The assessment illustrates that 90.6% of respondents agrees that parents should be involved in teaching/coaching of their children on how to read, interpret and use data, while 93% of the respondents reported that parents and teachers should work together to support children's Reading, interpreting, and use of data.

However, 71% of the respondents stated that some children do not need to learn how to read, interpret and use data. 92% respondents testified that there are many benefits to knowing how to read, interpret and use data, children can read, interpret, and use data for fun. Unfortunately, 35.5% respondents confirmed that children can read, interpret, and use data for learning and 91.5% respondents testified that statistic clubs are helpful to learn Reading, interpreting and using data.

**Figure 5: Children's knowledge and attitudes on Reading data**





### 3.2.4. Outcome

#### Discussion on the social economic indicators

Figure 6 displays the discussion on the social economic indicators with others including teachers, parents and classmates. Almost, 40% of the respondents reported that they were able to recall and write down indicators that have been discussed during the previous session of statistics clubs.

**Figure 6: Percentage (%) of children recalls of the previous Discussion on the social economic indicators with others**



During sessions of statistic clubs, facilitators use data from the Integrated Household and Living Conditions Survey (EICV) and the Demographic and Health Survey (RDHS) in a way that is adequate to children's level of understanding.

The timings and ordering of the event activities are managed in a way that make workshops affordable, as recommended by the as a full day set of activities. The total time required to complete all activities in this guide is about 4 hours and 34 minutes.

#### Easiness in finding official statistics during a session of the statistics clubs

**Figure 7: Percentage (%) of children that find it is easy to get official statistics for a reference**

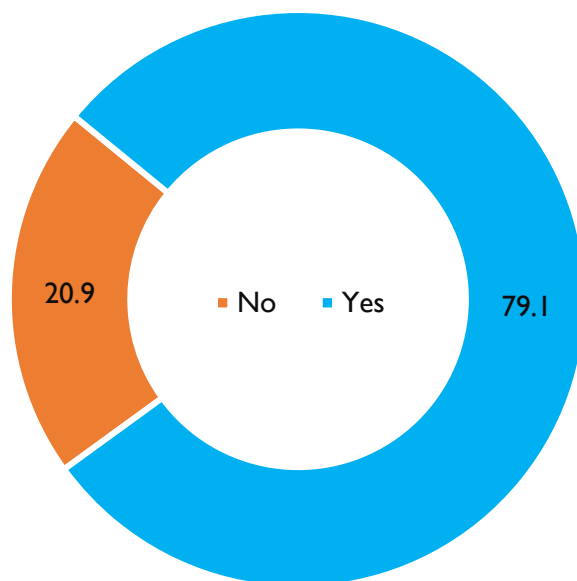
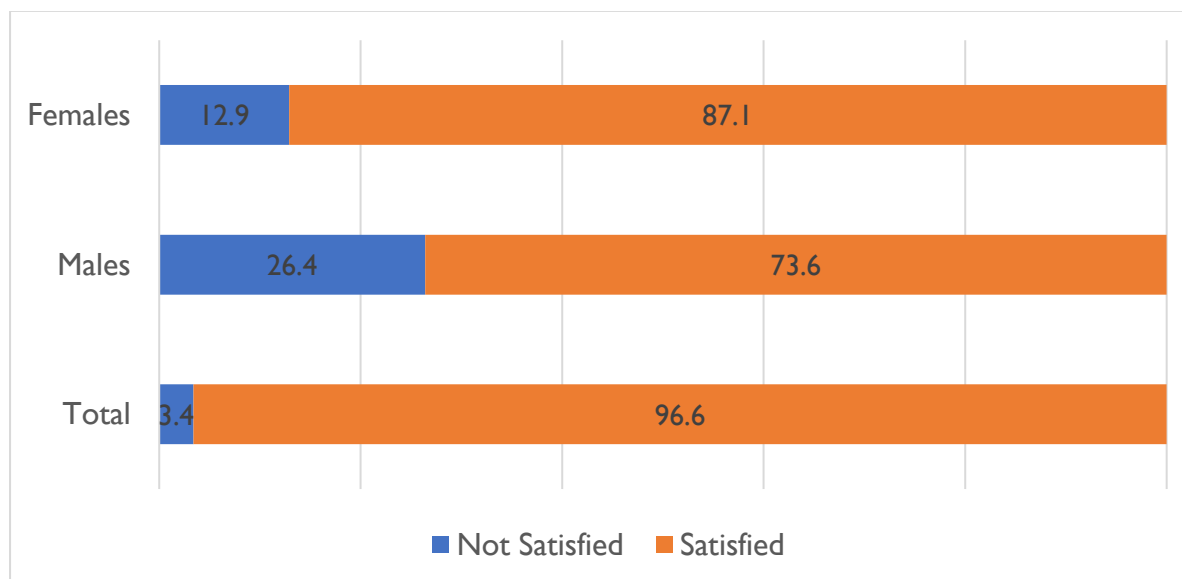


Figure 8 shows the satisfaction level of children and youth vis a vis the way teachers facilitate sessions of Reading Data with Children initiative. Around 97% of them reported that they were satisfied, while almost 3% were not satisfied. The level of satisfaction is higher among females than boys.



*The initiative is in line with Leaving No One Behind includes children and youth, children with disabilities, and vulnerable children (urban/rural schools). – KII UNICEF, Kigali*

**Figure 8: Satisfaction level of children and youth vis a vis facilitation by teachers**

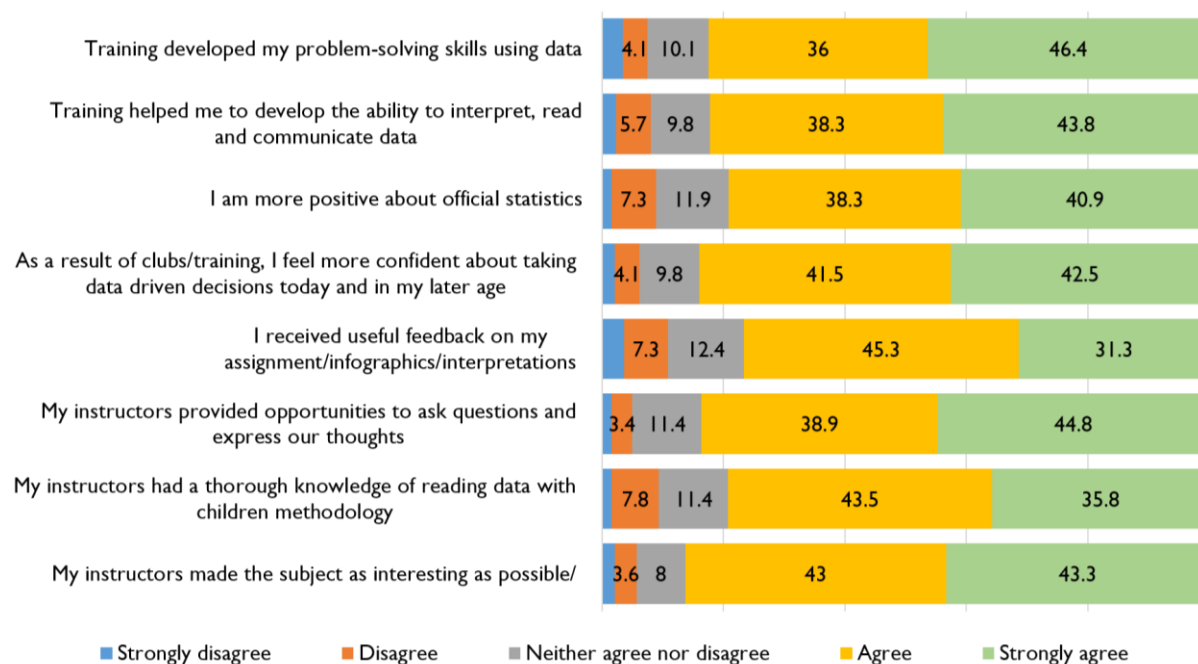


Hence, the figure 9 discusses the satisfaction level of children and youth with the initiative of Reading data with them in general, but in different point of views here presented as items. The satisfaction level is expressed by how important and useful children and youth are finding the initiative in its different elements of its role. These are for instance developing skills in data understanding, interpretation, communication, use of data in problem description and problem solving, etc.

For every item, the satisfaction level was 81.7%, and furthermore, 86.27%, of the respondents agreed that instructors made the subject as interesting as possible, 79.27%, instructors had a knowledge of Reading data with children methodology. In addition, 83.68%, confirmed that instructors provided opportunities to ask questions and expression their thoughts, while 76.69% of the respondents reported to receive useful feedback on the assignment as a result of joining clubs and felt confident, among other items.

The following figure illustrates the children and youth feeling about different elements of Reading data and Youth initiative and how they contribute to their intellectual and social development.

**Figure 9: Satisfaction with the Reading data with children and youth initiative in general**

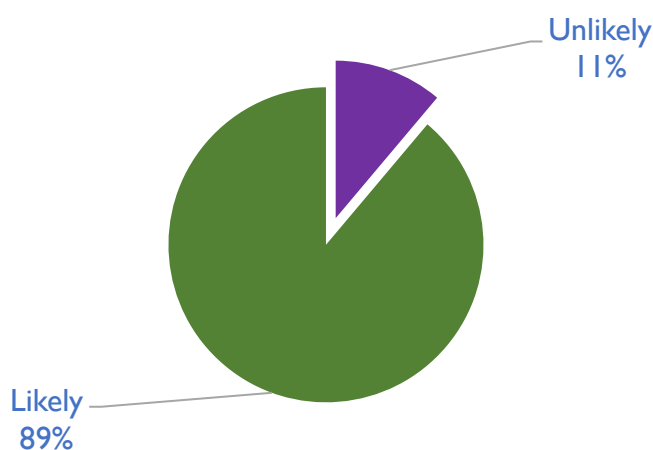


### 3.2.5 Sustainability

For the sustainability purpose, statistics clubs have their leadership committees which were voted by members to ensure effective and efficient organizations of these clubs and create the sense of responsibility and accountability among adherents of these clubs.

In addition, children have been asked whether they want to keep participating in sessions of Reading data with Children and Youth. The result is that around 89% of all interviewed children said that they are likely willing to continue with the initiative as is highlighted by the figure below. These results illustrate that the initiative has to be sustained and strengthened to respond the children and youth expectations in learning new things in the area of official statistics. This will ensure they know their rights and have enough knowledge on how failures of development programs may affect they lives. The Figure 10 shows how children and Youth think about their participation in sessions of Reading data with Children and Youth.

**Figure 10: Willing to attend the club in future**



## CONCLUSION AND RECOMMENDATIONS

### 4.1 Baseline value as per initiative indicators

**Table 4.** Reading data with children and youth initiative indicators

Statement	Indicators	Value
<p><b>Goal</b> Awaken the spirit, data-driven mindset, and statistical literacy of Rwanda's young people, who will lead the country's future in the era of Sustainable Development Goals (SDGs).</p> <p><b>Outcome:</b> Improved statistical literacy and data-driven mindset of children and youth (boys and girls, including children with disabilities)</p> <p><b>Indicators:</b></p> <ol style="list-style-type: none"> <li>1. Percentage (%) of children (girls, boys, including children with disability) demonstrating improved statistical literacy;</li> <li>2. Percentage (%) of children (girls/boys) reported changes in their views about social economic indicators from Reading data</li> </ol>		<p><b>57.8%</b></p> <p><b>12.9%</b></p>
<p><b>Output 1:</b> Statistical capacity of young generations for evidence-based decision-making improved</p>	1.1. Percentage (%) of children (girls, boys, and children with disabilities) report discussing the social indicators with teachers, parents, other children/youth, and community (i.e. forum, ...)	<b>42.1%</b>
	1.2. Percentage (%) of children participated in the statistics clubs for more than 75% of the sessions at the school level for the last term	<b>76.3%</b>
	1.3. Percentage (%) of children (girls/boys) report having improved knowledge and skills in data literacy	<b>80%</b>
<p><b>Output 2:</b> The uptake of official statistics up to the school levels strengthened</p>	2.1. Percentage (%) of children who reported improvement in understanding the use of data in the school community	<b>53.1%</b>
	2.2. Percentage (%) of children reported using statistical information in the organised events (i.e. debates, children's participation events, Africa Statistics Day...)	<b>17.4%</b>
<p><b>Output 3:</b> An adequate environment for all children, including ones with different disabilities, to interact and discuss statistical information provided</p>	3.1. Percentage (%) of children who reported having access to Reading data platforms	<b>79.1%</b>
	3.2. Number (#) of statistics clubs with regular (i.e. weekly/biweekly in the term) meetings/sessions	<b>3 out 5</b>
	3.3. Number (#) of organised events to interact and discuss with other children at school	<b>1 event</b>

	3.4. Number (#) of statistics clubs with sustainable organizational committee	3 out 5
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## Conclusion and lessons learnt

The assessment found that the “Reading Data with Children and Youth initiative” is a good initiative that needs to be sustained because it plays an important role in developing the statistical literacy of children and young people, it is contributing in communicating the SDGs indicators to a wider audiences including children, youth, teachers and parents. On one hand, almost all children and youth confirmed they are gaining a lot of information about how the country is being developed especially in areas that affect their life the most. On the other hand, almost all teachers confirmed also that the fact that they have been trained in facilitating sessions of the Reading Data with Children was an opportunity not only to be equipped with relevant skills to help children in sessions to understand official statistics and the development of areas that affect directly or indirectly their life, but also these trainings strengthened their knowledge in understanding official statistics opened their minds in ways they (teachers) can teach subjects related to statistics such as mathematics, economics, communication, etc. In addition, the study also found that children, young people and teachers are interested in accessing data through statistical platforms, particularly the NISR website to use them for various occasions, including debates and discussions about various events with their family members and classmates and teaching purposes. Definitely, this a contribution to the improvement of education quality in Rwanda.

However, children find that the fact that a big number of schools don’t have yet statistics clubs is limiting their interaction with their colleagues in discussions in holidays about the country development with facts and evidences. Also, teachers find that the fact that a small number of teachers were trained is a barrier in their discussions with others who have had the chance to be trained in facilitating sessions of Reading data with Children. Also, the fact that adequate materials to be used during sessions of Reading Data with Children and Youth are not enough affects the increase of initiative results.

Overall, the assessment realized that children and teachers would like to see the initiative expanded to more schools to make it more fruitful in terms of developing the statistical literacy in Rwanda and boosting the dissemination of official statistics for evidence based decision making and planning in areas that affect the children life.

As a way forward, NISR and UNICEF are encouraged to visit statistics clubs as often as possible to interact with children, youth, teachers as well as school authorities and discuss the development of these clubs. Trained teachers have shown willingness in collaborating with all stakeholders to strengthen and sustain the Reading Data with Children and Youth initiative, by participating in the expansion of statistics clubs in other schools and sharing their experiences with others. This is because they realized that the initiative is playing a good role in enhancing the understanding and communicating official statistics that relate the country development.

### 4.3 Lessons Learnt and conclusion

The assessment found that the Reading Data with Children and Youth initiative is playing an important role in improving statistical literacy among children and youth and it can be an opportunity for the dissemination of official statistics. Children and youth showed an interest in Reading Data initiative and they are willing to continue participating in the related event and activities in the coming years.

The assessment also found an interest to access data through statistical platforms such as NISR website, and to use them in different occasions including debates and discussions around different events with their family members (siblings, parents) and classmates. This presents a foundation to build on for additional efforts that aim at strengthening involvement of young generation in statistical activities, especially in advocacy, awareness and dissemination of official statistics. Therefore, if the Reading data with children and youth is maintained, there is a hope that the number of capacitated data users will keep growing and statistics will be more accessed, disseminated and consumed in different places including schools, communities, households, offices, businesses, etc. Furthermore, understanding the importance of statistics in the socio economic development of their country, the Reading data with Children and Youth initiative will motivate young generations to play a direct or indirect role during the data production processes through surveys and censuses by NISR or any other member of NSS.

However, the assessment realized that there is a need to motivate the creation of new statistics clubs in high learning institutions and support them by providing them documents such as printed copies, digital platforms with statistical information that are accessible on smartphones and tablets. In addition, expansion of spaces and events to discussing and commenting statistical information will allow children and youth not only to understand the importance of statistics in the development and decision making, but also to share their views and expectations for a better future. The involvement of well-trained teachers is of paramount importance to make these objectives achieved.

### 4.4 Recommendations for policies and programs

- **Extend clubs for statistics to all schools:** the findings revealed that children and youth who participate in statistics clubs have better data literacy knowledge and skills (80%) than the ones who don't adhere to these clubs. However, only less than 29 schools across the country have established statistic clubs. Consequently, children and youth in schools without statistics clubs will have a considerably lower chance of improving their statistical literacy. Therefore, Statistics clubs should be established in all schools across the country in order to more fairly support all children and youth to frequently interact with data and improve their data literacy at young age. More teachers should consequently be trained to facilitate sessions of Reading Data and Children. Involving teachers and children in programs of increasing the number of statistics clubs and teachers trained to facilitate Reading Data with Children sessions should be a strategy that will help in these expansions.
- **Providing more materials and advocating for statistics clubs to have enough equipment:** the findings revealed that statistics clubs with basic digital materials are doing well and more

motivated in Reading Data. Therefore, schools are recommended to provide statistics clubs with the minimum amount of materials to facilitate sessions for Reading Data with Children and Youth and ensure that they are interacting with data. These are laptops and projectors. NISR is also requested to provide children in high learning institutions with updated statistical information on brochures, and other relevant printable statistical papers. This will allow children and youth to interact with statistical information in an easy way and ensuring the interest and sustainability of statistic clubs.

- ***Design of a digital platforms for Reading Data with Children and the dissemination of statistics findings and introduce other strategies to help children and youth to read data better:*** According to UNICEF reports, Digital technologies have profoundly changed childhood and adolescence. The web based platforms including social media and messaging apps, have become integral parts of young lives around the world. They have transformed their learning, the way they make and maintain friendships, their leisure time, and their engagement with wider society. In this context, a digitalized web based dissemination platform with statistical information in attractive ways will capture more children and youth attention (mobile applications for data dissemination, game-driven applications with statistical information, short films with statistical information, etc.) and will contribute a lot in strengthening the Reading Data initiative among the young generation and hence increase their statistical literacy. Flashcards and trivia questions strategies that can be used by children and youth to share information with classmates, parents and other family members. Such tools can be used to encourage children and young generation for more interaction with statistical information.
- ***Organize dissemination programs and events of official statistics at the school and community level:*** the initiative has encouraged students to attend sessions within clubs and interact with their teachers/facilitators to discuss statistical information. However, the findings show that organized events are limited (only one event in the last three months before the assessment) at the school level, while it could be an occasion for engaging students (children and youth) to the fullest extent possible. Therefore, NISR and stakeholders are encouraged to organize dissemination events at the school and engage with students on various statistics indicators.
- ***Motivate children through competitions in Reading data with children and youth innovations:*** the findings revealed that only 5.7% of respondents attended the annual Africa Statistics Day event organized by NISR in the past. This is a little proportion when compared to the total number of members of all statistics clubs. It is recommended that the event be decentralized at higher learning schools to inspire future generations as well as initiating additional competitions and events that can motivate more children and youth to join statistics clubs and raise their statistical literacy.
- ***Doing the assessment on regular basis to track rooms of improvement and document success stories:*** This assessment is the first one after more than seven years of Reading data with Children initiative. It should be better to do it regularly to reveal the potential impact that school based statistics clubs could have on children's knowledge, perception and practices, and their statistical literacy in general.

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## Annex : QUESTIONNAIRE

### KII Question Guide : Teacher

#### Introduction:

- *Who we are?*
  - *What we hope to do together today and why? What we plan to do with the information we collect?*
  - *Verbal confirmation of your agreement to participate voluntarily (informed consent/assent) usage of any photography or audio recordings & reminder that they can choose to pause or stop whenever they want?*
  - *Icebreaker question: Are you familiar with Reading Data with Children and Youth? Can you tell us about your involvement in the program?*
1. How engaged are children and youth in Reading and discussing data? at what extent? and how has the Reading data with children and youth program helped to their capacity building in data-driven decision making? (Probe: how could they be improved to be more effective for girls? For boys?)
  2. How statistics are being used for decision making and informed discussions and debates?
  3. When it comes to improving children' and youth's minds to read and discuss data, how would you characterise the successes of Reading data with children and youth initiative in school? (Probe: What are some of the best practices, events, or improvements in which the children you teach participate
  4. How simple or difficult can teachers facilitate Reading data with children and youth using the teacher guide booklet? What do you think can be improved in order to reach the desired objective?
  5. Do you have any other ideas about sustainability of the programs? What needs to happen for the program interventions to continue? (probe: community partnerships, training of teacher, etc...), are you aware of any efforts already being made in this area?
  6. Have you facilitated a Reading data session that have a child with disability? How have you engaged with them?

## KII Question Guide: National level key informants (NISR&UNICEF)

### Introduction:

- *Who we are?*
  - *What we hope to do together today and why? What we plan to do with the information we collect?*
  - *Verbal confirmation of your agreement to participate voluntarily (informed consent/assent), usage of any photography or audio /*
- 
1. When it comes to building children' and youth's minds to read and discuss data, how would you characterise the successes of *Reading data with children and youth initiative* in school and community? (*Probe: What are some of the best practices, events, or improvements in which the children participate?*)
  2. What were the drivers, barriers, and bottlenecks to the *Reading data with children and youth's* success that may support policy makers and initiative designers adjust interventions going forward?
  3. What are the strategies in place to keep the *Reading data with children and youth* function? In terms of resources, mentorship, and direct support to the clubs created
  4. How and to what extent has the implementation of *Reading data with children and youth* been in line with the principle of No one is left behind and the principle of adhering gender equality?

## Questionnaire for Children

English	
Questions	Responses
1. Student name	
2. School name	
3. What is your age?	.....
4. Sex	1. Female 0. Male
5. What is your class year?	1. O'level 2. Senior-4 3. Senior-5 4. Senior-6
6. When did you register/attendee the first session of statistics club at school?  - What and who motivated you to attend?	Year.....  .....
7. How often did you attend statistic clubs at school? (Select one answer)  - If Never attend statistic club after first attendance, why?	- Always - Usually - Occasionally - Rarely - Never
8. Have you ever attended statistic day?  - Could you please tell us at least three indicators that you discussed in the club?  - Could you please tell us most important thing learned in the previous workshop or Reading data related events (including statistics club)?	1.Yes 0. No If yes, when? ..... How was it?  Could you describe the most excited take up during the day?.....  ..... If yes,.....
9. How often are you interested by Reading and discussing data? (Select one answer)  - How statistics are being used to inform your discussion and debates? Or when discussing with your parents or friends	1. Always 2. Usually 3. Occasionally 4. Rarely 5. Never
10. How easy it is to get data (official statistics) you need during debate/class's works? (Select one answer)	1. Very easy 2. Easy 3. Neutral 4. Difficult 5. Very difficult
11. Do you consult your teacher to get official statistics data for your reference? (Select one answer)	1 Yes 0 No

<p>12. What do you see as the benefit of Reading data initiatives for children? <i>(Select more than one benefit)</i></p>	<ol style="list-style-type: none"> <li>1. Better understanding of Rwanda profile and situation,</li> <li>2. Provide me ability to transform information into actionable knowledge and practices</li> <li>3. Boost the ability to make data-driven decisions</li> <li>4. Interpret information/data derived from</li> <li>5. Develops problem-solving skills</li> <li>6. Improves academic performance,</li> <li>7. Be creative in data visualisation and interpretation,</li> <li>8. Infinite career opportunities</li> </ol> <p>Other(specify)</p>
<p>13 We are interested in who participated in Reading statistic clubs. Were both boys and girls able to participate equally?</p> <p>- Were there any children who were excluded from the club activities, for example children with disabilities?</p>	<p>- Yes/ No If no why? How?</p> <p>- Yes/ No - If no why? How?</p>
<p>14 Considering your experience as child who participated in Reading data events, how likely would you be to recommend it to a friend or colleague?</p> <p>- Which is your favorite part our your clubs' content? And why?</p> <p>- How likely are you to continue attending this statistic clubs, next school year?</p>	<p>0 Very Unlikely to 10 Very likely</p> <p>0 Very Unlikely to 10 Very likely</p>
<p>15 How helpful are the school teachers/club's facilitators to support you in Reading data clubs</p>	<ol style="list-style-type: none"> <li>1. Not at all helpful</li> <li>2. Slightly helpful</li> <li>3. Moderately helpful</li> <li>4. Very helpful</li> <li>5. Extremely helpful</li> </ol>

<p>16 How would rate your satisfaction with the Reading data with children on these parameters:</p>					
<p>Parameters</p>	<p>Strongly disagree</p>	<p>Disagree</p>	<p>Neither agree nor disagree</p>	<p>Agree</p>	<p>Strongly agree</p>

My instructors made the subject as interesting as possible/					
My instructors had a thorough knowledge of Reading data with children methodology					
My instructors provided opportunities to ask questions and express our thoughts					
I received useful feedback on my assignment/ infographics/ interpretations					
As a result of clubs/training, I feel more confident about taking data driven decisions today and in my later age					
I am more positive about official statistics					
Training helped me to develop the ability to interpret, read and communicate data /					
Training developed my problem-solving skills using data, /					

17 Children's knowledge and attitudes on Reading data	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
It is important for a child to be exposed to data and taught how to read, interpret and use it from a young age.					
Only teachers should teach/ coach children how to read, interpret and use data					
Parents should be involved in teaching/coaching their children how to read, interpret and use data					
Parents and teachers should work together to support children's Reading, interpreting and using data					
Some children do not need to learn how to read, interpret and use data					
There are many benefits to knowing how to read, interpret and use data					
Children can read, interpret and use data for fun.					

Children can read, interpret and use data for learning.					
Statistic clubs are helpful to learn Reading, interpreting and using data.					

18 In your opinion, what are the factors that prevent children to read, discuss and use data at school, home and community?	
19 What need to be improved, so that children can read and discuss data?	

