48th IAEA
Post-Conference Report

October 6, 2023

Table of Contents

The 48th Annual IAEA Conference - Overview

The 48th annual conference of the International Association for Educational Assessment (IAEA)[1] was held in Kingston, Jamaica from September 24 to 29, 2023. The IAEA provides a global forum for professionals involved in educational assessment. Its members include examining bodies, university departments, research organizations and government agencies from more than 50 countries. Prior to Kingston (Jamaica), the IAEA conferences had been held in Mexico City (Mexico), Baku (Azerbaijan), Oxford (United Kingdom), and Cape Town (South Africa) in recent years. The 48th IAEA conference was hosted by the Caribbean Examinations Council (CXC). The CXC was established in 1972 under the agreement by the participating governments in the Caribbean community. CXC assures the global human resource competitiveness of the Caribbean through the provision of syllabuses; valid and reliable examinations; and services to help develop syllabuses, and assessments in cost-effective ways. The CXC has participation from 16 countries, many of whom were represented at the 48th IAEA conference in Jamaica. In addition to the Caribbean countries, the conference was also attended by delegates from a large number of countries across Europe (e.g., The Netherlands, UK), Asia (e.g, Azerbaijan, Malaysia, India), Australia (e.g., Australia), Africa (e.g., Nigeria, South Africa, Zambia), North America (Canada, Mexico, USA), and South America (e.g., Trinidad and Tobago). A total 256 delegates attended the 48th IAEA conference.

[1] See https://iaea2023.org/ for more details on the conference.

Figure 1. Dr Wayne Wesley, Registrar and CEO, CXC® welcomed the delegates to Kingston, Jamaica, for the IAEA 48th Annual Conference hosted by CXC® at the Jamaica Pegasus from 24– 29 September.

Figure 2. Prof. Indrani Bhaduri with ETS delegates at the conference headquarters.

Objectives for PARAKH's Presence at the Conference

Attending the 48th IAEA conference in Jamaica enabled PARAKH to meet objectives relating to the (a) dissemination of institutional research findings to a global audience and (b) a demonstration of the commitment of PARAKH to host the 49th IAEA conference in Delhi, India in 2024. More specifically, the objectives are:

1. Disseminate findings from NCERT studies related to NAS and FLS to an international group of educational researchers and officials from governmental assessment bodies worldwide.
2. Provide a platform for researchers and professionals interested in the development of quality assessments to learn about the work of NCERT for potential collaboration with agencies with complementary interests.
3. Professor Indrani to represent NCERT during the announcement that the 49th IAEA conference will be hosted in Delhi in 2024.
4. Meet the IAEA Board of Trustees to discuss preliminary hosting plans.
5. Experience and understand the physical and logistical requirements to facilitate planning of the 49th IAEA conference in Delhi in 2024.

The objectives also relate directly to the goals described in the PARAKH Year 1 Roadmap, specifically Goal 7 (Support research paper creation in collaboration with NCERT for NAS 2021 and FLS).

PARAKH's Accomplishments

Three paper proposals related to NAS and FLS 2021 were submitted by PARAKH, all of which were accepted for presentation after an independent peer-review process organized by IAEA. The three presentations share a focus on educational assessments in India and provide insights into different aspects of educational development and assessment innovations in

the country. In addition to the PARAKH presentations, Dr. Jonas Bertling (PARAKH project lead, ETS) conducted an inception workshop on developing self-report questionnaires to contextualize assessment results. Jonas was also invited to give the opening keynote address on the future of digitalizing assessments during which he also made reference to the NAS in India several times.

Figure 3. PARAKH Program Lead Jonas Bertling delivering his keynote address on digitalizing assessments.

Presentation 1: Establishing Learning Benchmarks in Multilingual India

The first presentation, which was delivered by Prof. Indrani Bhaduri (with Prof. Dinesh Saklani, Han-Hui Por, Peter van Rijn, and Jonas Bertling as co-authors) on Tuesday, September 26, 2023, explored the challenges of establishing learning benchmarks in a country with multiple languages and dialects and presented the results of a study on the effectiveness of different assessment tools and methods using data from the Foundational Learning Study (FLS).

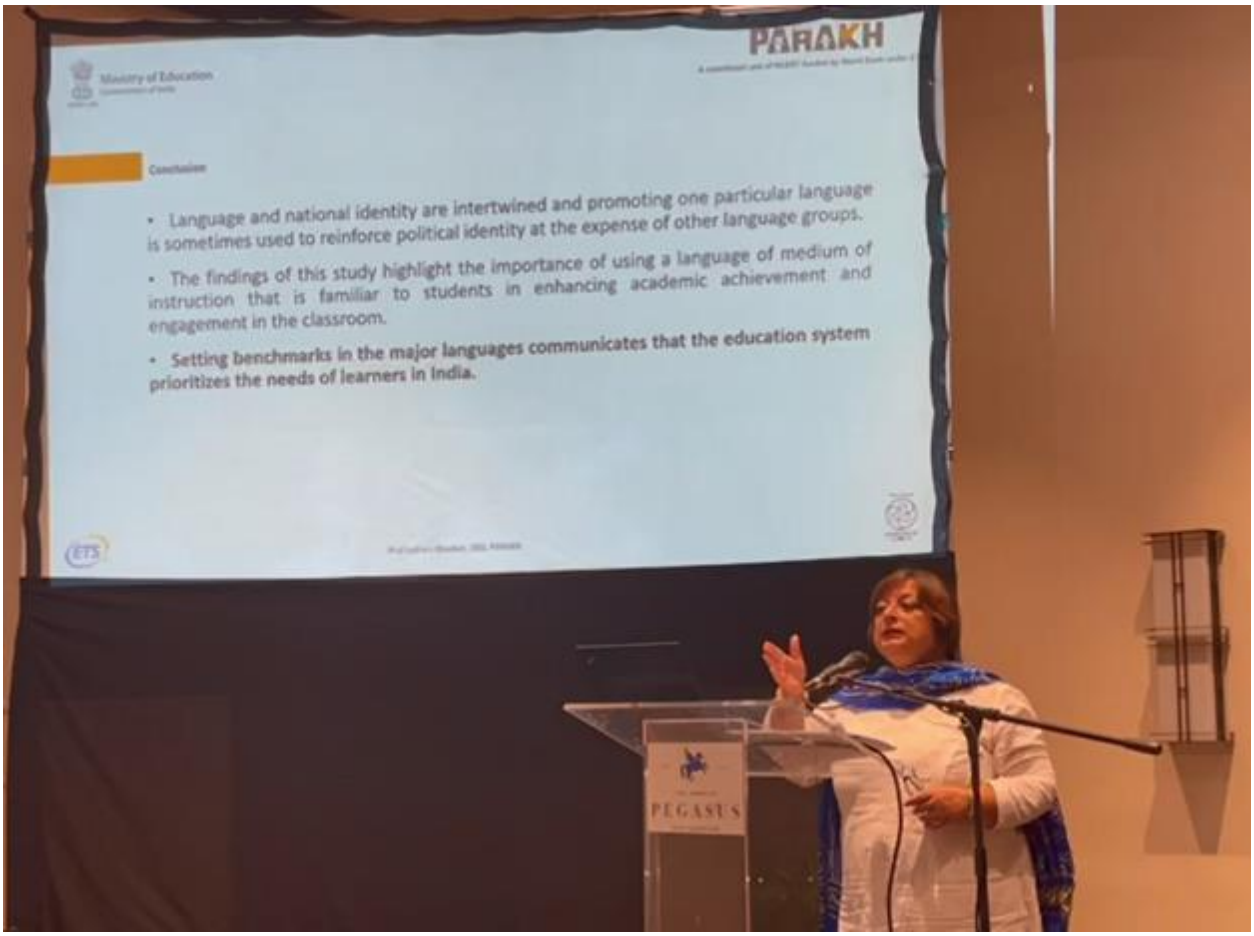


Figure 4. Prof. Indrani Bhaduri delivering her first presentation on the FLS.

India's multilingual landscape presents unique challenges for educational assessment and policy. For example, studies have shown that when students are taught in a language they

understand, they are more likely to participate actively in the learning process (e.g., Cummins, 1979; Walter & Dekker, 2011). Further, Benson (2005) and other researchers have also proposed that offering instruction in the home language can positively impact girls' school enrollment because girls are less exposed than boys to languages outside the home.

Further, establishing learning benchmarks is a fundamental step in the assessment development to support learning as students' performances on assessments are the outcomes of the complex interactions between experiences (such as their home language and sociocultural backgrounds) and the knowledge and skills targeted by the assessment (Ercikan & Por, 2020). This necessitates administering the assessment and establishing benchmarks in multiple languages in multilingual India.

In her talk, Prof. Indrani Bhaduri presented the results from the Foundational Learning Study (FLS), a large-scale study undertaken by the National Council of Educational Research and Training (NCERT). The FLS instrument was developed and administered in 20 languages to assess third-graders' foundational literacy and numeracy learning outcomes to establish benchmarks for reading and numeracy proficiency. The FLS was administered in 2022 to approximately 86,000 third-grade students from 10,000 schools.

The study examined the impact of the language of instruction on student performance and highlights the importance of establishing learning benchmarks in multiple languages in a multilingual country like India. We suggest that educational policymakers prioritize developing and implementing assessments that can effectively measure student learning outcomes in multiple languages. This will help ensure that all students, regardless of their home language, have access to high-quality education and can achieve their full potential.

Prof. Indrani’s presentation was well received. Comments from members in the audience highlighted positively especially the large sample sizes and the successful administration across a larger number of languages. Several audience members mentioned after the

presentation that they appreciated learning how large-scale assessments are administered in India and that they learned a lot from the talk.

All presentation slides are included in Appendix A.

Presentation 2: Enhancing Educational Equity through Large-scale Assessments: A Case Study of Gender Equality in India

The second presentation, delivered by Prof. Indrani Bhaduri on behalf of Prof. Dinesh Saklani[2] (with Han-Hui Por, Peter van Rijn, Jonas Bertling, and Kavita Gosh as additional co-authors) on Tuesday, September 26, 2023, focused on the National Achievement Survey (NAS) and its role in promoting gender equality in India education. The "Beti Bachao, Beti Padhao" initiative is highlighted as an example of how policies and assessments can work together to address social issues, and the NAS is a key tool in evaluating progress towards this goal. The presentation focused specifically on NAS data from Punjab and Haryana to examine the learning achievement and access to educational opportunities between boys and girls.

[2] Prof. Dinesh Saklani could not attend the conference due to a conflict with other meetings in India.

Figure 5. Prof. Indrani Bhaduri delivering her second presentation on the NAS.

Prof. Indrani Bhaduri's talk explored the potential of large-scale assessments in promoting educational equity, specifically focusing on gender equality in India (Sharma & Borgohain, 2022). By examining India's journey to improve educational prospects for girls, we demonstrate how large-scale assessments can play a pivotal role in addressing social issues and driving meaningful change. In India, the Beti Bachao, Beti Padhao (BBBP, translated as "Save the Daughter, Educate the Daughter") initiative aims to promote gender equality and empower girls by raising awareness about the importance of girls' education (Nayar, 2000).

In this presentation, the PARAKH team used data from the National Achievement Survey (NAS) to examine the performance of girls and boys. The NAS assesses the learning levels of children in Classes 3, 5, 8, and 10 nationally, providing a comprehensive understanding of learning achievement at the systemic level. The NAS 2021, the latest survey, included competency-based skills such as the ability to analyze, reason, and communicate effectively,

building learners' capacity as life-long learners. To provide a deeper understanding of the NAS results, the presentation focused on the learning achievement and access to educational opportunities between boys and girls in Punjab and Haryana. These states are of special interest because the girls in these states outperformed the boys. Finally, the presentation used the NAS background questionnaires to explore schools' and students' perceptions of girls' access to educational opportunities.

In conclusion, large-scale assessments can play a crucial role in evaluating progress toward educational equity and promoting evidence-based policy-making. By examining the progress of the BBBP initiative through the lens of large-scale assessments, we hope to contribute to the ongoing conversation about promoting gender equality in education.

Figure 6. Prof. Indrani Bhaduri answering questions from the audience after her presentation on the NAS.

Prof. Indrani Bhaduri's second presentation was well received as well. Comments from members highlighted their appreciation for the timely research question investigated. Participants also asked questions to better understand the NAS development and administration process and when the next NAS will be administered. As for Prof. Indrani Bhaduri's first presentation, several audience members mentioned after the presentation that they appreciated learning how large-scale assessments are administered in India and that they learned a lot from the talk.

All presentation slides are included in Appendix A.

Presentation 3: Large-scale Educational Assessments: The Case of India Compared Internationally

The third presentation, delivered by Dr. Han-Hui Por (with Prof. Indrani Bhaduri, Peter van Rijn, Heather Buzick, and Jonas Bertling as co-authors) compared the National Achievement Survey (NAS) in India with other large-scale educational assessments such as the United States' National Assessment of Educational Progress (NAEP) and the OECD's Programme for International Student Assessment (PISA). Large-scale educational survey assessments such as these are vital in measuring student learning outcomes in modern education systems. These assessments, often administered at the national or international level, are critical tools for measuring and monitoring educational outcomes, informing, and shaping policy decisions, and driving improvements in teaching and learning. The presentation showed that even though the NAS is an independent national assessment, it shares many characteristics with PISA which is an international assessment and demonstrated that LSAs can be designed to meet the needs of the country.

Figure 7. Dr. Han-Hui Por delivering her presentation on comparing the NAS with PISA and NAEP.

Large-scale educational assessments play a vital role in measuring student learning outcomes in countries worldwide. In India, the National Achievement Survey (NAS) is one of the key measures of student achievement in grades 3, 5, 8, and 10. The NAS 2021 was designed to provide a comprehensive assessment of learning outcomes with increased content coverage, building on previous national surveys (Ministry of Education, India, 2021).

Over 3.4 million students and 500,000 teachers from 118,000 schools across India participated in the NAS 2021, which was administered by PARAKH, the national assessment center set up under the Ministry of Human Resource Development (MHRD).

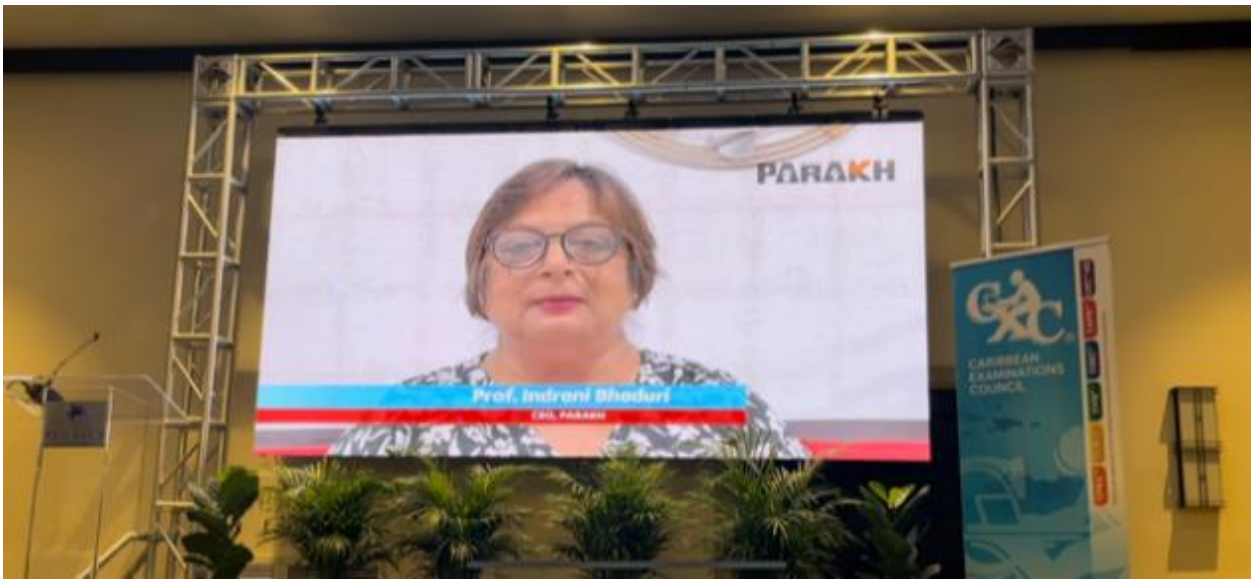
Given India's unique context as one of the largest countries with state-run public education, comparisons with other large-scale educational assessments can provide insights into potential transformations of national assessment practices. Therefore, this paper aims to compare the NAS with other large-scale assessments, such as the National Assessment of Educational Progress (NAEP) in the United States and the Programme for International Student Assessment (PISA), with a focus on the objectives, sampling and measurement designs, analysis methodology, and reporting approaches.

By analyzing and comparing the NAS with other international assessments, this study seeks to provide a deeper understanding of the similarities and differences between different assessment models. The findings of this study will be useful in informing ongoing discourse on large-scale assessments in India and worldwide and will contribute to the development of future education policies and practices.

Dr. Por’s presentation was well received. Several audience members commented on the notable similarities between NAS, NAEP, and PISA, and expressed they felt fortunate to learn that India has as large-scale assessment of this scope, which many participants were not aware of prior to the conference.

Announcement of PARAKH Hosting the 2024 IAEA in India

PARAKH will be hosting the 49th IAEA conference in 2024 with Prof. Dinesh Saklani, Prof. Indrani Bhaduri, and Dr. Jonas Bertling heading the organizing committee. Announcing the hosts and venue of the IAEA conference in the following year symbolizes the global collaboration and knowledge sharing that the organization promotes and is a cherished tradition for the IAEA. In anticipation of the announcement, a video was prepared by PARAKH to mark the official announcement and introduce PARAKH, the hosting organization. This video was a captivating blend of visual elements and informative content, featuring insightful speeches from Prof. Dinesh Prasad Saklani, Director of NCERT, Prof. Indrani Bhaduri, Head and CEO of PARAKH, and Dr. Jonas Bertling, PARAKH Program Lead. It also provided a glimpse into the rich and diverse culture of India, setting the stage for an event that promised to be both intellectually stimulating and culturally enriching.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Prof. Indrani Bhaduri
CBSE PARAKH
CXC
CARIBBEAN EXAMINATIONS COUNCIL


PARAKH
CXC
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Figure 8. Promotional Video for Official Announcement of 2024 IAEA Conference hosted by PARAKH

The presentation of this video to all conference delegates was met with resounding appreciation, as it not only built anticipation for the upcoming event but also showcased the meticulous planning and dedication of the organizing committee. In particular, the attendees appreciated the snippets of the teacher teaching a class of young and eager learners.

Following the video presentation, the spotlight shifted to Prof. Indrani Bhaduri and Dr. Jonas Bertling, who, as the esteemed representatives of PARAKH, were accorded the honor of taking center stage. They were joined by key representatives of CXC, the organizers of the previous 48th IAEA conference. This symbolic passing of the baton from CXC to PARAKH was marked by a momentous exchange of words, underscoring the collaborative spirit that defines the IAEA's mission. A formal and heartfelt handshake sealed this pivotal transition, signifying the seamless continuity of the conference's legacy and the shared commitment to advancing global cooperation.

Figure 9. Symbolic Handshake between 2023 and 2024 Conference Organizers

Figure 10. PARAKH CEO Prof. Indrani Bhaduri and PARAKH Program Lead Dr. Jonas Bertling presenting the poster announcing IAEA 2024 at the ETS booth during a coffee break.

Figure 11. Official Announcement Poster for IAEA 2024 distributed to all 2023 conference delegates.

Outcomes and Future Implications

In reflection, PARAKH accomplished its objectives relating to the (a) dissemination of NCERT institutional research findings to a global audience and (b) a demonstration of the commitment of PARAKH to host the 49th IAEA conference in Delhi, India in 2024. Attending the IAEA conference was also in direct service of Goal 7 of the Year 1 PARAKH roadmap.

Firstly, it fulfilled the paramount objective of disseminating critical findings from NCERT studies pertaining to NAS and FLS to an esteemed gathering of educational researchers and governmental assessment officials from across the globe. This dissemination of knowledge acted as a catalyst for the exchange of valuable insights and perspectives, fostering a global dialogue that can shape the future of educational assessment. The presentations generated considerable interest in the NAS, and the visibility of national assessments in India. The interest extended beyond the conference halls with questions on how the NAS implemented the best practices in assessment development, such as the use of the item response model in data analysis.

Secondly, PARAKH's attendance served as an invaluable opportunity for researchers and professionals invested in the advancement of quality assessments to learn about NCERT's work in large scale assessments, paving the way for potential collaborations with agencies sharing similar interests. The audience was particularly interested in the decision to translate items in the NAS and FLS into multiple languages, as many nations face the same issues in their nation's assessment.

Furthermore, PARAKH's attendance at the IAEA also signaled PARAKH's commitment to organize and host the 49th IAEA conference in India. This announcement not only bolstered NCERT's global standing but also underscored the organization's commitment to fostering international cooperation in educational research. The preliminary hosting discussions also

laid a solid foundation for the smooth and efficient organization of the conference in Delhi in 2024, bolstering its future success.

In conclusion, PARAKH's presence at the 48th IAEA conference met our objectives and was instrumental in setting the stage for the 49th IAEA conference. The full conference program for the 48th IAEA conference can be found in Appendix C.

Figure 12. Prof. Indrani Bhaduri talking to other delegates about PARAKH and the Indian assessment landscape.

Figure 13. Prof. Indrani Bhaduri with Dr. Han-Hui Por of ETS in the main conference hall.

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Appendix A: PARAKH Presentations

Please see below the slides from the three PARAKH presentations.

Presentation 1: Establishing Learning Benchmarks in Multilingual India

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Establishing Learning Benchmarks in Multilingual India

Indrani Bhaduri, NCERT, India
Dinesh Prasad Saklani, NCERT, India
Han-Hui Por, Educational Testing Service, USA
Peter van Rijn, ETS Global, Netherlands
Jonas Bertling, Educational Testing Service, USA

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Introduction

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Languages in India

- The Eighth Schedule to the Constitution of India contains a list of 22 "Scheduled Languages" (official languages) of the Republic of India.

Sr. No.	Language	Sr. No.	Language
1	Assamese	12	Manipuri
2	Bengali	13	Marathi
3	Bodo	14	Nepali
4	Dogri	15	Odia
5	Gujarati	16	Punjabi
6	Hindi	17	Sanskrit
7	Kannada	18	Santali
8	Kashmiri	19	Sindhi
9	Konkani	20	Tamil
10	Maithili	21	Telugu
11	Malayalam	22	Urdu

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Scripts in India

- The official scripts of the 22 official languages of the Republic of India include abugidas (pseudo-alphabets), alphabetical writing systems and abjads (Arabic-derived writing systems).
- There are ten abugida writing systems, used as the official scripts of India. All these abugidas belong to the Brahmic script family (Indic script family).

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Foundation Learning Study (FLS)

- Foundational Learning Study (FLS) 2022 is the largest study that assessed the learning levels of more than 86,000 students across India and is the only study that has been conducted in 20 different languages.
- A policy linking methodology has been implemented for the first time to arrive at the benchmarks in literacy and numeracy under the FLS 2022.

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Objectives of the FLS 2022

Assess learning outcomes: The study aims to provide reliable and valid data about Grade 3 students to know what they are able to do in foundational literacy and numeracy and the extent of learning outcomes being achieved.

Set baseline for NIPUN: The data derived from the FLS study would help in establishing a baseline for the NIPUN Bharat mission.

Set benchmarks: The study also aims to establish reading proficiency benchmarks for fluency and comprehension for each of the languages (20 in number) being assessed under the study and proficiency benchmarks for numeracy.

Report on SDG: This study will also provide data to report on SDG 4.1.1 indicators at the global level.

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Coverage of the Study and Sample for FLS 2022

Students – 86,125 **Schools – 9,158** **Teachers – 16,252**

FLS was conducted in 20 languages which are being used as a medium of instruction in various state/UTs covering – Assamese, Benglai, English, Gujarati, Hindi, Kannada, Malayalam, Manipuri, Marathi, Mizo, Odia, Punjabi, Tamil, Telugu, Urdu, Bodo, Garo, Khasi, Konkani and Nepali.

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Study Methodology for FLS 2022

- The FLS study is a school-based performance assessment. Selected sample of children from Grade 3 were assessed by a test administrator in a one-on-one setting where each child responded to a set of questions administered orally.
- Several foundational literacy skills including oral language comprehension, phonological awareness, decoding, reading comprehension, oral reading fluency with comprehension were assessed as part of assessment. For foundational numeracy, number identification and comparison, number patterns, and data handling are included

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Present Study

Language of Instruction (LOI) in the classroom significantly impacts students' academic performance and overall educational experience, especially when it differs from their home language.

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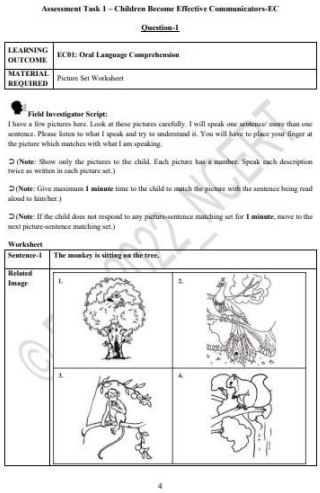
Sample Questions of Literacy



Assessment Task 1 – Children Become Effective Communicators-EC

Question-1

LEARNING OUTCOME	EC01: Oral Language Comprehension
MATERIAL REQUIRED	Picture Set Worksheet

Field Investigator Script:
I have a few pictures here. Look at these pictures carefully. I will speak one sentence/ more than one sentence. Please listen to what I speak and try to understand it. You will have to place your finger at the picture which matches with what I am speaking.

➲ (**Note**: Show only the pictures to the child. Each picture has a number. Speak each description twice as written in each picture set.)

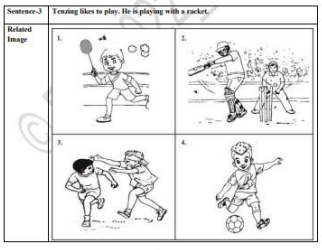
➲ (**Note**: Give maximum **1 minute** time to the child to match the picture with the sentence being read aloud to him/her.)

➲ (**Note**: If the child does not respond to any picture-sentence matching set for **1 minute**, move to the next picture-sentence matching set.)

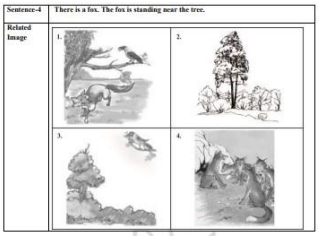
Worksheet

Sentence-1	The monkey is sitting on the tree.
Related Image	1. 2. 3. 4.

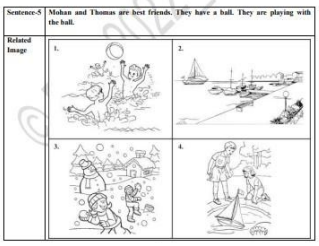
Sentence-2	The children are swimming.
Related Image	1. 2. 3. 4.



Sentence-3	Tenzing likes to play. He is playing with a racket.
Related Image	1. 2. 3. 4.



Sentence-4	There is a fox. The fox is standing near the tree.
Related Image	1. 2. 3. 4.



Sentence-5	Mohan and Thomas are best friends. They have a ball. They are playing with the ball.
Related Image	1. 2. 3. 4.

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Sample Questions of Numeracy

Assessment Task 2 – Children become involved learners and connect with their immediate environment-II.

Question-I

LEARNING OUTCOME	**Numbers -IL01:** Counts, reads, writes and compares numbers up to 9999
MATERIALS REQUIRED	Number grid

Field Investigator Script: Let's do a number activity.
Here are some numbers. I want you to point to each number and tell me what the number is.
Are you ready? Okay. Start from here.

Prompt A: What number is this?

(Note: If a child pause and stops on a number for 5-10 Seconds, then point to the next number and say- what number is this?)

Stop, if a child is unable to read 4 numbers in continuation or reads them incorrectly.

- For each incorrect number, mark (/) through the number.
- For each self-corrected response, mark (O) through the number.
- Mark each unread number/ no response with an underline (___).

Number grid

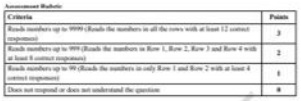
Row 1	6	8	11	67
Row 2	17	9	82	54
Row 3	388	412	950	315
Row 4	575	778	630	800
Row 5	1120	2050	3000	5656
Row 6	4000	7445	5001	1262

Expected Response: The child reads aloud the number as per number name convention in language of instruction or home language.

Assessment Instruction

Number of correct responses: _____/24

Time taken to complete the task: _____ seconds



Assessment Rubric

Criteria	Points
Reads numbers up to 9999 (Reads the numbers in all the rows with at least 12 correct responses)	3
Reads numbers up to 999 (Reads the numbers in Row 1, Row 2, Row 3 and Row 4 with at least 8 correct responses)	2
Reads numbers up to 99 (Reads the numbers in only Row 1 and Row 2 with at least 4 correct responses)	1
Does not respond or does not understand the question	0

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Establishing Benchmarks

In order to report the findings of the ORF with Comprehension, a systematic procedure of **Policy linking** was administered for setting global benchmarks (cut-points or cut-scores) on student assessments.

Based on the application of the common scale and benchmarking method to the assessments and data sets through policy linking helps in

- Understanding the results at the national level, drawing global comparisons of assessment results and drawing of implications
- Aggregation of assessment results for reporting on indicator SDG 4.1.1
- Follow-up of assessment results at the national level for understanding the status of foundational learning over time

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Establishing Benchmarks

In the context of FLS-2022, the activity of policy linking was conducted during 5 distinct extensive workshops held at different locations across the country for setting the benchmark *specifically* for Student **Oral Reading Fluency (ORF) with Comprehension in 20 different languages**. Teachers, language experts, pedagogy experts and State Coordinators (referred as panelists hereon) participated in the process of policy linking and facilitated the setting of benchmarks for each of the languages. The kit for the workshop was provided to each of the panelists that consisted of rating forms, relevant sections of GPF for Reading and ORF passages and Reading Comprehension Questions from the FLS assessment tool. The material was collected from the panelist after the conclusion of the workshop to maintain confidentiality.

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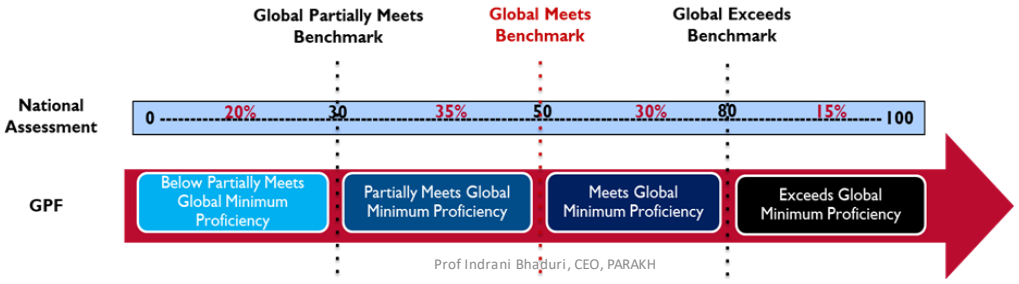
Global Proficiency Framework (GPF) and Setting Global Benchmarks

The Global Proficiency Framework for Reading defines the global minimum proficiency levels that learners are expected to demonstrate at the end of each grade level, from grades one to nine. It comprises four Global Proficiency Levels (GPLs) and detailed Global Proficiency Descriptors (GPDs) for each level. The Levels are **Below Partially Meets (BPM), Partially Meets (PM), Meets (M), and Exceeds (E) global minimum proficiency**. The Descriptors have domains, constructs, subconstructs, and knowledge and skills by grade, subject, and level.



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Tasks implemented as part of the Policy Linking Workshop

After receiving an introduction to policy linking and training on alignment with the GPF, the panelists were engaged in a three step process over the course of four days. The policy linking workshops followed a standardized process comprising of three core tasks

- checking the alignment of the assessments and the Global Proficiency Framework using the Frisbie method (2003)
- matching the items with the Global Proficiency Levels (GPLs) and Global Proficiency Descriptors (GPDs) provided in the Global Proficiency Framework and
- setting the benchmarks using the Angoff method.

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Benchmark set for Oral Reading Fluency (ORF)

Language	Benchmark (words per minutes)			
	Below Partially Meets	Partially Meets	Meets	Exceeds
English	0 - 14	15 - 34	35 - 53	54 and above
Hindi	0 - 16	17 - 34	35 - 54	55 and above
Punjabi	0 - 12	13 - 31	32 - 55	56 and above
Urdu	0 - 13	14 - 31	32 - 52	53 and above
Manipuri	0 - 10	11 - 34	35 - 58	59 and above
Mizo	0 - 24	25 - 42	43 - 65	66 and above
Bangla	0 - 14	15 - 38	39 - 55	56 and above
Assamese	0 - 8	9 - 29	30 - 50	51 and above
Garo	0 - 10	11 - 24	25 - 39	40 and above
Khasi	0 - 24	25 - 44	45 - 62	63 and above

Language	Benchmark (words per minutes)			
	Below Partially Meets	Partially Meets	Meets	Exceeds
Bodo	0 - 10	11 - 26	27 - 44	45 and above
Nepali	0 - 11	12 - 29	30 - 47	48 and above
Odia	0 - 10	11 - 37	38 - 57	58 and above
Marathi	0 - 11	12 - 31	32 - 50	51 and above
Gujarati	0 - 11	12 - 32	33 - 52	53 and above
Kannada	0 - 13	14 - 29	30 - 48	49 and above
Telugu	0 - 8	9 - 26	27 - 50	51 and above
Konkani	0 - 12	13 - 29	30 - 49	50 and above
Malayalam	0 - 9	10 - 27	28 - 50	51 and above
Tamil	0 - 8	9 - 27	28 - 49	50 and above

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Benchmark set for Numeracy

Benchmark for Numeracy (score points)	
Level	**Benchmark**
Below Partially Meets Global Proficiency	0-42 score points
Paritally Meets Global Proficiency	43-69 score points
Meets Global Minimum Proficiency	70-83 score points
Exceeds Global Minimum Proficiency	84 and above score points

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Conclusion

- Language and national identity are intertwined and promoting one particular language is sometimes used to reinforce political identity at the expense of other language groups.
- The findings of this study highlight the importance of using a language of medium of instruction that is familiar to students in enhancing academic achievement and engagement in the classroom.
- **Setting benchmarks in the major languages communicates that the education system prioritizes the needs of learners in India.**

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नमस्ते
Namaste

Prof. Indrani Bhaduri, CEO (PARAKH)
indranibhaduri@gmail.com
indranibhaduri

Presentation 2: Enhancing Educational Equity through Large-scale Assessments: A Case Study of Gender Equality in India

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Enhancing Educational Equity through Large-scale Assessments: A Case Study of Gender Equality in India

Dinesh Prasad Saklani, NCERT, India
Indrani Bhaduri, NCERT, India
Han-Hui Por, Educational Testing Service, USA
Peter van Rijn, ETS Global, Netherlands
Jonas Bertling, Educational Testing Service, USA
Kavita Ghosh, NCERT, India

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Equitable Access to Educational Opportunities

- In India, the education of girls has been high on agenda since the past decade.
- The Beti Bachao, Beti Padhao (BBBP, translated as "Save the Daughter, Educate the Daughter") initiative aims to promote gender equality and empower girls by raising awareness about the importance of girls' education (Nayar, 2000).

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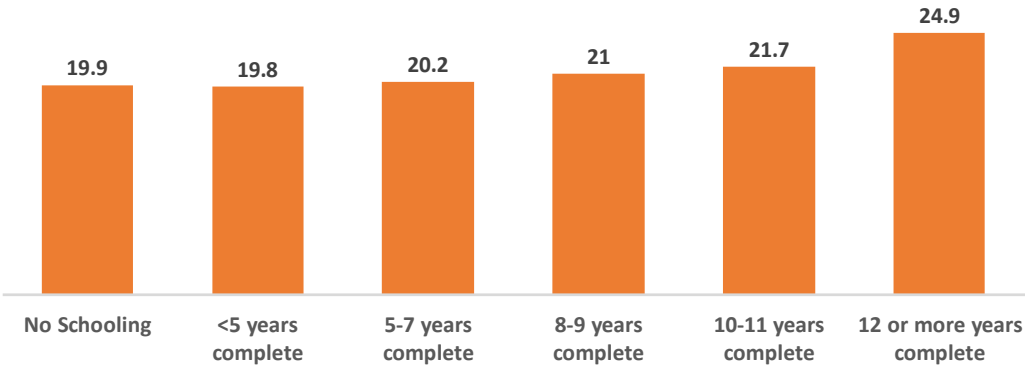
Average age of female as per the level of schooling (Source- NFHS, 2019-21)



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School Attendance

Percentage of *de facto* household population age 6-17 years attending school in the 2019-20 by sex and residence, according to age and state/union territory, India, 2019-21

	Male			Female			Total		
Age and state/union territory	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
India	89.9	87.5	88.2	91.0	84.7	86.5	90.4	86.1	87.4
Age									
6-10 years (Primary)	96.1	94.5	95.0	96.2	94.1	94.7	96.1	94.3	94.8
6-13 years (Elementary)	95.6	93.9	94.4	95.8	93.2	93.9	95.7	93.5	94.2
11-13 years (Upper primary)	94.8	92.9	93.4	95.3	91.5	92.6	95.0	92.2	93.0
14-15 years (Secondary)	85.6	82.2	83.2	89.0	78.7	81.6	87.2	80.4	82.4
16-17 years (Higher secondary)	72.7	65.4	67.7	74.8	57.8	62.6	73.7	61.5	65.2
11-14 years	93.4	91.1	91.8	94.2	89.4	90.8	93.7	90.3	91.3
15-17 years	75.8	69.9	71.7	78.8	63.5	67.8	77.3	66.6	69.8
6-14 years	94.8	93.0	93.5	95.3	92.1	93.0	95.0	92.6	93.3
6-17 years	89.9	87.5	88.2	91.0	84.7	86.5	90.4	86.1	87.4

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Outline of the Present Study

- Beti Bachao Beti Padhao was administered in the first phase in the States of Uttar Pradesh, Haryana, Uttarakhand, Punjab, Bihar, and Delhi
- In the present study the focus is on the learning achievement between boys and girls in the State of Punjab and Haryana has been taken up.

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National Achievement Survey (NAS) 2021

- NAS is a large-scale survey being implemented in India to understand the students' learning achievement vis-à-vis their contextual background.
- The survey is conducted after every three years in classes 3, 5, 8 and 10 across India and in all the States/UTs.
- The survey provides an overview of the quality of education system and students' learning levels.

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National Achievement Survey (NAS) 2021 Coverage

- Number of States – **37**
- Number of Districts – **720**
- Number of Schools – **1,18,274**
- Number of Teachers – **5,26,824**
- Number of Students – **34,01,158 (3.4 Million)**

https://nas.gov.in/reportcard/2021

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Case Study: Punjab

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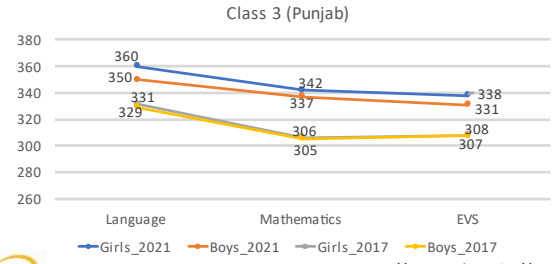
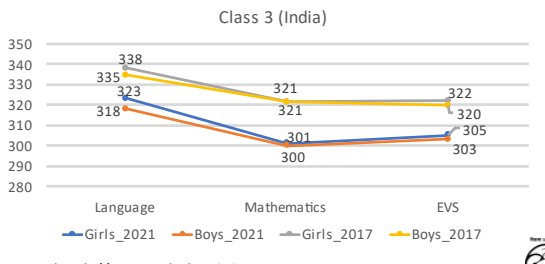
Achievement of Girls and Boys – Class 3

- In Punjab Girls are performing well than boys as well as girls of Punjab achieving high scores than National Level in Class 3

Punjab	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	360	**61.2**	350	**64.5**	331	54.6	329	54.5
Mathematics	342	**61.8**	337	**62.7**	306	52.0	305	52.1
EVS	338	**51.7**	331	**52.9**	308	42.2	307	42.5

India	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	323	**63.2**	318	**62.5**	338	**56.2**	335	**57.1**
Mathematics	301	**59.0**	300	**58.6**	321	**53.4**	321	**53.3**
EVS	305	**51.3**	303	**50.9**	322	**48.8**	320	**49.2**





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Percentage of Girls and Boys as per Proficiency Level – Class 3 (Punjab)

State	Proficiency Level	Language		Mathematics		EVS	
		Girls	Boys	Girls	Boys	Girls	Boys
Punjab	Below Basic	11%	17%	9%	11%	8%	11%
	Basic	26%	26%	26%	30%	26%	29%
	Proficient	35%	31%	36%	33%	38%	35%
	Advanced	28%	25%	29%	27%	28%	24%
India	Below Basic	28%	31%	23%	24%	22%	23%
	Basic	32%	32%	34%	34%	33%	34%
	Proficient	27%	25%	30%	30%	33%	32%
	Advanced	13%	12%	12%	12%	12%	11%

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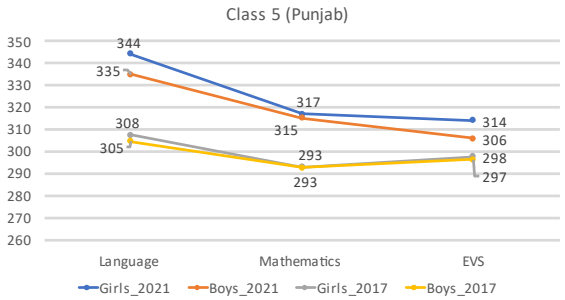
Achievement of Girls and Boys Class 5

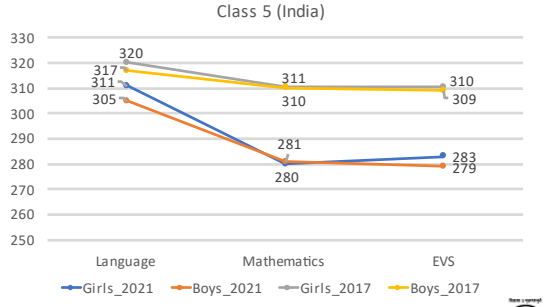
Punjab

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	344	52.4	335	55.6	308	49.1	305	49.9
Mathematics	317	58.2	315	58.0	293	54.0	293	53.2
EVS	314	55.6	306	56.5	298	48.2	297	49.0

India

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	311	55.7	305	55.0	320	58.7	317	58.3
Mathematics	280	52.7	281	52.4	311	57.0	310	57.0
EVS	283	53.6	279	53.1	310	54.3	309	54.2





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Percentage of Girls and Boys as per Proficiency Level – Class 5 (Punjab)

State	Proficiency Level	Language		Mathematics		EVS	
		Girls	Boys	Girls	Boys	Girls	Boys
Punjab	Below Basic	6%	10%	14%	16%	15%	21%
	Basic	26%	31%	41%	39%	33%	34%
	Proficient	43%	38%	29%	29%	36%	32%
	Advanced	24%	21%	16%	16%	16%	13%
India	Below Basic	20%	23%	35%	34%	33%	35%
	Basic	36%	38%	41%	41%	34%	34%
	Proficient	33%	30%	19%	19%	27%	25%
	Advanced	11%	9%	6%	6%	6%	6%

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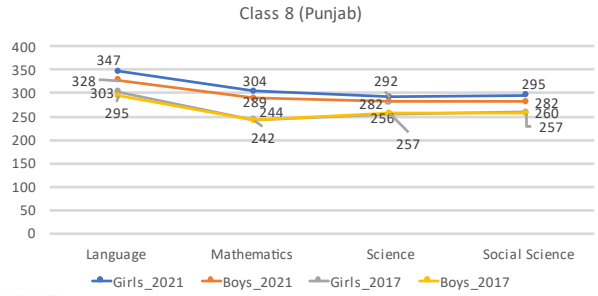
Achievement of Girls and Boys – Class 8

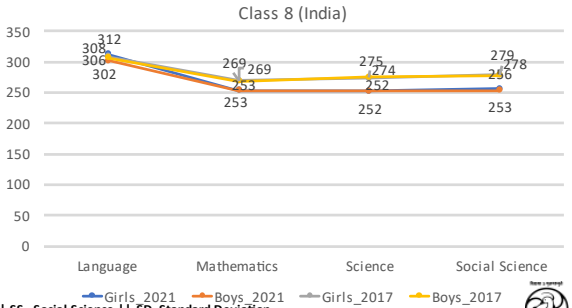
Punjab

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	347	56.6	328	56.8	303	48.7	295	47.6
Mathematics	304	77.1	289	70.8	244	38.9	242	40.1
Science	292	66.4	282	63.5	256	43.2	257	45.8
Social Science	295	66.9	282	64.5	260	42.2	257	41.7

India

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	312	59.2	302	57.3	308	54.2	306	53.8
Mathematics	253	55.5	253	55.7	269	53.3	269	52.7
Science	252	56.4	252	56.6	274	58.6	275	57.4
Social Science	256	58.4	253	57.8	279	53.9	278	53.9





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Percentage of Girls and Boys as per Proficiency Level – Class 8 (Punjab)

State	Proficiency Level	Language		Mathematics		Science		Social Science	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Punjab	Below Basic	3%	7%	11%	13%	15%	20%	17%	24%
	Basic	31%	41%	34%	40%	31%	32%	43%	43%
	Proficient	35%	31%	28%	26%	29%	28%	18%	16%
	Advanced	31%	21%	27%	21%	25%	20%	23%	18%
India	Below Basic	20%	23%	28%	27%	38%	36%	38%	40%
	Basic	45%	45%	45%	46%	35%	35%	42%	40%
	Proficient	23%	20%	19%	19%	19%	20%	12%	11%
	Advanced	13%	11%	8%	8%	8%	9%	8%	8%

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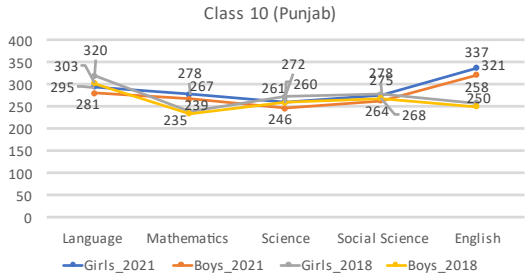
Achievement of Girls and Boys – Class 10

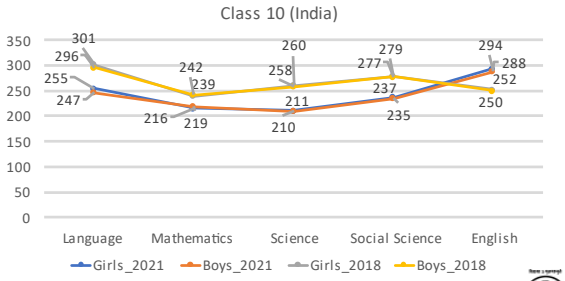
Punjab

	Girls_2021		Boys_2021		Girls_2018		Boys_2018	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	295	46.0	281	48.9	320	56.7	303	55.2
Mathematics	278	84.4	267	81.4	239	55.0	235	52.8
Science	261	68.5	246	68.9	272	59.6	260	58.6
Social Science	275	64.4	264	66.7	278	50.3	268	50.4
English	337	61.1	321	65.4	258	56.9	250	54.6

India

	Girls_2021		Boys_2021		Girls_2018		Boys_2018	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	255	50.2	247	49.5	301	54.7	296	54.2
Mathematics	216	57.6	219	59.2	239	53.3	242	54.3
Science	211	56.5	210	58.0	260	57.7	258	57.9
Social Science	237	56.6	235	58.7	279	54.7	277	54.7
English	294	60.6	288	59.9	252	54.5	250	52.1





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Percentage of Girls and Boys as per Proficiency Level – Class 10 (Punjab)

State	Proficiency Level	Language		Mathematics		Science		Social Science		English	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Punjab	Below Basic	22%	34%	12%	15%	38%	47%	30%	39%	3%	7%
	Basic	53%	47%	34%	35%	29%	27%	31%	28%	3%	7%
	Proficient	24%	18%	29%	28%	26%	22%	32%	28%	40%	43%
	Advanced	1%	1%	25%	22%	7%	4%	7%	6%	54%	43%
India	Below Basic	52%	55%	32%	29%	74%	73%	61%	62%	23%	24%
	Basic	37%	35%	47%	48%	17%	18%	24%	23%	17%	18%
	Proficient	10%	10%	16%	18%	7%	8%	12%	13%	41%	40%
	Advanced	0%	0%	5%	6%	1%	1%	2%	3%	19%	18%

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Case study: Haryana

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Achievement of Girls and Boys – Class 3

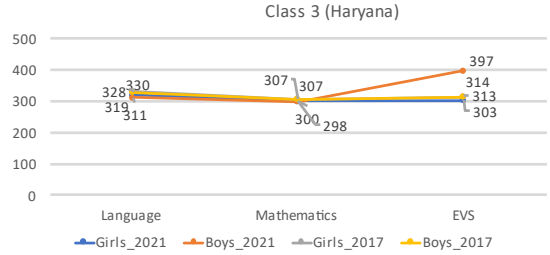
- In Haryana Girls performs better than boys in Class 3

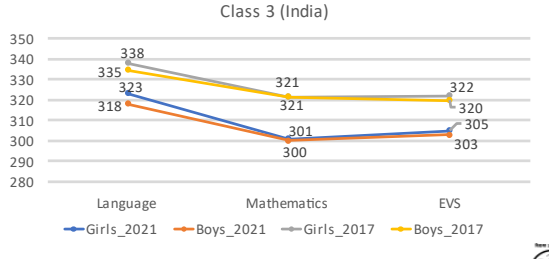
Haryana

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	319	57.5	311	57.7	330	53.2	328	53.7
Mathematics	300	51.5	298	50.5	307	50.1	307	49.7
EVS	303	45.1	397	45.3	314	46.7	313	46.7

India

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	323	63.2	318	62.5	338	56.2	335	57.1
Mathematics	301	59.0	300	58.6	321	53.4	321	53.3
EVS	305	51.3	303	50.9	322	48.8	320	49.2





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Percentage of Girls and Boys as per Proficiency Level – Class 3 (Haryana)

State	Proficiency Level	Language		Mathematics		EVS	
		Girls	Boys	Girls	Boys	Girls	Boys
Haryana	Below Basic	31%	37%	23%	24%	22%	26%
	Basic	35%	34%	40%	41%	40%	42%
	Proficient	24%	21%	29%	27%	30%	26%
	Advanced	10%	8%	8%	7%	7%	6%
India	Below Basic	28%	31%	23%	24%	22%	23%
	Basic	32%	32%	34%	34%	33%	34%
	Proficient	27%	25%	30%	30%	33%	32%
	Advanced	13%	12%	12%	12%	12%	11%

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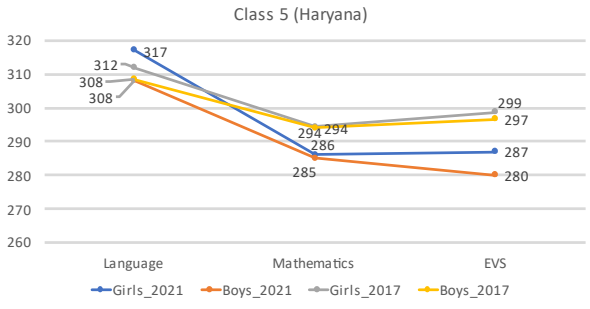
Achievement of Girls and Boys – Class 5

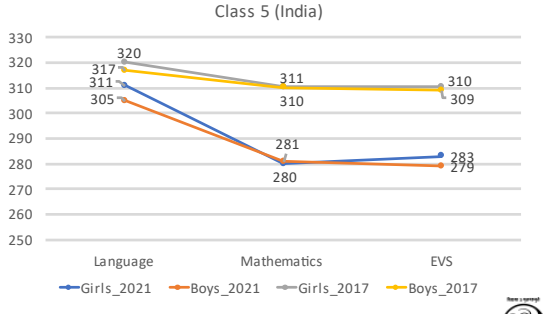
Haryana

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	317	50.6	308	51.2	312	53.4	308	53.7
Mathematics	286	45.7	285	45.5	294	51.2	294	50.6
EVS	287	47.7	280	46.1	299	51.0	297	52.3

India

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	311	55.7	305	55.0	320	58.7	317	58.3
Mathematics	280	52.7	281	52.4	311	57.0	310	57.0
EVS	283	53.6	279	53.1	310	54.3	309	54.2





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Percentage of Girls and Boys as per Proficiency Level – Class 5 (Haryana)

State	Proficiency Level	Language		Mathematics		EVS	
		Girls	Boys	Girls	Boys	Girls	Boys
Haryana	Below Basic	14%	19%	30%	30%	29%	34%
	Basic	38%	42%	47%	47%	40%	40%
	Proficient	38%	31%	19%	19%	26%	22%
	Advanced	10%	8%	4%	4%	5%	4%
India	Below Basic	20%	23%	35%	34%	33%	35%
	Basic	36%	38%	41%	41%	34%	34%
	Proficient	33%	30%	19%	19%	27%	25%
	Advanced	11%	9%	6%	6%	6%	6%

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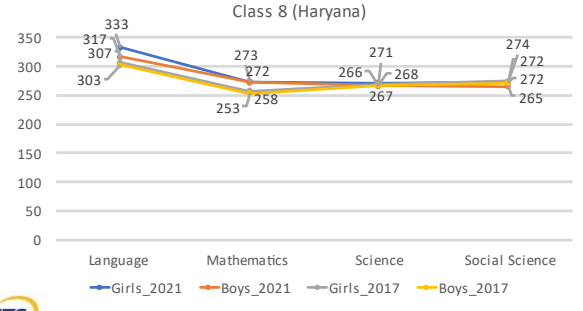
Achievement of Girls and Boys – Class 8

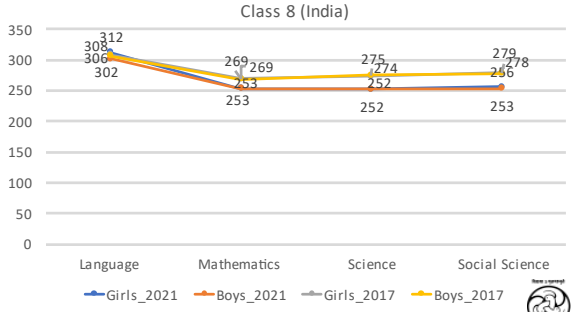
Hayana

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	333	56.4	317	57.7	307	47.9	303	50.2
Mathematics	273	55.6	272	58.4	258	44.0	253	43.6
Science	271	57.1	266	56.6	268	54.1	267	50.4
Social Science	272	54.2	265	54.2	274	48.7	272	49.3



India

	Girls_2021		Boys_2021		Girls_2017		Boys_2017	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	312	59.2	302	57.3	308	54.2	306	53.8
Mathematics	253	55.5	253	55.7	269	53.3	269	52.7
Science	252	56.4	252	56.6	274	58.6	275	57.4
Social Science	256	58.4	253	57.8	279	53.9	278	53.9



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LA- Language || MA- Mathematics || SC- Science || SS- Social Science || SD- Standard Deviation

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Percentage of Girls and Boys as per Proficiency Level – Class 8 (Haryana)

State	Proficiency Level	Language		Mathematics		Science		Social Science	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Haryana	Below Basic	6%	13%	16%	17%	22%	26%	25%	31%
	Basic	39%	44%	44%	46%	38%	37%	48%	44%
	Proficient	32%	26%	28%	25%	26%	25%	15%	14%
	Advanced	23%	17%	11%	12%	14%	13%	11%	10%
India	Below Basic	20%	23%	28%	27%	38%	36%	38%	40%
	Basic	45%	45%	45%	46%	35%	35%	42%	40%
	Proficient	23%	20%	19%	19%	19%	20%	12%	11%
	Advanced	13%	11%	8%	8%	8%	9%	8%	8%

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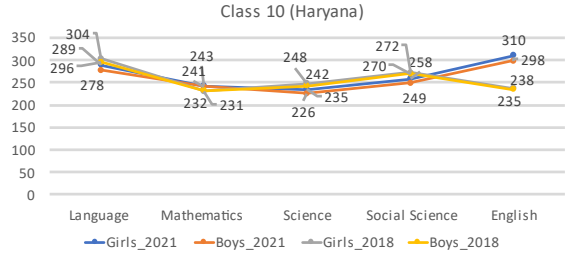
Achievement of Girls and Boys – Class 10

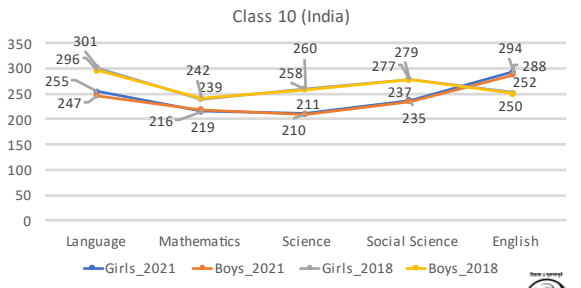
Haryana

	Girls_2021		Boys_2021		Girls_2018		Boys_2018	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	289	52.2	278	51.3	304	58.7	296	56.3
Mathematics	243	64.9	241	66.6	231	46.3	232	45.4
Science	235	63.9	226	65.4	248	53.1	242	50.8
Social Science	258	65.8	249	68.6	272	52.1	270	53.1
English	310	63.8	298	63.6	238	42.0	235	39.7



India

	Girls_2021		Boys_2021		Girls_2018		Boys_2018	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Language	255	50.2	247	49.5	301	54.7	296	54.2
Mathematics	216	57.6	219	59.2	239	53.3	242	54.3
Science	211	56.5	210	58.0	260	57.7	258	57.9
Social Science	237	56.6	235	58.7	279	54.7	277	54.7
English	294	60.6	288	59.9	252	54.5	250	52.1



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EN- English || LA - Language || MA- Mathematics || SC- Science || SS - Social Science || SD- Standard Deviation

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Percentage of Girls and Boys as per Proficiency Level – Class 10 (Haryana)

State	Proficiency Level	Language		Mathematics		Science		Social Science		English	
		Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
Haryana	Below Basic	30%	38%	19%	21%	54%	61%	42%	51%	9%	14%
	Basic	45%	44%	43%	43%	26%	21%	28%	23%	9%	12%
	Proficient	24%	18%	27%	25%	18%	15%	24%	20%	48%	46%
	Advanced	1%	1%	11%	11%	2%	3%	6%	6%	35%	28%
India	Below Basic	52%	55%	32%	29%	74%	73%	61%	62%	23%	24%
	Basic	37%	35%	47%	48%	17%	18%	24%	23%	17%	18%
	Proficient	10%	10%	16%	18%	7%	8%	12%	13%	41%	40%
	Advanced	0%	0%	5%	6%	1%	1%	2%	3%	19%	18%

EN- English || LA - Language || MA- Mathematics || SC- Science || SS - Social Science

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Summary

- The higher learning achievement of girls in these states in an indication of improved girls' education in these states.
- This paper, in particular, explored the educational achievement of girls in States/UTs that were part of Beti Bachao, Beti Padhao (BBBP) initiative in the first phase.

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Conclusion

- Large-scale assessments can play a crucial role in evaluating progress toward educational equity and promoting evidence-based policy-making.
- By examining the progress of the Beti Bachao, Beti Padhao (BBBP) initiative through the lens of large-scale assessments, we hope to contribute to the ongoing conversation about promoting gender equality in education.

Presentation 3: Large-scale Educational Assessments: The Case of India Compared Internationally

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Large-scale Educational Assessments: The Case of India Compared Internationally

Han-Hui Por, Educational Testing Service, USA
Indrani Bhaduri, National Council of Educational Research and Training, India
Peter van Rijn, ETS Global, Netherlands
Heather Buzick, Educational Testing Service, USA
Jonas Bertling, Educational Testing Service, USA

48th IAEA Annual Conference, Kingston, Jamaica
25 September 2023

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Aim

- Comparisons with other large-scale assessments (LSAs) can provide insights for national assessments.
- Demonstrate that a nation's large-scale assessment of educational attainment can be specifically designed to capitalize on the country's strengths and support its limitations.
  - For example, India's National Achievement Survey (NAS), although an independent assessment, shares similarities with OECD's PISA (e.g., multiple languages) and the United States' NAEP in terms of assessment framework, design, analysis and reporting (e.g., multiple grades).

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Overview

- Introduce comparison framework
- Features of NAS, using PISA and NAEP for illustrative comparisons
- Assessment system design choices on statistical error
- The comparison framework as an assessment development guide

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LSA Comparisons

- Black & Wiliam (2007)
  - Compared design differences in assessment systems in different countries, with a focus on national assessments.
- Cresswell, Schwantner, & Waters (2015)
  - Summarized effective practices of international LSAs for the development of PISAD
- Simon, Ercikan, & Rousseau (2012)
  - Edited volume on improving LSA: design issues in development, score comparability, reporting
- This presentation focuses on the considerations in designing national assessments.

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Elements in the Comparison Framework

- Sampling design
  - Target population
  - Sampling
- Assessment design
  - Assessment framework
  - Language adaptation, number of subjects, delivery mode, item format, assessment type, contextual questionnaires
- Analysis methodology
  - Scaling methods, calibration decisions, conditioning, proficiency estimation
- Reporting scores
  - Metrics, reporting levels

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Examples of Large-Scale Assessments

- Large-scale educational assessments play a vital role in measuring student learning outcomes in many countries.
  - In India, the **National Achievement Survey (NAS)** is a key measure of student achievement in grades 3, 5, 8, and 10.
  - The **National Assessment of Educational Progress (NAEP)** is the largest nationally representative, continuing evaluation of the condition of education in the United States.
  - The **Program for International Student Assessment (PISA)** is an international assessment that measures 15 -year-old students' reading, mathematics, and science literacy every 3 years

Topic	Element	NAS 2021	PISA 2022	NAEP 2022
Sampling design	Target Population	Grades 3, 5, 8, 10	15-year-olds	Grades 4, 8, 12
	Sampling	Two-stage	Two-stage	Three-stage
	Primary Sampling Unit	School	School	County
Assessment design	Assessment Framework	Learning outcomes	Future preparedness	Subject-specific content and thinking skill
	Translation	Yes	Yes	Some
	Subjects	Language, mathematics, environmental science, science, social science, English	Math, reading, science, creative thinking, financial literacy	Mathematics, reading, civics, US history
	Main Delivery Mode	Paper-and-pencil	Digital	Digital
	Subjects per Student	2-3	2	1
	Questionnaires	Student, school, teacher	Student, school, teacher, parent	Student, school, teacher
Methodology	Scaling Model	IRT	IRT	IRT
	Calibration	Fixed-item	Fixed-item	Concurrent
	Conditioning	No	Yes	Yes
	Proficiency	WLE	PV	PV
Reporting	Metrics	Scale scores and levels	Scale scores and levels	Scale scores and levels
	Reporting levels	National, state, district	National and some regional areas	National, state, and some urban districts

Topic	Element	NAS 2021	PISA 2022	NAEP 2022
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	Questionnaires	Student, school, teacher	Student, school, teacher, parent	Student, school, teacher
Methodology	Scaling Model	IRT	IRT	IRT
	Calibration			
	Conditioning	No	Yes	Yes
	Proficiency	WLE	PV	PV
Reporting	Metrics	Scale scores and levels	Scale scores and levels	Scale scores and levels
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	Subjects per Student	2-3	2	1
	Questionnaires	Student, school, teacher	Student, school, teacher, parent	Student, school, teacher
Methodology	Scaling Model	IRT	IRT	IRT
	Calibration	Fixed-item	Fixed-item	Concurrent
	Conditioning	No	Yes	Yes
	Proficiency	WLE	PV	PV
Reporting	Reporting levels	National, state, district	National and some regional areas	National, state, and some urb districts

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Similarities and Differences

- NAS shared features with NAEP, which are both national LSAs.
  - Stronger curricular focus than PISA.
  - Snapshots of educational progress at different grade levels.
- However, the multilingual landscape in India requires the NAS to be translated into 22 different languages, i.e., more like the PISA.
- Unlike PISA and NAEP, NAS is a paper-pencil assessment.
- The IRT scaling methodology of NAS is similar to PISA and NAEP, but PISA and NAEP use an additional conditioning step (i.e., using background and contextual information in generating plausible values) while NAS uses a single proficiency score per student.

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Design Choices and Statistical Error in Results

- In designing LSAs, it is important to determine to what extent each element impacts the precision in the reported results.
- Total survey error approach (Weisberg, 2005) can be applied to the context of LSA as well (see also Wu, 2010):
- # of schools, # of students from each school
  - Sampling error variance, intraclass correlation
- # of items per subject, trend items, length of form, form design
  - Measurement error variance
  - Linking/equating error variance
- Background questionnaire, contextual variables
  - Imputation error variance (only holds for PVs)

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Using the LSA Comparison Framework

- We used NAS, PISA and NAEP as illustrations. Additional or other relevant assessments can be used for comparisons.
- Framework displays the options for each element for consideration.
- National assessment design decisions should be based on:
  - Clearly defined assessment purpose
  - Country's strengths, and challenges

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Thank You!

Appendix B Full Conference Program

Sunday, September 24

	Workshop 1	Workshop 2	
	ONLINE - No	Port Antonio Suite	Rio Bueno Suite
Room	Registration required		
9:00 AM	Classroom-Based Formative Assessment: the practice and	Assembling Exams in R, using both CTT and IRT analyses - a	IAEA Meeting of the Board of Trustees
- 12:00 pm	challenge of validation	ready-to-go and user friendly tutorial	
	Prof Stuart Shaw	Dr Arnold Brouwer	
	Consultant Researcher,	Director, Research Center for Examinations and Certifications,	
	Cambridge,	Netherlands	
	United Kingdom		
	Moderator: Ms Kaydi-ann	Moderator: Mrs Gennette	
	Newsome	Clacken	
	Workshop 3	Workshop 4	
	Montego Bay Suite	Port Antonio Suite	
Room			
2:00	Using large norm-referenced datasets	Designing Questionnaires to Contextualize	

	from commercial digital	Achievement Results From Digital Assessments	
- 4:00 pm	assessments for longitudinal research: impact on policy and practice		
	Ms	Dr Jonas Bertling	
	Katie Blaney		
	Learning Design, Assessment and Professional Development,	Director- Research Services, Education Testing Service, USA	
	Hodder Education, UK		
	Moderator: Mr Alton McPherson	Moderator: Dr James Young	
6:30	WELCOME RECEPTION		
- 8:00 pm			
Room	TALK OF THE TOWN (17th Floor)		

Monday,

September 25

Time	Room	Session
8:00	Pre-conference area	Registration
09:00 -	Grand Ballroom	Opening Ceremony

10:00				
10:00-11:00	Grand Ballroom	Keynote Speech		
		Opportunities and Challenges in Digitalising		
		Large-Scale Assessments		
		Dr Jonas Bertling		
		Chair: Mr Mafu Rakometsi		
11:00-11:30	Pre-Conference Area	Break		
11:30 - 12:30	Simultaneous	Research and the	New Practices in	Curriculum Reforms:
	Session I	Future of Digital Assessment I	Large Scale Assessments I	Digital Transformations of Learning and Assessments I
		Montego Bay Suite	Port Antonio Suite	Negril Suite
	CHAIRS	Elmir Shirinov	Mr. Jan Wiegers	Dr Atiba Griffith
		Reporting the ups and downs of a nationwide project on	tbc	Teachers' Conceptions of Assessment Use In
		(partial) digitalizing constructed response assessments in Iran: challenges		the Era of Digitalized Assessments
		and promises		
		Ebrahim Talaee	tbc	Divya Varier, Marvin Powell,
				Stephanie Dodman
		Iran	tbc	USA
12:00 - 12:30		Development of the	tbc	Play to Learn or
		Malaysian University English Test (MUET) Online – Trialing and Piloting		Learn to Play: A Case Study of L1 and L2 Teachers' Use of Digital Games to

				Formatively Assess their Students across Schools in Trinidad and Tobago
		Shafiza Mohamed,		Murella Sambucharan,
		Adnan Husin, Badrul	tbc	Jerome De Lisle, Sharon Phillip, Carla Kronbug
		Hisham Abdullah		
		Malaysia	tbc	Trinidad and Tobago
12:30 - 1:30	LUNCH			
1:35 - 2:35		Keynote Speech -		
		VIRTUAL PRESENTATION		
		Digital Learning and Assessment		
		Dr Sanjaya Mishra, COL, Canada		
		Chair: Dr Mary Pitoniak		
		Grand Ballroom		
2:35 - 2:50	Break (pre-conference			
	area)			
3:00 - 4:00	SIMULTANEOUS	Cyber Security, The	Curriculum Reforms:	Emerging Ethical
	SESSIONS II	Integrity of Assessment and Credentialing I	Digital Transformations of Learning and Assessments II	Practices and Dilemmas in Assessment I
		Montego Bay Suite	Port Antonio Suite	Negril Suite
	CHAIRS	Dr James Young	Dr Ebrahim Talaee	Rose Clesham
3:00 - 3:30		Does ChatGPT make the grade?	Digital Moderation of Performance Examinations	Large-scale Educational Assessments: The Case of India Compared Internationally

				(Symposium Paper 3: Enhancing Education in India: Insights from Large-Scale
				Assessments)
		Jude Brady, Alison Rodrigues, Martina Kuvalja,	Michele Botha	Han-Hui Por, Peter van Rijn, Indrani
		Sarah Hughes		Bhaduri, Heather Buzick,
				Jonas Bertling
		United Kingdom	South Africa	USA
3:30 - 4:00		Perceptions of artificial intelligence in education and its impact on preparing for high-stake examinations in the Caribbean	Towards a Taxonomy for Sources of Construct-Irrelevant Variance in the School-Based Assessments	Exploring SEL Infused Classroom Assessment in the Caribbean
		Atiba Griffith	Carla Kronberg, Jerome De Lisle, Nalini Ramsawak-Jodha, Murella Sambucharan-Mohammed, Vivian Alexander, Sharmilla Harry, Tracey Lucas, Kristy Phillips, Sharon Phillip, Nirmala Ramnarine, Nicola Mark-Worrell, Patricia Claxton, Reina Brathwaite Cummings, Ramona Boodoo (4)	Reina Brathwaite Cummings
		Barbados	Trinidad and Tobago	Trinidad and Tobago

4:10 - 5:10	SIMULTANEOUS SESSIONS III	Emerging Ethical Practices and Dilemmas in Assessment II	New Practices in Large Scale Assessments II	Curriculum Reforms: Digital Transformations of Learning and Assessments III
		Montego Bay Suite	Port Antonio Suite	Negril Suite
	Chairs	Dr Brendalee Cato	Dr Han-Hui Por	Michele Botha
4:10 - 4:40		Performance Assessment of Markers participating at the process of assessment of written works on the school-leaving examinations and university entrance exams.	Linking National Assessments to Global Standards	Personalised assessments in Wales: A case study of on-screen adaptive formative national assessment
		Sarkhan Guliyev, Oleg Shelaginov, Ali Mahmudov, Elmir Shirinov	Nico Dieteren	Jim Crawford
		Azerbaijan	Netherlands	United Kingdom
4:40 - 5:10		Tackling exam malpractice at scale with Natural Language Processing (NLP)	Assuring the Quality of Statutory Tests for Dutch Primary Education	Decolonizing Global Flexible Learning Strategies:- Conceptualizing Micro-credentialing and Its Assessment Approaches in the Caribbean
		Gwyneth Toolan	Arnold Brouwer	Eduardo Ali, Margaret Niles
		United Kingdom	Netherlands	Jamaica

Tuesday,

September 26

Time		Session		
8:00 AM		Registration		
9:00 - 10:00 am		Keynote Speech		
		Social and Emotional Issues in Digital Learning and Assessment		
		Prof Paloma Mohamed-Martin, UG, Guyana		
		Chair: Shehzad Jeeva		
		Grand Ballroom		
10:00 - 10:20 am	Break (pre-conference area)			
10:30 - 11:30 am	SIMULTANEOUS	Organizational	Cyber Security, The	Social and
	SESSION IV	Models for Digitalising Credentials and their	Integrity of Assessment and Credentialing II	Emotional Issues in Learning and Assessment I
		Assessments I		
		Montego Bay Suite	Port Antonio Suite	Negril Suite
	Chairs	Divya Varier	Joseph Ofori-Mensah	Debra Ferdinand-James, PhD
10:30 - 11:00 am		Readiness for	Digital	Cognitive Ability,
		Organizational Change: Transition from Manual to Electronic Development and	Certification System of the West African Examinations Council	Time Preferences, and Educational Performance – A Latent Variable Analysis
		Banking of Test Items	(WAEC)	
		Justine Kimena	Patrick Areghan, Oyeniyi Olaitan	Kristof Kovacs, Balazs Klein
		Zambia	Nigeria	Hungary
		The Utility vs.	The role of the	The impact of

11:00 - 11:30 am		Usability Debate: How to Design Intuitive, Technology-Enhanced Item Types	state electronic information system "Pupil-Graduate" in the final	primary school pupils' academic wellbeing on their attainment in England
		without Compromising on Validity	certification of graduates of general education institutions and the issuance	
			of educational documents	
		James Young, James Crawford	Elmir Shirinov, Maleyka Abbaszade, Vugar Akbarov	Katie Blainey, Kristina Milanovic, Clare Wood
		Barbados	Azerbaijan	United Kingdom
11:30 am - 12:30 pm		IAEA RECOGNITION COMMITTEE: PILOT UPDATE - Grand Ballroom - Blended meeting		
12:30 - 1:30 pm		Lunch - Grand Ballroom		
1:35 - 2:35 pm	Symposium I	Artificial and Data Intelligence in Assessment Dr Rohan Jowallah, Senior Instructional Designer, University of Central Florida - Dr James Carmichael, Associate Professor, University of the Bahamas - Mr James Crawford, Chief Commercial Officer Surpass Chair, Dr Debrah Ferdinand James, Faculty, University of West Indies Grand Ballroom		
2:35 -			Break (pre-conference area)	

2:50 pm				
3:00 - 4:00 pm	SIMULTANEOUS SESSIONS V	Research and the Future of Digital Assessments II	New Practices in Large Scale Assessments IV	New Practices in Large Scale Assessments V
	ROOM	Montego Bay Suite	Port Antonio Suite	Negril Suite
	CHAIRS	Nico Dieteren	Katrina S. Alkins	Angela Lowe
3:00 - 3:30 pm		Data Analytics and the Future of Assessment	Digitizing Assessments for International Educational Professional Licensure Accreditation	A new quantile regression approach to age-standardisation for on-demand assessments
		Danielle Strachan	Dr. Raona Williams	Ben Smith, Matthew Turner
		Jamaica	United Arab Emirates	United Kingdom
3:30 - 4:00 pm		Twenty Years On, How Has The IAEA Community Moved Forward With AI	Relating the School-leaving Foreign Language Examination to the CEFR: the Case of Azerbaijan	Establishing Learning Benchmarks in Multilingual India (Paper 1 for symposium: Enhancing Education in India: Insights from Large-Scale Assessments
		Paul Edelblut	Konul Hajiyeva, Elmir Shirinov	Indrani Bhaduri, Dinesh Prasad Saklani, Han-Hui Por, Peter van Rijn, Jonas Bertling
		USA	Azerbaijan	India
4:10 - 5:10 pm	SIMULTANEOUS SESSIONS VI	New Practices in Large Scale Assessments VI	Research and the Future of Digital Assessment III	Emerging Ethical Practices and Dilemmas in Assessment III
	ROOM	Montego Bay Suite	Port Antonio Suite	Negril Suite
	Chairs	Dr. Raona Williams	Paul Edelblut	Sharon Phillip

4:10 - 4:40 pm		Variations within large scale digital assessments in the United Kingdom	Improving Digital Assessment Tools to Measure Student Learning in Nigeria More Accurately and Fairly	Enhancing Educational Equity through Large-scale Assessments: A Case Study of Gender Equality in India (Symposium Paper 2: Enhancing Education in India: Insights from Large-Scale Assessments
		Hannah Rowe	Prof. Dantani Ibrahim Wushishi, Dr. Innocent Uche Ezenwanne, Lukman Othman Suleman	Dinesh Prasad Saklani, Indrani Bhaduri, Han-Hui Por, Peter van Rijn, Jonas Bertling, Kavita Ghos
		United Kingdom	Nigeria	India
4:40 - 5:10 pm		Item Randomization and Student's Performance at the West African Examinations Council's BECE AND WASSCE in Ghana (2021-2022)	Modernized Psychometric Analysis for Digital Assessments: An Open-source Approach for Automation, Quality Assurance, and Efficiency	Why so many assessments? A holistic framework to help teachers to see the bigger picture - including the missing pieces
		Wendy Addy-Lamptey	Ryan Schwarz, Eralda Gjika	Irenka Suto, Gideon Copestake
		Ghana	Canada	United Kingdom

Thursday, Sep 28

Time		Session
8:00 AM		Registration
		Keynote Speech

9:00 - 10:00 am		Ethical Issues in Assessment: Practices from Central America Dr Salvador Malo, ACET, Mexico		
		Chair: Mr Nico Dieteren		
		Grand Ballroom		
10:00 - 10:20 am	Break			
10:20-11:20 am	SIMULTANEOUS SESSIONS VII	Emerging Ethical Practices and Dilemmas in Assessment IV	Research and the Future of Digital Assessment IV	Curriculum Reforms: Digital Transformations of Learning and Assessments IV
	ROOM	Montego Bay Suite	Port Antonio Suite	Negril Suite
	Chairs	Dr Michael M. Chilala	Sharon Phillip	Dr Arnold Brouwer
10:20-11:20 am		TBC	Prospects and Challenges of Conducting the West African Senior School Certificate Examination as a Computer-Based Examination in Nigeria	ICT interventions for high-risk learners: Implementation of the National Learner Attainment Strategy (NLSA)
		TBC	Ayobode Akinbuluma	Matsie Agnes Mohale
		TBC	Nigeria	South Africa
10:20-11:20 am		The Feasibility of Dual Online & Paper Provision for Maths MCTs in	A Systematic Exploration of Online Assessment in South African Public Schools	The Widening Gap Betweeen Curriculum Design And Its Implementation: A Case of Edo State in Nigeria (cancelled)

		the Skills for Work and Life Sector		
		Clair Rawlingson, Richard Harris United Kingdom	Gugulethu Nkambule South Africa	Oladipupo Moses Oladele Nigeria
11:30 am - 12:30 pm	SIMULTANEOUS SESSIONS VIII	Emerging Ethical Practices and Dilemmas in Assessment V	Research and the Future of Digital Assessment V	Research and the Future of Digital Assessment VI
	ROOM	Montego Bay Suite	Port Antonio Suite	Negril Suite
	Chairs	Jan Weigers	Ben Smith	Dr James Carmichael
11:30 am - 12:00 pm		Open Book Exams: Why a large-scale pilot is necessary to understand the impact on international high school level education	Exploring Stakeholders' Perception on Digitizing Public Examinations in Ghana	Analysis of the reception of ICTs in education and assessment during and Post COVID-19
		Rebecca Chivers, Rebecca Hamer Netherlands	Kennedy Kwadzo Ashiagbor Ghana	Louisa Muparuri Zimbabwe
12:00 - 12:30 pm		The Influence of Social Media Platforms in Examination Malpractices in Senior High Schools in Ghana	Flexible, digital testing for Dutch National examinations	A Comparative Analysis of Student Performance on Paper-Based and Digital Mathematics Assessment

		Joseph Ofori-Mensah	Martin van Reeuwijk	Brendalee Cato
		Ghana	Netherlands	Barbados
12:30-1:30 pm		Lunch (Grand Ballroom)		
	Symposium II	Social Issues, Work Skills and Assessment		
1:35-2:35 pm		Dr Clavia Williams-McBean, Lecturer University of the West Indies, Mona, Ms Katie Blainey, Product Director, Hodder Education Mrs Norlette Leslie Yearde, Acting Senior Manager, Caribbean Examinations Council Chair: Dr Andre Hill, National Literacy Coordinator, Ministry of Education and Youth, Jamaica Grand Ballroom		
2:35-2:50 pm	Break (Pre-Conference Area)			
3:00-4:00 pm		Simultaneous Sessions IX		
			Social and Emotional Issues in Learning and Assessment II	Curriculum Reforms: Digital Transformations of Learning and Assessments V
3:00-4:30 pm		40th IAEA AGM Montego Bay Suite (blended meeting)	Port Antonio Suite Chair: TBC Evaluation of Lecturers Professional Competency of Students' Assessment in Tertiary	Negril Suite Chair: Alton McPherson A Digital Approach to Continuous Assessment in Uganda: The Case for Data Capture, Grading, and Reporting under The Revised Lower Secondary School

			Institutions in Zamfara State (cancelled)	Curriculum
			Lukman	Lutalo Bbosa Sserunkuuma, Mike Nangosya Masikye
			Adaramaja Sheu, Victor Evanero O.	
			Nigeria	Uganda
			The	Use of Digital Technologies in Teaching, Learning and Assessment of Students in Technical Colleges in Nigeria.
			Role of SEL in the NQF - A Guide for Higher Education Practice	
			Sherma Joseph-Hyland	Irene Ovekairi Iluobe, Ifeoma Isiugo-Abanihe, Irene Ovekairi Iluobe, Irene E. Ipogah
			Trinidad and Tobago	Nigeria

Friday, Sep 29

Time		Session
9:00 - 10:00 am		CXC@50: Digital Transformation of Assessments
		Dr Nicole Manning, Director of Operations, CXC®
		Dr Arnold Brouwer, Director RCEC,
		Dr Ebrahim Talee, H. Humphrey Fellow, Penn State
		University
		Chair: Lorena Garelli Moreno-Quinto,
		Head of Effectiveness and Educational Assessment, Anahuac University
		Grand Ballroom
10:00 - 10:30 am	Break	

10:30 - 11:30 am	SIMULTANEOUS SESSIONS X	Emerging Ethical Practices and Dilemmas in Assessment VI	Cyber Security, the integrity of Assessment and Credentialing III	TBC
	ROOM	Montego Bay Suite	Port Antonio Suite	Negril Suite
	CHAIRS	Sherma Joseph-Hyland	Ayobode Akinbuluma	
10:30 - 11:00 am		Ethical issues and dilemmas in public examinations in Nigeria: Implications for the National Examinations Council (NECO)	Securing the Digital Classroom: Cybersecurity Best Practices for Educational Institutions	
		Prof. Dantani Ibrahim Wushishi, Dr. Innocent Uche Ezenwanne, Lukman Othman Suleman	Delroy McLean	
		Nigeria	Jamaica	
11:00 - 11:30 am		Validity of Automated Essay Scoring Revisited; Three Studies of AES Validity	Proposing Ethical Guidelines for Using Generative AI tools in Preparing and Assessing Software	
			Engineering Coursework	
		Yoav Cohen, Effi Levi, Anat Ben-Simon, Tzur Karelitz	James Carmichael	
		Israel	The Bahamas	