International Seminar

Building methodologies and indicators to measure the influence of ICT on the development of 21st Century skills

March 15th - 16th, 2016
Bogotá, Colombia

DAY 1 – Tuesday, March 15, 2016

Venue: Hotel Estelar Windsor House

9:00 – 10:30 a.m.: Opening Remarks

Moderator: Leonardo Villar, Executive Director, Fedesarrollo

- IDRC Vice-President: Steven Mcgurk
- Colombian Ambassador in Canada: Nicolás Lloreda
- Canadian Ambassador in Colombia: Carmen Sylvain
- Colombian Minister of Education: Gina Parody

10:30 – 11:00 a.m.: Coffee Break

11 - 11:45 a.m.: Vijay Kumar, Associate Dean of Digital Learning with responsibility for Strategic Educational Initiatives, MIT

“Sustainable technology-enabled educational innovation and Connected Learning Initiative (CLix) experience in India”

11:45 am – 1:00 p.m.: “Digital Technologies and the Future of Education”

Moderator: Elias Said Hung, Director of the Educational Observatory, Universidad del Norte, Colombia

- Launching of regional project: “Building Tools to Measure the Use of ICT in the Classroom” Susana Martínez-Restrepo, Researcher at Fedesarrollo, Colombia
- Launching of the project: “Shaping the Future of Education in Colombia” Claudia Zea, Director of the Laboratory for Innovation and Learning - Proyecto 50, EAFIT University, Medellin, Colombia
- Launching of the “Innovative Education Observatory” Carlos Lugo, Educational Innovation Director, Colombian Ministry of Education

1:00 – 2:00 p.m.: Lunch
2:00 – 3:30 p.m.: International Experiences

Moderator: Magali Zúñiga Céspedes, Research Director, Omar Dengo Foundation, Costa Rica

- **Digital learning and 21st century skills**
  Speaker: John Baker, CEO, Desire2Learn

- **Statistics, ICT and education, UNESCO**
  Speaker: Martin Schaaper, Programme Specialist at the Science, Technology and innovation Unit, UNESCO Institute for Statistics

- **Indicators to measure the uso and access to ICT, UNESCO in Brazil**
  Speaker: Alexandre Barbosa, Director, Cetic.Br

3:30 – 4:00 p.m.: Coffee Break

4:00 – 5:30 p.m.: Marketplace Activity: Regional Experiences of the Effects of Using ICTs in the Classroom

The objective of this section is to present the most important regional programs that include results or impact evaluations. Each of the programs will have a table with a representative presenting and handing over material with information regarding the general description of the program, its measurement methodologies, indicators developed as a result of the intervention, and the program results. Participants will have the opportunity to visit the programs they’re the most interested in and talk to the representative at each table.

- **SIMCE TIC, Chile**
  Speaker: Catalina Torrent – ICT Skills Evaluation – Enlaces, Chilean Ministry of Education

- **Red ILCE/Enciclomedia, Mexico (Program TBC)**
  Speaker: Mónica Gladis Perez, National Institute for Educational Evaluation (INEE), Mexico

- **One Laptop per Child, Peru (Program TBC)**
  Speaker: Jorge Ivan Peralta, Director of Technological Innovation in Education

- **Plan Ceibal, Uruguay**
  Speaker: Cecilia Marconi, Data Analytics Specialist, Plan Ceibal, Uruguay

- **Indicators Developed by the “Innovative Education Observatory”, Colombia**
  Speaker: Juan Francisco Díaz, Director of the South-Regional Innovative Education Observatory – Universidad del Valle

- **Model UBiTAG: Measurement of capabilities of use of ICT in teachers and educational institutions, Colombia**
  Speaker: Mónica Ospina, Monitoring and Evaluation Coordinator, Plan Digital TESO, EAFIT University

7:00pm – 8:30pm: Reception
DAY 2 – Wednesday, March 16, 2016: Measurement and Methodologies

Venue: Hotel Estelar Windsor House

9:00 – 10:30 a.m.: The Newest Techniques, Methods and Variables: The Role of Analytics and the Importance of Measuring the Impact of ICT on 21st Century Skills

Educational Software and Analytics

The objective is to introduce and justify the use of analytics to measure and identify how students use and interact with ICTs. This presentation will explain how analytics work (graphics and interfaces) and the advantages of using analytics. What aspects of appropriation and use of ICT can be measured with analytics that cannot be measured with existing indicators? With an analytics software on the computer, what do we want to know about how students use technology?

- Digital Education and Analytics: an international perspective
  Speaker: Cristóbal Cobo, Director of the Research Center – Ceibal Foundation, Uruguay

10:30 – 11:00 a.m.: Coffee Break

11:00 – 12:30 a.m.: The Newest Techniques, Methods and Variables: The Role of Analytics and the Importance of Measuring the Impact of ICT on 21st Century Skills

Definition of 21st Century Skills and their integration into educational guidelines

The objective of this presentation is to understand how to articulate the development of 21st Century skills with national curricula and educational guidelines. If no guidelines are established, what options are there to integrate a harmonious development of these skills? How do we develop 21st Century skills in context with limited resources? What are the different frameworks that are currently available to measure these skills?

- Speaker: Magali Zúñiga Céspedes, Research Director, Omar Dengo Foundation, Costa Rica

12:30 – 2:00 p.m.: Lunch

2:00 – 2:30 p.m.: Data Analysis and Mixed Methods: Identifying the Impact of ICTs as Instruments for Teaching and Learning, and Measuring the Role of ICTs in the Classroom

The objective is twofold: first, to debate whether ICTs must be considered mostly as an independent variable in most analysis and not as an outcome variable. As evidence has pointed out, ICTs are not necessarily having positive effects on learning. The approach taken is that it must be considered primarily as an instrument for teaching and learning cognitive and non-cognitive skills (21st Century skills, math, language, and sciences). This is why it is crucial to go deeper than previous methodologies and understand the processes by which children, teenagers, and teachers are using ICT in the classroom to learn. This could include quantitative (RCTs, semi-experimental, evaluation of results and implementation) and qualitative research methods.
The second objective is to study what indicators and data should register to inform on inequalities in the area of ICT and education. Why do we need to measure gender and rural/urban, socio-economic gaps with the use of ICTs? What sources of information and indicators are available to gauge how we are performing in terms of inequality in the region? What needs to be included and addressed to enhance the construction of these indicators and collect the appropriate data?

Moderator: Mónica Ospina, Monitoring and Evaluation Coordinator, Plan Digital TESO, EAFIT University

- “ICT as Instruments”
  - Speaker: Claudia Urrea, MIT Office of Digital Learning
- “Mixed Methods”
  - Speaker: Jorge Valencia, Universidad del Norte
- “ICT Indicators to measure Equity Gaps”:
  - Speaker: Susana Martinez-Restrepo, Researcher at Fedesarrollo, Director of the project: “Building Tools to Measure the Use of ICT in the Classroom”

2:30pm - 3:45pm Hands on-Workshop: Round Tables

3:45pm - 4:00pm: Final remarks: Naser Faruqui, IDRC Director of Technology and Innovation
DAY 3 – Thursday, March 17, 2016: Technical Meeting of Regional Team

Venue: Fedesarrollo

From 9:00 a.m. to 1:00 p.m.:

The objective of this meeting is to consolidate the regional team. Thus, the meeting will be a space to set common goals and interests between the participating countries, and define further research steps.

Topics To Be Discussed:

- Data comparability and sources of information related to the use of ICT in the classroom.
- Updates and research advances.
- Regional definitions and concepts. A glossary will be available for the entire regional team.
- Infrastructure and minimum conditions in schools to access ICT resources.
- Uses and appropriation of ICTs.
- Measurement: Names and descriptions of variables and indicators, and what we understand from them.
- Implementation and construction of instruments.
- Presentation of fieldwork design and data collection.
- Research questions and further steps suggested by attendees to the Fedesarrollo research group.

Participants from the regional team and countries and institutions expected to participate:

- Colombia: Ministry of National Education of Colombia, CIER-SUR, and Universidad del Norte
- Chile: Enlaces
- Uruguay: Ceibal Foundation
- Peru: Ministry of Education
- Mexico: National Institute for Educational Evaluation and Secretariat of Public Education