

BeLLE: Synergy between two learning tools: Bebras and ViLLE

20th Anniversary of the Informatics and Computational Thinking Challenge

Prof. Mikko-Jussi Laakso 26.9.2024

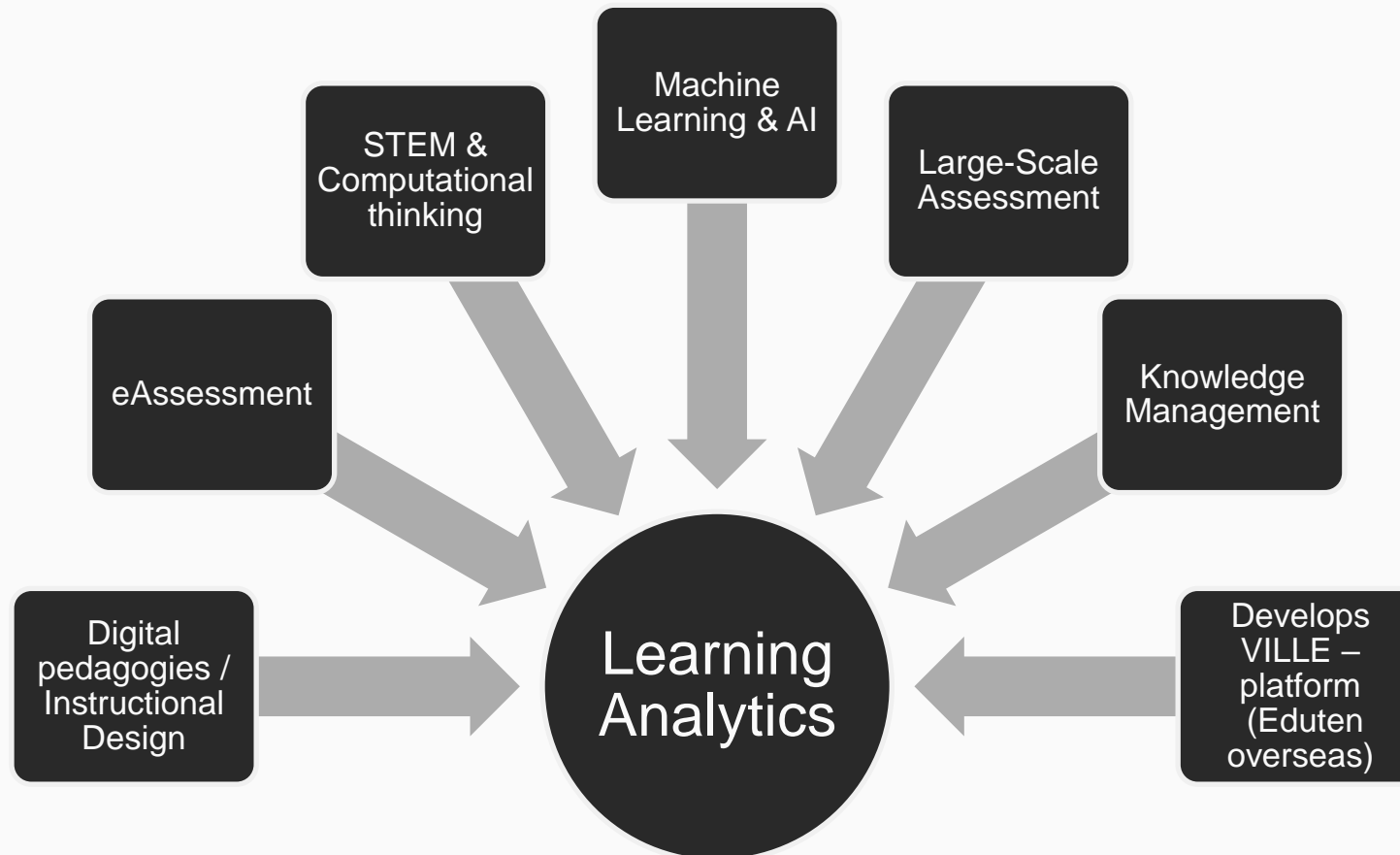


**UNIVERSITY
OF TURKU**

Turku Research Institute
for Learning Analytics

Turku Research Institute for Learning Analytics

“Transform society by maximizing the quality of teaching and learning, research-based & data-driven”



TRILA – infobox

- ‡ 30+ staff members
- 🎓 Multidisciplinary research unit
 - 🎓 Education, Computer Science, Psychology, Cognitive Sciences, Statistics, Humanities
- 🎓 20+ years of experience
- 🌐 Strong international collaboration
- 🌐 trila.fi

University of Turku

- ‡ 25000 students and staff
- 🎓 Founded in 1920 with the support of 22,040 donors.
- 🎓 “From a free people to free science
- 🎓 Multidisciplinary research university with 8 faculties
- 🎓 Academic heritage since 1640



UNIVERSITY OF TURKU

Turku Research Institute for Learning Analytics

EDUCA – Education for the Future – flagship

funding targeted to highly distinguished research programs that demonstrate scientific excellence
(2024-2031), **12,6 MEur** funding per 4 years

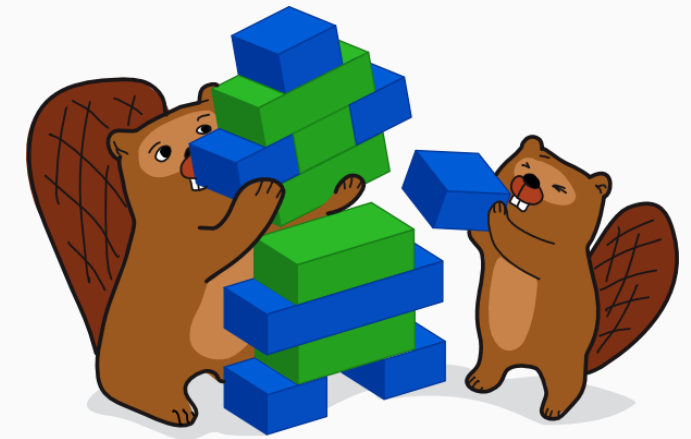
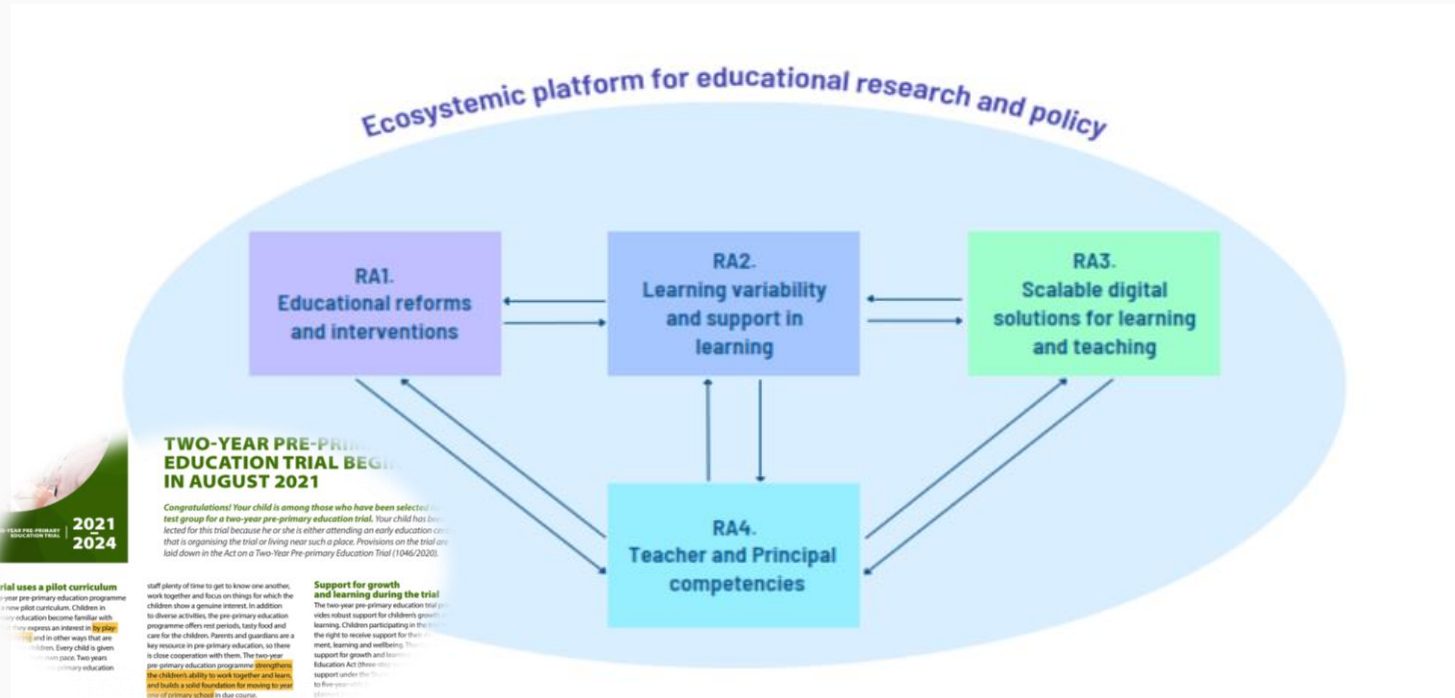
University of Jyväskylä, University of Turku, University of Helsinki, Aalto University, many top national and international professors and researchers involved.

In addition, EDUCA-doc includes 78 doctoral students under EDUCA (2024-2027)

MUREA - Multilingual Reading Assessment

FUNA – Functional Numeracy Assessment

BELLE (Bebras & ViLLE) – Computational Thinking



How to build a resilient and proactive education system(s) that are capable of recovering from disruptions (like pandemic), the most efficient way?

How to identify, overcome and prevent learning losses and gaps?

How measure the impact of educational changes and investments at large scale? And how to do all of this without overloading the system?



ViLLE – awarded learning platform

- Co-creation with the field!
- The use of the data for the good purpose & in a transparent way.
- Equal learning for all @ large scale.

The image shows two overlapping screenshots of web pages. The top screenshot is a UNESCO press release titled "UNESCO Prize awarded to a collaborative learning platform ViLLE from Finland", dated 06/04/2021. The bottom screenshot is a UNICEF article titled "Meet Eduten, the edtech startup with the potential to become a 'Blue Unicorn' that impacts the learning experiences of 100 million children", dated 24 May 2022. The UNICEF article includes a photo of children in a classroom and a media contact for Yemi Lufadeju.

UNESCO

ENGLISH

UNESCO Prize awarded to a collaborative learning platform ViLLE from Finland

06/04/2021 5 min

Share this article

unicef for every child

Office of Innovation

WHAT WE DO RESEARCH AND REPORTS STORIES TAKE ACTION

Press release

Meet Eduten, the edtech startup with the potential to become a 'Blue Unicorn' that impacts the learning experiences of 100 million children

UNICEF and XTC announce Eduten as winner of 2022 UNICEF EdTech Award with special mention to CogniAble

24 May 2022

Media contacts

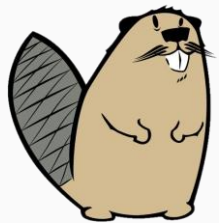
Yemi Lufadeju
Communication Manager, Office of Innovation
UNICEF
Email: glufadeju@unicef.org

© UNICEF/Photo: Shashank
Children learn with tablets and computers in the Public Melen School of Yaoundé, the capital of Cameroon.

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Turku Research Institute for Learning Analytics

Bebras + **vILLLE**
=
BeLLLE

2021 → 2022 → 2023 → 2024



Hungary



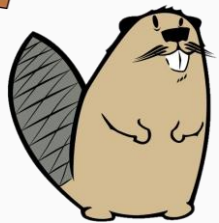
India

95,900 students
Local system + ViLLE

2021 → 2022 → 2023 → 2024



Spain



Hungary



Cuba



Lithuania



Dominican
Republic



Türkiye



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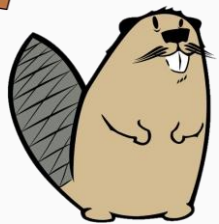
2021 → 2022 → 2023 → 2024



Spain



Sweden



Hungary



Cuba



Lithuania



Estonia



Puerto Rico



Finland



Mexico



Dominican Republic



>700,000 students?
Cuttle + Local system + ViLLE

2021 → 2022 → 2023 → 2024



Spain



Ireland



Sweden



Denmark



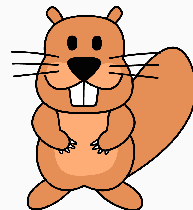
Armenia



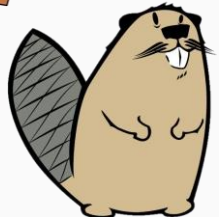
Afghanistan



Türkiye



Japan



Hungary



Cuba



Lithuania



Peru



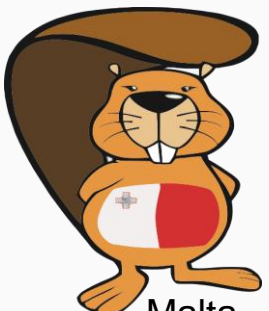
Mexico



United Kingdom



Indonesia



Malta



Estonia



Puerto Rico



India



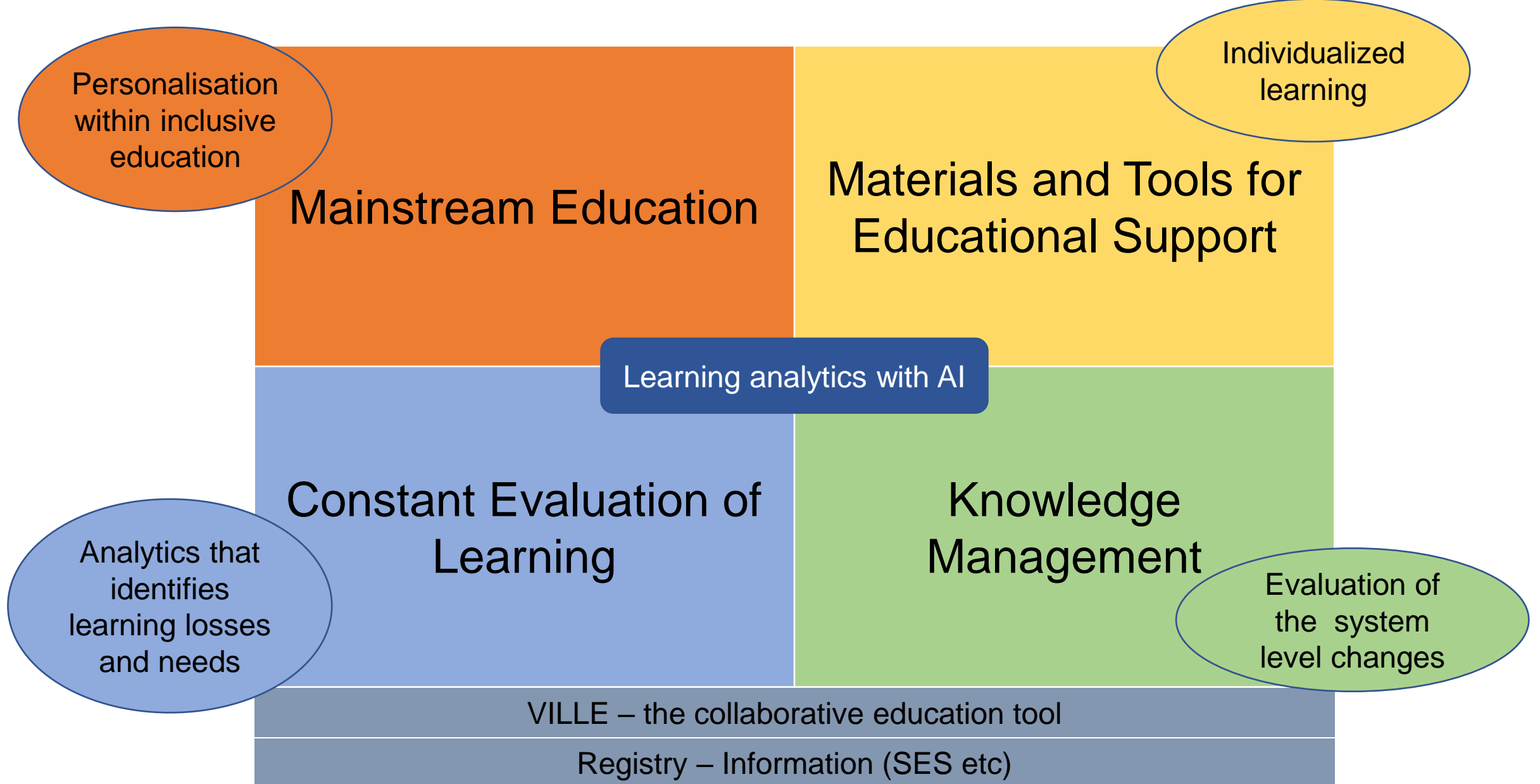
Finland



Dominican Republic



Nationwide Research Ecosystem of Teaching and Learning



“To help every learner in need as early as possible with personalized and effective intervention.”

@ large scale



Publications

Pluhár, Z. et al. (2022). Bebras Challenge in a Learning Analytics Enriched Environment: Hungarian and Indian Cases. In: Bollin, A., Futschek, G. (eds) Informatics in Schools. A Step Beyond Digital Education. ISSEP 2022. Lecture Notes in Computer Science, vol 13488. Springer, Cham. https://doi.org/10.1007/978-3-031-15851-3_4

Kaarto, H. et al. (2023) BeLLE: Multinational Research Collaboration on Bebras & ViLLE. In Proceedings of the 2023 Conference on Innovation and Technology in Computer Science Education V. 2. ITiCSE 2023. Association for Computing Machinery, New York, NY, USA, 669. <https://doi.org/10.1145/3587103.3594187>

Kaarto, H. et al. (2024) BeLLE: Detecting national differences in computational thinking and computer science through an international challenge. In Proceedings of the 2024 Conference on Creative Mathematical Sciences Communication. CMSC 2024. Lecture Notes on Computer Science. [Manuscript submitted and approved for publication]