

Annual Report Learning Technology & Analytics 2024

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In 2024, the Learning Technology & Analytics research group focused on enhancing its visibility and sharing its research findings.

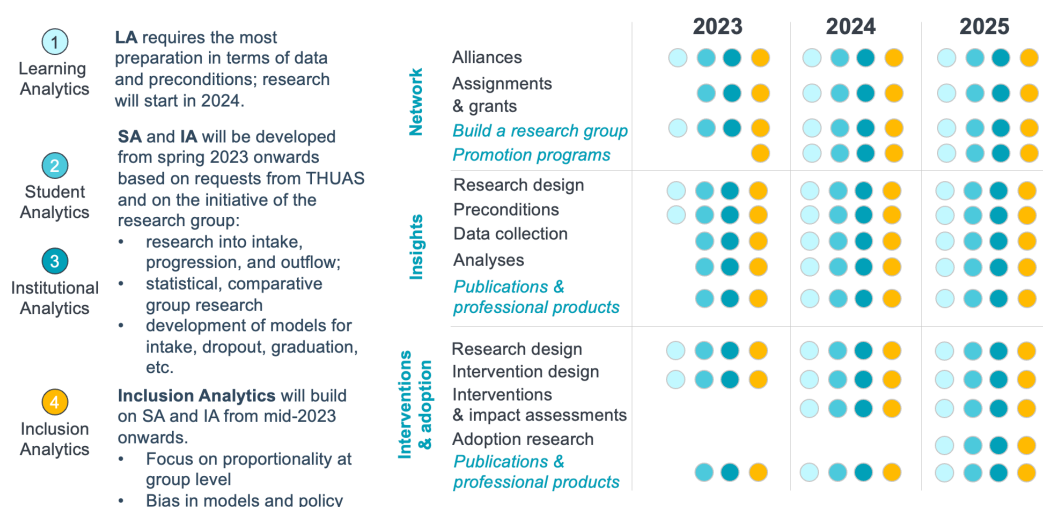
Development of research lines in Learning Analytics

The development of the four **research lines** for the **Learning Analytics** research theme has been further shaped in line with the multi-year plan:

- 1) *Learning Analytics* – What study patterns do we see in the interaction between students, teachers, teaching materials, and the teaching environment?
- 2) *Student Analytics* – What patterns do we see in students' study careers and within study programmes?
- 3) *Institutional Analytics* – What patterns are at play in the Hague region, the Randstad, and the rest of the Netherlands?
- 4) *Inclusion Analytics* – What insights can we gain in these three areas about equity for our students?

Research and planning structure

Over the course of three years, we will work on developing four fully-fledged lines of research.



As the proposed schedule shows, research line 1, *Learning Analytics*, takes proportionally the most time to develop; this has been designed in the DASH project—a study into the effect of predictions based on partial tests in Brightspace on students' self-confidence.

For research lines 2 and 3, *Student and Institutional Analytics*, enrollment analyses were developed in 2024 for more than 20 study programmes, in particular for programmes in the 'tekortsector' of Technology (Faculties of Technology, Innovation & Society, IT & Design and Health, Nutrition & Sport), the Faculty of Business, Finance & Marketing (B Accountancy/Finance & Control ft and B Management & Organization ft), the Faculty of Management & Organization (B Communication ft) and all other study programmes of the Faculty of Health, Nutrition & Sport. All reports are freely available internally to THUAS's employees.

An intern has researched the possibilities for intake research into international students. An employee of B&C, within the framework of research line 3, Institutional Analytics, has designed a funding guide that provides employees of THUAS with insight into the functioning of the external funding system.

For the fourth line of research, *Inclusion Analytics*, the research program **No Fairness without Awareness** resulted in the professor's *inaugural* lecture, delivered on November 21, 2025 (see the *review* for more information about the event with approximately 250 participants). The speech focused on the method developed by the professor to statistically investigate equity as applied to the progression from the first to the second year of study. This was investigated for all bachelor's study programmes at The Hague University of Applied Sciences; 90% of these programmes are characterized by inequality of opportunity, particularly for men, MBO students, and internal switchers.



The research group established a partnership with Nuffic to use CBS microdata (**Studying without Borders**) to research equity among Erasmus+ students.

In addition, within the same line of research, a national **vision on the possible impact of AI on equity in further education** was presented at the inaugural lecture. This was an assignment from Npuls on the opportunities and risks of using AI to increase equity, developed in collaboration with colleagues from universities, universities of applied sciences, and vocational colleges, under the project leadership and editorship of the professor.

Publications (Open Access)

Bakker, T. (2024). *No Fairness without Awareness. Toegepast onderzoek naar kansengelijkheid in het hoger onderwijs*. Intreerede lectoraat Learning Technology & Analytics. 1–82. doi: [10.5281/zenodo.14204674](https://doi.org/10.5281/zenodo.14204674)

Bakker, T., Eegdeman, I., De Kraker, C., Saçan, E., & van Leeuwen, A. (2024). AI and equity. *Vision document. The impact of AI on equity in tertiary education in the Netherlands*. Utrecht: Npuls. doi: [10.5281/zenodo.14266559](https://doi.org/10.5281/zenodo.14266559)

Learning Technology Development

A vacancy was opened in 2024 for the research theme **Learning Technology**, for which Dr. Manika Garg was hired as a senior researcher on September 1. Manika is an experienced researcher and lecturer in Computer Science with nine years of experience in India, where she was also involved in education and social impact through NGOs. In

2024, she obtained her PhD in Educational Technology from the University of Delhi, with publications on academic integrity and digital assessment.

Within the Research Group, she focused on evidence-informed evaluation of EdTech and AI in education, which led to the development of a national framework for **Evidence-Informed Evaluation of EdTech (3E)** commissioned by Npuls (Q4 2025). This promising framework immediately attracted national and international attention. It has been published in Dutch and English and recognized by national and international experts, including Professor Natalia Kucirkova ([EduEvidence](#)).

Publication

Garg, M., & Bakker, T. C. (2025). *Evidence-informed Evaluation of EdTech (3E): A Dutch Framework for Continuous Assessment of EdTech Effectiveness* (pp. 1–15). Npuls. doi: [105281/zenodo.15070789](#).

Development of the Research Group



In 2024, the research group comprised **part-time lecturers/researchers** (1.0 FTE) and a **full-time senior researcher** (1.0 FTE). The 1.0 FTE lecturer-researcher position was filled by six colleagues from GVS, ITD, and TIS: Nando Rensen and Memon Boukiour (GVS), Maria Sobral and Marcel van Vliet (ITD), and Cathy Liem and Sylvia Schipper (TIS). Dr. Manika Garg was hired for the 1.0 FTE senior researcher position. In addition, an intern worked for several months (Griffith Davanzo). Due to the termination of the United Nations Studies in Peace and Justice research group, the professor coached a PhD candidate (Saskia Rademakers); her research is not formally part of the research group.

The positions of the (lecturer) researchers were supplemented largely with **matching** from the faculty: GVS: 0.3 FTE, ITD: 0.4 FTE. In addition, lecturer-researcher Monique Bill joined the research group on her own initiative. In 2024, each researcher worked on one of the Learning Analytics research lines. A temporary colleague was recruited via Zuyd University of Applied Sciences (Daan Huberts) to research the shortage sectors.

Management assistant Titia Dijkstra (0.2 FTE) supported the professor.

Funding

In 2024, the research group secured funding through faculty matching (see above), internal research assignments on intake and progression, a subsidy from PGO funds, and external assignments from Npuls and Erasmus University.