



Universiteit
Leiden
The Netherlands

Joint programme for research into higher education 2025-2028

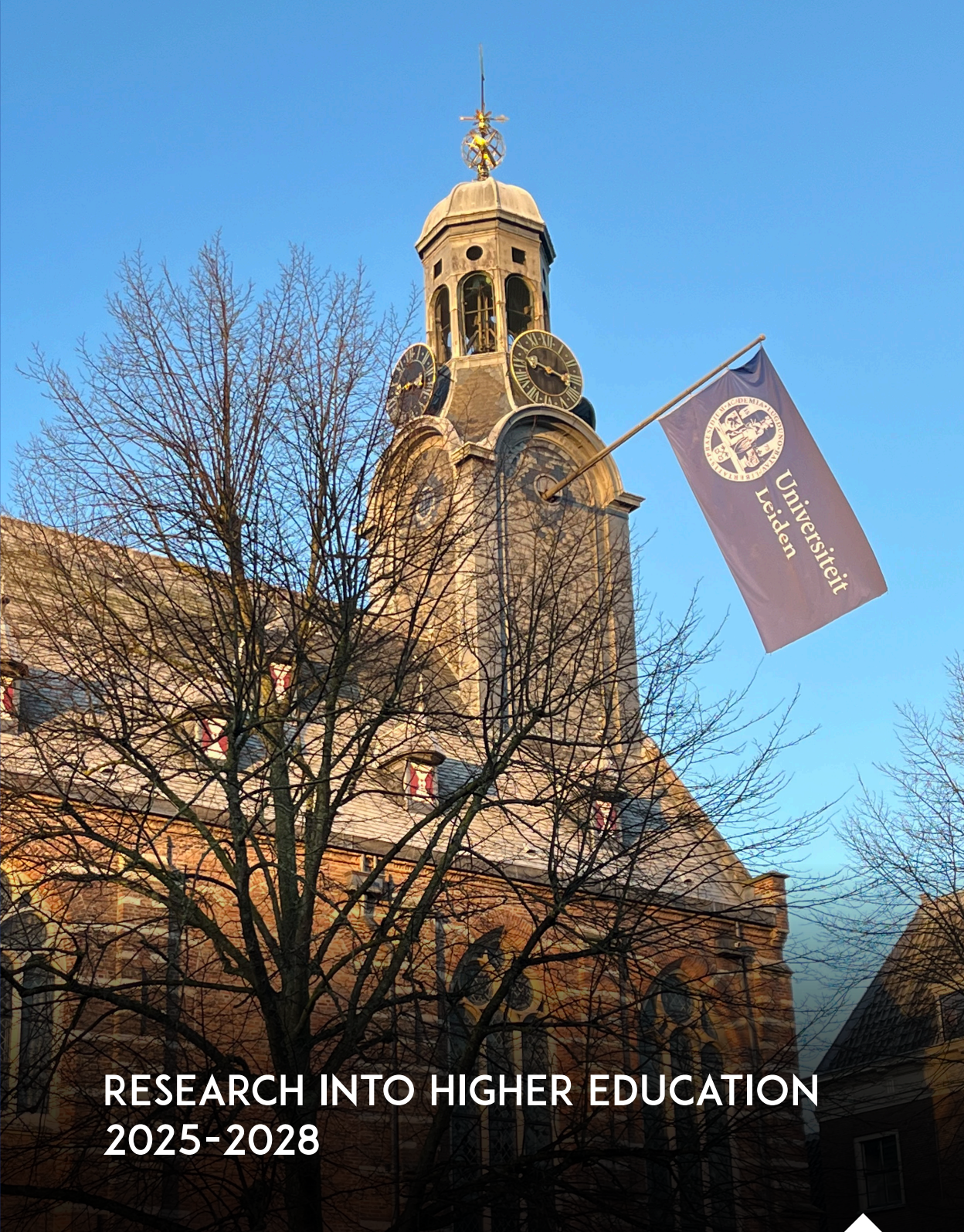
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RESEARCH INTO HIGHER EDUCATION 2025-2028



Universiteit
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Prelude

Leiden University's joint programme for research into higher education serves as a strategic initiative to enhance educational practice, innovation, and policy by integrating scientific research into all aspects of higher education. The programme consists of four lines of action: 1) collaboration in writing grant applications for educational research and innovation projects, 2) advising educational development and innovations through educational research, 3) unlocking the educational research knowledge base, and 4) coordinating in an educational research network. This programme for research into higher education is aligned with the strategic goals and the educational vision of the university, and the disciplinary and interdisciplinary strategic plans of departments and institutes of Leiden University. The themes described in this joint programme for research into higher education were drafted based on an exploration of the research literature and an analysis of current educational innovation and research projects. A preliminary version was discussed

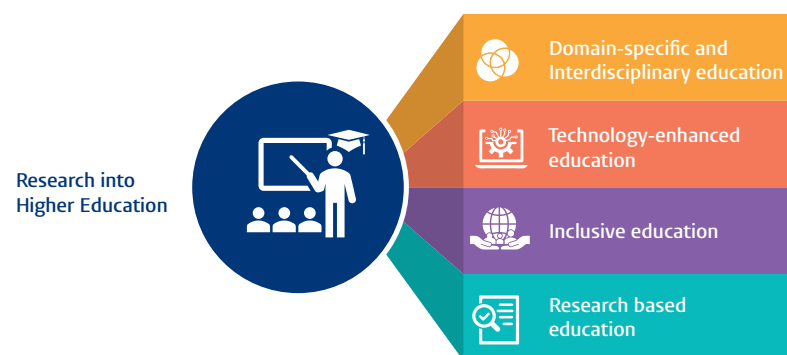
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*Strategically and efficiently prioritise resources,
initiate collaborations, and develop evidence-based insights*
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with educational researchers. The themes and educational topics were sharpened and supplemented in co-creation with various stakeholders from education policy, management, implementation, and research at all levels of the university. The themes described in this programme will assist to strategically and efficiently prioritise resources and efforts and to initiate collaborations and develop evidence-based insights that are relevant for teaching and learning at the university.

The added value of educational research

Educational research helps to understand how people learn, and how teaching can support that at the university. Through research into education, the development and innovations in university education can be effectively directed, scaled, and implemented in various contexts. Curricular adaptations and educational programmes are supported by the understanding of underlying teaching-learning principles. Furthermore, the insights from research into higher education support decisions on how to make university education future-proof. Educational research ensures a continuous enhancement of our understanding of what effective learning and teaching is. The conceptual changes in our thinking about education are fundamental for every step in any educational innovation and development in our teaching and learning programs. Furthermore, educational changes are initiated in various regions globally. The descriptions of these innovations in the international educational research literature help us to understand which underlying educational principles are at stake, and how these principles can be used effectively in other situations and contexts. This situational awareness is crucial when making decisions about educational changes at the university, as well as for the choices university staff make when innovating their teaching methods. It is also relevant to gain systematic insight into how educational innovations have an impact on stu-

Themes for Research into Higher Education



dent learning and well-being. Educational research thus supports evidence-based implementation of improvements in education. Because research into education is supported by both the knowledge of the academic disciplines and the knowledge from educational science, it is highly recommended to organise educational research within the university in an interdisciplinary approach. Educational research

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*Through research into education, innovations
 in university education can be effectively implemented*
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supports the development and growth of all faculty members at the university. In this way educational research contributes to recognising and rewarding educational efforts and the educational impact of faculty members.

In order to deploy the benefits of educational research for innovations in teaching and learning and for the growth of our faculty members, we developed a university-wide joint research programme in which we can systematically explore and improve our understanding of teaching and learning at the university. In order to collaborate effectively and to use resources efficiently for educational quality and innovation, we describe four general research themes for higher education research within Leiden University.

Research theme 1

Domain-specific, interdisciplinary, and transdisciplinary teaching and learning

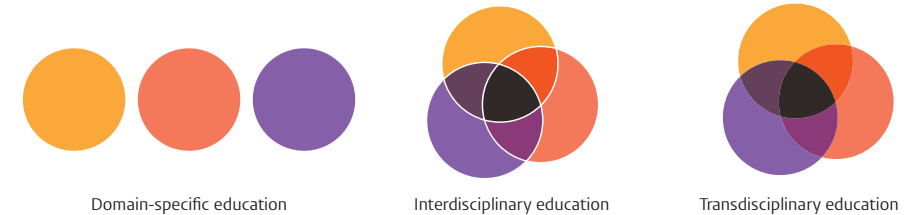
At the university, students are trained to work on solutions to complex challenges. In future work environments, solutions to those challenges can best be achieved through collaboration in which multiple disciplines come together (e.g., moral case deliberation, interprofessional consultation, collaborative teams, cross-curricular communities, collegial meetings). In addition to domain-specific knowledge and skills, students need transferable skills to work together in multi-, inter-, and transdisciplinary ways. Interdisciplinary teaching involves approaches where students integrate knowledge and skills from multiple academic disciplines, while in transdisciplinary approaches, students work together with partners outside the university, such as start-ups and companies in the bio-science park, the municipalities of Leiden and The Hague, museums, the International Criminal Court, the judicial system, or international collaborations. On the one hand, various studies

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*Students need transferable skills to work together
in multi-, inter-, and transdisciplinary ways*

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have shown that for strong collaboration, it is necessary for faculty to be an expert in at least one specific academic domain. On the other hand, these studies show that collaboration skills, empathy, trust, and care are also needed. Therefore, this research theme will focus on understanding, stimulating, and improving learning processes in domain-specific, multidisciplinary, interdisciplinary, and transdisciplinary learning activities. In addition, specific attention is paid to the central role of faculty members in the support for students to integrate knowledge from the various academic domains in interdisciplinary and transdisciplinary collaborations.



Examples of research questions in this theme are:

- What knowledge and skills do students learn from domain-specific, interdisciplinary, and transdisciplinary teaching-learning activities?
- What is the relationship between the domain-specific knowledge and skills and the transferable skills students learn in interdisciplinary collaborative learning?
- To what extent does a learning activity stimulate students to integrate knowledge and skills from various academic disciplines?
- What is the most effective way of exchanging feedback during transdisciplinary activities?
- In what ways can interdisciplinary learning best be assessed?
- What is the relationship between the learning of the collective and the learning of the individual student?

Research theme 2

Digital educational tools and technology-enhanced teaching and learning

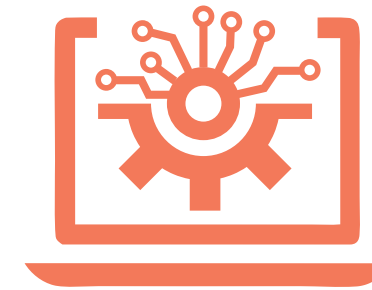
Digital learning tools are utilized in all educational programs at the university to support student learning processes and to manage educational logistics. Faculty at universities need to be digitally skilled to be able to make decisions about which digital tools are most suitable for which part of the learning process. To support faculty members decisions, knowledge is needed about the ways in which digital resources can be used to support achieving desired learning outcomes. In this research theme we will develop knowledge about how students' learning processes can be regulated, stimulated, and enhanced through digital learning resources and with the data acquired through these digital learning resources. This knowledge will lead to a deeper understanding of how to provide students with targeted feedback on their learning progress. The digital data can help faculty members and educational designers to develop differentiated education in which the student



Knowledge is needed about the ways in which digital resources can foster desired learning outcomes



has high degrees of independence and control over their learning. Therefore, this research theme will focus on understanding, stimulating, and enhancing student learning through digital learning tools and gaining insights into students' learning progress through digital (trace) data. Special attention will be paid how to enhance student learning with digital tools, such as learning analytics, artificial intelligence (AI), and virtual reality (VR), in blended and hybrid forms of teaching.



Examples of research questions in this theme are:

- Which digital data can be used to provide effective feedback to students on their learning process?
- How do digital tools (e.g. VR, AR, AI) influence the learning process of the students?
- How can we align learning analytics with instructional design?
- What are the characteristics of an effective digital educational design?
- What skills does a faculty members need to make a reasoned decision about digital tools and how to use them in their teaching effectively?
- How can mobile devices enhance the flexibility of education?
- What is the effect of distributed (retrieval) practice via a mobile app on knowledge retention?
- In what way is it possible for students to use generative AI to enhance their learning?

Research theme 3

Inclusive education and well-being of students and staff

Inclusive teaching-learning environments aim to provide all students with equal opportunities to develop academically. Differentiated and student-centred approaches to teaching that take into account the diverse needs of students help to give equal opportunities to all students. In order to provide university faculty and students with ample tools and competencies to redesign or create inclusive and differentiated learning environments, insight into the principles of inclusive teaching is necessary. Furthermore, knowledge is needed about ways to organise the various dimensions of inclusive teaching and about teaching approaches that support the learning processes of all students. In addition, it is relevant to deepen our understanding on how to widen access, recruitment, and selection of diverse students for the various programmes of the university. This will enable us to develop targeted interventions to support the students learning process, and to increase

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*Differentiated teaching approaches help to
provide equal opportunities to all students*

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students' well-being, sense of belonging, engagement, and equal opportunities. In this research theme, we will focus on understanding, stimulating, and improving teaching and learning for all students, with a focus on differentiated teaching and assessment approaches. In addition, we aim to develop further understanding of the various methods and approaches of recruitment and selection of students for university programmes.



Examples of research questions in this theme are:

- Which teaching approaches contribute to equal opportunities for all students?
- How can faculty members provide differentiated ways of teaching?
- What is the effect of a hybrid form of teaching on the learning processes of on-line and on-campus students?
- In what ways can assessment method and exam requirements contribute to equal opportunities for all students (including neurodiverse students, linguistic diverse students, students with a physical or mental challenge, or informal caregiving students)?
- In what ways can we strengthen students' sense of belonging in a study programme?
- What is the effect of different forms of recruitment processes on the influx of students into the programme?

Research theme 4

Research-based teaching and learning

Learning from, learning about, and learning through research is, and should be, an essential element of student learning at university. In educational practice, however, it is not always clear how research can be included or combined with teaching and learning. Research-based teaching is an educational approach that involves learning from and about research. This means that students participate in research processes, and actively engaged in using research results and research methods. Furthermore it entails teaching-learning activities in which students are involved in research-like situations where they learn what it means to be a researcher. Research-based teaching offers students the opportunity to gain in-depth knowledge of the domain, develop skills from research methods in the field and learn through research how knowledge changes and develops in a particular domain. This knowl-

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*Learning through research takes place
at all levels of university education*

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edge is essential for students to effectively tackle challenges and propel innovation forward. In this research theme, studies will focus specifically on understanding and improving research-based teaching and learning approaches and stimulating the associated student learning processes. Learning from research takes place at all levels of university education, from pre-university to PhD trajectories. However, in our programme particular attention is paid to learning in research environments, such as research internships, fieldwork, laboratories, libraries, and collections.



Examples of research questions in this theme are:

- Which forms of research-based education are specific to the domain?
- What higher-order cognitive skills do students learn in research-based teaching?
- What is the impact of research-based teaching on student learning and performance?
- What is the relationship between the use of research-based teaching and student performance?
- What is the role of feedback in research activities to support students to achieve the strongest learning gains?
- What is the effect of research-based teaching on students' understanding of knowledge development in the field?

Research focused on educational aspects

Various educational aspects are relevant to each research theme, such as students’ learning processes, curriculum design, and assessment. The table below gives an overview of the intersections between themes and aspects. For each theme, research questions can be drawn up for each of the aspects, and a research project

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For each theme, research questions
can be designed for each of the aspects
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can also be developed for combinations of themes and aspects. Enhancing our understanding of the themes and aspects of teaching and learning supports and strengthens the quality of educational practice, organisation, and policy. Each theme gives rise to specific questions that can be asked about what we already know from previous studies and how to study it within the university context. The table therefore serves as a tool for developing new educational research and innovation projects.



Research themes and educational aspects

Educational aspects Research theme	Learning processes and activating activities	Student motivation and engagement	Curriculum and instructional design	Feedback, evaluation and assessment	Professional development of staff	Recruitment, selection, and internationalisation	Educational quality and quality assurance	Educational logistics and organisation
Domain-specific, interdisciplinary and transdisciplinary teaching and learning								
Digital educational tools and technology enhanced teaching and learning								
Inclusive education and well-being of students and staff								
Research-based teaching and learning								



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