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Over nut en noodzaak van onderzoek naar hoger onderwijs

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Prof.dr. R.M. van der Rijst

**On the relevance and necessity of
research into higher education**



**Universiteit
Leiden**

Discover the world at Leiden University

Over nut en noodzaak van onderzoek naar hoger onderwijs

Oratie uitgesproken door

Prof.dr. R.M. van der Rijst

bij de aanvaarding van het ambt van hoogleraar Onderwijswetenschappen
aan het ICLON van de Universiteit Leiden
op vrijdag 13 september 2024



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Esteemed Rector Magnificus, dear students, family, friends, and colleagues

In the main part of my lecture I will argue that educational research is a powerful tool to innovate teaching and learning and support the development and growth of teaching academics at our higher education institutions. That it strengthens career paths of faculty in our higher education institutions and that educational research lays the foundation for future developments in higher education. I will support these arguments with illustrations from educational studies within our research group and beyond. I would specifically like to stress here that many of the ideas and arguments I portray today were created and developed in conversations with my colleagues and international guest researchers, and that our PhD students did most of the work and developed the better ideas. I feel honoured to work with all of you.

Universities and colleges

But first some facts about Dutch higher education. The Netherlands counts 14 universities, 4 theological/philosophical colleges, and 36 universities of applied sciences. Internationally, these institutes are often placed under a common denominator, higher education institutions. In the Netherlands, we make a sharp distinction between research universities and universities of applied sciences. Approximately 350,000 students study at Dutch research universities and 500,000 students study at our universities of applied sciences. In these higher education institutes more than 75,000 faculty members work on teaching and learning. Interestingly, only 6,000 faculty at research universities focus primarily on teaching and learning without having a research task. At universities of applied sciences there is a growing number of faculty members who focus on research tasks in addition to their teaching duties. Tasks and roles of faculty at research universities and universities of applied sciences in the Netherlands are diversifying. Although

higher education institutions around the world vary in both function and organization, three goals of higher education are commonly accepted, namely, education, research, and the responsibility to society. In addition, reference is also made to the leadership roles that faculty in higher education institutions have. The three functions of higher education come in various forms and compositions (Leisyte et al., 2009; van der Rijst & Visser-Wijnveen, 2011). It is relevant to observe that the teaching function in higher education institutions is always present. Without teaching and learning, there would be no university.

Higher education institutions are complex, continuously changing organisations, each with its own history. Over the centuries, these institutions have adapted to developments in society. For example, a relatively recent change within universities in the 19th century is the emergence of research departments and the emergence of the idea of a research university where scientific study is more highly regarded than the teaching of students (van Lunteren, Palm, & Vanpaemel, 1993). Before that, the core mission of universities focussed on teaching and learning of students, and faculty who did experimental research work in a laboratory were tolerated at best as a new invasive species of academic staff who were not always considered relevant or necessary at the academy. Willem Einthoven was such an experimenter (Moukabary, 2007), and in fact the entire fields of empirical health and natural sciences, were at first seen as the odd ones out within a university that, according to the standards at that time, should focus on the teaching of future lawyers, politicians, doctors, and teachers. It was only a century ago that 'empirical research' became a core task within the universities. This anecdote shows that conceptions on being a 'university' change over time and are therefore also transient, or in a more positive way, changeable and adaptable to developments inside and outside higher education institutions. At the Dutch research universities the research function is dominant and seems to be

the primary goal. This gives rise to, for example, the idea that teaching is a burden, to seasonal teaching appointments, and seemingly independence of tenure appointments to quality of teaching students. Some studies even indicate that if faculty at universities obtain educational innovation grants and pay extra attention to the quality of their teaching, in some contexts, it negatively impacts their career opportunities (Scheidig & Tremp, in press).

At universities of applied sciences, educational commitment and educational innovation seem to be closely aligned with the career development of teaching staff. Working on the quality of education, innovative teaching approaches, and curriculum design seem to be well received in universities of applied sciences. In these contexts, faculty make a career out of providing good teaching, improving student learning, and developing a domain-specific teaching philosophy. Something else seems to be going on here (Hu, van der Rijst, van Veen, & Verloop, 2015). Universities of applied sciences in the Netherlands indicate in their policy documents that they are committed to practice-oriented research, but in practice it turns out to be quite a challenge to institutionally embed this in order to improve teaching and the professions. Career opportunities for researchers who want to contribute to domain-specific research have to work hard to make a real impact through their research studies (van Winkel, van der Rijst, Poell, & van Driel, 2018). Faculty in both higher education institutions work on innovations in teaching and learning. The movement towards the 'Scholarship of Teaching and Learning' focuses on the narrative that it is possible to work on 'teaching and learning' in a systematic way, and that this systematic way is similar to other academic tasks such as conducting research (Hutchings & Shulman, 1999). Increasingly, this inquiry-based view of teaching and learning is advocated as an essential task of senior faculty (cf. van Dijk, van Tartwijk, van der Schaaf, & Kluijtmans, 2020). Educational research is not only relevant to the innovation of teaching and

learning, but also to the professional development of faculty at higher education institutions.

The differences between higher education institutions arise from historically developed organizational structures, from institutional culture, academic habitus, and personal views. The structure and culture that prevails have emerged from years gone by and have established stable ideas, conceptions and expectations at those who inhibit these systems. There are culture carriers, customs, narratives, and taboos (Bourdieu, 1984). Only if you know how to behave within the expectations of the prevailing culture - do the right tasks and achieve successes - then you seem to grow and make a career. Changing an existing culture takes years of effort, and costs valuable faculty who may drop out due to resistance and who might no longer be available for higher education. Some changes are necessary, but some things do not need to change. Academic freedom is a constant factor and is the space to explore what you, as an expert, find relevant at a particular moment, relevant to education, science, and society. And being able to question anything, and come back to that, after logical reasoning, academic debate, and weighing the validity of arguments. And furthermore, that if a previous idea is falsified, that it will not stick to you. But also that you take nuance and details into account, do not play rhetorical games, but use reason and logic to arrive at the 'truth'. That you empathize with the arguments of others, which means that you want to listen and even help the other to make their argument as strong as possible. This freedom is present in different ways in various places in higher education institutions internationally.

Spaces and forums

Higher education institutions have several distinguishable 'forums'. Places and spaces where specific topics are discussed. Spaces that sometimes overlap and sometimes do not. Spaces where specific habits and customs apply, things that

are discussed and what are not, arguments that are seen as powerful and arguments that are dismissed as senseless (Rushton & Bird, 2024; Temple & Barnett, 2007). For example, writing scientific article is seen as a valuable activity in ‘research forums’, while writing a teaching handbook might not. Another example is that, at the moment, you could see the ‘pedagogical role of the university’ as a topic that is not on the agenda in the appropriate forum. Various forums can be recognized within the institutions, such as teaching forums, student forums, research forums, operational management forums, disciplinary forums, and methodological forums. These forums are characterized by the topics of discussion, type of conversations, and type of arguments that are experienced as valid. In the literature, these are referred to as ‘discursive spaces’ or ‘conversational spaces’. Each individual faculty member inhabiting these forums influences the space, and that space affects each individual. This means that the space and person are in continuous motion, in flux. Many contemporary studies focus on aspects of the agent or of the structures, but less on the dynamic and dialectical relationships between the two. Studies on teacher and student ‘agency’ focus precisely on this relationship (Biesta, Priestley, & Robinson, 2015; Kusters, de Vetten, Admiraal, & van der Rijst, in press). The current emphasis on reductionism in science creates an emphasis on the individual, the factor, the characteristic, the person, or the structure. We then only see the things that are reduced and placed out of context and relationship. This seems to make us think that these abstractions ‘exist’ outside of the relationship they have with other things and with ourselves. But to really understand something, you not only have to see things, but also understand the relationships between the things. The focus on these relationships ensures, among others, that the research on teaching and teachers not focus on the deficiencies of faculty, but gives much more direction to the relationship between faculty, students, and domain-specific content in the particular forum. The current descriptions of the complexity and diversity of the teaching profession and the

emphasis on teacher agency is an expression of this changing focus on the relationship between individual and forum, agent and structure.

Teaching and learning in higher education

There is not one teaching approach that can be used for all learning objectives in higher education (de Jong et al., 2024). The learning objectives are just too diverse to be captured in a single teaching approach. Teaching and learning is a tailor-made process which focusses on the specific learning needs of a group of students in a specific domain with a focused objective (cf. van der Rijst, 2017). The answer to the question of what constitutes effective and valuable teaching and learning activities depends on the purpose, the group of students, the domain, and the teacher’s expertise. At the program level, effective teaching is related to the norms and values within the domain and the taught profession. This is where the students will start their professional careers. Individual teaching staff have their own conceptions about what are valuable learning activities for their students. Their conceptions depend, for example, on their education, experience in the profession, perceived research domain, and career path. How students experience their teaching also depends on their situation, the place in the curriculum, the perception of their teachers, but also previous experiences with similar learning activities, their own ambitions, and interests (Slot, Vulperhorst, Bronkhorst, van der Rijst, Wubbels, & Akkerman, 2020; van der Rijst, Visser-Wijnveen, Verloop, & van Driel, 2013; Vereijken, van der Rijst, Dekker, & van Driel, 2018). Developing one’s own teaching philosophy of what constitutes as valuable in teaching and learning is therefore not a question of providing an all-encompassing definition, but rather a question of placing oneself in the context of the past, present, and future. Where you are and what your ambitions and interests are at that moment in time (cf. Lamers, van der Rijst, & Admiraal, 2020). Describing your teaching philosophy is not to compete with others, but to start a conversation and

understand your own and the others positionalities. If an educational vision of the university does not seem to match with the philosophy behind the educational programme or the personal teaching philosophy of a staff member, then the conversation is relevant in order to appreciate each other's position and to support each other in developing teaching and learning.

Higher education in flux

6 Education is constantly evolving. Curricula and programmes are adapted to the knowledge base of the discipline, and to the demands of society and the labour market. Insights are changing about which teaching methods and approaches best support student learning. The skills and prior knowledge of first-year students are changing due to adaptations in the curriculum in secondary education. Change is more constant than what remains the same. Development and innovation of our educational programs are taking an important place in the jobs of our teaching faculty (Stevens, Day, et al., 2024). These educational innovations are present at all levels within higher education institutions. Adaptations in our teaching and learning can be designed efficiently and sustainably if we make use of what we already know what works and what does not work, and in which situations and contexts it works. As a result, the educational research literature will help us to make our education future-proof. But in order to appreciate this research literature and to be able to search the databases effectively, it is important to understand the educational research language in which it is written.

The changing landscape of higher education

With an appreciation of the educational language, concepts, and discourse, a re-evaluation of our teaching is possible. We are challenged to go beyond traditional teaching methods, and embrace approaches that enable students to actively participate in their learning activities. For example, many

higher education programmes aim to limit the number of hours of 'lecturing', in which a lecturer is transmitting knowledge, to replace it with activating teaching methods such as problem-based learning or collaborative learning. Higher education programmes are increasingly focusing on a shift towards learning-centred teaching approaches (Samuelowicz & Bain, 2001; Ottenhoff-de Jonge, van der Hoeven, Gesundheit, Kramer, & van der Rijst, 2024). These are approaches that recognize each student, with different needs, prior knowledge, backgrounds, and aspirations, as a unique individual. It is a teaching philosophy that places the learning process at the centre of teaching and encourages active engagement with the content through collaboration with peers and guided inquiry (de Corte, 2010). But it is also an educational approach in which the teacher is focused on the learning of the students. In describing two ends of a dimension, it sometimes seems as if this is a dichotomy from which we have to choose. Lecture or problem-based teaching; direct instruction or constructivist approach. Anyone who portrays this as a dichotomous choice, or presents it as a bone of contention, is depicting a false fact. Learning really occurs when a student uses what has been heard or read, has reflected on it, related it to their previous knowledge, and has been applied the new knowledge on similar problems in different situations. This requires instruction and feedback from the teacher as well as trial and error by the student (Merrill, 2021). Only then will the student be able to apply the acquired knowledge and skills in different contexts. Educational programmes in higher education therefore need to apply a variety of teaching and learning activities. Lectures have a function, just like seminars, laboratory practise, projects, and internships. There is not one teaching and learning approach that takes precedence, but rather a well-considered domain-specific palette of teaching-learning activities that is desirable (cf. de Jong et al., 2024; Jacobi & van der Rijst, 2010).

Educational research of value

The value of educational research for development and innovation in teaching and learning has several layers. First, educational research provides continuous reflection on what we consider as valuable instruction and learning activities. The changes in our thinking about education, which arise from educational research, are fundamental for next steps in development of teaching (cf. Rumiantsev, van der Rijst, Kuiper, Verhaar, & Admiraal, in press). Secondly, in order to gain insight into designed and implemented educational innovations, the innovation will have to be monitored, evaluated, and studied (cf. van Blankenstein, Trutescu, van der Rijst, & Saab, 2019). Educational research support the systematic evaluation of educational innovations in order to arrive at evidence-based conclusions and suggestions for improvement (cf. Visser-Wijnveen, van der Rijst, & van Driel, 2016). Thirdly, educational innovations, described in international educational science literature, provide help to understand what works for which students, contexts, and situations. These international research reports support us in making choices about the changes in our teaching at our universities (cf. Sanches, van der Rijst, Isabella, Day, & Visser-Wijnveen, 2023). The educational literature is a valuable resource for any innovation in teaching and learning (van der Rijst, 2020).

Aspects of teaching-learning process

The educational sciences developed various models that represent parts of the teaching-learning processes. These representations help to analyse and study teaching and learning processes from various perspectives and at different levels. The process of comparing, relating, and refuting in the academic discourse provides a deeper understanding of what works and what does not work for learning and teaching in theory and practice. Learning is the construction of knowledge by the student, and happens in relation to the other, the academic field, the situation, the context, and the student's

prior knowledge. Effective teaching approaches focus on the acquisition of knowledge, disposition, and skills by the student that are relevant to promoting academic freedom, cognitive independence, and agency in a particular area or domain of knowledge (cf. van Blankenstein et al., 2019). Academic freedom, the principle according to which academics should have autonomy in their research and teaching activities, is always in relation to the context, forum, and the collective to which it is related. This means that each academic should position their decisions in the contexts in which it matters and in which it resonates. The pedagogical question here is in what ways we can educate our students in the academic freedom, and in the awareness that this freedom is bounded to space, discourse, and the other. Only when we realize that the individual is always part of the greater community and that each of us 'is' only because 'we are', do we understand that freedom is never a property of the individual, but that we are only truly free when we all understand what it is to be free. The task of higher education is to support and guide this learning process of deepening the understanding of 'academic freedom'. Our conversation should be about learning pathways in our curricula, how we support extra-curricular forums, and what support we give our faculty to help our students to grow into truly academic free thinkers and achievers. Now that we understand this underlying quest, we can consider which themes will be central to teaching and learning at the university.

Educational development and support

Effective learning activities not only put the student's learning central, but also pays attention to the complexity of tasks and the diversity of students' prior knowledge, in order to understand the difficulties and misconceptions that may arise in explaining the concepts in the subject area. Marleen Ottenhoff developed a framework of elements of learning-centred education (Ottenhoff-de Jonge et al., 2021), which reflects the multi-dimensionality of student-centred teaching.

Faculty with a learning-centred approach were more likely to have a teaching philosophy that was strongly anchored in the discipline. These deeply felt missions translated into learning-centred approaches in which educators provided professional examples and feedback while teaching. To successfully implement learning-centred approaches, it is necessary to invest in the sustainable development and support of educators (Sutherland, 2018; van der Rijst, Dean, & Bolander Laksov, 2022). Educators need to be equipped with educational knowledge, pedagogical tools, technological skills, and beliefs relevant to make decisions in the ever-changing educational landscape. By fostering a culture of continuous professional development among educators, institutions can provide valuable higher education (Geertsema & van der Rijst, 2021). Educational sciences develop generic knowledge about teaching and learning and faculty have domain specific knowledge. If the knowledge of the domain and the knowledge of the educational sciences come together, promising new initiatives will emerge. By delving into the educational knowledge and merging it with disciplinary expertise, domain-specific understanding of students' learning processes will develop. This is an interdisciplinary approach in which, through conversations between educational researchers and domain-specific experts, innovative tailor-made and domain-specific teaching methods will be developed. In the combining of expertise evidence-based domain-specific teaching approaches emerge which are truly an innovation for teaching practice and can help faculty to improve their instruction and help students to learn deeply about their domain knowledge. By combining educational knowledge and knowledge of the disciplines, the path to effective university education is well-paved and easy to navigate (Timmermans & van der Rijst, 2023).

The beauty of teaching lies in the multi-dimensionality and interconnectedness of disciplinary and educational knowledge. This does not mean that generic educational knowledge,

tools, and approaches are useless to faculty. On the contrary, faculty need a repertoire of tools and techniques to choose from when designing their teaching approaches (cf. Vereijken & van der Rijst, 2023). But the faculty members decides from their own professional space what needs to be taught and only then considers which approach or tool is best for the job. This is how an effective application for an educational innovation is created. In an effective application all parts are aligned and focused. The knowledge for both the educational sciences and the academic discipline merge and form the basis of understanding and supporting student learning processes (cf. Shulman, 2005). Over the course of their careers, faculty develop their understanding and position within their teaching and research unit and their position in relation to their students. They will also grow in their understanding of the university as a community and the position of the institute and the university in society. This improved understanding strengthens faculty to make decisions within the boundaries in which they work. In this sense, faculty become stronger in informal educational leadership throughout their careers. The concept of 'teacher agency' offers us potential tools to assess the level of development of the person and the ecosystem (Kusters et al., in press). Max Kusters, PhD candidate at our institute, developed a set of real-life scenarios about education-related incidents in which a teacher has to make an in-situ decision. These narrative descriptions were used to assess teachers' decision-making space and modes of action in different contexts. These scenarios have the potential to be used in teacher development opportunities, for example as a tool for lecturers to reflect on their current reasoning behind the decisions they make, or as a tool for peer consultation and beyond.

Global trends

In recent years, there is a realisation that there are opportunities to create new paths. New digital tools open windows,

major disruptive crises make us realize that societal challenges are multidisciplinary in nature, and increasing globalization shows that there is more to the world than just 'our' way of knowing and being. There is an awareness that we can affect this change, but the directions are not yet fixed. I would like to describe some global trends relevant for teaching and learning in higher education.

From interdisciplinary training to training for disciplinary collaborations

Based on the idea that we need to educate students for the problems of the future, which by their nature require an interdisciplinary approach, various study programmes have emerged at the intersection of academic disciplines. Some interdisciplinary studies focus on a specific part of the labour market others on working together in interdisciplinary teams (Vulperhorst, van der Rijst, & Akkerman, 2023). Various studies have shown that for strong interdisciplinary collaboration, it is necessary to be an expert in a subfield (Vereijken et al., 2023). On the other hand, these studies also show that interdisciplinary collaboration skills are highly relevant (Pharo et al., 2012). The trend in the coming years will extend to focus on integrating collaborative skills along with the acquisition of in-depth disciplinary knowledge of theories and models. Luyao Huang, an international PhD candidate at ICLON, is studying interdisciplinary education in university programmes. In her current study, she relates common interdisciplinary teaching methods to the diversity of learning outcomes that are described in the educational research literature. The outcomes of her study will help us to develop targeted teaching approaches for specific learning outcomes in interdisciplinary programs.

From digital tools to technology-enhanced learning

In the digital age we now live in, technology is emerging as a potential support to develop learning-centred teaching approaches. Virtual platforms, collaboration tools, and

adaptive learning systems promise opportunities to customize education and provide students with interactive, personalized, and engaging experiences; but does it really enhance our students' learning? Specific off-line instructions are still needed to use these digital tools for the benefit of learning. Faculty are becoming more and more digital literate and are able to consider which digital tools are suitable for which part of the learning content (e.g. Baas, van den Berg, van der Rijst, & Admiraal, 2022). The digital tools are not an end in themselves, but a means to achieve certain learning outcomes. The teachers and instructional designers will have to reason from the point of view of the learning process of the individual student in such a way that the educational technology will be at the service of differentiated domain-specific teaching (cf. Wang, de Vetten, Admiraal, & van der Rijst, in press). Understanding the potential of technology enables faculty to transcend current practices and realize innovations in their teaching. On the other hand, it reinforces the need to understand the limitations of the digital tools and to see the need for professional development and professional space for faculty (van der Rijst, Guo, & Admiraal, 2023). Research into hybrid and blended forms of teaching can help teaching faculty, academic developers, and instructional designers to deeply understand when a digital solution can promote student learning and when it cannot. In a recent study, PhD student Linyuan Wang investigated the benefits of blended learning activities on student engagement in blended programs at our university. Her results show that students' control over the learning activities is not always conducive to their engagement in blended learning activities. It depends on the instruction and type of learning activity. This is an indication that with the inclusion of blended activities in our teaching, a careful instructional design is still needed (Wang et al., in press).

New opportunities await us. Software based on large language models offers opportunities to enrich teaching and learning. Currently, the debates about these large language models in

higher education are focused on the inability to assess students' input into their essays, and thus on the diminished value of essay writing assignments. In the coming years, the debate will shift to student learning opportunities. Because large language models can provide students with timely and targeted feedback, if students learn to ask the 'right' questions, the models can provide answers that students can use to increase their knowledge and integrate to solve complex problems. I am confident that the teaching profession will still be an in-person job in the future, but it will be supported by gen-AI-based software in providing feedback and promoting learning.

From inclusive teaching to an inclusive culture

The central tenet in teaching and learning in higher education is to recognize and celebrate the diversity within our student cohorts. Inclusive teaching approaches recognize students' diverse histories, perspectives, and experiences. By including all 'voices' in our teaching, we create an environment that not only values differences, but also harnesses them as enriched learning experiences. In a large European-funded project, we started an inventory of inclusive teaching approaches and experiences at universities. In COALITION we work together with seven partner universities in Europe. We noted, among other things, that the ideas about inclusive education in our institutes vary considerably and that we can learn from these different practices at our partner universities. Sharing experiences and approaches is the first benefit of collaboration. But we were also able to interview teaching faculty and students in depth, giving us an insight into the variety of inclusive teaching approaches at our universities. Inclusive teaching is aimed at engaging all students from an understanding of their challenges and abilities. In some cases, this means adapting resources, facilities, and spaces, but in many situations, teaching includes listening to the unheard voices and then, as a teacher, incorporating space and time into your schedule and adjusting teaching methods and content. This means that we as teaching faculty, academic developers,

and educational researchers have a duty to be empathetic towards our environments and the people we work with.

The conversation about inclusive education has started and in various projects and groups within the universities and colleges, lecturers are taking initiatives to redesign their education in such a way that all students feel involved and heard. As a result, education will become more in line with educational needs of our students. However, various groups in our society are still under-represented in our university programs. For some, the university is still an unwelcome place in which there seems to be no place for those who are not familiar with the implicit rules (cf. Nouta, Nessar, & van der Rijst, 2012). In the coming years, the university will need to grow towards an inclusive culture in which everyone who is willing and able to study also feels welcome and is part of the academic community. This will contribute to a broad participation of students and staff and to equal opportunities for all.

Aspects of education that will always be important

Apart from these global trends in higher education, there are several topics that remain important for teaching and learning in higher education. Increasing our understanding of the underlying mechanisms remains important to improve practice, organisation, and policy. Examples of those tenacious topics are: student interest and well-being (Slot, Vulperhorst, Bronkhorst, van der Rijst, Wubbels, & Akkerman, 2020), professional development of lecturers (van der Rijst, Baggen, & Sjoer, 2019; van der Rijst, Visser-Wijnveen, van Driel, & Verloop, 2014), assessment and feedback (Huizing & van der Rijst, 2016), matching and selection (Vulperhorst, van der Rijst, Holmegaard, & Akkerman, 2021), internationalisation (Hu, van der Rijst, van Veen, & Verloop, 2014; Lamers et al., 2020), and the pedagogy of learning to do research (Hu, van der Rijst, van Veen, & Verloop, 2016; Mainhard, van der Rijst, Tartwijk, & Wubbels, 2009; Vereijken, van der Rijst, Dekker, van Driel, 2018).

Furthermore, subject-specific pedagogies in higher education will always be of high importance. Various PhD studies are carried out by subject matter experts, such as faculty at universities of applied sciences who are specifically interested in the teaching approaches in their professional domain. These topics focus on the 'signature pedagogies' (Shulman, 2005), specific professional skills, or student learning objectives specifically relevant to the profession or the knowledge domain. For example, Amer Jaganjac, lecturer-researcher at Fontys University of Applied Sciences, is researching how faculty can teach Computer Science students to take all potential users into account in their software designs, in such a way that the products that these students will deliver in their future jobs promote inclusive use. Nazly Sedghinejad, a physics teacher in secondary education, is working on a study focused on physics laboratory education and studies which higher-order cognitive skills students develop in physics laboratory. Another example of subject-specific educational research is the study of Cheng Hua, a full-time PhD candidate at ICLON, who is studying improvisation in music education. Through improvisation activities, music students develop diverse skills and the agency to use them when relevant. These are just a few examples of how research at ICLON connects educational knowledge with domain-specific challenges in teaching and learning. This does not do justice to all those other PhD students, postdocs and researchers who carry out numerous studies within the ICLON research programme that are relevant to our understanding of teaching and learning in higher education.

Conclusion and acknowledgements

In general, focusing on the domain-specific learning processes of students emerges as a compass that leads us to stronger and sustainable teaching and learning in higher education. By embracing inclusive learning-centred education as a guiding model for our teaching, we are not only adapting to the changing needs of our students, but we are also contributing

to cultivating informed, flexible, and empowered individuals who are ready to face the challenges of the future. I sincerely hope that you will join me on this transformative journey as we redefine the contours of teaching and learning in higher education for next generations of students.

I have been fortunate to work in an exceptionally pleasant working and learning environment. It seems to come naturally at ICLON, but I realize more and more that the collegiality is due to the people who work here. I would like to thank all colleagues and former colleagues of ICLON for the beautiful and exciting moments we have shared.

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I would also like to express my gratitude to the Executive Board of Leiden University for my appointment as Professor of Educational Sciences with a specific focus on teaching and learning in higher education. And the board and management team of ICLON for their support of my appointment. In the time I have been given, I hope to make a substantial contribution to the quality of teaching, educational research, and the educational philosophy of ICLON and Leiden University and beyond.

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Cheng, Luyao, Nazly, Lorna and Amer. I am looking forward to our conversations and the challenges we face together.

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Locutus sum

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