Knowledge Agenda for Higher Education

Strengthening the quality of higher education with research and innovation

2023 → 2026
<table>
<thead>
<tr>
<th>Theme</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>5</td>
</tr>
<tr>
<td>Theme 1: Educational approaches of the future</td>
<td>7</td>
</tr>
<tr>
<td>Theme 2: Professional development of teachers</td>
<td>9</td>
</tr>
<tr>
<td>Theme 3: Student wellbeing</td>
<td>11</td>
</tr>
<tr>
<td>Theme 4: Diversity and inclusion</td>
<td>13</td>
</tr>
<tr>
<td>Theme 5: Societal issues</td>
<td>15</td>
</tr>
<tr>
<td>Theme 6: Connection to the labour market</td>
<td>17</td>
</tr>
<tr>
<td>Theme 7: Higher education institutes as learning organisations</td>
<td>19</td>
</tr>
<tr>
<td>Publication details</td>
<td>22</td>
</tr>
</tbody>
</table>
INTRODUCTION

The Netherlands Initiative for Education Research (NRO) contributes to enhancing the quality of Dutch higher education in various ways. It does so by funding educational research, by fostering innovation projects in higher education and by engaging in activities related to knowledge sharing and networking.

These funding rounds for research and innovation launched by NRO are the responsibility of the Programme Committee for Higher Education (PCHO). Researchers, lecturers, administrators, policymakers and students from higher professional education and universities are actively involved in this committee. The programme committee has drawn up a cohesive programme of funding rounds for research and innovation in education for the period 2023-2026.1 This knowledge agenda is part of this programme and consists of seven themes that will receive an additional incentive in the coming years in the thematic funding rounds that the NRO will launch for higher education. This knowledge agenda complements the Knowledge Agenda for Education, which was drawn up by NRO in 2022 for primary education, secondary education and secondary vocational education.2 In addition to thematic research, there will also be additional scope for unrestricted research in the programme.

Objective

By creating a thematic agenda that will be used for the entire duration of the four-year programme, potential applicants can be given a clearer indication of the various research opportunities being offered by NRO. A limited selection of major themes can also have a greater impact on the selected issues because multiple types of research on the same theme will be funded. The themes from the knowledge agenda can, where possible, also be used for NRO programming of educational innovation and for knowledge sharing and networking activities. This creates greater coherence between the three different lines, enabling them to mutually reinforce each other: outcomes of innovation projects, for instance, can generate follow-up questions for educational research, the results of which can then be shared with a wide audience via Onderwijskennis.nl.

Knowledge sharing

Creating coherence between the three different lines generates knowledge circulation. Responding to the major current educational policy and other educational issues of the target group (education professionals and policymakers) plays a key role in this. NRO chooses a number of fixed ways to develop knowledge products: theme pages, guidebooks and Knowledge Roundabout (‘Kennisrotonde’) answers.3 Furthermore, NRO also organises knowledge-sharing events. Knowledge products are always created in close cooperation with the intended users of knowledge and research so that accessibility, suitability for use and research quality are guaranteed. NRO consolidates all knowledge from research at one location (www.onderwijskennis.nl).

Themes

The knowledge agenda identifies seven themes that will play an important role in Dutch higher education in the coming years and where there is a need for more knowledge. Each theme approaches higher education from a different perspective or from a different target group. Some themes focus on the teaching of students, lecturers and entire educational institutes, for instance. The themes are often future-oriented; how can higher education continue to provide good education and prepare students for their future in the years ahead? This can be their personal future, their future careers, but also the future of the planet.

A brief description has been prepared for each theme. This description outlines the relevance of the theme for higher education, followed by a brief explanation of its connection with other themes that are relevant in higher education. Finally, possible research questions and research strategies have been defined, which could help researchers to provide orientation to their study.

1 For more information about the programme, see: https://www.nro.nl/en/researchprogrammes/higher-education-research
3 In addition to these fixed types of knowledge products, there is also focus and room for other types of knowledge products. This is because the type of knowledge product greatly depends on the intended outcomes of the study. NRO also distributes products from research, such as podcasts, webinars, teaching materials, toolboxes, checklists, manuals, reflection tools, methods for conducting interview, best practices, etc. via Onderwijskennis.nl and knowledge-sharing events.
The texts define the frameworks provided for a theme, but these are not exhaustive or fully filled in. The knowledge agenda is therefore not an overview study that documents the most recent state of available knowledge on a particular theme. Within the frameworks provided, there is room for applicants to provide their perspective on the theme and to link the relevance of the intended study to the descriptions. All themes will need different types of research to advance higher education. This applies to practice-oriented, policy-oriented and basic research, but also to evidence-informed evaluations of educational innovations, for instance.

The knowledge agenda makes it clear that the themes described are closely related and far from isolated. This is not surprising: the professional development of lecturers naturally influences the kind of education that is provided. Innovative teaching methods can be implemented, but if no provisions are made for the wellbeing of students, the question is whether the desired learning objectives can be achieved. The issues within one theme influence the answers for another theme. This connection is illustrated in the theme descriptions through certain links between themes. Researchers and lecturers are invited to connect themes in their project proposals and define research questions that are at the interface between two or more themes.

**Processes**

The Knowledge Agenda for Higher Education was developed after several consultations and discussions within the field of education. Based on research reports and previously funded research, NRO identified potentially relevant themes in higher education. Through an online questionnaire, lecturers, students, researchers and policymakers were invited to suggest new themes and to indicate which of the themes identified by NRO will play an important role in the coming years. The questionnaire was completed by 191 respondents. A longlist of 15 themes was identified from the results. Interested parties could then register for various dialogue sessions, in which they looked at the themes with the programme committee for higher education to identify knowledge questions and subtopics. Based on the outcomes of the dialogue sessions, the programme committee selected seven coherent themes that covered the most important knowledge questions and subtopics. For each theme, several experts were invited to provide more precise arrangements for the theme description. Based on these arrangements, the knowledge agenda was drafted by the programme committee in collaboration with the NRO office.
THEME 1:
EDUCATIONAL APPROACHES OF THE FUTURE

Education, like society, will face major changes and developments. This will bring challenges, but also opportunities in shaping and further improving education. Technological developments are rapidly taking place, as well as in education. Artificial intelligence such as ChatGPT will impact the types of assignments lecturers give students in the short term, for instance, but can also bring about major improvements in the long term, such as personalised education and serving a larger group of students.

In innovative teaching methods such as learning communities, students of different learning levels and social partners are increasingly coming into contact with each other to learn with and from each other. Students are increasingly working across disciplines. They do this to solve social and technological challenges in challenge-based learning, for example. Maker education is becoming increasingly affordable and large-scale due to technological developments, using 3D printers and virtual reality. The role of lecturers is becoming more and more diverse as a result of new educational approaches. Self-regulated learning, for instance, requires lecturers not only to teach but also to coach students. The use of data, information and AI tools is also becoming more and more important for lecturers as well as students. This is increasingly playing a role in study programmes and the job market’s expectations of graduates. The introduction of such teaching methods and educational innovations into educational practice will naturally lead to the question of how they can be designed and implemented in a successful and responsible manner.

Connections
Because educational approaches of the future are being used to achieve specific goals, this theme is closely related to other major themes currently relevant in higher education. The development of and working with new teaching methods calls for different skills, from both students and education professionals. This will have implications for the training and ongoing professionalisation of lecturers. Changes in the role and position of lecturers will in turn have an impact on the culture and structure of higher education institutes as a whole. Consider, for example, the organisation of lecturer teams or a growing recognition and appreciation of the professionalisation of lecturers in the field of education. New teaching methods may also aim to increase student wellbeing, expand interdisciplinary cooperation, focus on authentic issues from the labour market or society, or increase the diversity and inclusion of education. The objectives for education vary widely when looking at innovations in education, but the issues within this theme all focus on the use of teaching methods that will play an important role in Dutch higher education in the future.

Educational approaches of the future in relation to research
Because this involves change and innovation in education, the evidence of the effective factors of such new approaches is not always clear. Finding a balance between innovation on the one hand and maintaining a solid basis on the other to impart knowledge and skills to students is a challenge for education professionals for this purpose. More research and innovation projects that are evaluated in an evidence-informed manner can provide a better understanding of effective educational approaches of the future. Thus, research can focus on how innovative teaching methods such as challenge-based learning, self-regulated learning, or transdisciplinary education can be introduced in a meaningful way. Which contextual factors, for instance, have an impact on the successful introduction of self-regulated learning? When do innovative teaching methods have added value for education and student learning? And in what circumstances is there no added value? What ethical issues need to be considered in the introduction of new teaching methods? What skills do lecturers and students require in areas such as self-regulated learning, interdisciplinary cooperation, or AI literacy to achieve an improvement in education?

The efficacy and value of new educational approaches are strongly linked to the objective that is intended to be achieved by providing education. Method and objective can therefore not be viewed separately. Research on educational approaches of the future will therefore often be focused on the question of which method is best suited to achieve a specific objective - whether that be educating a targeted group of students, finding solutions for sustainability issues, or teaching skills needed for lifelong development.
Finally, the effective mechanisms of new educational approaches are reflected in different levels of education. Research can be aimed at the course level, but also at questions that are relevant at the curriculum level or across an institute. How can self-regulated learning be efficiently designed at the course level? How can challenge-based learning be integrated as a learning pathway across the curriculum so that students can gradually learn to collaborate with other disciplines and partners? What does transdisciplinary education require of the structure of teaching teams and institutes? And, equally important, how can effective innovations be embedded and scaled up in a sustainable manner in education? In this way, we can gain a better understanding of the educational approaches that are increasingly being used in higher education.
THEME 2:
PROFESSIONAL DEVELOPMENT OF TEACHERS

The quality of education is largely determined by the lecturers. Continuous professionalisation of lecturers is therefore important to support them in facing the major changes being encountered by the education sector. This includes developments in society, innovations in teaching methods, changes in the structure of education, lecturers' roles, and career paths.

Theme 1 of this knowledge agenda outlined the implications of new educational approaches for the training and ongoing professionalisation of lecturers, where they will be expected to take on new roles and skills. In addition to imparting knowledge, more attention is being paid to developing social skills and a learning attitude in students. The role of lecturers is therefore becoming more and more diverse, with a role as coach and supervisor of learning processes, for example. The role of the lecturer as part of a teaching team is also becoming increasingly important. The Professional Learning Community (PLC) is a popular development in the context of professionalisation through educational innovation. An increased focus on the importance of education has also been shown by the national movement of Recognition & Rewards. This development is accompanied by an increasing focus on the training and professionalisation of lecturers through initiatives such as the Basic Teaching Qualification (BKO) and the Senior Teaching Qualification (SKO). This understandably leads to the question of how such initiatives can best be designed to ensure the quality of education in the future. How do you set up a PLC, for instance? And how do you organise the professionalisation of lecturers within a degree programme, an institute or at the national level?

**Connections**

Lecturers have a primary role in education, which means that they are exposed to the major themes that are relevant in higher education in a variety of ways. The link between educational innovation and lecturer professionalisation has already been described above. An example that illustrates this link is the growing focus on self-regulated learning. Characteristics of this educational development are group work, discussion, reflection and activating teaching methods. The experiences of experts show that there is tension between the perspective of the self-directed, intrinsically motivated student and the perspective of the lecturer as a coach. How can these two perspectives become better connected? Which tools can be used to support lecturers in introducing more student direction and independent learning? Professionalisation takes place within an organisation: the learning culture that prevails there will naturally influence the learning of lecturers. Another theme that lecturers have to deal with is diversity and inclusion. Increasing polarisation, diversity of student population and changing perspectives on didactics and instructions can be a factor that sometimes makes lecturers reticent to act. It is important that lecturers are supported in this regard through training, resources and time. The same applies to the theme of student wellbeing, which is being addressed more and more in education. And finally, the changing labour market and social issues of the 21st century require students to master different skills and knowledge. Lecturers play a key role in this regard.

**Professional development of lecturers in relation to research**

Literature on the professional development of lecturers in higher education is scarce. There is a need to justify lecturer professionalisation better with scientific evidence and to use available knowledge in shaping professionalisation activities. This can include research on how lecturers themselves learn and how they obtain information and knowledge. How do they learn to effectively implement or scale up educational innovations, for instance? What are the risks and success factors?

Research can also address the benefits of innovation projects that foster lecturer professionalisation. This can provide a better understanding of the effectiveness of professionalisation programmes and activities on the learning of lecturers. The context factors that can affect successful professionalisation are also of significance here. These could be available resources, the teaching timetable, classroom size and the accessibility of the available infrastructure, for instance. Personal...
factors concerning professionalisation programmes also affect the effectiveness of professionalisation on the learning of lecturers and are therefore interesting to investigate further. Not only the professionalisation of individual lecturers is relevant within this theme. Taking the increase in diversity of roles in higher education into account, how effective team professionalisation can be shaped is also an important topic.
THEME 3:
STUDENT WELLBEING

In recent years, the student wellbeing theme has been decidedly placed on the agenda in Dutch higher education and policy. This theme is so important for higher education because students’ perceptions during their studies affect their learning outcomes and processes. Wellbeing and mental health thus also affect the further career of graduates. The urgency of this theme is highlighted by the coronavirus crisis, during which the wellbeing of students became especially evident. Wellbeing is still below the level it was before the coronavirus crisis, making it important to pay attention to this in the coming years as well.

Student wellbeing is closely related to bonding issues. A distinction is made between social bonding and academic bonding. A student’s sense of belonging to education runs through to different levels: from the classroom and in the degree programme, to an entire institute. Research has shown that a lack of a sense of belonging can have a negative impact on students’ academic careers and personal lives.4

Wellbeing, and therefore study outcomes, are influenced by positive and negative characteristics of ‘being a student’.5 Such characteristics are also known as energy sources and stressors. In addition to individual factors (such as sleep, physical wellbeing, exercise and food), the context of the environment also has a clear influence, such as the lecturer and the physical or digital educational environment. Institutes can promote student wellbeing by looking at the following five pillars in particular: the creation of awareness for student wellbeing; the creation of a safe study climate with a focus on bonding; prevention and early detection; addressing professionalisation of lecturers and student supervisors; assistance and psychosocial interventions. It is important to work using an integrated approach as much as possible, in which the personal development of the student, the early detection of mental or other problems, promoting resilience, assertiveness, inclusivity and sustainable work and other participation are a core element.

Connections
Student wellbeing cannot be viewed in isolation from the role of the lecturer. Professionalisation is instrumental in being able to deal with student concerns and stress, while pressure and stress among lecturers themselves has an impact on their ability or inability to detect student wellbeing issues. Furthermore, new educational approaches, such as student-driven, activated and problem-based education, may lead to more autonomy and freedom of choice for students, but also to higher expectations and less grip. Developments such as digitisation and flexibilisation, which may play a major role in education in the future, will affect what is asked of students. There is a risk here that specific target groups will miss out and will need a different type of support. Finally, the labour market will benefit from resilient and mentally vital graduates and thus prevent the risk of burnouts as much as possible.

Student wellbeing in relation to research
Many interventions and programmes are being developed in higher education to promote student wellbeing, but these have not often been researched or shared, which means that the efficacy and transferability to other educational contexts is not always clear. There is a need for more research on the impact of interventions on wellbeing, particularly the effective factors in specific educational contexts. This could include curricular and extra-curricular programmes, or individual interventions and online modules. Research can also focus on the extent to which certain teaching methods boost energy sources and stressors in students. Consider student-driven education, for instance, where students are seen as equal partners, which in turn affects their workload capacity. Large-scale projects in particular are well-suited to attempt to identify and include all variables for student wellbeing in the study, from internal and external factors on the one hand and energy sources and stressors on the other.

A potentially promising skill for increasing wellbeing is student resilience. Little is known about how best to master this. The
same applies to factors that foster students’ sense of belonging and the effect that bonding can have on student wellbeing,
regardless of whether this is academic bonding, social bonding or bonding with specific lecturers or the degree programme.

Finally, little attention has been paid to lecturer professionalisation in relation to student wellbeing, even though lecturers
have an important role in the wellbeing of students. This is why there is a need for more knowledge on which tools can be
used to address the professionalisation needs of lecturers in promoting student wellbeing.
Diversity and inclusion is a broad theme that encompasses many parts of social reality. This also applies to higher education. As a result, the theme can sometimes feel elusive and can be defined in very different ways. Before action can be taken to improve diversity and inclusion, it is therefore important to reach a consensus collectively (as a degree programme, as an institute and as a society) on the content of the theme. The great diversity of views also leads to different interpretations of the priority of the theme: what should education and research focus on first? Engaging in a dialogue about diversity and inclusion is therefore especially important. However, this is not easy. There is often a lack of a common language, which can lead to people talking past each other. On top of that, the theme has received a lot of political and other attention in recent years. Activism dominates the discourse and those who do not identify with it are quickly accused of looking away. A potential effect of this is that a silent middle can emerge that no longer dares to act. It takes courage to engage in open conversation. A possible solution is to look for a third way between activism and looking away.

This third way should help education professionals actively shape inclusive education. In other words, to move from the desire to recognise diversity to a trading repertoire to ensure that everyone participating in higher education, as a professional or student, can reach their full potential. This is based on rationality, reciprocity and empathy with the other. To date, little light has been shed on these aspects. Although there is much talk about ‘connection’ and ‘feeling at home’ within education, there is still too little attention being paid to the specific social interactions that foster this and who is responsible for what to improve them. This third way could be sought by focusing on the basic values of education. Instead of talking about diversity and inclusion as goals, they can be seen as means to fostering the provision of good education with equal emphasis on qualification, socialisation and personality development. This discussion can be the founding principle for overarching visions and ambitions for institutes.

Furthermore, additional attention should also be paid to the system characteristics and other preconditions that enable institutes to create a good environment for their staff and students. By identifying the system characteristics and preconditions, institutes can set up their policy and organisation structure in such a way that activities to shape inclusive education are most likely to succeed. This may include aspects such as ensuring sufficient time for appropriate supervision, small-scale programmes and adequate funding.

**Connections**

The diversity and inclusion theme does not stand alone. An inclusive environment that respects the diversity of the student population, for instance, fosters student wellbeing. An important goal to pursue that emerges in both themes is the sense of belonging. In addition, there are important opportunities for advancing this theme through lecturer professionalisation. In this case, it is essential to focus not only on including specific groups but also on the professionalisation of lecturers so that they can make all students feel they are being taken seriously and belong at their institute. Further professionalisation in the field of inclusive didactics for all students will foster this. Another theme that offers opportunities for synergy with diversity and inclusion is educational approaches of the future. It is important that new teaching methods are designed with a focus on diversity and inclusion in the broad sense, for example, in aspects such as a diverse curriculum, support and feasibility of the study for all students. Finally, there is an overlap with the institute as a learning organisation. To create a new climate in which everyone feels at home at the institute, the organisational culture will have to change along with the other changes. Doing this effectively is necessary to promote diversity and inclusion.

**Diversity and inclusion in relation to research**

There are several gaps in knowledge on diversity and inclusion. The first gap pertains to the Dutch education system. There is evidence that this system does not yet optimally support diversity and inclusion. It is therefore important to identify which aspects of the education system promote or hinder diversity and inclusion. The second gap has already been
mentioned above and pertains to the need for research into a common language, through which we can hold discussions to replace exclusion by inclusion.

A third gap pertains to the preconditions that ensure or can ensure that initiatives on diversity and inclusion succeed. An understanding of the preconditions will then offer institutes the opportunity to achieve these. A gap also exists here regarding public administrative knowledge of organising and reorganising institutes. On the one hand, this information is needed so that institutes can make changes to meet the preconditions. On the other hand, there are indications that the initiatives that exist for diversity and inclusion are not adequately supported in the current structure. Initiatives that are introduced top-down struggle to gain momentum, while grassroots movements often fail to gain support at administrative and public administrative levels in the institute. As a result, they struggle to broaden their impact. Both aspects hinder the effective application of diversity and inclusion policies.

Research can also specifically address and accommodate experiments on diversity and inclusion. Limiting factors in existing experiments are often a focus on returns, a vague definition of the theme and isolation from colleagues - from lack of support or cooperation to objection to the experiment. It is therefore important to be able to conduct experiments involving different layers of the institute. Whenever possible, experiments should be evidence-informed and on a larger scale.
Societal issues on this planet are becoming increasingly prominent in higher education. This includes, for example, economic, social, cultural and ecological issues, where the main question is how we live together within the limits of our planet. These are major challenges that demand much from our society. It calls for different basic skills and qualities than those learned in the past to achieve a liveable earth for all. The gaze is shifting from a focus on humans as a determining influence on the earth to a focus on the natural system as a whole.

Which skills will we specifically need for this transition? On the one hand, education is now strongly focused on the individual with, for instance, a focus on self-reliance, personal growth and personal learning pathways. On the other hand, the focus is on the labour market, such as emphasis on good employability and connection, and hybrid learning environments. However, social challenges, such a more sustainable world, also require other skills, such as seeing relationships and dependencies (systems thinking) and perspective shifting: being able to displace in space (local, regional and global), in time (the past, present and the future) and put yourself in others’ shoes. This presents higher education with the question of how best to educate students to prepare for these social tasks.

One possible way, for example, is transdisciplinary or interdisciplinary education. Disciplinary knowledge is vital to being able to adequately respond to the complexity of societal issues. By working on social assignments in an interdisciplinary context in higher education, students encounter disciplinary questions and thus discover what knowledge from other disciplines is needed to solve issues. This then calls for higher education institutes to create a solid education and curriculum structure, with an educationally sound design.

Connections
Educatıng together for a sustainable future affects many themes and levels in higher education. New educational approaches can foster the teaching of complex skills to students. These are skills that they will need to work on societal issues. The professionalisation of lecturers is an ongoing priority to ensure that they too have the needed skills to facilitate transdisciplinary education, for instance. In addition, there is an overlap through the perspective shift skill. This resonates throughout the classroom and lecture hall, with an inclusive outlook and attention to diversity in perspectives and world views. To solve major issues, higher education institutes must cooperate more and work across organisational and educational sector boundaries. This also requires a change in the organisation of educational institutes themselves and a learning culture.

Societal issues in relation to research
This theme is particularly suitable for research in which transdisciplinary cooperation takes place and in which the connection between different types of education is investigated. Several topics are interesting to explore in this regard. The vision or culture at an educational institute, for instance, can say a lot about how sustainability is reflected in the curriculum and how other social challenges such as cultural diversity and polarisation are dealt with. This is also related to the moral role and position that universities and universities of applied sciences adopt. This includes the impact they have on the development of students’ moral compass: education is hardly ever fully neutral and can have an impact, often unintentionally, on the things we enhance or oppose in the world. This is also influenced by the parties with whom education does or does not collaborate. How does the social, cultural and physical environment outside education, for example, affect the support given to social issues?

In addition, there is a need for more knowledge on how skills for sustainable development can be translated into effective teaching methods, didactics and testing. This can include, for example, transformative learning and transdisciplinary education. How can institutes successfully embed such education, for instance, at course level or more broadly across degree programmes?
Another research direction is what everyone in higher education - from lecturers and researchers to managers and support staff - needs in terms of professional development to be able to contribute to major social challenges. What conditions are there in terms of professional identity, organisation and other relevant contexts to successfully organise education for sustainable development, for instance?
THEME 6: CONNECTION TO THE LABOUR MARKET

What adaptive skills do the employees of the future need? This question cannot be easily answered because the labour market of the future is difficult to predict using models. Even employers do not know exactly what skills they think their employees will need to have. However, it is more difficult to find the right people when employers have more specific requirements: a broader degree programme ensures broader employability in the labour market. As well as other things, this calls for a change in the way employers think. Another uncertainty that the labour market will increasingly face in the future is permanent shortages: too many work vacancies and too few people. It will no longer be a matter of course in the future that all positions can be filled because of population ageing, for instance. At the same time, people are being trained for professions for which there are already too many workers and shortages are to be expected in professions that are crucial to creating a better society together. This leads to the question of how to deal with this as a society. Is more control needed by the government, for example, or can the labour market, as a market, best manage itself?

The changing labour market naturally has an impact on higher education as one of the tasks of educational institutes is to prepare students well for the labour market. It therefore seems that short-term courses and training will become increasingly important in the future due to the growing demand for continuing professional development training and retraining programmes, for instance. This will in turn lead to the question of what certificates/diplomas should look like in the future and what the role of microcredentials might be. More research on the connection of higher education to the changing labour market could shed light on possible solutions for the developments previously mentioned.

Connections

This theme does not stand alone. With a suitable locus in higher education, students can optimally develop their talents and be prepared for an appropriate job. This is why it is important to address diversity and inclusion in the layout of education. Moreover, major changes in education, such as the use of microcredentials, cannot be successfully introduced if there is no focus on higher education institutes as learning organisations. Innovative educational approaches, such as personalised learning pathways or interdisciplinary education, can help prepare students to enter the labour market. Hybrid education can also increase the connection to an increasingly hybrid labour market. This is offset by a growing desire for more community building and bonding on campus. Thus, student wellbeing also plays a part in this theme.

Connection to the labour market in relation to research

To also be able to achieve a good connection between higher education and the labour market in the future, more knowledge is needed on the future transitions in the labour market and their impact on what will be required of higher education. We can to some extent predict which transitions will take place, for example, in terms of sustainability, but we cannot predict exactly what effect they will have. What kind of skills will we need for that? How can we best identify future skills? A better understanding of these questions could also be of great value to policymakers because they will need to draft policy on future skills without all the necessary knowledge at their disposal.

The impact of transitions on the layout and design of education is another important issue. Digitisation, for example, is a trend that will change education. How does hybrid education relate to hybrid working, for instance? Which skills and expectations of graduates play a role here? Another relevant question is how to teach meta-cognitive skills effectively as basic skills. We know very little about this at the moment, partly because schools have a great deal of autonomy to shape this themselves. We also know little about an overall view of the professions, for example. What images do students and graduates have of a specific profession? How do they relate to reality? How are overall views of professions created and how can they be modified in education?
Higher education institutes are a prime example of learning organisations. Students are trained to become budding professionals and critical citizens, while lecturers and other staff continuously professionalise. However, they do not learn alone but find themselves in a shared environment where the people work together in a group, team, unit or network of groups every day. The culture within an organisation, in other words, how all these groups work together, has a great impact on the performance delivered by the organisation. Performance is partly determined by the people around you and how you work with them. Higher education will be faced with many challenges over the coming years that will call for a great adaptive capacity of institutes and lecturer teams. At the same time, innovation and learning are inseparably linked. Investing in the learning culture is therefore crucial in maintaining and improving the quality of education.

Fundamental in seeing universities and universities of applied sciences as learning organisations is the challenge of creating a culture that values and facilitates learning in all its expressions. By providing the right preconditions, an institute creates an environment in which people can successfully learn and flourish. This not only improves the quality of work but also increases job satisfaction and the appreciation for performance. Preconditions could include creating an infrastructure in which HR, educational and other leaders have an appropriate role, or one common strategy or vision which arranges the cooperation between people. The creation of such a culture poses a challenge because higher education is traditionally founded on the individual quality of the researcher or lecturer, where working together toward a common goal is not yet customary in all scientific disciplines.

Fostering a learning culture requires a broad common vision of learning that is shared and propagated by all those involved. Successfully bringing about change, whether this is enhancing social safety or introducing educational innovations, has an impact on all layers of the institute: from employees and teams, in codes of conduct and career policy, to leaders and administrators. Developing a learning culture is therefore part of a larger systemic change. After all, the willingness and ability to change are influenced by issues such as wellbeing, appreciation and workload.

Connections
The learning culture of higher education institutes is closely related to the other themes in this knowledge agenda. Change plays a major role in each of these themes. This means that understanding how institutes change and learn can help answer the key questions in the theme. The way in which lecturers professionalise, for example, is strongly determined by how lecturer teams are organised and the prevailing culture at the institute. And educating students for a future labour market and the world with major social challenges requires adaptive capacity and the ability to learn continuously. The sub-theme Recognition & Rewards plays a particularly important role in this theme because appreciating all the expressions of learning is an important condition for the further development of people and organisations. Furthermore, higher education institutes are complex, polyphonic organisations, which means that resistance to change can develop on sensitive topics, such as decolonisation of the curriculum. Achieving change in an inclusive and responsible manner thus ties in with the theme of diversity and inclusion.

Learning organisation in relation to research
Universities and universities of applied sciences are the focal point of research in this theme. By focusing on the distinctions between organisations in the research, a better understanding can be gained of the processes that lead to an agile organisation that fosters learning. Different levels can also be examined in conjunction with each other, such as the lecturer, organisation and system levels.

One level of possible research pertains the preconditions that organisations themselves set up to foster a learning culture.
How do organisations create a working environment for lecturers, academics and other employees in which job satisfaction is high and employee attrition is low? This could include technological infrastructure, human capital, leadership and management culture. How can you embed lecturer professionalisation in the organisation in a sustainable and effective manner? What should organisations and their culture look like to achieve this? Systemic structures at the national level, such as funding and accreditation, can also have an impact on these preconditions.

Another level focuses on the processes that take place within lecturer teams or other units that lead to successful collaboration. What kinds of collaboration processes should be developed within a task area and how does a leader create the type of collaboration needed to perform tasks well? Consider, for instance, team composition, multidisciplinarity, a sense of belonging among team members, appreciation for own expertise, perceived safety, dealing with tension, or connections with other networks. Little research has been conducted on the type of leadership that lecturer teams need to accomplish their tasks. How can educational leaders enhance lecturers’ job satisfaction in the face of high workloads and, in some cases, limited autonomy? Successful practices of collaboration can also be examined. Which mechanisms create an effective learning environment in successful programmes, taking into consideration how students are taught and how collaboration has been arranged?

The interaction between the different levels offers another research angle. How do the change efforts of individual lecturers and teams conjoin with the support and strategy provided by the institute? What is the role played by intermediate parties, such as centres for teaching and learning, or other parties involved?

Successful organisational change requires subject-area knowledge on a specific topic and knowledge about organisations and change strategies. Emphasis is often put on change within a specific topic, but change knowledge in a generic sense is frequently still lacking. Here lies a gap that is relevant to both science and educational practice. Bringing about change depends to a great extent on the specific context and the intended goal, but an underlying understanding of good practices can certainly help higher education further in fostering a learning culture.
The theme descriptions were prepared with the help of:

**Theme 1: Educational approaches of the future**
Jan van der Veen (Eindhoven University of Technology), Irene Visscher-Voerman (Saxion University of Applied Sciences), Kim Schildkamp (University of Twente), Kristin Vanlommel (HU University of Applied Sciences Utrecht)

**Theme 2: Professional development of teachers**
Perry den Brok (Wageningen University), Jan Riezebos (University of Groningen), Jan Vermunt (Eindhoven University of Technology), Machteld de Jong (Inholland University of Applies Sciences)

**Theme 3: Student wellbeing**
Rutger Kappe (Inholland University of Applied Sciences), Elisabeth Klinkenberg (Inholland University of Applied Sciences), Lara Slaats (Intercity Student Consultation (ISO)), Sam de Fockert (Intercity Student Consultation), Teun Dekker (Maastricht University)

**Theme 4: Diversity and inclusion**
Lieve de Coninck (Amsterdam University of Applied Sciences), Wieb Devilee (Intercity Student Consultation), Machiel Keesta (University of Amsterdam (UvA)), Jan Vyrastekova (Radboud University), Soemitro Poerbodipoero (Amsterdam University of Applied Sciences), Machteld de Jong (Inholland University of Applied Sciences)

**Theme 5: Societal issues**
Edwin van Meerkerk (Radboud University), Arjen Wals (Wageningen University & Research), Christiaan van den Berg (Dutch Ministry of Education, Culture and Science)

**Theme 6: Connection to the labour market**
Hafid Ballafkoh (Amsterdam University of Applied Sciences), Mark Levels (Maastricht University), Menno Vos (Windesheim University of Applied Sciences), Theo Bastiaens (Open University)

**Theme 7: Higher education institutes as learning organisations**
Wim Gijselaers (Maastricht University), Didi Griffioen (Amsterdam University of Applied Sciences), Klaasjan Visscher (University of Twente), Kristin Vanlommel (HU University of Applied Sciences Utrecht)
Keep track of us through our channels:

@Nationaal Regieorgaan Onderwijsonderzoek
@hetNRO

Netherlands Initiative for Education Research (NRO)
Visitors address:
Laan van Nieuw Oost Indië 300
2593 CE Den Haag (Gebouw Java)

Mail address:
Postbus 93461
2509 AL Den Haag

Telephone: 070 344 05 51
Email: pcho@nro.nl