Ministry of Education, Culture and Science

The value of knowledge

Strategic Agenda for Higher Education and Research 2015-2025

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Any questions can be addressed to:
Christiaan van den Berg (c.p.a.vandenberg1@minocw.nl)
Margo Keizer (ma.keizer@minocw.nl)

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"Education is the point at which we decide whether we love the world enough to assume responsibility for it and by the same token save it from that ruin which, except for renewal, except for the coming of the new and the young, would be inevitable.

And education, too, is where we decide whether we love our children enough not to expel them from our world and leave them to their own devices, not to strike from their hands the chance of undertaking something new, something foreseen by no one, but to prepare them in advance for the task of renewing a common world."

Hannah Arendt, The crisis of education, in: *Between past and future*

Foreword

During my series of visits to universities of applied sciences and research universities during the past year, I observed that the higher education sector has concerns and complaints about quality and scale. At the same time, I also observed that the dynamism, creativity and imagination needed to give shape to the higher education of the future are far from lacking. In parallel with and entirely independent of our ministerial initiative, a lively debate about higher education was taking place at the research universities in particular, a debate that looks set to continue for some time.

Students and university teaching staff throughout the Netherlands share a common awareness that the future is not an abstract entity which is simply going to happen to us. They appreciate that the future will be the result of the collective choices we make today and tomorrow, based on our concept of the kind of society we want to be and the higher education we need to achieve that idea.

This strategic agenda addresses a fundamental question. It asks what significance the changes in the world and in our society hold for day-to-day life in the working groups, lecture halls and canteens of our institutes of higher education. This question is of relevance because research universities and universities of applied sciences do not operate in a vacuum, but rather in open connection with their surroundings. They are breeding grounds of ideas and talent that need to engage with social reality and anticipate developments in the world. Moreover, and at the same time, they need to actively promote these developments, for example by means of technological inventions.

In recent years, the Dutch higher education sector has worked hard on its future resilience, a task in which it has made great progress. However, this is a task that is never complete. In the higher education sector we constantly need to be aware of why we do what we do, the interests and objectives we serve, and the approaches we take. More than ever before, the sector needs to address the pivotal question of the standards, values, ethics and ideals that it wishes to impart to its students alongside their new knowledge and skills.

Higher education educates the leaders of tomorrow – not leaders in the sense of rulers, but in the sense of the conveyors of values, such as teachers, judges, nurses and architects. Our form of democracy in the Netherlands owes its existence to the members of society who give thought to the nature of the community we wish to be. These members set the tone in how we interact with each other in our society, in what we find important and in the resultant choices. Higher education should not only train us to make these choices, but should also train us to moderate and focus the debate on the nature of such choices.

This requires both knowledge and skills. However, it is equally important that students learn how to reflect and think critically, not only about matters of substance but also about ethical implications. Students not only need to reflect on the 'what' and 'how' of social and scientific themes, but also need to consider the kind of society we want to live in and the values that govern our choices: 'Depth of understanding involves something which is more than merely a matter of deconstructive alertness; it involves a measure of interpretative charity and at least the beginnings of a wide responsiveness.'[1]

1 Stephan Collini (2012) *What are universities for?* Penguin Books, London.

For this reason, a programme of higher education must also always contribute to the personal development of students, to their reflection on personal values and to their development of a set of personal standards. This implies that we have high expectations of students, in the full knowledge that being a student in higher education is about more than passing exams, completing a work placement and writing a thesis – it goes beyond *learning to the test*.

Higher education not only relates to what students want to learn, but also to what universities of applied sciences or research universities believe that students should want to learn.[2] Higher education also means being pulled out of your comfort zone and being challenged to look beyond the confines of your individual timeline.

Scope for human interaction – between students, lecturers and researchers – is essential in this respect. After all, we can only learn to reflect, make associations and weigh standpoints through interaction, debate and, occasionally, confrontation. We do so by jointly racking our brains to tackle a social problem, by meeting other students or colleagues with a different perspective on the world and, as a lecturer, by both giving feedback to students and receiving feedback from students. This human interaction is also the very element that needs to receive more attention in many areas of higher education. Higher education must never be allowed to become a wholesale store that delivers as many students as possible to the labour market in the shortest possible time. Nor should it be permitted to become a supermarket in which students wander around as individual consumers, free to consume or compile a study programme at will and then, instead of picking up their receipt at the cash desk, collect their certificate as they leave.

This does not imply that higher education has no obligation to deliver. Higher education certainly does need to deliver: it needs to deliver 'study success' that provides added value. The term 'study success' refers to all support and study programme guidance provided to students. By 'study success' we also mean that students obtain the maximum benefit from their studies while graduating on time. Higher education has to prepare students for life and work after the completion of their studies and teach them how to use their knowledge, skills and personality to make a contribution to the complex social challenges that confront us all. A university of applied sciences or a research university is an autonomous community of values which is strongly rooted in society and enables talented young people to develop as well-rounded individuals. While doing so, it not only expects them to make an active contribution to that community but also equips them to make that contribution.

The entire higher education sector must be accessible to everyone who has the necessary capacity and the necessary motivation. The higher education sector also needs to appreciate the diversity of students and, consequently, the variety in their backgrounds, interests, talents and learning styles.

At the same time, processes such as personal development, the development of cultural and moral sensitivities and learning how to think and act at the required level are only feasible in a community that also sets standards and expresses expectations – a community that makes no concessions on substance and quality because of an excessively narrow focus on effectiveness and efficiency, or what John Dewey refers to as 'sugar coating'.[3]

2 Newspaper interview with Gert Biesta in Trouw, 9 April 2015

3 John Dewey (1972) *The Early Works of John Dewey 1882-1898*. Volume 5: 1895-1898. Southern Illinois University Press, Carbondale.

Students, society, and the universities themselves will all suffer if the endeavours to obtain a degree result in higher dropout rates, lower expectations and, ultimately, in lower quality.

The most valuable study programme is the programme that corresponds to the individual student's capacities, motivation and interests, the programme where the student feels that he or she is the right person in the right place. We need to balance our wish to offer higher education to students for whom this is not currently self-explanatory with our recognition of the fact that too many students currently begin a programme of higher education which, on further consideration, was not the right choice for them.

This is also the reason why it is so important that the quality of education is good at every level and that there is scope for extra challenges at every level for students with the ability to meet them. Moreover, this is the reason why institutions – much more than is currently the case – need to reason on the basis of the individual student and the student's study career. This will ensure that a secondary vocational education programme is appreciated as much as a programme at a university of applied sciences, that a master's degree at a university of applied sciences can be an interesting option for a graduate with a bachelor's degree from a research university, and that a master's degree programme at a research university is a realistic prospect for a graduate from a university of applied sciences with the requisite ability and ambition.

Consequently, students are entitled to have high expectations of the quality of the education provided by their university of applied sciences or research university and the level of commitment shown by the teaching staff who work there. Meanwhile, teaching staff and institutions are equally entitled to have high expectations of their students' motivation, willingness to cooperate, creativity, perseverance and sense of responsibility. Students who are inquisitive, interested, involved and thoroughly prepared must be the standard, not the exception.

We have a dynamic and uncertain future ahead of us. The students of today will, as the leaders of tomorrow, be confronted with complex situations that we cannot even conceive of at present. This requires leadership that extends beyond management in the literal sense of the word. In addition to simply managing or coping with reality, leadership will entail continually adapting yourself to a changing reality or set of realities – accommodating changes, anticipating changes and developing a vision on the significance of these changes for yourself and your surroundings. This requires not only knowledge and expertise, but also responsiveness, flexibility and creativity – and a way of life that takes you to the very edges of your comfort zone.

The higher education of the future will offer students a community in which young people from different disciplines can meet each other and learn how to cooperate, a community which provides scope for the development of individual talent and a community where applied research and scientific excellence can go hand in hand with social significance. This will ensure that 'yield' is not an objective defined in terms of quantitative output but as the sum of the individual and social added value achieved by providing good education to the right student in the right place. This strategic agenda is intended as a guide to fulfilling this ambition.

Dr Jet Bussemaker,
Minister of Education, Culture and Science

1 The leap into the future

My strategic agenda sets the course for higher education for the coming ten years. I do so jointly on behalf of the Minister and State Secretary for Economic Affairs[4]. My 'compass' is based on the discussions I had with students and university teaching staff during my series of visits to institutes of higher education, when they shared their most important dreams and concerns with me and with each other. In addition to these meetings, I also held discussions with institutions and representatives from the business community which have determined the agenda's themes of education quality, accessibility, talent development and diversity and social relevance.

During the preparations for this strategic agenda, the States General also agreed to the introduction of the student loan system. The reform of the basic student grant has resulted in a system of financial assistance for students that is fairer and more efficient and economical. The student loan system will release an amount of the current €3 billion that the government spends on income support in forms including student grants which will ultimately increase to € 1 billion.[5] This will enable us to further improve the education provided to all students. For this reason, this agenda also addresses the allocation of the funds released by the introduction of the student loan system to giving a quality impetus that is visible to students and teaching staff. The last Chapter examines the investment agenda compatible with this ambition.

Students will also need to make an active contribution to the quality of our education, be aware of their personal talents and appreciate their associated responsibilities[6], as the quality of education is also dependent on their efforts and input. This does not then relate solely to the enrichment of individual students or to students who select the study programme they believe will optimize their chances on the labour market but also – and in particular – to the improvement of education for all students on the basis of a broader responsibility for our society. The quality of education is not determined only by the new knowledge or expertise acquired by students: it also extends to the broader development of every student. In the 21st century, *Bildung* (the combination of education and formation) is synonymous with more understanding of the world, a strong moral compass and empathy, pioneering thoughts and actions and self-development driven by inquisitiveness and a critical intellect.

This agenda is not an isolated document, but is also based on letters to the States General on Open and Online Education, Internationalization and Lifelong Learning, as well as on the *Nationaal Onderwijsakkoord* (national education agreement). The vision of the State Secretary and myself on science and research policy falls outside the scope of this agenda: the policy priorities in this field have previously been laid down in the *Visie Wetenschap 2025: keuzes voor de toekomst* (2025 vision for science, choices for the future)[7]. This strategic agenda continues from this vision for science and works out a number of its policy ambitions in more detail. A separate programme is in progress within the context of the *Lerarenagenda* (teachers' agenda)[8], over which a report is published once a year.[9] My *Accreditatie op Maat* (tailored accreditation) letter to the House of Representatives of the States General addressed the

4 Jointly on behalf of the Minister and State Secretary for Economic Affairs as they bear the responsibility for 'green education'.

5 The revenue from the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) will increase to €1 billion in 2025, including the revenue from *Beter Benutten* (better utilization). The revenue will decline after 2025, to €820 million in 2065

6 During the discussions on the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) in the States General, I undertook to shift the previous emphasis on the 'investing student' to the 'responsible student' (Parliamentary Documents I, 2014/2015, dossier 34035, T02054).

7 Ministry of Education, Culture and Science (2014), *Visie Wetenschap 2025: keuzes voor de toekomst* (2025 vision for science, choices for the future). The Hague.

8 Lerarenagenda 2013 -2020: *De leraar maakt het verschil* (teachers' agenda, 2013-2020: the teacher makes the difference) October 2013 (Parliamentary Documents II, 2013-2014, 27 923, No. 171)

9 *Voorgangsrapportage lerarenagenda* (teachers' agenda progress report), 8 October 2014. See also the theme website, www.delerarenagenda.nl.

policy on quality assurance and administrative relationships.[10] My letter to the House of Representatives of the States General on the role of associate degrees in the education system was published at the beginning of June.

1.1. Beyond Veerman in an unpredictable world

In 2010, the Veerman Commission[11] addressed the question 'How future-proof is higher education in the Netherlands?' The conclusion was clear: it is not. The dropout rate is too high, talent is not challenged sufficiently and there is too little flexibility in the system to properly serve the varied needs of students and the labour market. At the time, the Commission recommended that a powerful impetus be given to the quality and diversity of the higher education system. The Veerman Commission recommended a threefold differentiation, namely in the structure of the system, in the profiles of institutions and in the range of study programmes that are offered.

Universities of applied sciences and research universities are hard at work on giving shape to this quality impetus. I also observed this during my series of visits to institutes of higher education. I observed a decline in research university drop-out rates, in particular. A strong impetus has been given to the quality of universities of applied sciences, as has also been noted by the Accreditation Organisation of the Netherlands and Flanders (NVAO).[12] I also observe an increase in profiling and differentiation. I also observe more honours programmes and broad-based bachelor's degree programmes at research universities and more applied research and associate degrees at universities of applied sciences. The Higher Education and Research Review Committee also concluded all the above in its midterm review of the performance agreements.[13]

What we have achieved after the Veerman report

Outline agreements have been concluded with the Association of Universities in the Netherlands (VSNU), Netherlands Association of Universities of Applied Sciences (VH) and the NRTO (Dutch Council of Training and Education), and performance agreements have been reached with all funded universities of applied sciences and research universities on the enhanced profiling of and greater differentiation in education and research, improvement in education quality and study success (by 'study succes' we mean that students obtain the maximum benefit from their studies while graduating on time.), and in greater valorization. These themes are now firmly integrated in the agendas of research universities and universities of applied sciences.

The government has implemented a number of amendments to the legislation and regulations to promote the threefold differentiation recommended by the Veerman Commission. These have provided for the three-year bachelor's degree programme at universities of applied sciences, the matching scheme for the choice of study programme, the advance of the final registration date to 1 May, the definitive introduction of associate degree programmes, the provision of scope for broad-based bachelor's degree programmes and master's degree programmes at universities of applied sciences, the introduction of uniform titles for university of applied sciences and research university study programmes, the provision of more scope for selection at universities for teacher education and university colleges and for honours programmes, and for Lifelong Learning experiments.

10 *Accreditatie op Maat* (tailored accreditation) letter to the House of Representatives of the States General (Parliamentary Documents II, 2014-2015, 31 288, No. 471).
11 Threefold differentiation, Recommendations of the Committee on the Future Sustainability of the Dutch Higher Education System (2010), Koninklijke Broese & Peereboom, Breda.
12 NVAO (2014) Focus on development. Annual Report 2013. NVAO (Accreditation Organisation of the Netherlands and Flanders), The Hague
13 Higher Education and Research Review Committee (2014), Midterm review of higher education performance agreements.

The Higher Education and Research Review Committee is following the implementation of the performance agreements. Its analyses reveal that universities of applied sciences and research universities are actively responding to the various target groups by offering a broad range of education routes. Universities of applied sciences are concentrating on new master's degree programmes, three-year bachelor's degree tracks for pre-university educated students, excellence programmes, and associate degrees. Research universities are focusing on excellence tracks and broader-based bachelor's degree programmes, in particular. Institutes are also making keen choices for greater differentiation in education and research. Many research universities have already made great progress towards the achievement of the quality and study success objectives specified in their performance agreements. The situation at the universities of applied sciences is mixed. They are confronted with the following trilemma: the task of increasing the stringency of the bachelor's degree programme final attainment level and bringing more students to this level, despite the fact that the academic achievement level of the students from intakes is still inadequate.

The Veerman Commission recommended substantial investments. These can be implemented following the introduction of the student loan system.

Education in an unpredictable world

The previous *Kwaliteit in Verscheidenheid* (Quality in Diversity) strategic agenda set its horizon at 2025. In this strategic agenda, we sharpen our focus on the same horizon with a greater awareness of the changing context of higher education. All the visits in the series of visits to institutes of higher education revealed an emphatic challenge: higher education needs to train students for life and work in an increasingly unpredictable, complex and globalized world. This pivots on a number of developments. Technological developments are resulting in the increasing unbundling of the production processes required for complex products and services.

Unbundling is a business model in which production processes are broken up and reorganized to increase efficiency. The drastic effects that unbundling can have are illustrated by the following examples. At the company's peak, Kodak was worth €28 billion and had 140,000 employees. Kodak is now history. Last year, the 'new Kodak,' Instagram – with 13 employees – was sold to Facebook for one billion dollars. In this same period, and in similar fashion, the US UberPop company has been shaking up the taxi sector and Airbnb the tourism and hotel industry. I am of the opinion that the higher education learning community for regular students cannot be unbundled without loss of quality. Nevertheless, higher education will also be put to the test by new business models. We must not turn our backs on innovation: we need to give shape to the meaning of the learning community of the 21st century.

Major changes are currently taking place in the labour market, which has suffered severe blows in recent years: old jobs have disappeared and new jobs have emerged.[14] Economists Frey and Osborne conclude that within the coming two decades 47% of total US employment will be in the high risk category, with jobs that will either change fundamentally or disappear. As explained in the letter to the House of Representatives of the States General on the effects of technological developments on the labour market[15], this does not imply that the people in these jobs will automatically become unemployed.

14 See, for example, Frey, C. & Osborne M. (2013) The future of employment: how susceptible are jobs to computerization. Working paper, September 2013. Oxford University; Brynjofsson E. & McAfee A. (2014), The second machine age: work, progress, and prosperity in a time of brilliant technologies. W.W. Norton & Company, New York; Deloitte (2014), *De impact van automatisering op de Nederlandse arbeidsmarkt* (the impact of automation on the Dutch labour force). Deloitte, Amstelveen; Scientific Council for Government Policy (2013) Towards a learning economy. Amsterdam University Press, Amsterdam; Central Economic Plan (2012) Wage inequality in the Netherlands is increasing. CEB Policy letter, June 2012.

15 Letter to the House of Representatives of the States General on the effects of technological developments on the labour market, 19 December 2014 (Parliamentary Documents II, 2013-2014, 29 544, No. 582).

Technological progress in the coming years will result in the creation of jobs that we are unaware of at the present. Moreover, we will increasingly see that professional practice innovates at a rate that outpaces the ability of study programmes to accommodate the developments. New technologies require new skills – and when routine and stability are of less value, the importance of flexibility and creativity both increase. In addition, the demand for individuals with higher education qualifications is increasing. The emerging economies are rapidly developing into knowledge economies – and the figures are dizzying: China currently has no less than 2,409 research universities and universities of applied sciences, invests $250 billion a year in human capital and expects to have about 195 million nationals with higher education qualifications by the end of this decade, 150% of the number in the USA.[16]

Increasingly greater demands are being placed on the working population of the Netherlands. Segments of the working population will need to meet other and more stringent requirements if they are to be able to keep up with the rapidly changing economy. The middle segment of the labour market will come under particularly great pressure and the prospects for employees with a secondary vocational education level ⅔ diploma, in particular, would appear to be less favourable in the coming years.[17]

This development will pose a social challenge should the erosion of the middle segment of the labour market be accompanied by increasing cultural and social contrasts between those with a high or low level of education. In the 21st century, higher education's function as the driving force behind emancipation and elevation is of undiminished importance.

This new world offers many opportunities for higher education: it is a world in which new links develop. Regional networks of knowledge institutions and the business community form an environment in which students can test their creativity in practice during their studies. Meetings across the borders – in the lecture hall, in Google hangout or on the other side of the world – all yield learning experiences that are proving increasingly valuable in our globalizing world. When uncertainty reigns, education offers the greatest value by teaching students the skill of seeing opportunities in an open future.
The importance of 21st century skills, such as critical reflection, cooperation, creativity, working with big data and adopting a pragmatic results-oriented attitude, has been emphasized in recent months. This also requires a learning culture that promotes lifelong learning. Last but not least, interdisciplinarity – the ability to make surprising associations between various ways of thinking and acting – is also of great importance.

The Scientific Council for Government Policy[18] also concludes that our world is becoming increasingly unpredictable and that social challenges are growing. Our education trains experts who will wrestle with challenges ranging from the shifting balance of power between West and East right through to climate change and financial crises. However, anyone who believes in the myth of a predetermined future that we cannot change denies precisely what we learn from good education: we shape the future. For this reason, the foundations on which our higher education rests and the ambitions we set ourselves have become more important than ever before.

16 Scientific Council for Government Policy (2014) Towards a learning economy, Synopsis of *Naar een lerende economie: investeren in het verdienvermogen van Nederland*. Amsterdam University Press, Amsterdam.

17 Weel, B. ter (2014) Weblog *Nog een keer over het midden* http://www.economie.nl/weblog/nog-een-keer-over-het-midden. See also the letter to the House of Representatives of the States General, *Ruim baan voor vakmanschap* (ample scope for professionalism), 2 June 2014 (Parliamentary Documents II, 2013-2014, 31 524, No. 207).

18 Scientific Council for Government Policy (2014) Towards a learning economy, Synopsis of *Naar een lerende economie: investeren in het verdienvermogen van Nederland*. Amsterdam University Press, Amsterdam

1.2. Today's higher education: strengths and weaknesses

The series of visits to institutes of higher education revealed very clearly that higher education in the Netherlands is good, but is not yet ready for the 21st century. This means that it is time to draw up the balance sheet. What makes us strong in unpredictable times? Where does our education fail, and which weaknesses does this reveal? These two questions are answered in relation to the three pillars on which higher education is based: quality, accessibility, talent development and diversity and social relevance.

Education quality is under pressure

The basic education quality in the Netherlands is good and Dutch students are skilled and satisfied. Dutch students score above average for OECD 21st century skills such as problem-solving capacity.[19] Dutch universities also perform well in international education rankings.[20]The National Student Surveys repeatedly reveal that students are generally satisfied with their study[21], which is undoubtedly a strength of higher education in the Netherlands that we can build on.

Nevertheless, I hold that 'satisfied' is not good enough. Anyone who looks further sees that a limit has been reached. Students following massive degree programmes such as business administration and communication, in particular, feel that their education is becoming more impersonal. We are at risk of losing sight of what education is all about – cultivating an academic and professional community in which talent flourishes. Good education not only results in satisfied students but also challenges students to leave their comfort zone. The Veerman Commission also drew attention to the fact that we in the Netherlands challenge our students too little. The Dutch Student Monitor 2014[22] reveals that more than half of all students lose motivation during their study. Dutch students also devote little time to their studies in comparison to students in other countries.[23] 60% of the 2008 student cohort at universities of applied sciences have been awarded a degree within five years (the nominal duration of the studies plus one year). 64% of the 2009 student cohort at research universities have been awarded a degree within four years (the nominal duration of the studies plus one year). For this reason, continued attention needs to be devoted to study success. Our inability to benefit from our strong starting base in challenging students makes our system vulnerable in a world that increasingly demands pioneering thinkers and practitioners.

19 OECD (2013), OECD Skills Outlook 2013: *First Results from the Survey of Adult Skills*, OECD Publishing: http://dx.doi.org/10.1787/9789264204256-en.

20 Both the Times Higher Education World University Rankings and QS World University Rankings take account of education indicators such as student/staff ratios. In 2014, six Dutch universities were listed in both rankings of the world's best 100 universities. UvA, Leiden, Utrecht, Delft, Rotterdam and Wageningen were listed in the THE rankings. UvA, Leiden, Utrecht, Delft, Rotterdam and Groningen were listed in the QS rankings.

21 The National Student Survey 2015 actually revealed that students are more satisfied than ever before.

22 Researchned (2015) *Studentenmonitor, Tabel 09.02.01 – Motivatie aanvang en nu totaal.*

23 Eurostudent V, www.eurostudent.eu, consulted on 28/02/2015

The Twente Educational Model provides student-centred, activating education

University of Twente has introduced a new didactic model for the bachelor's programmes which places a great emphasis on student-centred, activating education. Almost all modules now include a practical project in which students apply their knowledge. The teaching staff, who work in teams, focus on encouraging students to give shape to their education. Working in groups of students is standard and tutors fulfil the role of coach. Giving this impetus to the quality of education has increased the number of students studying within the nominal duration of their study and improved their study attitude.

See also:
http://www.utwente.nl/onderwijs/bachelor/studeren-in-enschede/twents-onderwijsmodel/

I appreciate that universities of applied sciences and research universities cannot offer education to even more students and deliver even more quality with the same resources, in part because the research budget and the resources for applied research have not increased in proportion to the increase in student numbers. The Veerman Commission has stated that substantial investments are absolutely essential if we are to retain and strengthen the position of Dutch higher education. In addition, institutions are expected to meet an increasing number of demands for challenging education, increased study success, smooth transfers and stronger ties with society. It is then clear that investments are required.

The most inspiring times in our education are the meetings between student and teacher. However, during the series of visits to institutes of higher education the teaching staff and students at research universities stated that less and less time appeared to be available for these meetings. The growing pressure to publish not only reveals the cracks in the academic system[24], but is also detrimental to education – to the students and to the teaching staff.

I notice that dedicated teaching staff are becoming increasingly frustrated by the great pressure to publish and the pressure of regulations[25]. A recent survey conducted within the context of the IBO science policy[26] revealed that 46% of the academic staff do not regard high quality education as even one of the top three of the institute's most important objectives.[27] Education is not sufficiently appreciated as being of importance to career development and flexible contracts are extremely common. This is indicative of a short-coming in our system – we are at risk of losing sight of the teaching staff and the education.

Universities of applied sciences need to integrate research more firmly into their education. The Education Council[28] acknowledges that innovative capacity is becoming increasingly important to today's professionals. The Council is of the opinion that training more innova-tive professionals will require the firmer integration of applied research into higher education, in part by increasing the number of research centres. Applied research at universities of applied sciences is distinguished from other forms of research by its direct relationship with professional practice and the relevant study programme. This is given shape by means

24 Even the medical science sector has stated that the growing pressure to publish lowers the quality of scientific research, reduces the sharing of acquired knowledge and, consequently, ultimately results in poorer performance in the clinic. See also a study carried out by the Rathenau Instituut, Tijdink, J., Maclaine Pont, C., Jonge, J. de (2015) *Publicatiedruk bij medisch-wetenschappelijk onderzoek.* Rathenau Instituut, The Hague.

25 De Goede, M., Hessels, L. (2014), *Feiten en Cijfers. Drijfveren van onderzoekers.* Rathenau Instituut, The Hague

26 De Goede, M., Hessels, L. (2014), *Feiten en Cijfers. Drijfveren van onderzoekers. Rathenau Instituut*, The Hague. See also Ministry of Education, Culture and Science (2014), *Visie Wetenschap 2025* (2025 vision for science).

27 It transpired that the most important objectives for researchers were 'the ability to carry out high-quality research' and 'working in an environment with high-quality, inspiring people'.

28 Education Council (2014) *Meer innovatieve professionals*. Education Council, The Hague

including the articulation of demands from practice, organization via knowledge networks and the participation of teaching staff and students in the research. It is then necessary to ensure that these research centres do not become isolated from education practice and actually *enrich* education via the link with research. This will result in the investigative capacity of university of applied sciences students becoming a pronounced quality of our system.

During the series of visits to institutes of higher education, I often heard that although our education is good, it is focused primarily on the 20th century. We are still concentrated largely on the dissemination of knowledge and on qualifications. However, the higher education of 2025 will also need to devote adequate attention to the two other tasks to which education derives its *raison d'être*: socialization (responsible actions in social contexts) and personal development (independent and creative critical thoughts and actions). Blended learning offers many opportunities for providing more personal education. One example is the approach adopted by Alexandru Iosup, 2015 Netherlands Teacher of the Year[29], who uses gamification to challenge his students in their various routes to learning. We can achieve much more with further initiatives of this nature and we can support the teaching staff in their implementation at the workplace. Massive Open Online Courses (MOOCs), for example, not only enrich the quality of education in the Netherlands but also offer opportunities for the dissemination of knowledge that until recently appeared to be inconceivable. The developments at Dutch MOOCs are being followed all over the world and the courses are internationally renowned. For this reason, the Netherlands' strong links with the international networks for open and online education is one of the strengths of our system.

Challenging education pulls students out of their comfort zone and, as a result, prepares students for the unpredictable world. Pioneering education also extends to education outside our national borders. Within this context, it is important to note that although the growth in the number of Dutch students who acquire international experience during their studies is limited[30], education in the Netherlands is becoming increasingly international. The Netherlands appeals to a rapidly increasing number of international students seeking to further their development: our system attracts talented students from all over the world.[31]

These international students are of real added value to our education and the Netherlands' knowledge economy.[32] We are also gaining more and more benefit from the international aspect of our education now the institutes are devoting more attention to 'internationalization at home'. I attach great importance to the Bologna Process and the development of a European higher education area as a means of promoting international mobility and international cooperation. Important steps still need to be taken and obstacles need to be overcome, whereby the great variation in quality between countries poses a particular challenge.

Accessibility is in order, but transfers have stalled

Continually increasing numbers of the Dutch have followed higher education since the nineteen-fifties. Education was the production line of enrichment: as many people as possible were to qualify at the highest possible level. We have also achieved a great deal in this area, as from an international perspective the Netherlands also has a relatively high percentage of nationals with higher education qualifications *(see chart)*. Our world is no

29 The selection of Netherlands Teacher of the Year is an ISO initiative.

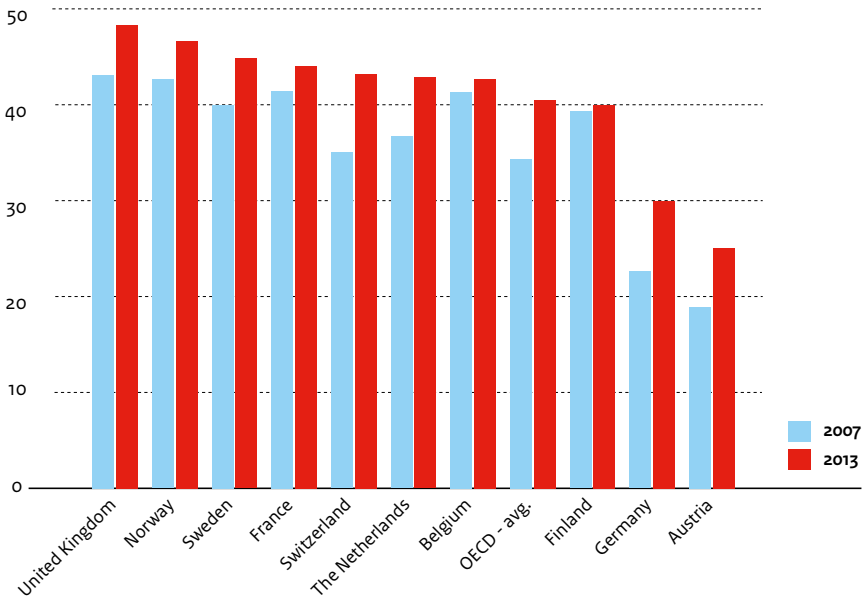
30 See Nuffic (2014) *Internationalisering in beeld*. Nuffic (the Netherlands expertise and service centre for internationalization in Dutch education), The Hague

31 See Nuffic (2014) *Internationalisering in beeld. Nuffic* (the Netherlands expertise and service centre for internationalization in Dutch education), The Hague

32 The Bureau for Economic Policy Analysis (CPB) has carried out a calculation, incorporating a number of assumptions for important uncertain factors, which indicates that incoming mobility can result in a net positive effect of €740 million per annum. Developing ties with international talent enhances education in the Netherlands and the Netherlands' knowledge economy. See also the vision paper on internationalization, 15 June 2014 (Parliamentary Documents II, 2013-2014, 22 452, No. 41).

longer one of production lines, but of constant, dynamic and people-oriented change. Our education needs to reflect this development. Students deserve the education that suits them best, irrespective of their social origins and financial situation.

figure 1: percentage of nationals with higher education qualifications in the population between the ages of 25 and 34



Accessibility to higher education in the Netherlands is good. The Netherlands' score is about as high as those of Finland, the Czech Republic, Norway, Sweden and Estonia. The Netherlands scores higher than Germany, Denmark and Switzerland.[33] The Inspectorate of Education[34] notes that students increasingly opt for the direct route to their next level of education (preparatory secondary vocational education-secondary vocational education, senior general secondary education-university of applied sciences) and that stacking qualifications (preparatory secondary vocational education-senior general secondary education- pre-university education, secondary vocational education-university of applied sciences-research university) is becoming less frequent. This can be indicative of difficulties in transfers between education sectors.[35]

The improvement of transfers is an important objective from an emancipation perspective, especially now the contrasts between the highly qualified and poorly qualified would appear to be increasing, as indicated by the Netherlands Institute for Social Research (SCP) and the Scientific Council for Government Policy[36]. The number of students with a low socio-economic status entering universities of applied sciences has once again increased from last year.[37] The accessibility of higher education in the Netherlands to first-generation

33 OECD (2014) *Education at a Glance 2014: OECD Indicators*, OECD Publishing

34 Inspectorate of Education (2014) *De staat van het onderwijs: onderwijsverslag 2013/2014. Ministry of Education, Culture and Science*, The Hague.

35 The Inspectorate also refers to this in its report on *Overgangen in het onderwijs* (2014). See also the letter to the House of Representatives of the States General, *Ruim baan voor vakmanschap* (ample scope for professionalism), 2 June 2014 (Parliamentary Documents II, 2013-2014, 31 524, No. 207) for my vision on contiguous preparatory secondary vocational education-secondary vocational education-university of applied sciences learning routes.

36 Bovens, M., Dekker, P. & Tiemeijer, W. (Ed.) (2014) *Gescheiden werelden? Een verkenning van sociaal-culturele tegenstellingen in Nederland.* Netherlands Institute for Social Research, Scientific Council for Government Policy, The Hague

37 ResearchNed (2014) *Monitor Beleidsmaatregelen 2014, Studiekeuze, studiegedrag en leengedrag in relatie tot beleidsmaatregelen in het hoger onderwijs.* ResearchNed, Nijmegen.

ethnic minority students has also improved in recent years.[38] Nevertheless, the participation of ethnic minority students is still somewhat lower than of native Dutch students.[39] Not only do more women than men now follow higher education, their study success rate is also higher and they graduate faster than men.[40]

As the diversity of the student population is much greater than in the past, ensuring that all students are successful in their studies is a challenge. The dropout rate is still too high. In the 2012/2013 academic year, 35% of the students decided not to continue their initial choice of study in the second year.[41] The proportion of students regretting their choice is greatest amongst students following senior general secondary education or secondary vocational education and amongst non-Western ethnic minority students. No less than 74% of non-Western ethnic minority male students attending universities of applied sciences are still without a degree after five years.[42] One out of every five students from secondary vocational education enrolling at universities of applied sciences leave after one year without higher education qualifications.

Students require the ownership of their career and scope for tailoring. I do not interpret this as a call for commercialization and individualization, as the anonymous vacuum of the unbundled institute I referred to above is the last place where students will see their personality reflected in their education. However, these times do require more differentiation within the system. The binary system is one of the strengths of Dutch higher education. I see this system becoming stronger, with more students in associate degree programmes, pre-university education tracks, master's degree programmes and more applied research at universities of applied sciences. I see more honours programmes, broad bachelor's degree programmes and research master's programmes. The bursary doctorate experiment and development of industrial doctorates reveal that further differentiation will also take place in the third higher education cycle. This indicates that the binary system cannot be a static system. I intend to provide scope for the further development of quality, differentiation and mutual transfers within the system.

Lifelong Learning is a major gap in our system. Higher education with both feet in the 21st century will need to perceive a tremendous opportunity in the growing demand for post-initial education. In this respect, the Netherlands' funded education lags from an international perspective.[43] Employees in the Netherlands devote about 0.6 of a year of their working life to formal and non-formal education[44], which is less than in other EU Member States: employees in the Sweden and Finland, for example, devote 1.8 years.[45]
Although these figures give a slightly distorted picture due to the differences between the systems, they do reveal that adult participation in funded education has been declining in the Netherlands for many years.[46] At the same time, it is expected that the labour market's demand for employees with higher qualifications will continue to increase faster than

38 ResearchNed (2014) *Monitor Beleidsmaatregelen 2014, Studiekeuze, studiegedrag en leengedrag in relatie tot beleidsmaatregelen in het hoger onderwijs.* ResearchNed, Nijmegen.
39 Centre for Higher Education Policy Studies (2015) *Kerncijfers hoger onderwijs in internationaal perspectief. Report for the Ministry of Education, Culture and Science.* Cheps, Enschede.
40 Netherlands Institute for Social Research/Statistics Netherlands (2014), *Emancipatiemonitor 2014.* SCP/CBS, The Hague.
41 ResearchNed (2014) *Monitor Beleidsmaatregelen 2014, Studiekeuze, studiegedrag en leengedrag in relatie tot beleidsmaatregelen in het hoger onderwijs.* ResearchNed, Nijmegen.
42 Statistics Netherlands StatLine, *studievoorgang hbo* table, consulted on 27 February 2015: Only 26 per cent of the non-Western ethnic minority male students attending universities of applied sciences (2008 student cohort) now have a degree after five years.
43 Advisory Committee on Flexible Higher Education for Workers (2014) *Adviesrapport Flexibel hoger onderwijs voor volwassenen*. See also the letter to the House of Representatives of the States General, Leven Lang Leren (lifelong learning), 31 October 2014 (Parliamentary Documents II, 2013-2014, 30 012, No. 41).
44 Formal education is education for which the government bears the system responsibility and which results in the award of qualifications recognized by the government. Non-formal education encompasses other forms of education.
45 Scientific Council for Government Policy (2013), *Towards a learning economy.* Amsterdam University Press, Amsterdam.
46 A study carried out by ResearchNed (2012) revealed that the declining participation in funded part-time higher education is in part due to the insufficiently flexible and demand-driven education. The education is not compatible with the characteristics and needs of adults and the requirements of employers. - PM

supply.[47] More opportunities will then need to be provided for further education and refresher education throughout the employees' careers, where funded education will play an important role.

Institutes have increasingly stronger ties with the outside world

The Netherlands, according to the World Economic Forum[48], has been one of the world's most competitive economies for some years and since 2007, the Netherlands has ranked in each year's top 10 (of a total of 148 countries). However, according to the European Commission Innovation Union Scoreboard 2014[49], the Netherlands is not one of Europe's innovation leaders – such as Finland, Germany, Denmark and Sweden – but one of the followers. The OECD[50] praises the Netherlands' publicly-financed scientific research, but notes that the Netherlands lags in its valorization. The Scientific Council for Government Policy states that promoting knowledge circulation is of greatest importance to the improvement of the responsiveness of the Dutch economy. This circulation entails the mobilization and application of ideas and technologies available or in use in other companies, sectors and countries. This requires the development of the capacity to identify, assimilate and make skilled use of new knowledge.

The value of knowledge circulation extends beyond its economic value. I am of the opinion that education is a very important form of knowledge valorization. Involving students in social issues during their education forms them into fully-fledged citizens who feel connected to the world around them. Obviously, institutes of higher education play an extremely important role: they involve students in research and link them with social players and businesses. An excellent example of this is given by the Centre of Expertise Healthy Ageing in Groningen, where researchers, lecturers, students, businesses and institutions for healthcare and well-being jointly search for solutions to everyday problems in healthcare, growing up healthily and healthy ageing. The members of the Amsterdam Creative Industries Network work in labs on social issues in cooperation with partners in the creative industries. Consequently, the need for institutes to develop ties with the outside world is more important than ever before. Clear progress has been made in the development of these ties with the outside world.

The Advisory Council for Science, Technology and Innovation (AWTI) demonstrates that Dutch economy is increasingly developing into regional hotspots in which institutes of higher education are important linking players.[51] I notice great dynamics in the networks of knowledge institutions, businesses and public institutions. This is, for example, manifested in the form of initiatives such as the Technology Pact, Action Agenda for progress of Smart Industry and the top sector approach, and the associated Human Capital Agendas. I also expect this for the Care Pact. In addition, science parks, campuses and economic clusters are being developed by strategic alliances of businesses, knowledge institutions and local or provincial governments.

47 Advisory Committee on Flexible Higher Education for Workers (2014) *AdviesrapportFlexibel hoger onderwijs voor volwassenen*.
48 World Economic Forum (2015) *The Global Competitiveness Report*. World Economic Forum, Geneva.
49 European Commission (2014) *Innovation Union Scoreboard 2014*. European Union, Brussels
50 *OECD Reviews of Innovation Policy: Netherlands (2014)*. OECD Publishing: http://dx.doi.org/10.1787/9789264213159-en.
51 Advisory Council for Science, Technology and Innovation (2014) *Regional innovation hotspots Quantes,* The Hague

Elevate online education platform links regional partners for the worldwide dissemination of knowledge

Elevate is an online education platform for health care which was initiated by Utrecht University, University Medical Center Utrecht and HU University of Applied Sciences Utrecht in 2012. Elevate offers online post-graduate education to small groups of health professionals all over the world. Elevate brings together the best the Netherlands has to offer in this area – from the Royal Tropical Institute and a range of hospitals and regional partners – and mobilizes this expertise for global dissemination in the health sciences. This assists in increasing global standards and reducing differences in quality between countries.

Zie ook: http://www.elevatehealth.eu/

Nevertheless, the employers meeting during the series of visits to institutes of higher education revealed that employers still have difficulty in gaining access to these large knowledge institutions. Much of the cooperation is the result of spontaneous individual contacts between teaching staff/researchers and persons from the business community and other civil society organizations. Increasing the sustainability of the relationship between businesses, civil society organizations and institutions will improve the responsiveness of institutions.

The relationship between the field and education is intrinsically strong at universities of applied sciences as a result of their professional orientation. Applied research also has stronger ties with professional practice, for example in the form of the universities of applied sciences's Centres of Expertise. When the work began on the development of these Centres, a carefully-considered decision was taken to begin by focusing on the top sectors. Sectors such as the education and care sector can be involved even more intensively in Centres of Expertise, as is already the case in Groningen and elsewhere in the Netherlands. However, in many other cases a structural form of collaboration is lacking and any collaboration that does take place is dependent on individuals. Moreover, and in spite of the developments, applied research at universities of applied sciences is still confronted with major challenges. Only a few per cent of their budget is available for research. Furthermore, the attention to research in the curriculum of the universities of applied sciences is still in development. The Education Council recommends that applied research be integrated more firmly at the universities of applied sciences and that all study programmes devote structural attention to the investigative capacity of the students. The OECD[52] also recommends the enhancement of the research capacity of the universities of applied sciences, as they could bridge the divide between firms with little or no innovation experience and world-class research universities and applied research institutes.

Research universities traditionally have weaker ties between education and labour market, as well as limited attention to work placements. Profiling with research and education differentiation assists institutes in developing specific ties with their environment. Attention to this has increased, in part due to the performance agreements. More discussions are now taking place at research universities on the course they wish to set. Most research universities opt for a number of research foci that are broad, theme-oriented and multidisciplinary in form. They tie in with the proven strengths in the institute's profile, as well as with external developments and opportunities. Universities of applied sciences also specify focal points for both their applied research and education. However, it is necessary to continue the profiling.

52 *OECD Reviews of Innovation Policy: Netherlands (2014)*. OECD Publishing: http://dx.doi.org/10.1787/9789264213159-en.

This is in part dependent on the extent to which this is supported within institutes. An insight into the national situation is also lacking.

Conclusion

We may conclude from the look into the future that our higher education has a number of strengths. We need to retain these strengths and expand them to retain our international lead.

- The basic quality is in order: Dutch students are skilled and satisfied;
- There is an open culture which is focused on innovation: this is reflected in the attention to blended learning and the appeal of Dutch higher education to international students;
- The system is, in general, accessible: participation in higher education has increased sharply in the past decades;
- There is a binary system: the strength of the universities of applied sciences lies in the ties with the field and the – complementary – strength of the research universities lies in educating students to become academic thinkers, as a result of which the Netherlands is also strong in science subjects;
- The profiling and differentiation are both increasing;
- The structurally intertwined education and research: many research universities and universities of applied sciences can still work on a better balance.

Nevertheless, I also identify a number of weaknesses that will require a great deal of our attention in the coming period.

- Too little emphasis is placed on the socialization and personal development that accompany qualification;
- Students are not very motivated: they devote little time to their studies and, at the same time, are challenged too little. Moreover, insufficient attention is devoted to talent and talent development;
- Study success rates are still low: students take a long time to complete their education and dropout rates are particularly high at universities of applied sciences. The ties with society, including businesses, civil society organizations and the city, are improving but still need to be improved further;
- Lifelong Learning can be improved further;
- Transfers between sectors and study programmes have stalled;
- The range of education on offer is still insufficiently differentiated;
- The balance between the research universities' education and research is not in equilibrium. Universities of applied sciences still carry out insufficient research;
- There are still insufficient distinguishing talent programmes.

1.3. The leap into the future: ambitions and principles

During the coming years we shall need to make a leap into the future, to the higher education of the 21st century. Quality will then have top priority. The time to make this leap into the future is now. Whilst the quality of our education is coming under increasing pressure, the future requires us to make great investments in students and their education. A strong quality impetus is required if Dutch higher education is to have sustainable value. The student loan system makes this impetus feasible. At the same time, we expect students to assume more responsibility for their education, since the quality of education is also dependent on the substantive contribution efforts and input of the students. For this reason, I regard the achievement of the ambitions of this agenda as a joint task for the government and institutes, which will need to show the students how these resources enrich education. This cannot be achieved overnight: it will take time, due to the gradual availability of funds for

the investments. In 2025, the revenue from the student loan system will have almost reached the maximum. My agenda is intended, in continuation of the series of visits to institutes of higher education, to give further shape to the dialogue with students, teaching staff, administrators and the business community. The agenda emphatically specifies the themes. The agenda determines the most important policy themes for the coming years and outlines a vision of the future. However, the agenda does not specify the route to every point on the horizon. These will be addressed in our future discussions. This agenda pivots on the following ambitions:

World-class education
- Small-scale learning communities;
- Rich learning environments;
- High quality teaching staff and education managers;
- Scope for education innovation

Accessibility, talent development and diversity
- Readily accessible higher education;
- Talent programmes;
- Study success;
- Cooperation across the educational spectrum;
- Additional attention to secondary vocational education students;
- Transfers within the higher education system;
- Flexible system for Lifelong Learning.

Social relevance
- Sustainable regional and sectoral cooperation, with rich learning environments;
- Stronger links with the labour market;
- Knowledge valorization: economic and social benefit;
- Further profiling, incorporating educational concepts.

I shall discuss the specific detailing of these ambitions in the following sections. Policy lines for all three themes – world-class education, accessibility, talent development and diversity and social relevance – have been specified for the coming years. The last Chapter addresses the investment agenda for the fulfilment of these ambitions.

However, the existence of an innovative education system that is accessible, promotes transfers and encourages ties between institutes and their surroundings is governed by the condition that the administrative relationships offer scope and give confidence. I have previously explained my vision on administrative relationships in higher education in my *Accreditatie op maat*[53] (tailored accreditation) letter. I welcome this opportunity to return to this issue before I work out the various ambitions and policy lines in the following sections.

1.4. Governance: more scope for innovation, more confidence

The government bears the responsibility for a future-proof education system that provides assurances for quality, accessibility and efficiency. I intend to give this responsibility more shape on the basis of confidence in which the student is pivotal, the teaching staff are once again the owners of the education process, the institute is given more scope for innovation and the costs and benefits are in better balance.

53 *Accreditatie op Maat* (tailored accreditation) letter to the House of Representatives of the States General (Parliamentary Documents II, 2014-2015, 31 288, No. 471).

During the past years I have observed that the availability of sufficient scope for the students, teaching staff and administrators can release a great deal of energy and result in many good initiatives: their involvement allows good education to blossom. I intend to offer more of this scope within the higher education management philosophy. For this reason, I wish to be able to have more confidence in the institutes' internal governance. Discussions about education and its quality will then make a contribution and whenever possible will need to be held between the appropriate parties – between students, teaching staff and administrators and, for some elements, with employers and other national and international interested parties.

A good quality culture is entirely dependent on thorough discussions on the nature of good education. I intend to invest in this culture. I intend to encourage students, teaching staff, administrators and the government to maintain a permanent dialogue on essential conditions such as expertise, culture, the attitude of administrative bodies and supervisory authorities, and government confidence. Although confidence cannot guarantee that students, teaching staff and administrators always assume their responsibilities, in the absence of this confidence they will never be in a position to assume their integral responsibility. The enhancement of internal governance is needed to achieve a better balance between internal and external accountability. This latter will then need to be slimmed down to create the aforementioned scope for institutes.

The first condition to be met for good internal governance is the positioning of professionalism and expertise in the fields of education science, leadership and finance. The enhancement of the internal checks and balances promotes the institutes' self-correcting capacity. This also improves the integration of social interests. Moreover, the Netherlands Scientific Council for Government Policy is of the opinion that external supervision (which the Council refers to as 'external oversight') benefits from properly functioning internal checks and balances.[54] Having and giving confidence will then be essential. The government has in the past focused on the formal conditions in the form of legislation, regulations and codes of governance. This has resulted in extensive regulations. I am of the opinion that although regulations can prescribe the preconditions to be met for good education, they cannot make sure that good education is actually *given*. This is the duty of the education community.

For this reason, in my opinion the main need is for an appropriate administrative culture in which these checks and balances can function. This requires a transparent culture with room for counter arguments and for good discussions in which all parties are involved, in time, in important decisions such as the appointment of administrators, and in which participation in decision-making is appreciated and is assigned an appropriate position. The assignment of this appropriate position includes facilitating participation in decision-making by providing sufficient training, organizational support and an appropriate reimbursement. This is also applicable to the study programme committees. I will be continuing my discussions with institutes and students on this in the coming period. In their expertise role, the study programme committees are in an unparalleled position to provide advice on the quality of the study programme. They are of great value to the internal quality assurance system. For this reason, I intend to assign the study programme committees a greater role in the further development of the accreditation system, in accordance with the request of the House of Representatives of the States General, in the *Duisenberg-Rog* motion (May 2015)[55] and *Mohandis-Duisenberg* motion (September 2013)[56]. The *Versterking Bestuurskracht* (reinforcement of administrative strength) legislative proposal emphasizes the important duty of the study

54 Scientific Council for Government Policy (2014). *Improving internal checks and balances in semi-public organisations.* Amsterdam University Press, Amsterdam.

55 Motion of members Duisenberg and Rog of the House of Representatives on study programme committees (Parliamentary Documents II, 2014-2015, 31 288, No. 458).

56 Motion of members Duisenberg and Mohandis of the House of Representatives on the role of study programme committees in the accreditation system (Parliamentary Documents II, 2013-2014, 33 472, No. 22).

programme committees and assigns the participation council the right to be consulted on the appointment of administrators and the profiles for the selection of candidates.

The provision of appropriate assurances for the legal status of students is a further important precondition attached to giving scope and confidence. I am currently, in part on the request of the Senate of the States General,[57] holding discussions with students, institutes and other experts on the legal status of students and issues of relevance to that status. This then not only relates to the status of students who are members of the participation council or study programme committee, but also to all students studying at an institute. The performance of various legal procedures within the institute has jointly been brought forward as a relevant issue. This issue will be examined during the coming period.

I have laid down in the *Nationaal Onderwijsakkoord* (national education agreement[58] that more fundamental changes will be made to achieve a substantial reduction of the regulatory pressure. The objective is to provide for future-proof, stable and stable administrative relationships that do justice to the core responsibilities of students, teaching staff, institutes and the government. I have announced that I shall carry out a critical examination of the duties of the Accreditation Organisation of the Netherlands and Flanders (NVAO), Inspectorate of Education, Committee for Efficiency in Higher Education (CDHO) and Higher Education and Research Review Committee (RCHO) and shall examine where the regulation pressure can be reduced. This must result in lower regulation pressure and more scope. I have previously announced in my *Accreditatie op maat* (tailored accreditation) letter that I shall take the next steps in the reduction of the regulation pressure and I have stated the steps I shall take in accreditation. I discuss the macro-efficiency policy in more detail in the Social relevance Chapter of this strategic agenda.

The final assessment of the performance agreements, in 2016, will be followed by an evaluation of the experiment with performance agreements and, on the basis of the outcome of this evaluation, the decision-making on the design of the quality agreements. This evaluation will examine whether the performance agreements have resulted in better education and the enhancement of the quality culture. This strategic agenda is intended as a guide for the improvement of Dutch higher education during the coming ten years. A leap into the future in terms of education quality, accessibility, talent development and diversity and the relevance of our education to society is feasible only with administrative relationships that are based on confidence and focused on innovation. I am taking these steps to create the scope required for the fulfilment of the ambitions detailed in the following chapters.

57 Commitment made to members Engels, Ganzevoort and Gerkens on 20-01-2015, during the plenary debate on the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) (34 035) .

58 Adoption of the budgets for the Ministry of Education, Culture and Science (VIII) for 2014, 19 September 2013 (Parliamentary Documents II, 2013-2014, 33 750 VIII, No. 8).

2 World-class education

2.1. Ambition for 2025: quality is pivotal

My ambition for 2025 is to offer education that enables all students to get the best out of themselves in an unpredictable world. We can only fulfil this ambition when we give optimum shape to and perform education's traditional duty, *Athenaeum Illustre*, 'illustrious school,' whereby we need to devote attention to socialization and personal development alongside qualification. This in turn implies that we will expect more from students – more from them in terms of their personal development, academic or professional attitude, autonomy, expertise, ability to cooperate, efforts and participation, creativity and imagination. The teaching staff are the driving forces for this learning process. I understand 'education quality' as all these activities and learning activities that make a maximum contribution to this learning process.

Good higher education is integrated in learning communities that are ideal for critical discussions and reflection. When viewed from this perspective, an academic and professional community is also a community of values, a community of values in which the teaching staff and students discuss each other's views and share their responsibility, motivation and appreciation. All students, irrespective of their background, will then need to feel that they are a fully accepted member of this community. This inclusive community offers every student with the necessary capacities the opportunity to successfully complete their studies.

The manner in which shape is given to good education, the formation of learning communities, the balance between the three objectives of education (qualification, socialization and personal development) – the meaning of *Bildung* in the 21st century – differs by discipline, study programme and institute. However, the increasing diversity of students – with varying backgrounds, interests, talents, learning styles and paces – requires more tailoring in higher education. More tailoring can then ensure that all students with the necessary capacities can follow the study programme that suits them, the study programme that is compatible with their ambitions and talents. The potential offered by digitalization offers new opportunities. Institutes will then need to make choices and increase the differentiation of their education, for example in the content of the education (broad-based or discipline-oriented programmes), forms of education (problem-oriented education, project education and similar), level (extra attention for students at risk of dropping out and/or extra attention for students that wish for education with an additional challenge) and educational resources (blended learning and similar). We will then be able to have high expectations of every student who is in the right place, from three-year bachelor's tracks for pre-university educated students at universities of applied sciences, research master's degree programmes, to University Colleges and associate degree programmes. I also intend to emphasize the importance of micro quality assurance – good timetables, the timely marking of exams, or teaching staff and support services that are readily accessible. A good example is provided by the private IVA Driebergen Business School, which was selected the best university of applied sciences in the *Keuzegids Hoger Onderwijs 2014* higher education study guide for the seventh year in a row. The IVA concept of small-scale entrepreneurship education with a strong focus on automotive and nautical business management continues to result in very satisfied students.

More differentiation in education also provides an answer to the trilemma of retaining the accessibility of higher education, achieving high-quality education and making efficient use of government and other resources. It will then be necessary for universities of applied sciences and universities focused on specific groups of students to select sharper and more recognizable study programme profiles. I am prepared to support this path of further differentiation and tailoring provided that the focus remains on the students' interests and the accessibility and quality of Dutch higher education remain assured. I then assign priority to the quality of education, in the sense of meaningful learning communities, over quantity that largely revolves around numbers of students and graduates.

Striving to increase the number of nationals with higher education qualifications is then a means, not an end. I attach no importance to a quantitative objective of having 50% of people with higher education qualifications. We Dutch will need to rely heavily on our shrewdness, creativity, inventiveness and ability to cooperate. For this reason, I regard study success as the outcome of high-quality education and the student in the right place rather than an end as such.

From my series of visits to institutes of higher education, other discussions with various higher education parties, literature studies and an inventory of good examples, I have concluded that the following conditions must be met for the provision of high quality education. I regard meeting these conditions as one of my spearheads for the coming period, which I shall promote with a number of national measures including a grant programme for teaching staff.

a. *Small-scale learning communities*
   Students learn most in small-scale learning communities that invite them to engage in critical discussions and reflection. These learning communities and good study guidance improve the ties and involvement within the student body and the teaching staff body and between the students and teaching staff, which is beneficial to the quality of the education.

b. *Rich learning environments*
   Students can only learn well in rich, powerful and meaningful learning environments, such as higher education that is closely intertwined with research, professional practice, international classrooms and support by online and open online education and good study facilities.

c. *High-quality, inspiring teaching staff and education managers*
   High-quality teaching staff are of tremendous importance to good education. The teaching staff must be placed in a position to continue to develop themselves in their subject and in their teaching skills, for example by becoming familiar with new forms of education such as digital education, and by further improving their teaching capacities, etc.

d. *Scope for education innovations and experiments*
   Teaching staff and education managers will, in conclusion, need to be offered extra scope and opportunities for the adjustment of education to today's requirements and for work on experiments with new forms of education and educational resources.

Universities of applied sciences and research universities have been working on meeting these conditions for many years. This strategic agenda is intended to help them in their efforts. The extra funds released on the introduction of the student loan system will enable universities of applied sciences and research universities to make additional efforts on top of their existing investments. Institutes will be able to allocate these funds in order to achieve institutional objectives that are compatible with the national priorities referred to in this strategic agenda. These are institutional objectives which are formulated in dialogue with the teaching staff and students, i.e. through study programme committees and the participation council, and other important stakeholders and which are laid down in the strategic institutional plan. I intend to reach quality agreements on the achievement of these objectives.

2.2. Small-scale learning communities

The quality of the education is not only determined by the efforts of the teaching staff but also by the input of the students. This is also the reason why higher education needs to be of a smaller scale to ensure that the teaching staff have more time for individual contacts with students, as education is a relationship between people. Teaching staff and students make recommendations in the *Manifesto for future excellence education*[59] that can be applied more broadly in regular education. Good and challenging education is education in which education institutes offer students a learning environment that enables them to get the best out of themselves and encourages them to be creative and leave their comfort zone. It is striking to note that many honours students at both universities of applied sciences and research universities do not recognize themselves in the 'excellence' concept and that some students are put off by this terminology and assume that they do not come into consideration for an honours programme, even though they might possess the necessary capacity. The aforementioned manifesto reveals that students feel more affinity with concepts such as relevance, freedom, talent development and responsibility, social responsibility, off the beaten track, individualism and innovation. For this reason, I intend to introduce 'talent programmes' as an umbrella concept for a range of initiatives focused on talent development. Excellence or honours programmes, or other distinguishing programmes focused on community involvement, art, sport, crossovers and entrepreneurship, can then be referred to as talent programmes.

Talent programmes such as honours programmes provide important added value in that they offer students scope to give shape to their study programme, understand their personal drive and talents, and develop skills including cooperating with students from other disciplines within their learning community. Students are also offered the opportunity to demonstrate their social involvement and to work on their personal development and citizenship. Good teaching staff make this feasible by challenging students, having high expectations of them, offering them intensive support and giving high-quality feedback. Self-evidently, universities of applied sciences and research universities also offer very many regular study programmes which also possess these characteristics, such as tailoring and social involvement *(see chapters three and four for more information)*.

Small inside large with Utrecht University's Freshmen College

The psychology department, with a large annual intake of students, sought a means of introducing a small scale that would enable students to develop ties with their fellow students and the study programme. This is based on the principle that small-scale education and ties, or 'community development,' can improve study success.

This was achieved by introducing Freshmen Colleges for first-year students. Each of the five Freshmen Colleges consists of 100 students (i.e. 'small inside large'). The Freshmen Colleges are assigned permanent tutors and the students receive as much of their education from the same teaching staff as possible. The five Freshmen Colleges each bear the name of a famous psychologist. The small scale and the community development can contribute to the focus of the education.

59 Project Team Summit Excellence 2014 (2014) *Manifesto for future excellence education*. Amsterdam University of Applied Sciences xthe Sirius Programme, Amsterdam.

I am of the opinion that, during the coming years, institutes will need to devote much more attention to the implementation of these experiences in regular education, as all students benefit from challenging education that calls on their passions and talents. The development of small-scale learning communities or communities is then an important condition to be met. Community development is not only desirable in small or small-scale study programmes, but also in the large study programmes that create small learning communities in subjects and disciplines. Education must regain the human dimension. A study carried out by Furrer and Skinner[60] reveals that a feeling of belonging plays a crucial role in the motivation, performance and emotions of students. Universities of applied sciences also need to hold high expectations of both their students and teaching staff. Students greatly appreciate working with like-minded and motivated students – and with inspiring and dedicated teaching staff.

When the institutes make a structural allocation of 60% of the funds released on the introduction of the student loan system to the recruitment of extra teaching staff, then almost 4000 extra teaching staff can be recruited by 2025. This is equivalent to an increase of almost 15%. The extra teaching staff are primarily intended for more intensive, smaller-scale education – more 'small in large,' talent programmes, individual feedback, mentoring, tutoring and oral exams, etc.

Extra teaching staff, mentors and tutors

The ambition is to realize small-scale education and, ultimately, increase the involvement of the students and teaching staff in education. For the research universities, this will provide for the intensification of education – especially in the large study programmes – to further enhance the academic climate. Universities of applied sciences will be able to recruit extra teaching staff to increase the ties with professional practice and applied research. The objective is to ensure that students, especially in study programmes with many students, such as business administration and communication, will once again be able to study in small learning communities. This implies that smaller groups, personal guidance and attention, individual feedback, individual portfolio assessments and oral exams will become more of the standard than the exception. Students, in exchange, may be expected to challenge themselves, each other and their teaching staff to get the best out of themselves. A reciprocal relationship between teacher and student is of essential importance to high-quality education, where the standard is the interested student and not the consumeristic student. In view of this, a study is being carried out to examine whether the National Student Survey (NSE) can be developed further into an instrument that can give a general indication of the institute's quality culture and the students' contribution to that culture. The Survey will then not only examine student satisfaction, but also examine their behaviour, study behaviour, broader experiences and the contribution students make to education.

Second year experience, University of Minnesota

The University of Minnesota has introduced a 'Second year experience' programme. The elements of this programme include the availability of a grant from the Office of Undergraduate Education to enable students to gain experience with research and the 'Take your professor to lunch' initiative. In this latter initiative, a group of three to seven students can take a professor to lunch to get to know him or her better and to ask questions about the professor's discipline. The University picks up the bill for the lunch.

During the series of visits to institutes of higher education, students also indicated that they also have a need for more study support in the form of tutoring and mentoring.

60 Furrer, C., & Skinner, E. A. (2003). *Sense of relatedness as a factor in children's academic engagement and performance.*Journal of Educational Psychology, 95, p. 148-162.

Second year experience, University of Minnesota

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A publication of the Higher Education and Research Review Committee[61] reveals that intensive, person-oriented study support improves ties and, as a result, promotes study success, which is one of the performance agreements. This improvement in study success is beneficial to students, who need to deal with fewer disappointments, to the teaching staff, who encounter more involved students, and to the Dutch knowledge society since talent is not wasted. Direct personal support in forms including tutoring and mentoring makes a direct contribution. This is all the more important when the range of programmes on offer is more flexible and students are confronted with more choices. Teaching staff, tutors and study counsellors with an extra degree of involvement are then required, together with good discussions, both when there are problems *and* when things are going well. The notion that only poorer performing students need this support is a misunderstanding: better performing students also benefit from encouragement.

Open online education, blended learning and ICT are all ideal means of creating more challenges for students. Having students study more material in advance by means of assignments, online tests, gamification,[62] videos and MOOCs, altogether reflecting the 'flipped classroom' learning approach, enables the teaching staff to rearrange and make more efficient use of the available contact time. However, in my opinion ICT should never be used to make cutbacks in education spending by reducing the number of teaching staff.

2.3. Rich learning environments

Students can only learn well in a rich, powerful and meaningful learning environment. Research universities and universities of applied sciences are developing various forms of learning environment, with education intertwined with research and professional practice, internationalization, digital learning environments and open and online education, as well as extra and co-curricular activities, community engagement, top sport and other sports, cultural and student associations and entrepreneurship. All these learning environments appeal in some way to the talents and capacities of students. This creates curiosity and promotes inquisitiveness. These learning environments also form the context within which the three objectives of education – qualification, socialization and personal development – are given shape.

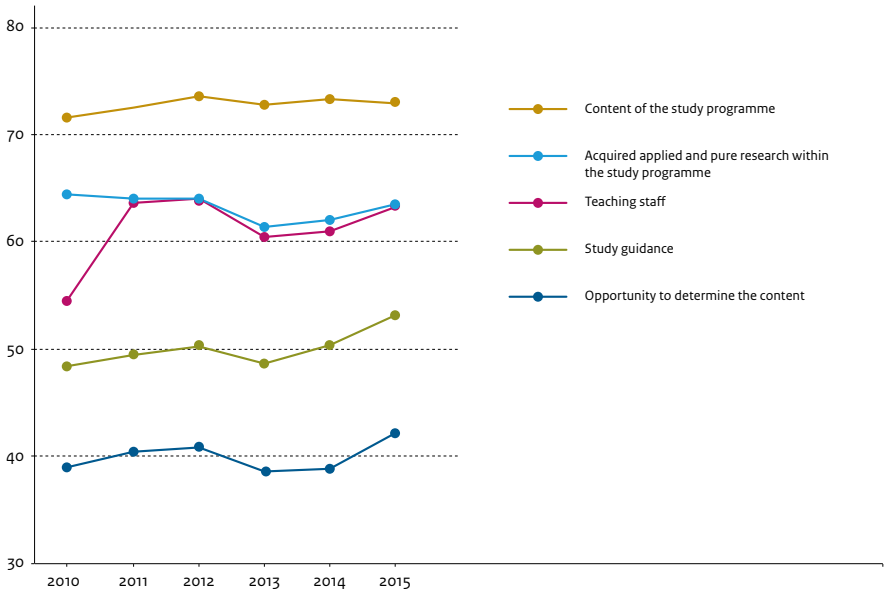
In addition to sharpening the students' cognitive skills, the students then learn a number of non-cognitive skills – 21st century skills – including learning and innovation competences (critical thinking, creativity and cooperation), information, media and technological skills (ICT skills, media literacy and working with big data), career and life skills (flexibility, initiative, social and cultural skills, productivity, leadership and entrepreneurship). This

61 Higher Education and Research Review Committee (2014) *Interventies uitval en rendement.* Online: http://www.rcho.nl/media/www_rcho_nl/interventies%20uitval%20en%20rendement%2017%20nov.pdf

62 The inclusion of game elements in education to increase student motivation.

then includes assurances for Dutch language[63] and mathematics skills that are both essential skills for success. Once again, high expectations must be the standard. I shall request the General Secretariat of the Dutch Language Union to work out the recommendations from the Council for the Dutch Language and Literature on Dutch language skills in higher education in cooperation with the field and to exchange best practices. I also request institutes to work on an integral language policy which is compatible with their profiling. High expectations must always be the standard.

figure 2: percentage of students who state that they are satisfied with: (Source: NSE)



The development of 21st century skills is not an end but a means to teach young people how to think in terms of opportunities. It is not without reason that, within the context of *#onderwijs2032*, an explicit examination of the value of these skills is being made in primary education and secondary education. The manner in which we make use of our skills is always related to our personality and attitude, integrated in the context and customs of professional practice. It involves being responsive to questions raised by the surroundings or situation and is linked to personal opinions on what constitutes 'good' work, the moral compass. For this reason, appropriate learning environments offer sufficient opportunities for experiments outside the comfort zone and for reflection. They also need to provide the scope for personal wishes, solutions, creativity and for the flops or failure needed for the required innovation.

I intend to offer universities of applied sciences and research universities an opportunity to enhance the learning environment for their students. I then place the emphasis on intertwined education and research, internationalization, open and online education and the importance of extra and co-curricular activities. I work this out in more detail below.

Intertwined education and research

The strength of Dutch education and research lies in the fact that they are structurally and greatly intertwined. The Netherlands' scientific research ranks amongst the world's best, which gives us a good starting position. The most important task for the research

63 The Dutch Language Union (2015), *Vaart met taalvaardigheid; Nederlands in het hoger onderwijs.* The Dutch Language Union, The Hague

universities is then to increase the degree to which education and research are intertwined so that students can learn in an academic environment and synergy between academic education and research is achieved. This then extends beyond solely disseminating knowledge to challenging students to take part in the acquisition of knowledge, either by involving students in original scientific research (research-based education) or by having students carry out research (research-tutored education). The creative contribution and feedback from students act as an incentive to the teaching staff to formulate and explore new, unexpected research questions.

This creates an environment in which creative and innovative scientific sparks can fly from student to teacher and vice versa[64], although this is possible only when education is firmly integrated in a research environment. The manner in which research and education are intertwined, as the Advisory Council for Science, Technology and Innovation indicated in its *Verwevenheid onderwijs en onderzoek* recommendations[65], will vary greatly between university of applied sciences and research university study programmes and between bachelor's and master's degree programmes. Integrating education firmly into the research environment requires additional academic teaching staff who are offered more stable positions and balanced teaching and research duties. I am gratified to note that, on the adoption of the Collective Labour Agreement in the autumn of 2014, the research universities stated that they will reduce the percentage of flexible contracts. I assume that their decision is based on the desirability of stable career paths at universities.[66]

Universities of applied sciences need to integrate applied research more firmly into their education. This was also one of the Veerman Commission's recommendations. The Education Council[67] recently stated that innovative capacity is becoming increasingly important in our society. The requirements this poses practitioners in professional practice have consequences for universities of applied sciences and the education they provide.

The Council also states that training more innovative professionals will require the firmer integration of applied research into higher education. The Education Council recommends that all study programmes devote structural attention to the investigative capacity of students.

Inholland University of Applied Sciences and 'Ten Plus'

Inholland University of Applied Sciences is participating in the Kenniswerkplaats Tienplus ('Knowledge Lab Ten Plus'), which is focused on the provision of low threshold parenting support for parents of teenagers in Amsterdam. Many poorly qualified parents and migrant parents feel remote from the parenting support centres in Amsterdam. The Kenniswerkplaats Tienplus is a collaborative arrangement in which knowledge, policy and practice are brought together in self-help organizations that wish to provide for more accessible and effective parenting support.

64 Education, research and valorization are closely interrelated, Delft University of Technology's basic premise.
65 Advisory Council for Science, Technology and Innovation (2015) *Verwevenheid onderzoek en onderwijs: eenheid in verscheidenheid. Advisory Council for Science,* Technology and Innovation, The Hague
66 In doing so, the Government is implementing the motionof member Mei Li Vos of the House of Representatives of the States General proposed on 2 April 2015, during the debate on science policy (32 288 No. 427).
67 Education Council (2014) *Meer innovatieve professionals.* Education Council, The Hague

The Netherlands Scientific Council for Government Policy[68] also acknowledges that universities of applied sciences will have to transform themselves into knowledge institutions and strike a new balance between transferring knowledge, generating economic activity and helping to solve problems. The universities of applied sciences can be particularly good knowledge partners for the small and medium-sized enterprise sector, as the Advisory Council for Science, Technology and Innovation recently stated in its *SMEs and Universities of Applied Sciences* recommendations.[69]

Although attention to research and to investigative capacity are already on the agenda of universities of applied sciences, the envisaged learning lines have yet to become customary practice in education. More associate professors are required, as the universities of applied sciences also state in their strategic plan[70].

The performance of applied research at universities of applied sciences will also require an increase in the proportions of teaching staff with a master's degree or PhD that are currently low as compared to other countries, as well as an expansion of the capacity of the research centres. This will result in the investigative and problem-solving capacity of university of applied sciences students becoming a pronounced quality of our system. The increase in the number of associate professors and teaching staff with a master's degree or PhD shall both need to be governed by quality, not quantity.

Social issues, in conclusion, increasingly require an interdisciplinary and transdisciplinary approach to research and education. The *Wetenschapsvisie* (vision for science) published earlier states that the resolution of today's major social challenges requires the provision of the scope researchers need to make creative and unexpected cross relationships. This scope for researchers will also need to be extended to education, as the objective is to ensure that students possess firm basic knowledge and skills and the ability to look and work beyond their boundaries. The task for research universities and universities of applied sciences is to supplement their discipline-oriented study programmes with further broad-based programmes, crossovers and learning routes tailored to the students that are compatible with the institute's profiling and differentiation. Once again, students will need to assume more responsibility for their learning process.

The extra funds released with the student loan system will enable universities of applied sciences and research universities to supplement their existing investments with investments in intertwining education and research. Research universities will be able to allocate these funds, in addition to the substantial increase in teaching staff referred to above, to the appointment of additional research lecturers or university lecturers or senior university lecturers with combined education and research duties to increase the extent to which education and research are intertwined in large-scale degree programmes. Universities of applied sciences will be able to use these funds to appoint additional associate professors and teaching staff with a PhD who have an education duty *(see section 5.3)*. The education community will be able to exercise its discretion in giving shape to this.

To open online higher education

My ambition for 2025 is that all teaching staff at Dutch institutes of higher education make their educational resources openly available, i.e. open access higher education, and that, as a result, the Netherlands plays a pioneering role in the world.[71]

68 Scientific Council for Government Policy (2013), *Towards a learning economy.* Amsterdam University Press, Amsterdam.

69 Advisory Council for Science, Technology and Innovation (2015), *SMEs and Universities of Applied Sciences Partners in innovation Advisory Council for Science*, Technology and Innovation (AWTI), The Hague

70 Netherlands Association of Universities of Applied Sciences (2015) HBO 2025: *Wendbaar en Weerbaar*. Netherlands Association of Universities of Applied Sciences, The Hague.

71 This also fulfils the commitment I made during the General Meeting on Internationalization of 17-12-2014 (Parliamentary Documents II, 2014-2015, 22 452, No. 43).

The optimum utilization of the digital opportunities is essential to elevate good higher education to excellent higher education in which all students get the best out of themselves, their talents are challenged and backlogs are reduced. I have previously emphasized the great potential in my vision paper on open and online higher education[72]. This is also the reason why I have challenged institutes to experiment with the opportunities offered by open and online education, evaluate their findings thoroughly and make use of the lessons learnt to enhance the breadth of education. I remain prepared to conduct a critical examination to identify any legal impediments to this development.

I call on institutes and their teaching staff to share their educational resources and to use materials from their colleagues both inside and outside their institutes. The teaching staff's ability to tailor education to the student increases with the supply of open educational resources. Cooperation between teaching staff and teaching groups then plays an essential role. A form of peer review that makes sharing educational resources feasible also makes a direct contribution to education quality. I also, within this context, attach importance to the Dutch institutes' recognition of each other's MOOCs and 'Open Educational Resources'. The University of Groningen is a good example: the University awards credits to students who successfully complete MOOCs that have been developed by Leiden University.

I shall enter into discussions with the institutes and teaching staff on the manner in which sharing and reusing open educational resources can become customary practice and how I can facilitate this. Within this context I shall explore whether, and if so how, a national or international platform for sharing, processing and using educational resources can contribute to the fulfilment of this ambition. Consideration can then be given to a 'Holland Virtual University'. Higher education can continually be improved with ICT only when teaching staff have the necessary time, scope and – above all – enthusiasm. For this reason, I am pleasantly surprised by the great interest in the Open and Online Higher Education incentive scheme. I shall double the budget from 2018 to accelerate the development, increase the amount of educational resources under open licence available to all institutes of education and enhance capacity building in the Dutch context.

I shall organize an international conference on open and online education during the Netherlands' Presidency of the Council of the European Union. This will also enable us to continue to share our European knowledge of and experience with open and online education and offer Dutch higher education a platform.

I request universities of applied sciences and research institutes with construction or reconstruction plans to take account of new, creative and small-scale forms of education and the space and architecture that these require. Too many teaching rooms at institutes are still designed and fitted out for mass organized education. Moreover, many buildings do not have designs and fittings that encourage meetings between students, teaching staff and administrators. Small-scale conference and working-group rooms, break-out rooms and common rooms, and similar, are desirable for small-scale education activities. Blended learning and online and open online education often require substantial investments in education facilities. We shall contribute towards this expenditure by enabling institutes to invest extra funds in study facilities for small-scale education. Once again, the education community will be able to exercise its discretion in giving precise shape to this.

72 Vision paper on open and online education, 14 January 2014 (Parliamentary Documents II, 2013-2014, 31 288, No. 362).

Internationalization

I have previously emphasized the importance of internationalization of higher education in my letter to the House of Representatives of the States General on the international dimension of higher education and secondary vocational education: internationalization makes education more challenging and students smarter, more creative and entrepreneurial.[73] In the 21st century, internationalization has become an indispensable element of student education. Higher education is characterized by its open nature – the European Higher Education Area – and education is increasingly given in international networks. Every year, Dutch higher education attracts thousands of students from all over the world.

They reap the fruit from the quality of Dutch higher education and themselves enrich Dutch education, science and society. Moreover, their presence is as such sufficient to enable us to educate the majority of Dutch students in an international context.

The international classroom offers innumerable opportunities for challenging, pioneering education. With my 'Make it in the Netherlands' action plan, I have implemented policy to strengthen the ties between international talent and the Netherlands, in part by eliminating as many of the legislation and regulation bottlenecks as possible in terms of studying, undertaking work placements and working. Allowing the international component of Dutch education to come increasingly to the fore is also important.

However, the international mobility of Dutch students is not keeping pace with the growth in the intake of foreign students. This is a pity, because the precise objective of higher education is to educate pioneering thinkers and practitioners, an objective that can only be achieved with experience abroad during their studies. For this reason, in my letter I referred to earlier I stated that I shall strive to achieve more outbound mobility.

In 2015, I have – in cooperation with the research universities and universities of applied sciences – introduced the 'Holland Scholarship' for talented inbound and outbound students. During the coming decade this will enable about 10,000 top students to study abroad. To promote outbound mobility, in particular, I will encourage the research universities and universities of applied sciences to continue to work on the following four important conditions:

- Furthering the international orientation of students in the curriculum and the contacts between international and Dutch students;
- Incorporating a mobility window in the curriculum;
- Providing information;
- Continuing and expanding financing sources, such as the 'Holland
- Scholarship,' to further promote outbound mobility.

I will also, after consultations, submit the *Bevordering internationalisering hoger onderwijs* (promotion of the internationalization of higher education) legislative proposal to the House of Representatives of the States General via the Council of State. The Government is also of the intention to enable the establishment of foreign sub-branches by means of an Order in Council that will lay down further qualitative and financial preconditions and other provisions.

I will also continue my efforts for the creation of the European Higher Education Area. The Bologna Process offers a good framework for this, although bilateral cooperation with other Member States – at government and institutional level – can also remove barriers and, therefore, offer a best practice at a broader European level. The recent

73 See also the vision paper on internationalization, 15 June 2014 (Parliamentary Documents II, 2013-2014, 22 452, No. 41).

Benelux agreement on the mutual recognition of academic degrees and qualifications is a good example. At the same time, foreign institutes wish to focus on Dutch students, which also has consequences for Dutch higher education. I am, within this context, working on the protection of the Dutch names for 'research university' and 'university of applied sciences' to counter misleading initiatives from abroad.

The increasing internationalization of Dutch higher education is resulting in education increasingly being given in English at both bachelor's and master's level. This is to a certain extent self-explanatory for studies of an international nature and at institutes with a specific international profile. The legislation also offers scope for tailoring when this is functional and appropriate. However, this anglicization may be less self-explanatory for other studies or at other institutes. I have in any case concerns about the position of Dutch as the cultural and scientific language in higher education, and certainly when an excellent command of Dutch may almost be regarded as a *conditio sine qua non* in this respect.

I am not, for the time being, of the intention to draw precise lines in the field of tension between internationalization and the retention of the Dutch language. Nevertheless, I do wish to stress three language points for attention. Firstly, the use of English may never be to the detriment of the quality of higher education. Secondly, institutes will need to be transparent, or more transparent, about their language policy and make very clear how their language policy serves the achievement of their education and quality objectives. I am of the opinion that language or other policy focused solely on attracting more foreign students is inappropriate. Thirdly, I require the institutes and other parties involved to give account for the extent to which they can implement anglicization in which studies and which institute profiles.

Within this context it is important that foreign students studying at Dutch institutes of higher education for a somewhat longer period of time are encouraged to learn Dutch whenever possible. A serious game and a Dutch MOOC developed for this purpose are already being used intensively. The language centres of the research universities and one university of applied sciences also offer intensive Dutch language courses.[74]

Extracurricular and co-curricular activities

Students need to be able to develop into responsible citizens who can make a contribution to the educational community and society. Giving something back to society enables students to come into contact with various groups, which promotes cohesion. Moreover, students learn a great deal from carrying out activities in an existing context. They can do so, for example, in the form of voluntary work and community engagement programmes, extracurricular activities such as study or student associations, participation in consultation bodies, top and other sports activities or cultural activities and entrepreneurship. We need to continue to encourage students to carry out activities of this nature, as they contribute to students' socialization and personal development.

Institutes including the University Colleges demonstrate that relating these other activities closely to study programmes such as co-curricular activities ensures that they are extremely successful and visible. Examples include projects focused on challenges in the city, the organization and management of study and activity associations and other projects such as sustainability projects, etc. Universities of applied sciences and research universities are requested to make sufficient facilities available for these activities, make the activities visible and to link them to education whenever feasible.

74 This also fulfils the commitment I made during the debate on internationalization in higher education of 17 December 2014 (Parliamentary Documents II, 2014-2015, 22 452, No. 43).

2.4. High-quality, inspiring teaching staff and education managers

The series of visits to institutes of higher education repeatedly revealed that the quality of the teaching staff is one of the most important conditions to be met for good education. When we hold high expectations of students, we may also hold high expectations of teaching staff and education managers. Fortunately, the quality of the teaching staff at research universities and universities of applied sciences is high. Research universities have worked hard on the basic and senior teaching qualification programmes (BKO/SKO). All universities of applied sciences have made a great leap forward with the level of their teaching staff's qualifications, with more teaching staff with a master's degree or a PhD. I intend to provide further support to the efforts of institutes to enable them to take the next step. However, the institutes do then need to adopt modern and future-oriented personnel and education policies. Within this context, I request explicit attention for the following:

a. Higher appreciation of education;
b. Permanent professionalization of teaching staff and education managers;
c. Attention for diversity in personnel policy

More appreciation of education

Staff at research universities, as indicated earlier, all too often have a lower appreciation of education and teaching than research. Whilst researchers often form closely-knit communities that work permanently on innovation and progress, the communities for teaching staff and education innovation are much less visible. For this reason, research universities are requested to devote explicit attention to the structural promotion and rewarding of education and to the promotion of differentiation in the careers of teaching staff and researchers.[75] When referring to 'differentiation,' I refer to allocations of time to education and to research that are not always in the same ratio for everyone and to careers that not only have different foci in terms of the research time and education time, but also have different foci in terms of management positions, design duties, innovation assignments and ties with society (valorization duties). The major challenge is to promote these variations, including variations of benefit to education, to grade reliably and remunerate appropriately, all both in terms of the individuals and the team.

75 See also Advisory Council for Science, Technology and Innovation (2015) *Verwevenheid onderzoek en onderwijs: eenheid in verscheidenheid*. Advisory Council for Science, Technology and Innovation (AWTI), The Hague

University of British Columbia: Professor of Teaching Faculty Stream.

The Collective Labour Agreement concluded between the University of British Columbia and the Faculty Association, in 2010, includes an alternative tenure track to professor, the Professor of Teaching tenure track. The option of promoting lecturers to the position of professor has several objectives:

- Recruit and retain excellent academics by offering them an appealing career in education and educational leadership;
- Promote research and development into education innovation (for example, in curricula, pedagogical approach and digital learning methods);
- Facilitate and promote interdisciplinary cooperation in education inside and outside the University.

This will ensure that excellent teaching staff – and not just excellent researchers and managers – are offered a fulfilling career. A number of research universities already offer scope for appointments of teaching professors. Endeavours will be made to ensure that there are sufficient teaching professors for every scientific discipline of some size to work jointly on structural improvements and innovation of the education in the relevant and/or related discipline. Self-evidently, there are then major differences between scientific disciplines and professional disciplines. The *Wetenschapsvisie* (vision for science) states that further agreements will be reached with the research universities in a new outline agreement. Universities of applied sciences will need to recruit more high-quality associate professors and researchers with strong ties to professional practice and vocational education. During this increase in research capacity additional attention will need to be devoted to the extent to which education and research are intertwined and to the permanent appreciation of the educational duty. University of applied sciences research shall at least need to prepare students for professional practice.

Permanent professionalization of teaching staff and education managers

The important assignment for universities of applied sciences and research universities is, on the basis of a future-oriented personnel and education policy and in continuation of the basic and senior teaching qualification programmes (BKO/SKO), to continue to work on the permanent professionalization of teaching staff and schooling of skilled education managers. I attach importance to the research universities and universities of applied sciences taking the next steps in this development. This then relates to the teaching staff's substantive expertise, use of new forms of education, didactic skills and skills in, for example, working with an international classroom and to work placements that enable the teaching staff of universities of applied sciences to acquire new practical experience.[76] Knowledge of the opportunities offered by digitalization and skills in their utilization and the reuse of online educational resources will then be an important element. For some teaching staff, this can also relate to the design, implementation and evaluation of innovations in education. The study grants for teaching staff (*see section 2.6*) need to make a contribution to this. The universities of applied sciences are explicitly requested to devote extra attention to educational leadership by organizing study courses and to continue to work on the level of qualification of the teaching staff: more teaching staff with a master's degree or a PhD are required. Quality has priority above quantity. Moreover, the quality of teaching staff is not determined solely by their level of qualifications: excellent teaching staff who do not have the appropriate qualifications, for example teaching staff from professional practice, should also be appreciated.

76 This is also recommended by the Advisory Council for Science, Technology and Innovation, see: Advisory Council for Science, Technology and Innovation (2015), *SMEs and Universities of Applied Sciences Partners in innovation* Quantes, The Hague

Attention for diversity in personnel policy

Diversity at universities of applied sciences and research universities is increasing rapidly. Students and staff are increasingly becoming international, with a continually greater diversity in the countries of origin. The number of students with a non-Western background is also increasing, in particular in the Randstad conurbation. The strong representation of women in the student population is also striking. However, the representation of teaching staff with a non-Western background and the representation of women in senior management positions and in professorships both lag far behind, also at an international level. We cannot resign ourselves to this situation, as diversity also creates opportunities: students and scientists from various backgrounds also contribute diverse perspectives and this greater pluriformity in perspectives can result in more creativity and innovation.[77]

Taskforce Future for diversity (VU-UL-EUR)

VU University Amsterdam, Leiden University and Erasmus University Rotterdam recently set up the Future for Diversity Task Force. The task force is focused on the improvement of enrolment and transfer rates within higher education for students from different cultural backgrounds and the improvement of their entry into the labour market following graduation. In so doing, the research universities, in cooperation with civil society organizations such as businesses, universities of applied sciences and the ECHO Foundation, make their contribution to resolving the low labour participation rate of highly qualified young migrants.

Gender diversity among professors is improving, with an increasing proportion of women, although the improvement is very slow (just over 6% of professors were women in 2000, which crept up to almost 15% in 2013). At the current pace, the equal participation of men and women in academic scientific positions will be achieved only in 2058. The research universities bear the primary responsibility for this situation. For this reason, the *Wetenschapsvisie* (vision for science) states that the gender balance will be an element of the outline agreement with the Association of Universities in the Netherlands (VSNU). The objective is that we align with European initiatives and adopt the European Commission's line so that we can catch up with the backlog and achieve at least the EU average by 2025. The *Wetenschapsvisie* also states that if this objective is not achieved then targets may be incorporated in the Higher Education and Research Act.

One of the most important programmes is the Netherlands Organisation for Scientific Research's Aspasia programme. The objective of the programme is to encourage the promotion of talented female scientists to the position of professor. Linking the programme to the Innovation Impetus (Vidi and Vici grants) includes the competition element. Research university boards that promote their female Vidi or Vici laureates to the position of senior university lecturer or professor respectively within a year of the award of the grant come into consideration for a bonus of €100,000. The outline agreement with the Association of Universities in the Netherlands (VSNU) will include specific agreements on the gender balance for professors.

77 Universities including Leiden University refer to this in their institutional plan. See also: Leiden University (2015) *Freedom to Excel. Leiden University Institutional Plan 2015-2020*. Strategic Communication and Marketing Leiden University, Leiden.

Students and scientists from various backgrounds also contribute diverse perspectives and this greater pluriformity in perspectives can result in more creativity and innovation. Attention for this should be a permanent part of university of applied sciences and research university institutional plans. This strategy relates to education, research, internationalization and personnel policy.

2.5. Scope for education innovation

Our ambition is to give ample scope to our teaching staff and education managers to work and experiment with forms of education and educational resources that make an optimum contribution to education that challenges, connects and offers more scope for tailoring. The professionals bear the responsibility for continually searching for opportunities for innovation and improvement. However, they *do* need to be provided and experience the scope they need to make this search. Although innovation is as such no guarantee for improvement, the absence of innovation will inevitably result in obsolescent education. A healthy quality culture provides for accountability. Good quality assurance does not impede education innovation, but rather ensures that lessons are learnt and that priority is given to the improvement capacity. The accreditation system is being adjusted to take this into account: the new proposals for the accreditation system provide institutes, and the teaching staff and education managers in particular, more scope to take up the ownership of education quality and quality assurance.

I intend to give a substantial impetus to education innovation in Dutch higher education by:

a. Introducing Comenius grants for teaching staff and education managers;
b. Making more funds available for research into higher education;
c. Creating scope for regulation free zones for experimentation and education innovation.

Comenius grants for teaching staff and education managers

I intend, in analogy with the Innovation Impetus for research, to introduce a substantial grant programme for teaching staff and education managers which will increase to a structural amount of €20 million per annum. These Comenius grants are intended for promising and excellent teaching staff, teams of teaching staff and education managers, with the focus on education innovation that connects with the study programme or institute plans for the future and is in line with this strategic agenda. The grants will enable teaching staff to make innovations in the education they give, teaching staff and teams of teaching staff in direction positions to make innovations in the curriculum, and education managers and institutes to give shape to education innovation projects at faculty or institute level. The objective is that other existing and future incentive programmes for higher education, such as the earlier Sirius programme, will be made available via this grant programme.[78] This will also result in a channel for national incentive measures for higher education, which will result in benefits including a reduction of the costs incurred in submitting applications and giving account.

78 This also fulfils the commitment I made to Member Bruijn during the plenary debate on the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act), on 20-01-2015 (34 035).

It is my express intention that the Comenius grants will contribute to more varied careers at universities of applied sciences and research universities. The award of a grant should give an incentive to the education careers of young and/or promising and/or excellent individual members and/or teams of the teaching staff. The award of a Comenius grant should also give an incentive to good educational leadership. Consideration can then be given to specific lecturers, a Professor of Teaching tenure track and/or teaching professors. Moreover, institutes can make use of these when awarding a teaching fellow or selecting the Teacher of the Year.

Fellowships in Teaching & Academic Development, University College Dublin

University College Dublin provides for the further professionalization of its teaching staff by making a wide range of facilities, funds and activities available in the field of academic development. A selected number of the teaching staff are appointed to the two-year fellowships to give them the opportunity to work on an applied project that addresses an important Teaching & Learning theme. The selected fellows (seven in the 2014-15 period) collaborate in multidisciplinary projects on curriculum development, learning, teaching and didactics, etc. The specific theme can vary between the two-year fellowships. The fellows collaborate with experts at other universities in Ireland and abroad whenever feasible.

These grants are also intended to result in the development of communities and networks of enthusiastic teaching staff and education managers who assist each other in their work and development, hold national master classes and actively exchange best practices. I will enter into discussions on the design with the relevant parties in higher education, in particular with the teaching staff.

More funds for education research

Sustainable education innovation also requires an insight into the effectiveness of interventions and measures. Both thorough education research and insights into how the findings from this research can be interpreted in terms of education practice at universities of applied sciences and research universities are then of crucial importance. More evidence-based information about what is and is not effective is required, whereby the questions from education practice are determinative. This can link up with themes that are addressed in this strategic agenda, such as small-scale learning environments, tutor and mentor systems, rich learning environments, talent programmes and diversity, etc. This knowledge will be disseminated at education and higher education Academic Workshops (Chapter 4) and via professionalization programmes at institutes. These results from research are also needed for the quality culture I require within the context of the *Accreditatie op Maat* (tailored accreditation) letter to the House of Representatives of the States General.[79]

79 *Accreditatie op Maat* (tailored accreditation) letter to the House of Representatives of the States General (Parliamentary Documents II, 2014-2015, 31 288, No. 471).

I intend to make funds available for systematic research into innovations in higher education from the perspective of the students and teaching staff *(via Academic Workshops, see Chapter 4)* and the broad dissemination of this knowledge. These funds, which will be made available from 2018, will increase to a structural amount of €5 million and will be provided via the Netherlands Initiative for Education Research (NRO). The objective of this is to scale up best practices, learn from each other and implement improvements throughout higher education.

Regulation free zones for education innovation

It may be desirable to temporarily relinquish specific rules (such as rules made for historical reasons) to introduce genuine innovations in higher management, subject to the condition that this does not impair quality. I intend to provide a number of study programmes scope for real experiments with new forms of education, possibly linked to the Comenius grants. These can also include experiments which examine the introduction of more flexibility, including the detailing of the ideas of the National Union of Students[80] for full and part-time students and ideas for extra-curricular activities. A second example is the use of modules with certificates for specific target groups within the context of Lifelong Learning. However, the quality and the basic quality must always be retained.

Co-designing transformational education, Verenigde Staten

Experts are of the opinion that the Olin College is the world's most innovative engineering college. With Olin College's focus on future challenges, its curricula not only address traditional subjects (such as mathematics) but also, and specifically, devote attention to design, creativity, working in groups, leadership, entrepreneurship, service learning, interdisciplinarity, system thinking and global perspectives. Olin graduates possessing these skills, in combination with the capacity to learn independently in an adaptive and intrinsically motivated manner must be able to make a major contribution to the 14 'Grand Challenges for Engineering'.

A further good example is provided by the flexible part-time education experiments and pilot trials that are to begin next year. Further examples include the student loan system vouchers that students can surrender between 5 and 10 years after the completion of their studies and the honours programmes. The Manifesto for future excellence education[81] recommends the retention of excellence programmes for trials with innovation. It would be desirable to retain this scope for students and teaching staff to continue work on pioneering higher education developments in a safe environment.

80 Dutch Student Union (LSVb) (March 2014) *Het nieuwe leren is flexstuderen De introductie van de flexstudent.* LSVb, Utrecht

81 Project Team Summit Excellence 2014 (2014) Manifesto for future excellence education. Amsterdam University of Applied Sciences and the Sirius Programme, Amsterdam

2.6. What we are going to do

Our endeavours to offer higher education that enables all students to get the best out of themselves encompasses the following in the period to 2025:

- The funds released with the student loan system will enable institutes to make work of the implementation of small-scale, intensive education. The extra funds will enable them to appoint additional teaching staff, tutors and mentors, research lecturers and associate professors.

- This will also provide for the increased intertwining of education and research. This will be achieved at research universities by the deployment of the gradually increasing numbers of research lecturers in increasing the students' involvement in original academic research and at universities of applied sciences by the deployment of the associate professors in increasing the ties between education, applied research and professional practice.

- The ambitions for internationalization relate to the encouragement of outbound mobility (via the 'Holland Scholarship' Programme and mobility windows), the implementation of improvements to the recruitment and retention of foreign students (Make it in the Netherlands) and the facilitation of transnational education (vision paper on internationalization). Institutes will give account for the extent to which they may implement anglicization. I will continue my efforts for the creation of the European Higher Education Area.

- Dutch institutes of higher education remain the international leaders in the field of open and online education opportunities. The Netherlands will emphasize this ambition during the Netherlands' Presidency of the Council of the European Union in 2016. Institutes experiment with the opportunities and implement the lessons in their entire range of study programmes. The funds released with the student loan system make it feasible to expand the current open online higher education incentive scheme.

- All university of applied sciences teaching staff make their educational resources freely available in 2025, so that they can make use of each other's digital learning materials. An exploratory study will be carried out to explore whether, and if so how, a national or international platform for sharing, processing and using educational resources can contribute to this. Institutes will also be called on to recognize each other's MOOCs.

- Higher appreciation of education as compared to scientific research by the promotion of more differentiation in the careers of teaching staff and researchers. Sufficient teaching professors need to be available for every scientific discipline of some size.

- The introduction of Comenius grants for teaching staff and education managers focused on education innovation in higher education. In the longer term a structural amount of €20 million will be available, which I intend to provide for the allocation of 110 grants in each sector (universities of applied sciences and research universities). The intention is that these grants can make a contribution to more varied careers at universities of applied sciences and research universities and to more exchanges of best practices. In addition, the outline agreement with the Association of Universities in the Netherlands (VSNU) will include agreements on the gender balance for professors.

- A study is being carried out to examine whether the National Student Survey (NSE) can be developed further into an instrument that can give a general indication of the institute's quality culture and the students' contribution to that culture.

- Funds will be made available to the higher education sector for more applied and demand-oriented research. In the longer term a structural amount of €5 million will be made available. This will provide for the more rapid scaling up of best practices.

- A number of regulation-free zones will be created in higher education to offer more scope for education innovations. Examples of these include honours programmes, pilot trials with flexible full-time and part-time education, partial certificates and an experiment in flexible studies for students.

3 Accessibility, talent development and diversity

3.1. Ambition for 2025: every talent is given an opportunity

We wish our higher education to offer opportunities to every student – opportunities for their personal development, the development of their talents and the achievement of the level of education that is suited to them. This is also in the interest of society, as we need all this talent. The demand for the highly qualified is high – and continues to increase. As I stated earlier, I do not regard an increase in the number of persons with higher education qualifications as an end as such. The Netherlands already has a relatively large number of nationals with higher education qualifications and many secondary vocational education certificates, for example, offer students excellent qualifications for the labour market. Moreover, the sectors confronted with a shortage or risk of a shortage of suitable staff (education, technology and engineering and care) are working hard on solutions. Consequently, the essence of the issue confronting us is slightly different: we need to get every student in the right place. This involves offering scope to all students, including those for whom the decision to study is anything but self-explanatory.

My principle is higher education with maximum accessibility. Our students deserve it. The Netherlands deserves it. There may be no financial, cultural or information barriers to higher education. The Netherlands already does reasonably well in this respect, including from an international perspective. Large groups of students enter higher education and a comparison of the students with their parents' level of education reveals that universities of applied sciences, in particular, play an important emancipatory role. Nevertheless, there are still clear differences between groups and differences in the level of education between today's young people are still clearly related to the level of education and socio-economic status of their parents. Students transferring to universities of applied sciences from secondary vocational education, for example, much less frequently have parents with higher education qualifications. Women do well, but non-Western ethnic minority students are still much less likely to enter higher education than others. Fortunately, their participation level has increased sharply in recent years. However, we're not there yet. A substantial number of schoolchildren and their parents still perceive higher education as another and unknown culture – and this all too often still forms a barrier. This has to change.

Offering individual students opportunities for personal development entails even more differentiation in higher education than at present, both in terms of the education and the education concepts. This differentiation is necessary because students are different. The diversity of the student population has increased sharply with the greater participation in higher education and is continuing to increase. Dutch society is becoming more diverse and this is reflected in a more varied student population. Individualization is also resulting in increasing variety in students. There is more need for flexible learning tracks and tailoring in higher education, as well as in secondary education and secondary vocational education. More tailoring in secondary education and secondary vocational education also has consequences for higher education.

My ambition for 2025 is that the various groups of students in higher education receive much more attention – *appropriate* attention. The average student who grew up in the rich Amsterdam-Zuid district has very different needs and a very different background and learning style from a student who grew up in the poor Rotterdam-Zuid neighbourhood. There are also great differences in the composition of the student population of institutes in the Randstad conurbation and the eastern and southern Netherlands, not to mention the differences between students from abroad who originate from countries including Germany, Italy and Korea. Higher education needs to have an answer to this diversity. This implies tailoring, or differentiation, but at the same time also implies holding high expectations of every student irrespective of their prior education, background or origins.

Nor does this begin with higher education. Secondary schools, institutes of secondary vocational education, universities of applied sciences and research universities bear a joint responsibility for guiding their students to the right place in higher education, for uninterrupted learning lines and for the study success in higher education. More cooperation across the educational spectrum is required.

Important steps forward have been made in the differentiation of the range of study programmes on offer in recent years. However, we aren't there yet. This is also applicable to the system. The system I have in my mind's eye offers much more scope for flexible learning routes within higher education. There need to be realistic transfer options from institute of secondary education to university of applied sciences and research university, from secondary vocational education to university of applied sciences, from associate degree to bachelor's degree and from bachelor's degree to master's degree programme. There need to be more tailored routes. I also perceive scope for more options for the combination of subjects of study programmes and institutions, including combinations beyond university of applied sciences and research university demarcations. This is appropriate for our variation in students. This also includes realistic opportunities to re-enter higher education after a period in the labour market.

In continuation of the above, I have the following seven ambitions:

a. *Retain a readily accessible system;*
b. *Develop the talent programmes further;*
c. *Increase study success;*
d. *Enhance collaboration in the education al spectrum so that all students are assigned the place that is most suited to their ambitions and talents and transfers are more successful;*
e. *Devote extra attention to secondary vocational education students who transfer to university of applied sciences;*
f. *Devote more attention to transfers and flexibility within the higher education system, in part by the enhancement of differentiation in education, to cater better for the diversity in the student population;*
g. *Provide flexibility in the system for Lifelong Learning so that following a higher education study programme is also appealing during the working career.*

3.2. Readily accessible higher education

My agenda is intended to create the scope needed to offer all students the education that is most suited to them. I am of the opinion that this is the essence of accessible higher education. However, the current drop-out rates – during their first year, 40% of students at universities of applied sciences and 26% at research universities still drop out from their initial choice of study – make clear that improvements are both feasible and necessary. Moreover, this is all the more the case when we appreciate that there are also significant differences between groups. I am concerned by the indications received from the universities of applied sciences in the major cities. Although these universities of applied sciences are making great efforts to cater for their large populations of non-Western ethnic minority students, the drop out and switch rates of this group are still increasing. Only 26% of the non-Western ethnic minority male students attending universities of applied sciences (2008 student cohort) now have a degree after five years.[82] Improving this situation is a task for society. Institutes need to devote additional attention to this group, for example during the matching process and the tutoring and mentoring, although my proposals for more cooperation across the educational spectrum *(see 3.5)* also state the need for specific attention to the non-Western ethnic minority issues. Continued attention is also required for the

82 Statistics Netherlands StatLine, *studievoorgang hbo table*, consulted on 27 February 2015.

position of students with a functional limitation: although they devote above average time to their studies, they still have a higher drop-out rate and take longer to complete their studies.

I am gratified to note that research universities and universities of applied sciences are making keener choices, both in terms of the range of study programmes they offer and the education concept they have adopted, as well as in terms of the student groups on which they are primarily focused. This selection of specific student groups can, for example, relate to the target group for Lifelong Learning or to students who wish to develop specific talents (such as in the arts, sports or entrepreneurship). This increases the diversity of the study programmes on offer to students. However, it is also important that the entire system remains accessible to all students. Moreover, students must be appropriately informed about the choices the institutes make in their profile and education concept so that students are aware of what they are choosing.

The government bears the final responsibility for a readily accessible higher education system. The secondary education and secondary vocational education sectors have, in analogy with higher education, initiated a development towards greater flexibility and tailoring and are also seeking ways of catering better for their students. The *Plan van aanpak Toptalenten* (action plan for top talents), about which the State Secretary informed the House of Representatives of the States General in April[83], is one manifestation of this.

The Dutch council for secondary education recently launched a proposal for a tailored diploma, in which pupils will be able to sit examinations in subjects at various levels and the diploma may also state the pupil's extra activities at school. If this tailored diploma is introduced then some pupils will complete their preparations for higher education in a different manner. When this development is set against the accessible higher education that I see in my mind's eye, with suitable learning routes for all students, then these alternative secondary education preparations for higher education will inevitably have consequences for higher education. Pupils who have completed their secondary education with more than the regular programme will then need to see this reflected in the study programme they are offered in higher education. Honours tracks, for example, could be of interest to this group. The matching scheme offers universities of applied sciences and research universities an important instrument for giving account of the secondary education qualifications of candidate students with a tailored diploma. This must provide the opportunity to guide the new student to the right place. I am of the opinion that the scope for decentralized selection created on the abolition of admission via drawing lots is also an important instrument. I shall, with the State Secretary, closely monitor the extent to which the Dutch council for secondary education's detailing of the proposal for the tailored diploma provides assurances for the civil effect of the secondary education diploma. I understand the statement made by the Association of Universities in the Netherlands (VSNU), in which the association draws attention to the need for the provision of sufficient academic education in pre-university education subjects for the ability to complete university studies with success. When the proposal for the tailored diploma has been worked out in more detail all parties involved (the Dutch council for secondary education (VO-raad), Netherlands Association of Universities of Applied Sciences, Association of Universities in the Netherlands (VSNU), Intercampus Students' Association (ISO), National Union of Students (LSVb), Youth organization for vocational education (JOB), National Students Action Committee (LAKS) and Ministry of Education, Culture and Science) will consult to assess whether and, if so how , the developments in the various sectors can be linked to each other.

The Inspectorate of Education has stated in its Inspection Report that in the coming years it will closely monitor developments in the accessibility of higher education for various groups.

83 Letter to the House of Representatives of the States General on the progress in the *Plan van aanpak Toptalenten* (action plan for top talents) 2014-2018, 9 April 2015 (Parliamentary Documents II, 2013-2014, 340 00, VII, No. 88).

I attach importance to this, in part in view of the increasing number of study programmes with a fixed number of enrolments. The fixed number of enrolments policy is intended to provide assurances for the quality of study programmes when too many candidates apply for a place.

3.3. Talent programmes

In recent years, a quality culture has developed in higher education that gives encouragement to excellence and talent development. The Sirius programme has made a great contribution. Research universities and universities of applied sciences have used the Sirius programme to achieve a fundamental cultural shift. Attention has increasingly focused on individual talents and capacities, manifested in the form of excellence programmes. This development needs to be pursued vigorously. All research universities now have honours programmes at bachelor's level. A critical mass is needed to continue the existing honours programmes, provide assurances for quality and to continue to innovate. 7% of students following a bachelor's degree programme at research universities participate in honours programmes. 5.3% of students following a bachelor's degree programme at universities of applied sciences and 3.4% of students following a master's degree programme participate in honour's programmes.

HU University of Applied sciences Utrecht

Students at the HU University of Applied Sciences Utrecht who follow an honours programme by intensifying or deepening their regular study programme can earn one or more *Ster Verklaringen* (star declarations). Students can also earn stars on their own initiative. These students then submit an honours application for one of their activities for its qualification as an excellence performance. A student who has earned five *Ster Verklaringen* can, after the completion of a final assignment, come into consideration for the honours certificate. They can furnish this to work placement companies or future employers as proof of their capacities.

The Netherlands can retain its leading role in honours education and talent development only with continued efforts and attention. These are, by virtue of their position, valuable test beds for education innovation and quality trials that can also in part have an influence on regular education. All students then benefit. For this reason, during the initial years I intend to allocate some 10% of the funds released by the student loan system to the powerful further development of talent programmes, including the honours programmes.[84] As I do not wish to erect any financial barriers to participation I have discontinued the plans for the experiment with tuition fee differentiation for honours programmes.[85]

The ambition is to implement more small-scale, intensive education, including outside of the honours programmes and study programmes with the distinctive feature small-scale, intensive education. For this reason it is also undesirable to request higher tuition fees for small-scale study programmes in regular education, other than in those situations in which the distinctive feature small-scale, intensive education has been acquired via the Accreditation Organisation of the Netherlands and Flanders (NVAO) and additional costs are

84 This also fulfils the commitment I made to Member Bruijn during the plenary debate on the Wet *Studievoorschot Hoger Onderwijs* (higher education student loan system act), on 20-01-2015 (34 035).

85 Commitment made during the plenary debate on the *Sociaal leenstelsel* (student loan system) legislative proposal, 11 December 2013.

an issue. Decentralized admission is also feasible for these study programmes to provide assurances for the quality of and ability to organize small-scale, intensive education.

3.4. Improving 'study success'

A number of measures have been implemented in recent years that are intended to increase the probability of study success for students who transfer from pre-university education or secondary vocational education. I regard study success as the outcome of high quality education and the student in the right place, and not an end as such. Promoting study success implies offering opportunities, reducing drop-out rates and achieving reasonable study durations. During the past years universities of applied sciences and research universities have made tremendous investments in the improvement of quality and promotion of study success. Many activities have been initiated that are focused on the redesign of curricula, intensification of education and guidance, the exploration and selection function of the negative binding recommendations regarding the continuation of studies after the first year, monitoring of study progress, taking account of extracurricular activities, attention to new forms of testing and teaching staff professionalization, etc. The efforts are beginning to bear fruit. I attach importance to the institutes' continuation of these efforts and to their intensification of them as necessary. It is then important to devote attention to the various talents of students. The universities of applied sciences and research universities endorse these ambitions, with an eye to the future.

I discuss the efforts secondary education and secondary vocational education have made to get each student in the right place in sections 3.2 and 3.5. A great deal has also taken place in higher education. This relates, in the first instance, to the study choice. Students state that making the wrong study choice is the most important reason for their decision to switch study programme or drop out. For this reason, universities of applied sciences, research universities and the government have worked hard on the improvement of the study choice process and have implemented measures including the introduction of the 1 May registration date deadline, the 'Study in figures' study information leaflet and the matching scheme. The task for the coming years will be to learn from the first experiences with the matching scheme, experiment with what is effective for each group and to exchange best practices. The studies carried out to date appear to indicate that prospective students think that the activities at the institute itself are the most useful. These result in ties with the institute. These activities at the institute can be of the form of individual discussions between a member of the teaching staff and a prospective student, as well as trial study days and matching days that enable students to experience what studying in higher education really means. Although these instruments are relatively expensive and cost a great deal of the teaching staff's time, they do appear to have the greatest effect. For this reason, institutes will need to continue to make substantial investments in study choice activities. However, it should be noted that these study choice activities are only a step in the student support process. Gains can still be achieved in the coming years by linking the experience in the study choice activities to the further support (tutoring and mentoring) offered to students in their first year, in particular. As indicated earlier, additional attention then needs to be devoted to groups of students for whom studying in higher education is not self-explanatory, such as non-Western ethnic minority students and students with parents from a lower socio-economic level. I intend to subject the experiences with the matching scheme to a broader evaluation in a number of years.

Higher education has also been made more selective in a limited number of places in which dropout rates had been very high and it transpired that students had not been prepared properly for the level of the study programme. Further prior education requirements have been formulated for seven secondary vocational education-university of applied sciences routes, as a result of which transfers will no longer be self-explanatory from 2015-2016 onwards. The first evaluation of these regulations will take place in 2016. Students

with a university of applied sciences first year certificate are no longer entitled to admission to research universities. These students currently do come into consideration, whereby the institute decides whether to admit the student. Specific further prior-education requirements have been formulated for the universities for teacher education. I attach importance to the institutes' use of means other than selection in getting students in the right place. The matching scheme would appear to be ideally suited to this purpose. Creating more homogeneous groups can also be appropriate, provided that this is linked to a clear institutional vision.

We know, for example, from the experiences of the universities of applied sciences with many non-Western ethnic minority students and the experiences with the associate degrees and the three-year bachelor's degree programme for students with a pre-university education that this increases the ties with and the motivation in the study programme.

The institutes of higher education have, in line with the recommendations from the Veerman Commission and in part due to the performance agreements and the study choice activities, increased their attention to study success and to incoming students. This s a gain, although we're not there yet. The evaluation of the performance agreements and the meetings on the future form of quality agreements will examine how we can integrate the efforts to improve study success and the results that have already been achieved further in the policy.

3.5. Collaboration across the educational spectrum

Universities of applied sciences, research universities, institutes of secondary vocational education and secondary schools actively engaged in the study success of their pupils in their further education all state that the most important gains for individual pupils can be achieved by increasing the regional collaboration between the schools supplying students to institutes of higher education and the institutes of higher education. Consequently, this needs much more attention in the coming years. This will require the adoption of more of an education spectrum attitude in which the component sectors bear the joint responsibility for the development of the individual pupil. The sectors would also appear to be ready to do so. The secondary education sector has stated in the *Sectorakkoord-vo* (secondary education sector agreement) that it regards itself as jointly responsible for the study success of its pupils in their further education. The *Bestuursakkoord-mbo* (secondary vocational education administrative agreement) has assigned the quality plans the explicit objective of creating an appropriate link with the universities of applied sciences. Higher education has, in part due to the performance agreements and the study choice activities, increased the attention to study success and to new students. However, there is still work to be done. All too often, the reasoning behind policy development is based on the sector in question and cooperation with other components of the education spectrum does not receive the attention warranted by the interests of the students.

Collaboration in the region can serve a number of objectives. Existing collaborative arrangements often focus on good substantive links (contiguous curricula), a contiguous track for pupils who are both able and willing to learn more, improvement of the career orientation and study choice guidance or the professionalization of teaching staff in secondary, secondary vocational or higher education. It is important to bear in mind that education is a people process. Networks of teaching staff from different education institutes are in general also the carriers of innovation in education. The teacher training programmes at universities of applied sciences and research universities also play an important role in this, with joint teacher design teams in which secondary and higher education teaching staff work out education, and with programmes such as the *Eerst De Klas* (Teach First) trainee programme and education traineeships. Successful collaborative projects have been initiated in a number of regions in recent years. Some of these have been funded or funded in part by the government, although most have been funded by the institutes participating in the project. At the same time, this

collaboration is often fragile and too dependent on a number of highly-motivated professionals. The parties participating in the projects have a clear wish to make broader use of the knowledge and experience they acquire in improving the successful transfers of students. All too often, a structural perspective on regional collaboration is lacking.

Our agenda is intended to change this, not by prescribing how regional collaboration is to be given shape, but by encouraging universities of applied sciences and research universities to seek collaboration with secondary schools and institutes of secondary vocational education. I also intend to provide financial support for these collaborative projects *(for more information, see the Investment agenda, section 5.3)*.

I then assume that the secondary schools and institutes of secondary vocational education will also contribute to these projects, self-evidently in proportion to their means. This contribution can also be in the form of teaching staff time (contribution in kind). I will also request express attention to secondary education-higher education and secondary vocational education-university of applied sciences collaboration in the future higher education and secondary vocational education quality agreements.

The intention is to give the current promising collaboration initiatives a structural basis and to expand them. I refer to a number of initiatives in which I think of collaboration within the education spectrum. This list is not exhaustive and it is not intended to serve as a list of initiatives to be followed by all institutes. Institutes need to develop initiatives and projects that are suited to their profile, education concept, context and environment.

Examples of collaboration between secondary education and higher education include the intensive cooperation in the Utrecht, Amsterdam and Twente regions. These regions have adopted an explicit combination of a pupil and a teacher approach. Large groups of pupils are offered an opportunity to really experience what it is like to study in higher education. This is achieved, for example, by visiting a research lab with their teacher or by following master classes. Exchange programmes and professionalization programmes ensure that secondary school teachers visit universities of applied sciences or research universities more frequently, which in turn enables them to fulfil the role of substantive coach for their pupils. The more intensive contacts with and at secondary schools are also beneficial to the higher education teaching staff's knowledge and understanding of the situation in secondary education.

Higher education students in these regions are also deployed as role model for secondary school pupils, for example by being appointed 'personal assistant of the teacher'. These personal assistants of the teacher offer perspectives to pupils, in particular to pupils for whom the step to higher education is not self-explanatory (first generation with a higher level of education or ethnic minority groups).

An interesting example is also provided by the Faculty of Science at Radboud University. Secondary school teachers attend the first year students' lectures given by the faculty. This enables the teachers to experience their pre-university education school's teaching link with higher education for themselves, acquire the knowledge they need to improve this link, keep their knowledge of their subject up to date and, and above all, makes the teachers accessible to the first year students with whom they are studying. The secondary school teachers can then serve as tutors for these first year students, who can help them solve problems and make contact with the university teaching staff. These developments are also taking place at universities of applied sciences. Best practices are being developed at the science support points that may be taken up by the language and arts and humanities, economics and law domains. Maastricht University, Utrecht University and the University of Twente have developed professional learning communities with a number of secondary schools which assist the schools in the analysis and interpretation

of the schools' data so that they can provide the pupils better tailoring support. It would be beneficial to continue these initiatives and expand them to other regions.

Another good example is the summer camp option offered by a number of universities of applied sciences and research universities. These camps enable pupils to prepare themselves for study in higher education, test or brush up their knowledge, or acquire inspiration for their personal development. One example of these camps is the *Vakantieschool* (holiday school) organized during the school summer holidays by Inholland University of Applied Sciences and Hogeschool Rotterdam, University of Applied Sciences, with support from the Municipality of Rotterdam. The *Vakantieschool* gives lessons in language, mathematics and study skills to students of the Zadkine and Albeda institutes of secondary vocational education that wish to continue their studies at a university of applied sciences.

A number of universities of applied sciences and research universities are also developing pre-university programmes, such as Leiden University's PRE. The University's programme offers almost 100 talented pre-university education pupils an opportunity to follow a university study programme on one afternoon a week during their last two years at school. This is a broad study programme which is linked to the University's Sirius/honours programme and is intended to enable the pupils to become acquainted with a number of disciplines. The pupils also carry out research in one element of the programme.

One example of the collaboration between institutes of secondary vocational education and universities of applied sciences is the *Teamplayers* initiative between The Hague University of Applied Sciences and the ROC Mondriaan regional education and training centre. Sports management and physical education teaching (higher education) students and sports and exercise (secondary vocational education) students then work together as a team for one year on a specific assignment from professional practice. Secondary vocational education and university of applied sciences students work together, for example, in the Schilderswijk district in The Hague on the improvement of the residents' participation in sports by including the organization of a renewed range of sports on offer in the district and the improvement of the organization of the district's sports association. Working together on the assignment enables students to become acquainted with the different working levels in professional practice and with each other's worlds. This helps secondary vocational education students as it makes the step to universities of applied sciences smaller.

Zuyd University of Applied Sciences' STER (star) programme

This programme offers talented secondary vocational education students in the region who are following a level 4 construction or civil engineering study programme an opportunity to follow a university of applied sciences study programme on one afternoon a week during the last year of their secondary vocational education studies. Students who subsequently enrol in the university of applied sciences's Built Environment (BBE) bachelor's degree programme are then offered a three-year fast track university of applied sciences study programme. The visitation committee (quality assurance inspection committee) was enthusiastic about this route. The committee's report stated that 'this study programme delivers high-quality intake and links.'

Institutes in the Almere region are also collaborating actively in career orientation and the preparation of pupils for higher education. The LOB (career orientation and support) development team Almere is developed by staff of Windesheim University of Applied Sciences and regional secondary schools. They are focused on a contiguous career

orientation and support learning line from the general secondary education transition class to the second year at university of applied sciences, with a range of activities and assignments for the pupils including the preparation of a portfolio, discussions about a profession with an adult, attention to the choice process and 'speed-dating' with parents, as well as the matching scheme and attention given to students beginning their studies.

Knowledge about student progress in their further education often serves as a trigger for discussions between education institutes on the link between the levels and study success. Steps have been taken in recent years to provide secondary schools access to information about their former pupils' success in their subsequent education. Secondary schools need, in particular, to make better use of the information that is already at their disposal. This is also applicable to the information at the research universities and universities of applied sciences. Institutes of secondary vocational education do not yet have a national instrument that provides them information about the study success of their former students at universities of applied sciences, although they have a need for this information. I, together with the Netherlands Association of Universities of Applied Sciences and the Netherlands Association of VET (Vocational Education and Training) Colleges, will examine how we can develop an instrument of this nature. One of the questions that will then need to be answered is the level of aggregation of the transfer data required to ensure that data cannot be traced back to individual students.

I am of the opinion, in conclusion, that we must not underestimate the importance of collaboration between supplier and customer schools for students from lower socio-economic environments and for non-Western ethnic minority students. Self-selection is an issue for some of these students. I wish to challenge the higher education sector, and provide the necessary support, to intensify its work on socio-cultural accessibility to the extent required to do more justice to the chances of these pupils. Major gains can be achieved by creating an open culture, entering into discussions with the schools supplying pupils and enabling pupils to become acquainted with the 'other' culture of higher education at an early stage of their time at school.

3.6. Additional attention to secondary vocational education students

The transfer from secondary vocational education to university of applied sciences has proven to be vulnerable. During the past five years, the switch and drop-out rate of first year students at universities of applied sciences with a secondary vocational education prior education has increased from 36% to 41%. 21% of the students drop out and the remainder switch their study programme. It will be evident that additional attention needs to be devoted to secondary vocational education students who transfer to university of applied sciences, and certainly when it is borne in mind that transfer from institute of secondary vocational education to university of applied sciences is an important emancipatory route. This is not only applicable to the students who have completed the transfer, but also to the prior phase in which students decide whether they wish to progress to a university of applied sciences. However, I am not of the opinion that every secondary vocational education school leavers should necessarily progress to higher education. Students with a secondary vocational education certificate have excellent qualifications for the labour market and the labour market also welcomes them. However, excellent opportunities must also be available to the group of secondary vocational education students with the ambition and capacity to study at a university of applied sciences. I attach importance to the removal of unnecessary impediments that prevent the transfer of these students from institutes of secondary vocational education to universities of applied sciences.

It is then gratifying to note that students from secondary vocational education who successfully complete their first year at a university of applied sciences subsequently do relatively well. The Inspectorate draws attention to the fact that the secondary vocational education students' choice of university of applied sciences is then a factor. The drop-out rate of secondary vocational education school leavers who successfully complete their first year at a university of applied sciences is virtually zero, at some institutes but almost one-third at other institutes.[86] The Expertise Centre for Professional Education (ECBO) will shortly complete a study that searches for statistical explanations for the differences in the study success of secondary vocational education school leavers at universities of applied sciences. Investments in the collaboration between secondary vocational education and universities of applied sciences on education level would appear to be having a beneficial effect. I expect the universities of applied sciences to devote additional care to secondary vocational education school leavers in the coming years. Universities of applied sciences must actively search for increased collaboration with institutes of secondary vocational education in the region and carry out many activities that will enable secondary vocational education students to become acquainted with the university of applied sciences and with university of applied sciences students and teaching staff. One of these instruments consists of giving guest lessons at institutes of secondary vocational education. This also extends to actively inviting secondary vocational education students to visit the university of applied sciences.

Collaboration in the northern Netherlands

Four universities of applied sciences (NHL University of Applied Sciences, Stenden University of Applied Sciences, VHL University of Applied Sciences and Hanze University of Applied Sciences) and seven institutes of secondary vocational education (Alfa College, Nordwin College, Drenthe College, ROC Friese Poort, Friesland College, Noorderpoort and Onderwijsgroep Noord) in the northern Netherlands concluded a covenant on successful transfers from institute of secondary vocational education to university of applied sciences at the end of 2012. These institutes perceive that they have a social responsibility to improve transfers from institute of secondary vocational education to university of applied sciences and have been actively working on this improvement in recent years. The universities of applied sciences and institutes of secondary vocational education are making great efforts in the provision of active study support for secondary vocational education students. This is in any case provided to all secondary vocational education students during the last two years of their secondary vocational education, although study choice support is increasingly being made available in the second year of secondary vocational education. A university of applied sciences member of teaching staff then, for example, visits students during their first year of secondary vocational education to give an explanation of universities of applied sciences. One example of a collaborative project focused on an appropriate study choice is the university of applied sciences module project of the NHL University of Applied Sciences and ROC Friese Poort. A total of 50 secondary vocational education students following the teaching assistant and pedagogical work study programmes are divided into two groups that follow a nine-week programme given by university of applied sciences and secondary vocational education teaching staff on three hours a week. The students are then assisted by student counsellors (former secondary vocational education students) of the primary teacher education, social work and services, and educational theory university of applied sciences study programmes.

86 This relates solely to students who drop out. This is in contrast to the rate of 36%-41% referred to at the beginning of this section, which relates to drop out and switch

On the introduction of the student loan system, on 1 September 2015, a great deal of attention was devoted to the retention of the broad accessibility of the higher education system. During the debate on the student loan system specific attention was devoted to students from groups with a lower socio-economic status, which include many non-Western ethnic minorities. Assurances for the broad accessibility are provided by increasing the supplementary grant for students of parents with lower incomes, the retention of the *OV-kaart* (Dutch student pass for public transport) and the relaxation of the repayment scheme.[87] Additional resources are made available for the provision of information to secondary vocational education students. We intend to ensure that secondary vocational education students do not decide not to continue their studies in higher education simply because they lack the necessary information or because they have an incomplete insight into the financial consequences of the student loan system. In furtherance of the commitment I made to the Senate of the States General, the Ministry has consulted with secondary vocational education transfer experts on the most appropriate means of organizing of a recognizable, low-threshold contact point for secondary vocational education students with financial questions, doubts and concerns.[88] The experts have stated that alongside the provision of appropriate information to secondary vocational education students on the changes that are being made it is particularly important to ensure that secondary vocational education students clearly understand the consequences these will have for them. The computation aid DUO has developed[89] may then fulfil a role. Students and prospective students can use this computation aid to draw up a study budget, examine how much study financing they will need and view the impact of their choices on the amount of their study debt and the repayment burden after graduation.

As many secondary vocational education students will begin by raising their questions with their teachers, mentors or the dean, I have sent a letter to the institutes of secondary vocational education in which I request them to take the necessary action to promote the financial knowledge of the student loan system and financial awareness. This can, for example, be of the form of lessons in citizenship, meetings on career orientation and study choice or referrals to specific external organizations that can help young people with their financial choices. Many good instruments have already been developed or will become available within the near future. An interesting example is the initiative the HU University of Applied Sciences Utrecht has taken to develop a lessons programme for institutes of secondary vocational education.[90]

The secondary vocational education sector has taken important steps in the improvement of the link between institutes of secondary vocational education and universities of applied sciences. These include, first of all, the decision to make secondary vocational education more intensive and more challenging. In addition, language and mathematics reference levels will be introduced for level 4 secondary vocational education that are identical to those for universities of applied sciences.

87 Any effects of the introduction of the student loan system will be monitored. In carrying out this monitoring the Government implements the motions of members Slob *et. al.*, Klaver et al. and Van Meenen *et al.* that received broad support during the debate on the student loan system in the House of Representatives of the States General (Parliamentary Documents II, 2012-2013, Parliamentary Documents II, 33 410, No. 20 and 2014-2015, Parliamentary Documents II, 34 035, No. 45). Pursuant to the commitment made to the Senate of the States General, students and the States General will be involved in the design of the monitor.

88 Commitment made to members Sent and Engels during the plenary debate on the Wet *Studievoorschot Hoger Onderwijs* (higher education student loan system act) (34035). These commitments have been fulfilled with the letter on the third knowledge measurement of the stude

89 This computation aid is available from the DUO website, https://duo.nl/particulieren/actueel/Rekenhulp-nieuw-stelselstudiefinanciering. asp

90 Pursuant to the commitment that was made, the Senate of the States General will be involved in the evaluation of career orientation and support in secondary vocational education. This commitment was made to members Sent and Engels during the plenary debate on the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) (34035).

These developments offer prospects, but at the same time they also require additional attention to appropriate links between university of applied sciences study programmes and modernized secondary vocational education study programmes.

The Netherlands Association of VET (Vocational Education and Training) Colleges, Youth organization for vocational education (JOB) and the Dutch Council of Training and Education (NRTO) recently presented a plan for the future which, if implemented, will also have evident consequences for the link between secondary vocational education and universities of applied sciences. Consequently, all education sectors have plans that impact transfers and links to higher education. Good discussions on this development between the various sectors involved are then of importance. The plan of the Netherlands Association of VET (Vocational Education and Training) Colleges, Youth organization for vocational education (JOB) and the Dutch Council of Training and Education (NRTO) is also focused on increasing the appeal of senior vocational education to larger groups of students. They propose that the higher levels of preparatory secondary vocational education and senior general secondary education be integrated into 'preparatory vocational education'. If this proposal is implemented then the pupils who now opt for senior general secondary education will certainly receive a different form of preparations for study at a university of applied sciences. As a result, the outcome of these discussions is of relevance to the link and, consequently, universities of applied sciences need to be closely involved in the discussions. The State Secretary and I shall submit a response to this proposal to the House of Representatives of the States General at the beginning of the summer.

The development of what are referred to as 'transfer electives' in secondary vocational education is a good development which is specifically focused on good preparations for the transfer to a university of applied sciences. The Government assumes that once all secondary vocational education study programmes include electives, in 2016-2017, all level 4 secondary vocational education students will be able to choose a transfer elective.

Universities of applied sciences and institutes of secondary vocational education have great confidence in the value of transfer electives and are also working hard on their contents. At the same time, progress coordinators and teaching staff state that many secondary vocational education students find it important that they are recognized as secondary vocational education students for whom the transfer to a university of applied sciences is a realistic and appropriate option early in their secondary vocational education studies and not, consequently, only once most electives are offered. This is certainly applicable to secondary vocational education students for whom the transfer to higher education is not a self-explanatory choice, as well as to other students. The early identification of secondary vocational education students with the potential to transfer to a university of applied sciences to study for an associate degree simplifies the creation of contiguous learning tracks for related study programmes. For this reason I shall facilitate secondary vocational education institutions and universities of applied sciences that wish to make serious efforts to introduce contiguous learning lines for related study programmes (fast track or otherwise) by making it possible to experiment with 'joint secondary vocational education-university of applied sciences study programmes'.

This implements my intention stated in my letter of 2 June 2014, on a future oriented secondary vocational education[91], to include transfers to universities of applied sciences in the 'professional route' experiments.

3.7. Transfers within the higher education system

91 Letter to the House of Representatives of the States General on future-oriented secondary vocational education, 2 June 2014 (Parliamentary Documents II, 2013-2014, 31 524, No. 207).

I not only intend to ensure that the higher education system is readily accessible to pupils and students entering higher education, but also that students in higher education are offered opportunities to gain the maximum from their talent. This requires a range of study programmes with appropriate links to the various levels, interests and ambitions of the increasingly varied student population. A more differentiated range of study programmes is required.

With our binary system we are in a good position to meet the needs for variety and differentiation. This dual system refers to the distinction between the two basic orientations within the system, one of which is oriented to the profession and one of which is oriented to research.

We realize that in practice the distinction is more nuanced: research universities train students for science, the labour market or entrepreneurship and universities of applied sciences, even though it is not their primary objective, also carry out research. Nevertheless, the distinction between education at universities of applied sciences and research universities makes it possible to enhance the essence of each type of education and to accommodate the differences in orientation and learning style between students to a great extent. The business community and organizations in the Netherlands are of the opinion that this distinction in our system is worthwhile, whilst over the borders this distinction is recognized as a contributory factor to the quality of our higher education.

The Veerman Commission's recommendations have initiated the introduction of more differentiation in this binary system in response to the increasing diversity of the student population. A great deal has been achieved, although we're not there yet. The system we have in our mind's eye offers more opportunities and greater scope. It offers appealing study programmes for students who are interested in a short study programme and for whom a longer study programme is not appropriate. It offers all students with a bachelor's degree a realistic option of following a master's degree programme. It has a university of applied sciences sector that is appealing to pre-university education school leavers. It also offers flexibility, flexibility to nevertheless progress from an associate degree programme to a bachelor's degree programme, to decide to begin with a study programme at a university of applied sciences – perhaps because the step to a research university appears to be too great – and then nevertheless follow a master's degree programme at a research university, or to opt for a master's degree programme with a greater professional orientation when it becomes apparent during the bachelor's degree programme at research university that a master's degree programme with a greater professional orientation would be more appropriate. This also extends to more scope for the selection of a study programme which contains elements of university of applied sciences and research university study programmes. The same is also applicable to the option of acquiring several years' work experience and then following a study programme or study module in higher education.

More collaboration between institutes is crucial for the fulfilment of many of these ambitions. For this reason, this will receive a great deal of attention during the coming years.

Positioning the associate degree more strongly

The associate degree is an important new member of our higher education family, a member that needs to develop further to maturity. The fact that virtually all the students at Rotterdam University of Applied Sciences' Rotterdam Academy following an associate degree programme (secondary vocational education graduates) would not have entered higher education in absence of the associate degree programme makes the added value of the associate degree clear. The associate degree has an important emancipatory function. Moreover, the field has a need for a level of qualification between level 4 secondary vocational education and bachelor's degree graduates.

The letter to the House of Representatives of the States General of 5 June 2015 outlines a new perspective for the associate degree[92] , a perspective that links up with the ambition of the universities of applied sciences as expressed in the Netherlands Association of Universities of Applied Sciences' *HBO2025, wendbaar en weerbaar* (universities of applied sciences in 2025, flexible and resilient) report. The object is to strengthen the associate degree's position in the system. More associate degree programmes should be introduced and the number of students with an associate degree should be increased from the current almost 6000. I am providing for this by separating the associate degree from the university of applied sciences bachelor's degree programme. I expect this to enhance the associate degree's identity and its appeal to institutes and to students. This is also of importance to private education. A greater range of associate degree programmes will increase adult participation in higher education. Rotterdam's approach appears to interest young students, an approach in which a separate community (the Academy) has been formed for students following the associate degree programmes.

I attach importance, now the associate degree is acquiring an independent position, to the retention of the feasibility of transfers from the associate degree to a university of applied sciences bachelor's degree programme. An associate degree must continue to offer a leg up to students who have become acquainted with higher education and wish to develop themselves further. Institutes offering associate degree programmes must ensure that there are good opportunities for transfers to one or more bachelor's degree programmes of the institute or other universities of applied sciences.

Tailoring within bachelor's degree programmes

As stated in Chapter 2, increased tailoring is also feasible within bachelor's degree programmes. In recent years, institutes have worked hard on increasing the diversity within bachelor's degree programmes, in particular for small, selected groups of students in the form of University Colleges and honours programmes, etc. The institutes can also make use of the lessons we learn from these developments in their regular education *(see the 'World-class education' chapter for my proposals in this respect)*.

A development has also been initiated towards more broad-based bachelor's degree programmes. The technology sector has been rearranged at universities of applied sciences, which has resulted in broader labels and a great reduction in the number of labels. There are a number of examples of changes at research universities, which have introduced broader study programmes and study programmes that combine a number of disciplines, alongside University Colleges where integral education is offered on the basis of a liberal arts philosophy. I find this an interesting development, a development which also links up with my ambition to work on the triplet of qualification, socialization and personal development goals of education. However, we do need to ensure that students following a broad-based study programme can also specialize during the study programme to the extent required to enter the labour market with a good basic qualification and a clear insight into the profession.

Universities of applied sciences that also appeal to pre-university education school leavers

A research university is not the most appropriate choice for all pre-university education school leavers. A university of applied sciences may be more appropriate for some pre-university education school leavers. Although we are aware of this, the number of pre-university education school leavers that opt for a university of applied sciences continues to decline. For this reason, I intend to continue with the Veerman Commission's agenda to make universities of applied sciences more appealing to pre-university education school leavers. Universities of applied sciences must be a realistic choice for pre-university education school

92 Letter to the House of Representatives of the States General on the assignment of a greater role to the associate degree in the education system, 5 June 2015 (Parliamentary Documents II, 2014-2015, 31 288, No. 473).

leavers and a serious alternative. A number of important steps have already been taken towards this objective. The Quality in Diversity Act and the amendment of the efficiency policy rule provide universities of applied sciences more scope to offer pre-university education school leavers three-year study programmes and university of applied sciences master's degree programmes. Work has also been carried out on titles of more comparable values. The issue is now to make more use of the opportunities. More three-year study programmes need to be developed for pre-university education school leavers.

I perceive particular opportunities for these in study programmes and sectors with no or virtually no counterparts at research universities, such as care (physiotherapy) and teacher training study programmes. The Thomas More University of Applied Sciences and The Hague University of Applied Sciences for example, already offer pre-university education school leavers three-year teacher education study programmes.

My agenda offers more scope for university of applied sciences master's degree programmes. It has transpired that universities of applied sciences are more appealing to pre-university education school leavers who appreciate that they can progress from their university of applied sciences study programme to a research university master's degree programme[93]. Consequently, realistic opportunities for transfers from a bachelor's degree at a university of applied sciences to a research university master's degree programme are also important. I will return to this later.

Transfers from bachelor's degree to master's degree programme

I intend to ensure that all students have the opportunity to follow a master's degree programme. For this reason, I require a substantial expansion of the university of applied sciences master's degree programmes and a smoother transfer from bachelor's degree to master's degree programme.

University of applied sciences master's degree programmes

Although the number of university of applied sciences master's degree programmes has increased since 2012, in particular in the arts, the increase is still lower than had been expected. No more than almost 12,000 students are currently enrolled for a university of applied sciences master's degree programme. This is in part due to the attention that the universities of applied sciences have justifiably devoted to the improvement of their bachelor's degree programmes in recent years. Nevertheless, a further increase in the number of university of applied sciences master's degree programmes is desirable as this is in the interests of both students and the labour market. The limited range of university of applied sciences master's degree programmes on offer results in the somewhat lower number of graduates with a master's degree in the Netherlands as compared to other countries. The labour market has a need of employees with a higher level of education. The education sector, for example, has the ambition to increase the number of teachers with a master's degree. Professional practice is becoming more complex, which gives cause to the need to train existing employees to a higher level and to recruit new employees with a higher level of education. This is the case, for example, in the care sector which is increasing in its complexity and is making increasing use of technology. For this reason, the recent development of a university of applied sciences master's degree programme to train professionals to build a bridge between technology (such as smartwatches, domotics and online assistance) and the social dimension of these developments is praiseworthy.

Sectors in which university of applied sciences master's degree programmes offer added value include, alongside the care sector (in combination with technology), sustainability/ energy (in combination with technology), business for engineers (the manufacturing

93 ResearchNed (2011) Kiezen voor hbo of wo. *Achtergronden en motieven van vwo'ers die kiezen voor een hbo-studie.* ResearchNed, Nijmegen

industry) and the creative industry sector. Alongside more specialized university of applied sciences master's degree programmes, university of applied sciences master's degree programmes that can expand the horizon of university of applied sciences graduates with a bachelor's degree and which are cross-sector master's degree programmes can meet a need on the labour market.[94] University of applied sciences bachelor's degree programmes are currently often smaller and more specialized than research university bachelor's degree programmes due to their qualifying function on the labour market. The specialization function of the university of applied sciences master's degree programme will increase in importance when university of applied sciences bachelor's degree programmes become broader, as has recently taken place in the technology sector. Consequently, there will be a continuing need for more specialized master's degree programmes. I shall offer more scope for funded university of applied sciences master's degree programmes by abolishing the current limitation to the priority fields (top sectors, care, education and master's degree programmes that connect with the three-year study programmes for students with a pre-university education) in the macro efficiency policy rule

Transfers from university of applied sciences bachelor's degree to research university master's degree programme

Alongside the expansion of the range of university of applied sciences master's degree programmes, the group of university of applied sciences graduates who wish to transfer to research university to follow a master's degree programme must be offered sufficient opportunities for these transfers. The 2011 outline agreement includes the agreement that the university of applied sciences-research university switching programmes shall be drawn up jointly by the universities of applied sciences and research universities for as far as is possible and that these programmes must be incorporated in university of applied sciences bachelor's degree programmes to the maximum possible extent. This development of an 'academic route' integrated in a university of applied sciences bachelor's degree programme is beginning to be implemented and can be regarded as a good example in practice. Although it has transpired that this is a good formula, this route is nevertheless most suited to students who decide that they will ultimately transfer to a research university master's degree programme early in their studies.

In addition, there are currently concerns about the range of switching programmes available. The number of university of applied sciences graduates following a research university master's degree programme has declined in both relative and absolute terms. Moreover, although the Inspectorate establishes in its recent research report that the switching programmes on offer are currently still adequate, it also notes that institutes state that offering switching programmes is not appealing for them and that they are giving consideration to scrapping programmes. Furthermore, students state that programmes are already being scrapped. The *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) prescribes that from 2017/2018 onwards the fee institutes charge for switching programmes shall be limited further to a maximum of the statutory tuition fees. This takes an important step forwards in increasing the appeal of switching from university of applied sciences to research university to students, although as indicated above there concerns about the availability of these programmes.

Switching programmes by definition require tailoring as the design of these programmes is based on the elimination of individual student deficiencies. There are also great differences between institutes with respect to the extent to which they cooperate in the link between and transfers from university of applied sciences bachelor's degree to research university master's degree programme. No arrangements for this tailoring have been made in the current funding system. I shall discuss this with the Association of Universities in the Netherlands and Netherlands Association of Universities of Applied

94 B&A & Maatschap voor Communicatie (2010), *Masteropleidingen in het hbo.* B&A, The Hague

Sciences within the near future and will invite the unions of students to attend the discussions. I will search for a tailoring solution within the current funding system for the period from 2017/2018, when the institutes will under the obligation to charge solely the statutory tuition fees for switching programmes.

Transfer to a research university master's degree programme

The switch made when students progress from a research university bachelor's degree to a research university master's degree programme also requires the necessary attention. The sharp division is intended to increase the students' range of choices and to encourage students to make a carefully-considered choice of master's degree programme. This is favourable, but it does increase the substantive distance between the study programmes that are chosen. Moreover, my attention has been drawn to the need for an extension of the master's degree programme in some fields of study required to deepen or broaden the master's degree programme. This is, for example, applicable to the social sciences and humanities that have already drawn attention to this in their sector plans. An extension of the master's degree programme, where relevant, can also accommodate the international ambitions such as the development of joint programmes with foreign partners as master's degree programmes abroad are usually longer than one year. Consequently, the extension of some research university master's degree programmes may be worthwhile. In the coming period I, together with the research universities and students, will examine the need, desirability and financial consequences in more detail.

Further differentiation within the binary system

I intend to offer scope for more flexibility in study programmes, both inside and outside the two pillars of our binary system. I see students who wish to follow subjects at another institute or wish to combine the study programmes of different institutes. Why should we not facilitate this more when doing so accommodates their ambitions and interests? Why, for example, should research university students be unable to follow study programmes at universities of the arts, or vice versa? Why should sports study programmes at universities of applied sciences be unable to benefit more from medicine study programmes at research universities? I intend to provide for more crossovers between education sectors when they are worthwhile and accommodate a need.

I also intend to provide for this flexibility between disciplines beyond the confines of an institute. This flexibility is often already feasible within an institute, even though students state that making the necessary arrangements is not always easy, but is rarely feasible between institutes. Why, for example, should technology students at a university of technology not be able to follow subjects such as organization science, business administration or public administration at another research university? Why should economics or technology students not be able to study a foreign language elsewhere? And why do we not challenge economics students to immerse themselves more in philosophy and ethics? I intend to discuss this with the Netherlands Association of Universities of Applied Sciences (VH), Association of Universities in the Netherlands (VNSU), Intercampus Students' Association (ISO), Dutch Student Union (LSVb) and Confederation of Netherlands Industry and Employers (VNO-NCW). I shall bring the LSVb *Het nieuwe leren is flexstuderen* report into these discussions.

This is based on the assumption of more collaboration between the institutes, between individual universities of applied sciences, between individual research universities and between universities of applied sciences and research universities. I shall call the institutes to account for this. We in the Netherlands not only need to invest in more international collaboration but also, and in particular, in more national collaboration. This is necessary if we are to get the flexible programmes we want off the ground. I also wish to note that for as far as I am concerned universities of applied sciences and research universities may more frequently collaborate in jointly drawing up programmes, and

certainly for professional master's degree programmes. This is already taking place within Centres of Expertise, which is a good development.

Our binary system is not a static entirety, nor should it be. The Veerman Commission also drew attention to this. Institutes that profile themselves become more differentiated. This in turn blurs the distinction between universities of applied sciences and research universities, as is becoming apparent around us. However, this development must not result in the substance of graduate profiles becoming less clear to the labour market. Nevertheless, I intend to continue to offer scope for this organic development, in part because it promotes further collaboration between institutes.

3.8. Flexible system for Lifelong Learning

Education does not train for a job for life, but for a career in an increasingly dynamic labour market. Jobs and professions are created, change and disappear at an increasing pace, which in turn increases mobility within and, more and more frequently, between sectors. Moreover, the demand for higher qualified staff continues to increase. For this reason, participants in the labour market can only retain their sustainable and flexible deployability only when they continue to develop themselves. Continually acquiring new knowledge and skills and maintaining existing competencies has become more important than ever before. Sufficient opportunities for lifelong learning then need to be available to *and* utilized by everyone, including those who already have a job. Staff learn a great deal at their workplace, for example by working with their colleagues and by occasionally changing their duties or position. This embodies an important societal duty of both the private and funded sectors of higher education.

Education must be flexible and demand-driven to ensure that it meets the needs and requirements of a range of target groups in higher education, including the continually increasing number of members of the working adults target group. Moreover, and even more importantly, this target group will require education that links to the knowledge and skills they already possess and does not waste their time in teaching them skills they have already acquired. There is a need for education routes that link to the opportunities and needs at the workplace and which make use of the opportunities for online learning. In addition, there is a need for phased participation in study programmes or modules of study programmes. This improves the ability of adult students to adjust their studies to peaks and troughs in their working and private life and to stack the modules required to obtain their qualification.

For this reason, last October the Government adopted the recommendations of the Rinnooy Kan Committee and announced a number of measures focused on enhancing the flexibility and demand-orientation of part-time higher education.[95] The objective is to increase higher education's appeal to adults and, as a result, the increase their participation rate. These measures are intended to reverse the decline in adult intake in higher education. The adoption of the measures recommended by the Rinnooy Kan Committee also links up with the wishes of the Dutch Council of Training and Education (NRTO) in the Council's *Leren Loont* (learning is rewarding) position paper.[96] The most important of these measures relate to pilot trials with flexibilization and experiments with demand financing that can jointly have a great impact on the flexibilization of the higher education system and the achievement of a culture of Lifelong Learning. These trials and experiments are focus on both funded and non-funded institutes, both of which are important providers

95 Letter to the House of Representatives of the States General on lifelong learning, 31 October 2014 (Parliamentary Documents II, 2014-2015, 30 012, No. 41)

96 Dutch Council of Training and Education (2015), *Leren Loont!De bijdrage van private opleiders aan het verdienvermogen van Nederland.NRTO*, Houten.

of part-time higher education. The experiments will be monitored in detail and, should interim effect measurements give cause to do so, the Minister may decide to prolong the experiments or expand the experiments to include a limited number of other study programmes.

The expansion of the range of associate degree programmes and professional master's degree programmes is, as I have indicated above, also of importance to Lifelong Learning. The experiments in demand financing, which will begin in September 2016, entail the conversion of the existing funding system into financing on the basis of vouchers and the provision of more opportunities for institutes to adopt a modular approach and give education at a number of establishments. This may result in a more level playing field for funded and non-funded institutes. The experiments will also entail closer cooperation with employers, which will result in a flexible, demand-oriented range of study programmes. In the first instance the experiments in demand financing will be carried out in the technology, care and social welfare sectors, as these are the sectors in which the need for trained staff and the award of certificates are the greatest.

Institutes taking part in the pilot trials on flexibilization will no longer need to work on the basis of a range of study programmes specified in the form of teaching programmes and adopted in advance, but will instead be able to specify study programmes in terms of learning outcome units. The link between credits and study load (in hours) will be uncoupled. Consequently, the pilot trials are based on control of the output, namely the knowledge and skills that students ultimately need to acquire and not where, how and when they acquire them and how long this takes. I have previously announced, in October 2014, that €65 million additional funds for these experiments with demand financing and pilot trials with flexibilization will be made available in the period until the end of 2020 .

The introduction of the 'Lifelong Learning credit' as agreed in the student loan system agreement offers new groups of students an opportunity to borrow their tuition fees.[97] This removes the financial barrier for students who are not entitled or are no longer entitled to student loan system financing, including the tuition fees loan, but who are motivated to follow the study programme required, for example, to make the switch to another sector or achieve a higher level of education. The student loan system also lays down that students who begin their bachelor's degree programme in the period from 2015/16 to 2018/19 inclusive – and who, consequently, will be unable to benefit in full from the investments of the revenue from the student loan system – will be reimbursed in the form of vouchers of €2,000 that they can use to pay for accredited additional training in the period between five and ten years after their graduation. This measure also encourages adult participation in higher education and, as a result, gives an extra impetus to a culture of Lifelong Learning.

With the above we have taken a number of important steps towards a higher education system that is more appealing to participants in the labour market. During the coming years I and the Minister of Social Affairs and Employment will periodically inform the House of Representatives of the States General about the effects of the Lifelong Learning policy.

97 I answered the motion of members Duisenberg et al. on the introduction of over de lifelong learning credit (Parliamentary Documents II, 2014-2015, Parliamentary Documents II, 2,34 035, No. 40) in March 2015 (Parliamentary Documents II, 2014-2015, Parliamentary Documents II, 30 012, No. 50).

3.9. What we are going to do

We shall carry out the following to offer opportunities to all students in higher education and to get all students in the right place:

- Continued attention to the accessibility of the system, including further investments in study choice activities.

- The funds from the student loan system can, in continuation of the Sirius programme, also be allocated to talent programmes including honours routes. This will integrate the Sirius programme initiatives in the activities resulting from the strategic agenda. I intend to allocate a substantial amount, in the first years some 10%, of the funds from the student loan system to talent programmes including honours programmes.

- Continued attention to study success, study drop-out rates, switch rates and duration of studies by continuing to invest in the improvement of the study choice process, enhancement of cooperation between secondary schools and institutes of secondary vocational education, the continuation of the binding recommendations regarding the continuation of studies after the first year, the devotion of attention to the various talents of students and the provision of more tailoring and support in the form of tutoring and mentoring. This also encompasses more attention for the importance of extra-curricular development.

- More regional collaboration between secondary schools supplying students, institutes of secondary vocational education and institutes of higher education. Funds from the student loan system are available for secondary education-higher education and institutes of secondary vocational education - universities of applied sciences collaboration projects focused on more contiguous learning lines, improvements of career orientation and support or improvements in the accessibility of higher education to specific groups. Funds are also available for improving the link of higher education to the labour market *(see the Investment agenda)*.

- Extra attention to secondary vocational education students on their transfer to a university of applied sciences: a great of effort will be made to provide information about the student loan system and to increase financial awareness,[98] to the transfer electives as an important instrument and to the introduction of joint secondary vocational education - university of applied sciences programme experiments.

- More differentiation in the study programmes on offer. Associate degrees will be provided scope by uncoupling the link between the associate degree and university of applied sciences bachelor's degree. The number of university of applied sciences master's degree programmes will be increased by abolishing the policy rule's limitation to the priority sectors.

- Realistic opportunities for transfers to the master's phase, both to the university of applied sciences master's degree programme and research university master's degree programme.

- A tailoring solution will be sought for switching programmes for the period from 2017/2018.

98 This also fulfils the commitment during the plenary debate on the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) (34035).

- More collaboration between institutes of higher education, including between universities of applied sciences and research universities, in making more flexible study programmes feasible for students (extending beyond the boundaries of disciplines and institutes).

- Increases in the flexibility and demand-orientation of part-time education: introduction of experiments with demand financing, pilot trials with flexibilization and the 'Lifelong Learning credit'.

4 Social relevance

4.1. Ambition for 2025: institutes at the heart of society

Young citizens following higher education learn how to function in our internationally oriented society. This requires knowledge and professional knowledge and skills and professional skills, although these on their own are insufficient: more is required. The leaders and innovative professionals of the future also need an understanding of social themes relating to the kind of society we want to be and how we make the associated choices. Society offers a rich learning environment for this. Specific social issues or assignments from the business community can be integrated in the education. This will challenge students to leave their comfort zone and will enable them to make their contribution to the resolution of social issues and giving shape to society.

Research universities and universities of applied sciences are not only of social relevance, but are also part of society. I attach great importance to the reflection of the diversity of society in the teaching staff and student populations of the institutes. This can be achieved by devoting attention to the representation of teaching staff with a non-Western background and the representation of women in senior management positions by continuing to work on the accessibility of higher education without financial, cultural or information barriers. This enriches the learning community. Students and scientists from various backgrounds also contribute diverse perspectives. Institutes and their students are also confronted with social issues, such as loneliness, drugs abuse, radicalization and discrimination. Students can work on their personal development only when their institute is at the heart of society.

For this reason, my ambition for 2025 is that institutes of higher education have developed structural links with education, research and practice at all levels. These links need to be regional, in view of the physical proximity of businesses and public institutes, as well as national and international. These links to a changing society ensure that higher education is and remains up to date with developments in society. In 2025, universities of applied sciences and research universities work together in fruitful ecosystems with secondary schools, institutes of secondary vocational education, research institutes, government agencies, businesses, hospitals, local shops and sports clubs, etc. Students also expect links of this nature.[99] The business community also wishes to be more actively involved in education and to be more of a partner.[100] The environment then serves more as a rich learning environment than at present, for example by the utilization of regional hotspots where students acquire experience and graduates can get to work, or by the integration of social projects in the curriculum. Education institutes, conversely, contribute to the regional hotspots by the provision of knowledge, human resources and their reputation,[101] in part for the purposes of the hotspots' international visibility and appeal. These are then hotspots where new business activity, jobs and start-up companies are created. In 2025, many practical environments have been created, such as living labs, fab labs and field labs, with attention to crossovers between disciplines. The joint Human Capital Agenda that the nine top sectors drew up this year offers an excellent basis for crossovers between disciplines and collaboration between education, research and practice.

99 Intercampus Students' Association (ISO) (2015) *Blik op de toekomst. Een onderzoek naar de taak van opleidingen voor een goede aansluiting van het hoger onderwijs op de arbeidsmarkt/maatschappij.*ISO, Utrecht.

100 Input from the Confederation of Netherlands Industry and Employers (VNO-NCW) and the Dutch Organisation for Small and Medium Sized Businesses (MKB Nederland) for the Strategic Agenda for Higher Education, May 2015. A regional hotspot is a geographical cluster of businesses, research institutes and other partners that form a network and a joint organization focused on innovation

101 A regional hotspot is a geographical cluster of businesses, research institutes and other partners that form a network and a joint organization focused on innovation

The Human Capital Agenda calls on the research community and the business community to jointly encourage an entrepreneurial and connecting culture which focuses on a combination of technology and investigative capacity, entrepreneurship and creativity.

In 2025, valorization – the utilization of knowledge – is integrated in higher education. The manner in which this is implemented varies between study programme and institute, and depends on the institute's profile. There is a clear picture of this, as well as of the institutes' international position. In 2025, economic valorization in the form of start-ups, spin-offs, patents and other forms of business activity is emphatically accompanied by social valorization in which education and research contribute to the resolution of social issues. As a result, higher education is in part a driving force for corporate social responsibility. Education as a form of knowledge valorization and creation of social value is generally recognized and appreciated, with the interpretation of research in terms of education. This is based on strongly intertwined education and research and the strongly applied research orientation of universities of applied sciences.

The profiling of institutes of higher education ensures that they are recognizable to students and employers and creates opportunities for the support of regional, national and international specializations. This makes a contribution to the training and recruitment of the necessary staff (the battle for talent) and to the performance of the appropriate research.[102] Moreover, businesses know who to contact for cooperation and future staff. The Research Agenda will set the necessary priorities. In 2025, institutes are also differentiated by their education concept. In 2025, institutes can accommodate change more than is currently the case. In a world in which society and the labour market are becoming increasingly dynamic, economic developments succeed each other more and more rapidly and the influences of internationalization, individualization and flexibilization impose other requirements on students, it is becoming more and more important that education institutes are provided the additional scope they need to anticipate these developments and to be innovative in their education concept and study programmes on offer. These last include, for example, crossovers between study programmes. During the increasing profiling and differentiation attention is also devoted to a more varied higher education landscape.

In summary, I am working on the following for 2025:

a. sustainable regional and sectoral collaboration, with rich learning environments;
b. stronger links with the labour market;
c. Knowledge valorization: economic and social benefit; d. further profiling, incorporating educational concepts.

4.2. Sustainable regional and sectoral cooperation, with rich learning environments

The regional networks are already very dynamic, in part under the influence of national and European policy. Knowledge institutions are part of, and often the driving force behind, regional hotspots. Science parks, campuses and economic clusters are being developed by strategic alliances of businesses, knowledge institutions and local or provincial governments.

There are now also a number of examples of hotspots that serve as important learning and working environments for students, where knowledge is shared and a joint culture dominates, such as the Leiden Bio Science Park, Chemelot in Geleen and the 'Gaming hotspot' in

102 Vision paper on internationalization, 15 June 2014 (Parliamentary Documents II, 2013-2014, 22 452, No. 41).

Utrecht[103]. The strategic alliances between businesses and knowledge institutions are also characteristic of the Technology Pact. The Technology Pact's national measures create the conditions required for specific collaboration between regional and sectoral parties. The Care Pact and the sectoral collaboration in the 'green' sector also provide for a combined national and regional approach of this nature. The city can also contribute to the learning environment: I have already seen excellent examples in honours programmes and at university colleges. The *Academie van de Stad* (academy of the city) is another example: the Academie van de Stad collects current issues from urban parties, interprets these in terms of assignments for students and monitors the entire process. Projects have been started in Amsterdam, Utrecht and The Hague and, this year, in Almere. Students make a contribution to society and receive something in return, such as a discount on their rent.

The Springlevende Wijk (sprightly residential district)

Students taking part in the *Springlevende Wijk* project work on improving the quality of life in the residential district. Students, commissioned by a housing corporation and the Municipality and in cooperation with *Academie van de Stad*, residents and district organizations, work on the design and implementation of relevant, valuable sub-projects in residential districts in Amsterdam, The Hague, Utrecht and Almere. Students receive support for their role of student coordinator in the form of the priority allocation of a home and a discount on the rent. (www.academievandestad.nl)

Jeugdlab

Jeugdlab, on the Jeugdland site in Amsterdam, is part of Amsterdam University College's study association. Students carry out interesting, educational activities in Jeugdlab that are designed to generate children's enthusiasm for science. In return, the study association may use the Jeugdland building in the evenings for activities for the student community. (http://auc.jeugdlab.org)

However, collaborative arrangements of this nature are not universal and are not equally integrated. Moreover, they are often dependent on individuals. Best practices have developed when enthusiastic teaching staff took initiatives, more time was invested and some form of coordination was in place. Employers state that it is important that the institutes' teaching staff are thoroughly familiar with the field, although little time is available in practice. During the series of visits to institutes of higher education I also heard that universities of applied sciences and research universities could make much more use of their graduates to obtain feedback about the link between the curriculum and professional practice. Alumni would also welcome an opportunity to do so.[104]

It is particularly difficult for universities of applied sciences to take up the full role of knowledge partner across the breadth. The Education Council states that the relationship of the universities of applied sciences with the professional field is changing.[105] A continually increasing number of collaborative arrangements are being set up in which teaching staff, associate professors, researchers, students and company employees are working on or cooperating in applied research and innovation, for example in learning and working communities or Centres of Expertise. However, the Education Council also states that this

103 Advisory Council for Science, Technology and Innovation (2014) *Bloeiende netwerken. Hotspots als habitat voor innovatie.* Quantes, The Hague

104 Intercampus Students' Association (ISO) (2015) Blik op de toekomst. *Een onderzoek naar de taak van opleidingen voor een goede aansluiting van het hoger onderwijs op de arbeidsmarkt/maatschappij.* ISO, Utrecht

105 Education Council (2014) *Meer innovatieve professionals.* Education Council, The Hague 107 Advisory Council for Science, Technology and Innovation (2015) *SMEs and Universities of Applied Sciences. Partners in innovation Quantes,* The Hague

collaboration is in part more occasional than structural and of a strategic nature. In addition, the SME sector's involvement is still limited. The Advisory Council for Science, Technology and Innovation also emphasizes that the knowledge networks of the SME sector and universities of applied sciences are based on individual contacts between members of the teaching staff and associate professors with businesses in the sector and, consequently, are vulnerable.[106] In addition the Advisory Council for Science, Technology and Innovation draws attention to the fact that universities of applied sciences still encounter difficulties in organizing research. The lack of time and flexibility makes it difficult for them to connect with the methods of businesses in the SME sector. We, in line with the recommendations of the Advisory Council for Science, Technology and Innovation, will make it possible for universities of applied sciences to appoint more associate professors *(see 2.3)*, draw attention to the importance of practical work placements for teaching staff within the context of the permanent professionalization of teaching staff *(see 2.4)* and make it possible to increase investments in sustainable regional networks.

I intend, in continuation of the policy that has been implemented and announced, for example in the *Wetenschapsvisie* (vision for science) and the *Agenda Stad* (city agenda), to encourage sustainable regional collaboration. Scope will then need to be available for differentiation and regional differences. A design which results in a one size fits all approach will not be effective. Consequently, there will be no grand designs: the focus needs to be placed on the enhancement of the institutes' responsiveness. The emphases placed by universities of applied sciences can be very different from those by research universities, and by Centres of Expertise other than by science parks close to research universities. Each institute and each region has its specific foci and partners. The hotspots are in varying phases of their lives.[107] The Bureau for Economic Policy Analysis (CPB) and Netherlands Environmental Assessment Agency (PBL) have adopted the go-with-the-flow principle as an important basis: policy that follows, rather than making explicit choices.[108] This is required because of the unpredictability of the developments. Innovation processes differ between cities because cities do not follow the same growth path.

In view of this background I shall focus on two measures:

- A generic investment intended for the recruitment of additional teaching staff and associate professors;
- An impetus for the further development of promising public-private and public-public collaborative arrangements.

Investment in teaching staff and associate professors

The extra funds released with the student loan system will enable universities of applied sciences and research universities to make extra investments in teaching staff and associate professors *(see Section 5.2)*. This will enable research universities to strengthen their ties with their environment. It will offer opportunities to pull students out of their comfort zone, in part by developing their social awareness. This can be achieved, for example, by creating a network in which economics students van become acquainted with debt counselling. During the series of visits to institutes of higher education I saw some excellent examples of the integration of the environment in the curriculum, although this is far from customary. Teaching staff need to make great efforts in developing and maintaining regional networks. I attach importance to the university teaching staff's devotion of attention to these networks, including the teaching staff of study programmes that are not focused on a specific profession.

106 Advisory Council for Science, Technology and Innovation (2014) *MKB en hogescholen. Partners in innovatie.* Quantes, The Hague

107 Advisory Council for Science, Technology and Innovation (2014) *Bloeiende netwerken. Hotspots als habitat voor innovatie.* Quantes, The Hague

108 Centraal Bureau for Economic Policy Analysis and Netherlands Environmental Assessment Agency (2015) De economie van de stad. CPB/PBL, The Hague.

This connects with the greater attention of research universities to the social relevance of their research *(see also Section 4.4)*.[109] This facet also needs receive sufficient attention in the research universities' career policy.

Universities of applied sciences can invest in the expansion of applied research (such as by the appointment of more associate professors and more teaching staff with a PhD). This is important as the links between universities of applied sciences and the environment are increasingly routed via these lectureships. Many bodies, including the OECD and Advisory Council for Science, Technology and Innovation[110], draw attention to the need to enhance applied research.[111] A first step has recently been taken. Pursuant to the Rutte II Coalition Agreement, as from 2014 extra investments will be made in the RAAK (Regional Attention and Action for Knowledge Circulation) programme for applied research at universities of applied sciences that will be funded via the Taskforce for Applied Research - Innovation Alliance Foundation (part of the Netherlands Organisation for Scientific Research).[112] However, in my opinion this is insufficient. I intend to allocate the extra funds from the student loan system to a further major step forward so that applied research improves education.[113]

Impetus for the further development of promising collaborative arrangements

Collaboration between knowledge institutions, businesses and civil society organizations that work well together can result in the development of institutes of higher education with a good profile and in sustainable collaborative arrangements. Substantial investments required for some forms of collaboration cannot be funded by institutes of higher education without assistance or financial assistance.

I intend to promote the further development of profiling and promising regional collaborative arrangements by continuing to allocate the current 2% of the funds to profiling and greater differentiation. As universities of applied sciences and research universities are making great efforts and good progress I intend to continue to support their efforts. The requisite decision-making will take place after the evaluation of the performance agreements. I am also reserving additional funds from the student loan system for the improvement of collaboration between universities of applied sciences, research universities, the business community and civil society organizations[114] *(see Section 5.3, 'Specific incentives for national priorities')*.

The object is to improve the link between education and society, not just the link with the labour market but also all the various links with society. Students should gain visible benefits from these links in their education. Universities of applied sciences can allocate the funds, for example, to giving further shape to their applied research in Centres of Expertise or in comparable collaborative structures in or outside the top sectors. The Higher Education and Research Review Committee advocated the expansion of Centres of Expertise in its system report for 2014. I will request universities of applied sciences that are expanding Centres of Expertise to also focus on social issues *(see Section 4.4)*. In continuation of their further profiling, research universities can allocate the funds to rich learning environments, such as a living lab that encourages multidisciplinarity, or to innovative study programmes in the form of broad-based study programmes or crossovers between study programmes.

109 The *Standaard Evaluatie* Protocol (standard evaluation protocol) was drawn up jointly by the Association of Universities in the Netherlands, Netherlands Organisation for Scientific Research and Royal Netherlands Academy of Arts and Sciences. The standard evaluation protocol serves as the basis for all Dutch scientific research.

110 Advisory Council for Science, Technology and Innovation (2015), *SMEs and Universities of Applied Sciences. Partners in innovation* Quantes, The Hague

111 OECD Reviews of Innovation Policy: Netherlands (2014). OECD Publishing: http://dx.doi.org/10.1787/9789264213159-en.

112 The investment relates to an amount of €3 million from 2014, which will increase to a structural amount of €13 million from 2018, as a result of which the budget for the competitive flow of funds will total a structural amount of almost €30 million.

113 Intercampus Students' *Association (2013) Dicht bij de student. Lectoraten in het hbo 2013.* ISO, Utrecht.

114 In so doing, I am also adopting the recommendation of the Advisory Council for Science, Technology and Innovation (2015), *SMEs and Universities of Applied Sciences. Partners in innovation* Quantes, The Hague

4.3. Stronger links with the labour market

The continually accelerating pace of developments and the increasing unpredictability of the labour market give cause to the need for good links between education and the labour market. I intend to provide several forms of incentives to institutes to strengthen their ties with the labour market and, as a result, offer students a richer learning environment. I stated in the previous section that I intend to support the development of sustainable collaborative arrangements between institutes, businesses and civil society organizations. I then stated that a more active alumni policy can make a contribution to the improvement of the link between study programme curricula and professional practice. Graduates with several years' work experience can state which elements of the curriculum were of great benefit to them when they took their first steps in the labour market. Alumni with longer work experience can indicate how their study programme has contributed to their career development and how their study programme has contributed to their personal development. Alumni, as the occasion arises via alumni networks, can also play a role in increasing the numbers of practical lecturers and guest lecturers. This will bring professional practice into the study programme and create a richer learning environment. This approach has already been adopted by many study programmes, although the study programmes of research universities, in particular, could make more use of this practical experience.

Work placements are another means that can be used to improve the preparation of students for the labour market. Work placements are already customary or even mandatory elements of university of applied sciences study programme curriculum. The facilitation of research university work placements could become more common: at present, some research university students actually take the initiative to organize a work placement outside their study programme curriculum. Research universities could facilitate students more so that work placements also become more common at these institutes.

Alumni could also offer useful information to students about the chances and opportunities their study programme offers them on the labour market or assist them in their assessment. Institutes could, for example, organize alumni/student meeting days. The information material for students is also being improved so that they can gain a better insight into the labour market prospects and professional profile of graduates from the study programme they are considering. As from 1 May of last year, and in parallel with the introduction of the advance of the final registration date and the matching scheme, institutes of higher education are also obliged to enclose a study information leaflet containing figures (a 'Study in figures' leaflet) with their information material about their bachelor's degree programmes which contains information including their prospects on the labour market (the percentage of students who have found a job at their level 18 months after their graduation).

The labour market relevance is also of importance when developing new study programmes. Institutes need to ascertain the potential professional profiles and prospects on the labour market of graduates from their study programmes. For this reason, employers – and, when feasible, sectoral organizations – need to be involved in the development of new study programmes. This is even more important in the development of associate degree and university of applied sciences master's degree programmes. Attention is, in conclusion, also devoted to the specific problems of sectors identified in sector plans, sectoral analyses and explorations, such as the Sector Plan for Physics and Chemistry and the Sector Plan for university of applied sciences technology (*see Section 4.5*).

4.4. Knowledge valorization: economic and social benefit

Research universities and universities of applied sciences are actively working on valorization achieved by making knowledge available for social and economic utilization. They have agreed in the outline agreements (autumn 2011 to 2015) to devote more attention to valorization, including in the proposals for the performance agreements. Each institute made this specific in 2012. The government is supporting the valorization process with the Valorization Programme (2010 to 2018), for which funds of €63 million have been made available. The Minister of Economic Affairs and the State Secretary for Education, Culture and Science recently submitted a letter to the House of Representatives of the States General in which they explain the current situation.[115] The interim assessment of the Valorization Programme by Panteia reveals that the Programme has already made a demonstrable contribution to the integration of valorization in the form of inclusion in long-term plans, the recruitment and assessment of staff in terms of their valorization capacity and, in some cases, in the form of concentration at a central location. The Programme has also supported 650 start-ups. This interim assessment resulted in the decision to continue the Programme in its current form, whereby priority will be given to 'continued fascination and retention of qualified staff' and 'increased involvement of the business community'. This Programme is focused fairly strongly on science, engineering and life sciences. The Programme has also urged the language and arts and humanities, economics and law domains to give consideration to the areas in which their type of knowledge could best be utilized: the cultural sciences, for example, possess an entirely individual value that cannot be expressed in terms of social and economic effects.[116]

I note that a great deal is being done in the valorization area, for example in the form of start-ups, spin-offs, patents and incubators in which, in cooperation between students and researchers, new companies are being developed. As indicated in the response to the Advisory Council for Science, Technology and Innovation *Diensten waarderen* and *De kracht van sociale innovatie* reports, all forms of valorization are important, including social and economic valorization. The Advisory Council for Science, Technology and Innovation states that this offers a wealth of opportunities to Dutch society and the Dutch economy as it results in the development of networks of individuals and organizations that are focused on social objectives. These objectives include, for example, the resolution of complex contemporary social issues such as youth welfare and environmental problems. For this reason, the *Wetenschapsvisie* (vision for science) requests explicit attention to research with economic, scientific and social impacts, which will be manifested in the *National Research Agenda*.

The Government is gratified by the work of research universities and universities of applied sciences on the development of a framework that will make the various forms of valorization transparent, including, for example, the – in my opinion, crucial – use of research results in study programme curricula (minors[117], final projects and similar), the number of businesses or public institutions with which the institute is cooperating and the numbers with a higher level of education or a PhD.

As stated in the *Wetenschapsvisie* (vision for science), the Government will conclude a doctorate agreement with the business community for progressions of graduates with a PhD to the business community. In addition, more progressions of graduates with a PhD to social sectors such as the education sector are also desirable. In continuation of the above, I intend to offer scope for industrial doctorates and for differentiation in doctorate routes. I shall explore, should additional funds be necessary, how any additional funds that are required

115 Letter to the House of Representatives of the States General on the utilization and marketing of knowledge, an interim assessment of the Valorization Programme, 7 March 2015 (Parliamentary Documents II, 2014-2015, 32 637, No. 169).
116 Scientific Council for Government Policy (2015) *Cultuur herwaarderen.* Amsterdam University Press, Amsterdam.
117 Letter to the House of Representatives of the States General on progress in the development of valorization indicators for higher education, 3 June 2013 (Parliamentary Documents II, 2013-2014, 31 288, No. 344).

can temporarily be covered by the underutilization of the funds for the *subsidieregeling praktijkleren* (learning in practice grants scheme) as proposed in the Duisenberg motion.[118]

An incentive of this nature should not be focused exclusively on the top sectors and should not address solely large but also smaller companies. I shall also consult with the Ministry of the Interior and Kingdom Relations on the feasibility of the government's recruitment of more PhD graduates.

In emphasizing the ties with society in this Strategic Agenda I am also endeavouring to make broader use of knowledge in the social field. I shall place the emphasis on the following:

- The enhancement of the impact of education research on education practice (in primary right through to higher education);
- The expansion of university of applied sciences Centres of Expertise focused on social challenges;
- The further development of entrepreneurship education;
- The recognition of education as a form of knowledge valorization or creation of social value.

Enhancement of the impact of education research on education practice

Good education research contributes to the improvement of the quality of education, not only higher education but also education in other sectors. One of the Ministry of Education, Culture and Science's ambitions in the *Lerarenagenda* (teacher's agenda, 2013) is to enhance the school as a learning organization. Collaboration between teachers and between teachers and knowledge partners (teacher training institutes and research institutes) is considered to be of great importance to this development. The Sector Plan for the Education Sciences commissioned by the Association of Universities in the Netherlands (VSNU) also emphasizes the importance of this collaboration. The authors are of the opinion that long-term, focused collaboration is required to improve the link between education and science, as this is necessary to generate scientific knowledge that is of importance to and can be applied by schools. They propose an infrastructure in analogy with the academic workplaces in the care sector (and which are financed with grants from the Netherlands Organization for Health Research and Development). These can accommodate applied and fundamental research carried out in a structural collaborative agreement between researchers (including research centres) and education institutes as well as, where relevant, teacher training institutes and decentralized government agencies.

Research universities have recently, on the initiative of the Higher Education Inspectorate, opened three what are referred to as 'academic workplaces'. The Inspectorate, in close collaboration with the education science sector and schools, is carrying out research at these academic workplaces which addresses important education themes. I attach importance to the development of more structures that supplement these initiatives of the Inspectorate and which enhance the impact of education research on education practice, such as academic or knowledge workplaces.

I then also attach great importance to the universities of applied sciences taking up this initiative, preferably in collaborative arrangements with research universities. The funds referred to in Section 4.2 (Impetus for collaborative arrangements) must be sufficient to enable universities of applied sciences, research universities and education practice to set up collaborative arrangements. I shall request the Netherlands Initiative for Education Research (NRO) to support this process. I shall make additional funds available for research into higher education *(see Section 2.5)*.

118 In doing so, the Government is implementing the motion of member Duisenberg proposed during the debate on science policy conducted by the House of Representatives of the States General on 2 April 2015 (32 288 No. 420).

Expansion of Centres of Expertise focused on social challenges

Universities of applied sciences train many graduates who will subsequently work on important social issues such as education, the ageing population, care, social participation, urban vitality and sustainability. These themes require the deployment of excellent professionals and new knowledge developed in collaboration with stakeholders. The decentralization of care and welfare to the municipalities, for example, gives cause to the need to give careful consideration to the most appropriate approach to organizing, managing and staffing these services.

Centres of Expertise, an appropriate form of organization for addressing these themes, can adopt a cohesive approach to education, research and knowledge valorization. The current Centres of Expertise in development already include a number of centres that are focused on care and in which care and welfare institutions participate, as well as centres where businesses can develop ICT support. One example of these centres is the Centre of Expertise Healthy Ageing (Hanze University of Applied Sciences) in which 160 stakeholders (governments, knowledge institutions and education institutes, care and welfare organizations, network organizations and businesses) in the northern Netherlands region are now cooperating. A further example is the Centre of Expertise *Sneller Herstel* (rapid recovery) of HAN University of Applied Sciences, focused on more effective convalescence methods and professionals, which operates in collaboration with Radboud university medical center and a number of care institutions. HAN University of Applied Sciences also collaborates with other parties in the provinces of Gelderland and North Brabant in the *Zorg Alliantie* (care alliance) focused on professionalization in the welfare, housing and care sectors. The Centre of Expertise Ucreate (HKU University of the Arts Utrecht), in conclusion, focuses on innovative methods for helping individuals to opt for sustainable, healthy behaviour.

An expansion of the number of university of applied sciences Centres of Expertise focused on social challenges would be desirable, as there are more social issues. Further Centres of Expertise could, for example, focus on countering the increasing segregation of society and on the aforementioned consequences of the decentralization of care and welfare. I shall also make use of the funds for giving an impetus to the development of promising collaborative arrangements for these new Centres of Expertise (or comparable organizations).

Further development of entrepreneurship education

A great deal of attention is also devoted to entrepreneurship education, although the growth is limited at present. Entrepreneurship education is focused both on becoming an entrepreneur and on adopting a more entrepreneurial attitude (taking many initiatives and creativity, etc.). Institutes of higher education have already set up Centres of Entrepreneurship that have been given the assignment to develop education in and research into entrepreneurship. Four study programmes and two minors have now been awarded a distinctive feature entrepreneurship from the Accreditation Organisation of the Netherlands and Flanders. Awareness of the role played by entrepreneurship is also increasing in the arts and creative technology study programmes: research has recently been carried out into the role and specifications of entrepreneurship education.

The Ministry of Economic Affairs and Ministry of Education, Culture and Science have assigned the Amsterdam Center for Entrepreneurship to develop and implement a strategy for the integration and encouragement of the provision of entrepreneurship education at institutes of higher education and for the enhancement of exchanges of knowledge and best practices. The Amsterdam Center for Entrepreneurship is carrying this out in collaboration with other Centers for Entrepreneurship in the Dutch Centers for Entrepreneurship network. Good examples of this nature need to be expanded further and scaled up.

The further development of entrepreneurship education will require the availability of sufficient good entrepreneurship education teaching staff. For this reason,

I request the knowledge institutions to include the recruitment of teaching staff who can teach entrepreneurship and the adoption of an entrepreneurial attitude in their allocation of the funds for the recruitment of additional teaching staff and associate professors. The entrepreneurial attitude referred to above also extends to themes including integrity and ethical professionalism.

Students learning how to develop an entrepreneurial attitude and acquire entrepreneurial skills also need to be involved and supported in the start-up of new businesses. During the series of visits to institutes of higher education the universities of applied sciences indicated that business start-ups of this nature at universities of applied sciences research are lacking. For this reason, the Taskforce for Applied Research - Innovation Alliance Foundation (NRPO-SIA) will launch a pilot trial of the encouragement of the introduction of knowledge concepts and products developed by universities of applied sciences on the market. The pilot trial will support marketing feasibility studies. An instrument of this nature is already available for commercial and entrepreneurial activities at research universities in the form of the Netherlands Organisation for Scientific Research Take Off programme.

Knowledge valorization via education

Education plays an important role in the broad valorization of knowledge, as the results from research must resound in education – which also contributes to the social relevance of research. This is based on strongly intertwined education and research *(see Section 2.3)* and the strongly applied research orientation of universities of applied sciences *(see Section 4.2)*.

It is conceivable that the coming calls for the *Zwaartekrachtprogramma* (gravity programme) (2016) may devote additional attention to education as a form of knowledge valorization alongside economic and social valorization. This is also in line with the recommendations of the Advisory Council for Science, Technology and Innovation (AWTI) to encourage strongly intertwined education and research, including research resources shared in competition.[119]

4.5. Further profiling, incorporating educational concepts

Profiling with research and education differentiation assists institutes in developing specific ties with their environment. It increases their recognizability to students and employers. For this reason, in 2010 the Veerman Commission recommended the clearer profiling of the institutes and a clear choice of their mission. I am gratified by the situation revealed by the midterm assessment of the Higher Education and Research Review Committee. All universities of applied sciences and research universities have made progress in their implementation of their planned enhancement of their profiles. The profile themes selected at institute level are increasingly determining the design and reorganization of the range of research and study programmes. This is supported by continually increasing collaboration between the institutes. The Committee also notes that when institutes develop focus and mass they tune their internal strengths and weaknesses to external opportunities.

Research universities are then primarily focusing on national, European and international agendas and priorities (for example, programmes such as Erasmus+, Horizon 2020 and policy developments within the ERA and EHEA). Although universities of applied sciences have more of a regional focus, they are also increasingly discovering the opportunities offered by European programmes and policy development. The Higher Education and Research Review Committee also states that more discussions are taking place at institutes on the course they wish to set.

119 Advisory Council for Science, Technology and Innovation (AWTI) (2015)Verwevenheid onderzoek en onderwijs: eenheid in verscheidenheid. Advisory Council for Science, Technology and Innovation, The Hague

The institutes' profiling processes can seek even stronger ties with regional spearheads, valorization, developments in top sectors and the resultant Capital agendas, social sectors and the priorities of the Research Agenda. I intend to challenge institutes not only to develop a clear and distinctive education and research profile as compared to other Dutch institutes but also – and above all – as compared to international institutes.

To this end, the *Wetenschapsvisie* (vision for science) has previously announced that some 4-5% of the research funding of the research universities will be reallocated in a manner that supports their research efforts that contribute to the Research Agenda.[120] The continued allocation of the current 2% of the funds to profiling and regional collaboration will also give an impetus to the profiling (Section 4.2). In addition, I shall:

- Conduct the debate on further profiling
- Offer scope for innovations in the study programmes on offer

Debate on further profiling

During the coming period I intend to conduct the debate on the profiling that has been achieved and the further profiling that is desirable, in part on the basis of the National Research Agenda. Institutes need to connect to a large number of national developments. Major steps still need to be taken, for example, to achieve the Technology Pact's target whereby 4 out of every 10 students follow a science or technology study programme. 35% of all students entering research universities and 22% of all students entering universities of applied sciences have enrolled in a science or technology study programme. Attention is also devoted to other sectors alongside the Technology Pact's devotion to technology study programmes, such as in the Human Capital Agendas, the Lerarenagenda (teacher's agenda) and in the Care Pact, as well as to the importance of the language and arts and humanities, economics and law domains to social challenges, for example the provision of new foreign languages such as Chinese at secondary schools. '

Attention to national harmonization is then desirable. There are already good examples, such as the completion of some 20 sector plans and the Netherlands Association of Universities of Applied Sciences' exploration of the various sectors as laid down in the outline agreement. The university of applied sciences technology is a successful example. The Netherlands Association of Universities of Applied Sciences, 18 universities of applied sciences involved and the field have decided to reduce the current 65 technology study programmes to 36 broader-based basic study programmes.

This will make the study programmes more recognizable to students, simplify the institutes' adjustment of their study programmes to cater for regional or other developments and will obviate the need for them to introduce new study programmes. Two new sector plans have recently been developed by research universities for the social sciences and education sciences sector. The expansion of these examples would be desirable. The universities of applied sciences' explorations of the sectors are, for example, focused solely on education. Increasing national harmonization is of importance to the future content of the macro-efficiency policy *(see next paragraph)*.

In addition, I intend to extend the profiling discussion further than profiling in the study programmes on offer and differentiation in research. I attach importance to greater differences in the pedagogic-didactic environment in this further profiling.

This relates, for example, to Amsterdam University of Applied Sciences' education concept, with a link to one of Amsterdam's specific big city issues, and the problem-driven education

120 The influence of the doctorate parameter will be set a maximum of 20 per cent

of Maastricht University. However, other forms of profiling also come into consideration, for example profiling on the basis of digitalization or Lifelong Learning.

Scope for innovations in the study programmes on offer

I intend to improve the ability to accommodate rapid developments in society and the labour market by shifting the control of the study programmes on offer more towards confidence in the institutes and by offering greater scope for innovation. I have previously explained my vision on administrative relationships in higher education in my *Accreditatie op maat* (tailored accreditation) letter to the House of Representatives of the States General. In my letter, I also stated that in the coming period I shall carry out a critical examination of the duties of the various organizations and shall examine where the regulation pressure can be reduced. In the coming period I shall also examine the policy on the efficiency of the study programmes on offer at system level (macro-efficiency policy).[121]

This then relates to the efficiency in higher education policy rule that prescribes the manner in which institutes can submit applications for new study programmes, as well as to instruments that are focused more on the current study programmes on offer.

The current policy rule on efficiency in higher education at system level accommodates the core objectives of this policy, namely the development of a range of study programmes on offer that meet the needs of students, science, employers and society in general, that the study programmes on offer are developed in an efficient manner and that good assurances are provided for accessibility. My exploration of future macro-efficiency policy will continue to adopt this accommodation of these core objectives as the most important principle.

I conclude from the experience acquired with the policy during the past years and the discussions on the policy with the institutes that institutes can increase their profiling and collaboration when this creates in added value. Institutes are utilizing this scope and are focusing more on quality than on growth in numbers of students and study programmes. This is an important development, a development I intend to maintain and to which I intend to offer even more scope.

I see that institutes are jointly assuming a continually greater role in any adjustments to the existing study programmes on offer that may be required. The field organizes the explorations and analyses of the sectors. This ownership by the institutes has proven its added value during the past years and is something I wish to expand. In addition to the technology sector that I referred to above, other sectors such as the arts sector have now taken major steps towards the reorganization of the study programmes on offer. The humanities sector has also indicated that it wishes to assume the responsibility for the national small and unique study programmes on offer.

I intend to make substantial improvements for a number of points. These relate to the scope for innovation and responsiveness, the further enhancement of ownership, reduction of the administrative burden and shorter lead times for applications. I conclude from the developments in the sector and the discussions on these developments with the institutes that the above will become feasible by controlling more on the basis of trust and providing more scope to institutes to make choices with the other stakeholders on the study programmes on offer. I shall explore the opportunities for the above in the coming period. With the new policy on the study programme I also intend to focus more on the past provision of scope for the introduction of broader-based interdisciplinary bachelor's degree programmes. This is in line with my ambitions for the quality of education and accessibility that I explained in chapters two and three of this agenda.

121 This also fulfils the commitment I made during the General Meeting on Internationalization of 17-12-2014.

The introduction of broader-based interdisciplinary bachelor's degree programmes (but with the retention of sufficient opportunities for the specialization required for a good basic qualification and a clear insight into the profession), more scope for students in contributing to the shape of their study programme and more scope for the three qualification, socialization and personal development goals of education.

I then wish to create more opportunities for interdisciplinarity so that students will be challenged to approach problems from various disciplines and to search for creative solutions.

I also see that the regions are assuming a continually increasing role in the development of the study programmes on offer. The current policy rule offers scope to link up with regional knowledge agendas within the national macro efficiency framework. The collaboration between education institutes, businesses and local governments is generating a great deal of energy and resulting in good initiatives. I intend to retain this approach to encourage structural collaboration within the regions and, as a result, achieve an optimum link between education and the labour market.

However, giving more confidence and scope is without prejudice to my responsibility, as Minister, for the efficiency of the higher education on offer at system level. I shall continue to assume this responsibility. It is then important that institutes give external account for the choices they have made. I shall involve all stakeholders in the exploration. I shall submit a proposal for the future macro-efficiency policy before the summer of 2016.

4.6. What we are going to do

We shall work on the following to enable institutes to operate at the heart of society:

- Sustainable regional collaboration, with rich learning environments, by means of:
  - A generic investment, so that additional teaching staff and associate professors can strengthen the ties with their environment;
  - Assisting in the further development of profiling and promising public-private and public-public collaborative arrangements (by means of the allocation of the current 2% of the funds to profiling and a budget for regional collaborative arrangements).

- Stronger links with the labour market:
  - The provision of good information to students on the labour market prospects provided by the study programmes (study information leaflet);
  - Active alumni policy;
  - Increased facilitation of research university work placements.

- Knowledge valorization: economic and social benefit, by:
  - The enhancement of the impact of education research on education practice (in primary right through to higher education), for example in academic or knowledge workplaces;
  - The expansion of Centres of Expertise focused on social challenges;
  - The further development of entrepreneurship education;
  - The broader recognition of education as a form of knowledge valorization.

- Further profiling, incorporating education concepts, by:
  - Conducting the debate on the profiling that has been achieved and the further profiling that is desirable;
  - Offering scope for innovations in the study programmes on offer.

5 Investment agenda

5.1. Introduction

Good education is small-scale and responsive, offers scope for meetings and collaboration as well as the development of individual talent, challenges students and is supported and given by motivated, highly-qualified teaching staff.

Although many institutes are already working hard on this, extra investments will be required to bring the ambitions of this strategic agenda closer to fulfilment. The Veerman Commission has already drawn attention to the need for substantial investments to retain and strengthen our international competitive position. An extra impetus is indispensable if we are to do justice to the growth of the number of students in higher education, their increasing diversity and the resultant need for the tailoring of education. It is not realistic to expect institutes to offer education to even more students *and* to deliver even more quality with the same resources, in part because the research budget and the resources for applied research have not increased in proportion to the increase in student numbers in higher education. For this reason, it has been agreed in the *Nationaal Onderwijsakkoord* (national education agreement) that the investments made feasible by the student financing reforms will be allocated to higher education, including the research at universities of applied sciences and research universities which is directly related to education, and will compensate for part of the detrimental developments in the budget for the higher education sector resulting from the Coalition Agreement. This will not only enable us to maintain but will also enable us to further improve the quality of higher education. This is also the principle of the student loan system, the agreement between the People's Party for Freedom and Democracy (VVD), Labour Party (PvdA), Democrats '66 (D66) and Green Left (GL). These investments will need to result in a multicoloured education system in which the range of education on offer and the profiling of the institutes contribute to creative, innovative and challenging high-quality education.

To achieve this, the *Nationaal Onderwijsakkoord* (national education agreement) specifies that the revenue from the student loan system will be allocated to conscious study choice, education support and new forms of education that meet the need for differentiation. This is also fully in line with the investments that the Intercampus Students' Association (ISO), National Union of Students (LSVb), Netherlands Association of Universities of Applied Sciences (VH) and Association of Universities in the Netherlands (VSNU) regarded as desirable in their joint letter[122] and with the outcome of the series of visits to institutes of higher education. They are of the opinion that investments in more intensive education, more and better student support, suitable and good study facilities and the further professionalization of teaching staff can give an important impetus to the quality of education.

The *Studievoorschot-akkoord hoger onderwijs* (higher education student loan system agreement) justifiably states that not all institutes and study programmes will benefit from any given measure. The joint letter from the students and institutes also states that every university of applied sciences and research university is different and, consequently, has a different priority. However, it is also important that the investments result in improvements that are visible to students. For this reason, it is important not to opt for a one size fits all approach but rather to offer institutes the scope to select the approach that is most suitable and effective for them – an approach that is compatible with the specific context, profile and strategy of the relevant institute and meets the needs and requirements of the institute's teaching staff and students. Institutes ensure that the approach they select will meet their needs by consulting with each other and examining the results from national and international studies.

We are not beginning at zero. A great deal of time and large funds have been invested in further improvements in the quality of higher education. The institutes, in advance of the

122 Joint *Gezamenlijke ambities onderwijskwaliteit* (shared ambitions for the quality of education) letter from the Association of Universities in the Netherlands (VSNU), Netherlands Association of Universities of Applied Sciences (VH), Intercampus Students' Association (ISO) and National Union of Students (LSVb) to Minister Bussemaker (20 April 2015).

investments that will become feasible following the introduction of the student loan system, are themselves allocating an annual amount of €200 million in 2015, 2016 and 2017 to give an impetus to the quality of their education.

The Association of Universities in the Netherlands (VSNU) and Netherlands Association of Universities of Applied Sciences (VH) will give me further outline information at the end of this year. The revenue from the student loan system will be generated increasingly from 2018. The revenue from the student loan system will make it feasible to intensify the efforts being made to improve the quality of education and bring the shared perspectives much closer.

5.2. Expenditure areas

This investment agenda links the available funds to the most important objectives of the strategic agenda. These objectives can be achieved in various ways. I do not specify the methods to be used: the investment agenda is not a blueprint for institutes, but refers expressly to 'expenditure areas'. The central principle governing all investments is that the funds must make a contribution to improvements in the quality of education that are recognizable to the students. The account the institutes give for their investments will also focus on this principle.

Nevertheless, the classification into expenditure areas does reveal that these investments will bring the achievement of the objectives specified in the strategic agenda much closer by – not overnight, but in the longer term. This is in part due to the gradual availability of funds for the investments. The focus of this investment agenda is on the entire period until 2025.

The investments referred to in this investment agenda are classified *(see Table 1)* into eight expenditure areas that link with the objectives presented in this strategic agenda:

1. Small-scale, intensive education;
2. Talent programmes;
3. Education-related research;
4. Study facilities and digitalization;
5. Specific incentive for national priorities (such as transfers);
6. Profiling;
7. Incentive for Lifelong Learning.
8. *Beter benutten* (better utilization) (student pass for public transport task force).

5.3. What can we achieve through investment in each expenditure area?

Small-scale, intensive education

This strategic agenda demonstrates the importance of small-scale, intensive education. Studies have revealed that links – contacts between teacher and student – enhance education, increase study success and improve results. Providing more intensive support to students, alongside the professionalization of teaching staff (also in their provision of support), also contributes to a better study choice and to improved study success.

This is certainly of importance with the increasing diversity of the student population. This is also the reason why it is necessary to give a strong impetus to small-scale, intensive education. This requires measures that provide for:

- Close, small-scale and intensive learning communities of students and teaching staff with more tutorials, more practical lectures, more individual feedback, more oral examinations and more personal contact with the teacher;
- Enhancement of the ties between teaching staff and students. On average, smaller groups of students result in more time for teaching staff to give individual feedback and support students in their development;
- Intensive support during the study choice.

Teaching staff

In 2012 [1], the total teaching staff at universities of applied sciences amounted to 18,932 (teaching staff) and at research universities 9,450 (lecturers, senior lecturers and professors). When a structural amount of 60% of the funds from the student loan system for institutes is allocated to small-scale, intensive education then structural amounts of €231 million will be available to universities of applied sciences and of €141 million to research universities.

From 2015, universities of applied sciences will then be able to recruit more than 2500 teaching staff (FTEs) and research universities 1400 teaching staff (FTEs). For the universities of applied sciences this is equivalent to an increase of more than 13% in the number of teaching staff and for the research universities this is equivalent to a structural increase of almost 15% in the number of lecturers, senior lecturers and professors as compared to 2012.

[1] *Source: VH onderwijzend personeel 2012 (most recent Netherlands Association of Universities of Applied Sciences teaching staff figures available), VSNU WOPI 2012 (academic staff excluding the teaching staff of university teaching hospitals).*

The extra funds available following the introduction of the student loan system will make it feasible to appoint additional teaching staff, practical lecturers, tutors and study counsellors. This is of importance to the quality and accessibility of the system and to transfers within the system. In addition, the permanent professionalization of teaching staff and education managers will be feasible. As this requires a substantial impetus, I intend to enable institutes to recruit a structural approximately 4000 additional members of teaching staff. This will require a structural amount of 60% of the funds from the student loan system (small-scale, intensive education, and talent programmes).[123] I expect that as this will also offer the institutes more certainty they will be less inclined to appoint temporary teaching staff.

Talent programmes

During the past years, a range of talent programmes resulted in increased attention for individual talents and capacities. These include excellence or honours programmes that have in part been promoted by the Sirius Programme, programmes for the enhancement of community engagement and sustainability projects such as the international solar-powered car competition.

As these distinguishing programmes make a tremendous contribution to the qualification, socialization and personal development of students, I intend to arrange for additional investments in talent programmes.

123 This increase in the number of teaching staff can be achieved only when institutes allocate the entire budget to additional staff.

These can relate, for example, to talent programmes for students seeking an extra challenge, additional attention to honours tracks, the broadening and deepening of study programmes and the continuation of the Sirius projects.[124] I intend to make it feasible for institutes to allocate a substantial amount, in the first years some 10%, of the funds from the student loan system to talent programmes.

Education-related research

The need for the enhancement of the links between research and education gives cause to the need for a financial impetus to universities of applied sciences and research universities. Investments in the enhancement of the extent to which education and research are intertwined will make it feasible to:

- Achieve synergy between academic education and research in which knowledge is not only transferred to students but students are also challenged to participate in the acquisition of knowledge;
- Devote structural attention to the investigative capacity of students.

The funds that are available can provide for measures that enable teaching staff to find a better balance between education and research. I intend to make it feasible for research universities to appoint additional academic teaching staff who are offered more stable positions and balanced teaching and research duties, in particular for the large-scale degree programmes. The attention at the applied research at universities of applied sciences will be devoted to increasing the proportions of teaching staff with a master's degree or PhD that are currently low as compared to other countries, as well to an expansion of the capacity of the research centres.

In its *Naar een duurzaam onderzoeksklimaat* (towards a sustainable research climate) vision of research, the Netherlands Association of Universities of Applied Sciences states that it is striving to achieve a ratio of 1 associate professor to 720 students. I intend to make it feasible for the universities of applied sciences to fulfil this ambition. This requires an increase in the number of associate professors of about 580 FTE, equivalent to expenditure of approximately €72 million. I intend to make it feasible for research universities to appoint additional research lecturers, in particular. This, on the basis of about 460 FTE additional research lecturers, an almost 5% expansion of the number of lecturers (in addition to the 15% additional lecturers at research universities result from the first expenditure area), will require research university expenditure of €46 million. To give this substantial impetus it will be necessary to allocate a structural amount of 20% of the funds from the student loan system for institutes from 2024 onwards. The education community will be able to exercise its discretion in giving shape to this.

124 This also fulfils the commitment I made to Member Bruijn during the plenary debate on the Wet Studievoorschot Hoger Onderwijs (higher education student loan system act), on 20-01-2015 (34 035).

Lectoren

In 2012[1], universities of applied sciences had 1 associate professor to every 1,300 students (324 FTE associate professors to 421,560 students). In its *Naar een duurzaam onderzoeksklimaat* (towards a sustainable research climate) vision of research, the Netherlands Association of Universities of Applied Sciences states that it is striving to achieve a ratio of 1 associate professor to 720 students. This requires a total of 580 FTE associate professors at the universities of applied sciences, which will involve expenditure of approximately €72 million.

When 20% of the funds from the student loan system for institutes are invested in education-related research it will be feasible to fulfil this ambition from 2024.

[1] *Source: Education Council recommendations, November 2014*

Study facilities and digitalization

The correct facilities are a precondition that needs to be met for good education. The modernization of the institutes' study and education facilities will enable them to improve the utilization of digital opportunities in the education they provide, with the objective of improving the quality of education and increasing the accessibility of higher education. At an international level, this is regarded as one of the success factors for the education of the future.

The conditions to be met for the provision of small-scale, intensive education to an increasing number of students also include investments in teaching rooms and in ICT. Many institutes have education rooms that are designed and fitted out for mass organized education. For this reason, I intend to encourage institutes to make use of study facilities such as group workspaces, work group rooms for small-scale education activities. I also intend to enable institutes to make investments in the infrastructure required to facilitate blended learning and online and open online education.

Institutes currently devote an average 12,5% (research universities 13.7%, universities of applied sciences 11.9%) of their expenditure to infrastructure/facilities (expenditure on facilities + depreciation on buildings and equipment). The alternative allocation of these funds is not self-explanatorily sufficient to create the required infrastructure: an additional impetus is required. This also meets the need of the joint institutes and students for investments in suitable and good education facilities.

I intend to provide further incentives for the improvement of education by alterations to the infrastructure. To this end I intend it make it feasible for institutes to have an additional funds, alongside their current central government grant, at their disposal equivalent to approximately 10% of the funds from the student loan system. These are funds for extra investments such as investments in small-scale work and study areas and digitalization, as well as for the operating costs associated with facilities of this nature. A good digital infrastructure is then indispensable.

Specific incentive for national priorities

This agenda, in addition to specifying incentives for small-scale, intensive education, education-related research and study facilities and digitalization for all institutes, also specifies a number of national priorities that require specific incentives. I intend to offer separate scope for these.

These consist of:

1. Comenius grants for teaching staff in higher education, in analogy with the Innovational Research Incentives Scheme (€ 20 million). These Comenius grants constitute a national grants programme for promising and excellent teaching staff – for example, for the Teacher of the Year selected by students – teams of teaching staff and education managers, as well as for innovation projects. This programme is intended to contribute to a culture of permanent professionalization. €10 million will be made available to both universities of applied sciences and research universities for this grant programme, sufficient for both universities of applied sciences and research universities to issue some 110 grants. I will enter into discussions on the design with the relevant parties in higher education, in particular with the teaching staff.

Comenius grants programme

National education grants programme for teaching staff. We will be making €10 million available (from 2025) to each sector for the issue of the target of 110 Comenius grants per sector (universities of applied sciences and research universities) to excellent teaching staff, teams of teaching staff and education managers:

- 65 grants of €50,000
- 30 grants of €100,000
- 15 grants of €250,000

2. An arrangement for the provision of incentives for various objectives (€12 million): More research into higher education and the improvement of its quality. From 2018, I intend to make funds available for more research into higher education via the Netherlands Initiative for Education Research equal to a structural amount of €2.5 million for universities of applied sciences and €2.5 million for research universities. Initiatives in the innovation area, such as the continuation of the open and online education scheme focused on active experimentation across the full breadth of open and online education (including MOOCs), experimentation relating to regulation free zones for education innovation (experimentation with new forms of education). The structural amount for the arrangement for the provision of incentives for various objectives totals €4 million for research universities and €8 million for universities of applied sciences.

3. Improvement of regional collaboration to improve transfers in education and strengthen the link with the labour market (structural amount of €30 million). The intention is to give the current promising collaboration initiatives between secondary schools and institutes of higher education and between institutes of secondary vocational education and universities of applied sciences a structural basis and to expand them. Our intention is not to prescribe how collaboration in the region is to be given shape, but to offer institutes an opportunity to intensify their collaboration with secondary schools and institutes of secondary vocational education. It is then important that the secondary schools and institutes of secondary vocational education make a contribution to these projects in proportion to their means, where relevant in kind. The major theme addressed in these collaborative arrangements needs to be the promotion of transfers.

Regional cooperation

Institutes already make funds available for collaborative activities focused on improving transfers. Estimates indicate that institutes currently allocate between €400,000 and €900,000 of their own funds to regional collaboration. They allocate these funds, for example, to pre-university preparatory programmes, teacher training and professionalization and career orientation and support, etc.

A substantial increase in the current efforts of the institutes requires funds of €10 million for research universities (18 institutes) and €20 million for universities of applied sciences (37 institutes). The *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) prescribes that transfers will be an issue for attention in the quality agreements.

I also intend these funds to give an impetus to sustainable regional collaboration between research universities/universities of applied sciences and the business community and civil society organizations, including improving the link of higher education to the labour market by means such as work placements and an active alumni policy. This will also tie in with the activities and investments within the scope of the *Lerarenagenda* (teacher's agenda).

I reserve 10% of the funds from the student loan system for institutes for the aforementioned three forms of specific incentives for national priorities (a structural amount of €62 million, of which €24 million for research universities and €38 million for universities of applied sciences).

Profiling

In recent years, research universities and universities of applied sciences – in part within the context of the performance agreements – have taken major steps in the selection and implementation of their profile. A further enhancement of this is desirable.

I intend to promote the further development of profiling and promising regional collaborative arrangements by continuing to allocate the funds for profiling and greater differentiation (2% of the education budget). As universities of applied sciences and research universities are making great efforts and good progress, I intend to continue to support their efforts. The decision-making will take place after the evaluation of the performance agreements. These funds can also be allocated to the further development of promising public-private and public-public collaborative arrangements, such as Centres of Expertise. The collaborative arrangements will also continue to devote attention to broader knowledge valorization.

Profiling: further development of promising collaborative arrangements:

The number of Centres of Expertise can be substantially increased, in particular in the public sectors. A Centre of Expertise costs, within the current framework, €1 million per annum during a four-year period.

As announced in the *Wetenschapsvisie 2015* (2015 vision for science), 4-5% of the research funding of the research universities will be allocated in another manner (capping the PhD bonus). These funds remain available to the institutes and are intended to support agreements with the institutes on their research efforts that contribute to the research agenda. This gives research universities, supplementary to their steps within the context of the performance agreements, an incentive to and support in linking the priorities in the research agenda with steps in their profiling.

Lifelong Learning

I intend this investment agenda to give a further impetus to Lifelong Learning. I stated in my letter on Lifelong Learning (Parliamentary Documents II, 30 012, No. 41) that I intend to achieve a change in culture, in part by providing incentives for pilot trials with flexibilization, experiments with demand financing and for broader accessibility to the education minor.

The Government attaches importance to the ability of the first students falling under the student loan system – and who contribute to the feasibility of improvements to the quality of higher education – to see this reflected in their education. For this reason, the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) includes provisions whereby students in the first four cohorts falling under the new system are entitled to a voucher that enables them to follow further education in the period between five and ten years after their graduation. As a result, this measure also gives an impetus to Lifelong Learning and to part-time education in the Netherlands. The enactment of the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) is accompanied by the introduction of the 'Lifelong Learning credit' as from 2017.

All full-time students who begin a bachelor's degree programme in the 2015–2016 to 2018–2019 academic years inclusive, receive their first student loan in those years, complete their degree programme[125] but do not benefit in full from the extra investments in the quality of education will receive a voucher with a value of about €2,000 which can be redeemed for extra education in the period between five and ten years after graduation. As the vouchers are intended for a specific group of students, they will be issued to individual students and will be non-transferable. The budget available for the vouchers will increase from €0.2 million in 2021 to a maximum of €135 million in 2027, and will then decrease to €0 in 2036. A decision will be made on the allocation of any unexpended voucher funds in 2036.

Beter benutten (better utilization)

The *Studievoorschot Hoger Onderwijs* (higher education student loan system) legislative proposal announced that measures will be implemented to limit public spending on student travel to a maximum of €750 million per annum from 2025, with an interim step to a maximum of €850 million in 2020 (both amounts at the 2014 price level). This will release an amount that increases to €200 million in 2025. *The Beter benutten onderwijs en openbaar vervoer* (better utilization of education and public transport) task force will submit specific proposals for the manner in which this can be achieved. At the end of 2015, I will receive the task force's final report with its conclusions and recommendations on the better utilization of the buildings of institutes of education and the public transport system. I shall inform the House of Representatives of the States General of the final report and consult with the House on the contents in the spring of 2016.

The amount that is released will be allocated to higher education and to education-related research. It is conceivable that the allocation of these funds may vary from the current allocation system adopted for the central government grant to higher education. Any such variation will depend on the manner in which the savings are achieved. I also keep the option open of allocating a larger share of the available funds to the institutes that generate more revenue. Consideration is also being given to plans in which the funds are allocated on a regional basis.

As the institutes of secondary vocational education also contribute to the *Beter Benutten* (better utilization) revenue, consideration is being given to an allocation formula for investments in higher education that also have an influence on secondary vocational education.

125 Students at universities of applied sciences must complete their bachelor's degree programme within the graduation period. Students at research universities must complete the entirety of their bachelor's degree programme and master's degree programme within the graduation period.

5.4. Allocation of the funds

The majority (90%) of the additional funds made available following the introduction of the student loan system127 will be allocated via the central government grant to the institutes to offer them scope to adopt their individual and integral approach (expenditure areas 1 to 4 inclusive). I shall reserve the remaining 10% of the funds made available following the introduction of the student loan system for specific incentives for national priorities. The agreement reached on the student loan system states that the funds released following the introduction of the student loan system will be invested in higher education and will be linked to the strategic plans of the institutes and to the quality agreements reached with the Ministry of Education, Culture and Science and with the Ministry of Economic Affairs. The quality agreements will also include agreements on the manner in which account is to be given.

The institutes, in advance of the investments that will become feasible following the introduction of the student loan system, are themselves allocating an amount of €200 million per annum in 2015, 2016 and 2017 to give an impetus to the quality of their education. The extra funds from the revenue from the student loan system will enable universities of applied sciences and research universities to continue their quality impetus and to make additional efforts and investments. This will make it feasible to intensify the efforts being made to improve the quality of education and will bring the shared perspectives much closer.

The institutes can allocate the additional funds they receive and their current central government grant to the achievement of institute objectives that connect with the national priorities referred to in this strategic plan but which may be given shape within the context of the relevant institute. These are institute objectives that are formulated in dialogue with the teaching staff and students and which are laid down in the strategic institutional plan. The *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) includes provisions which provide for the right of approval of the outline budget to ensure that students and teaching staff are involved in decisions on allocations of funds to investments.

As the current performance agreements are an experiment, when the quality agreements are being drawn up I shall take explicit account of the outcome of the evaluation of the performance agreements to be carried out following the final assessment in 2016.
The involvement of the participation councils and students and teaching staff in the conclusion and fulfilment of the agreements will then be an important issue for attention. I expect institutes to discuss the results and the evaluation of the performance agreements with their students and teaching staff and to reach the quality agreements to be made later with the appropriate involvement of the students. I regard this as a condition that must be met to provide assurances for sufficient support for the agreements.

I will be pleased to meet with the parties involved to discuss the content of the quality agreements and the accounting processes for those agreements as based on the evaluation of the performance agreements. I intend to continue the joint process we began with the series of visits to institutes of higher education to address the most important tasks for and investments in higher education. It is not without reason that the *Wet Studievoorschot Hoger Onderwijs* (higher education student loan system act) includes provisions which prescribe that the student organizations, Association of Universities in the Netherlands (VSNU) and Association of Universities of Applied Sciences (VH) must be consulted on the draft Order in Council that will govern the specification of quality agreements. I have also undertaken to ensure that the Order in Council shall prescribe how the participation council must be involved in the quality agreements reached between the government and the institutes.

We need to remain critical of the current systems and to make use of the lessons learnt from experience in the design of new systems. I attach importance to the institutes' formulation of their ambitions in consultation with their rank and file. I will also assess whether further developments at system level are required. I wish to make use of the Netherlands Court of Audit' expertise in the joint process leading to the quality agreements on giving account for and visualizing results. This then relates, in particular, to the Netherlands Court of Audit' expertise in the use of input, output and outcome indicators and other policy instruments that can visualize results and broader proceeds. Self-evidently, I will also discuss this with the House of Representatives of the States General.

5.5. Finance

The following table links the available funds from the student loan system and the other available funds to the most importance objectives of the strategic agenda. These objectives can be achieved using various methods. For this reason, the budgets in this table do not serve as a blueprint: they should expressly be regarded as to 'expenditure areas'. The funds released by the approach of the *Beter Benutten* (better utilization) task force increase to €200 million in 2025. These funds are in addition to the funds from the student loan system.

Table 1: Expenditure areas for the higher education investment agenda 2015 (including 'green education')

	x € 1 million α	2015	2016	2017	2018	2019	2020
	STUDENT LOAN SYSTEM FUNDS						
	Student loan system funds available for institutes (total universities of applied sciences/research universities)*	200	200	200	200	200	236
1	Small-scale, intensive education (≥50%)				100	100	121
2	Talent programmes (≤10%)				20	20	20
3	Education-related research (20%)				40	40	47
4	Study facilities and digitalization (10%)				20	20	24
5	Specific incentive for national priorities (10%)				20	20	24
6	Funds for student vouchers**						
	TOTAL FUNDS STUDENT LOAN SYSTEM *(excluding Beter Benutten (better utilization)***)*	**0**	**0**	**0**	**200**	**200**	**236**
	OTHER AVAILABLE FUNDS	**4**	**21**	**87**	**82**	**82**	**71**
7	Profiling						
	Funds, capping doctorate funding at 20% (Research universities)****			71	71	71	71
8	Promotion of Lifelong Learning:						
	- Current funds for flexibilization of adult education at universities of applied sciences	4	21	16	11	11	
	TOTAL AVAILABLE BUDGET FOR THE INVESTMENT AGENDA HIGHER EDUCATION 2015 *(excluding Beter Benutten (better utilization))*	**4**	**21**	**87**	**282**	**282**	**307**

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
400	500	528	600	650	700	649	650	690	724
210	260	276	320	350	380	350	350	374	395
30	40	40	40	40	40	40	40	40	40
80	100	106	120	130	140	130	130	138	145
40	50	53	60	65	70	65	65	69	72
40	50	53	60	65	70	65	65	69	72
0	1	4	26	78	118	135	124	76	39
400	**501**	**532**	**626**	**728**	**818**	**785**	**774**	**766**	**763**
71	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**
71	71	71	71	71	71	71	71	71	71
471	**572**	**603**	**697**	**799**	**889**	**856**	**845**	**837**	**834**

α *Due to rounding off differences, amounts may not add up exactly*

* - It has been agreed with the Association of Universities in the Netherlands (VSNU) and Netherlands Association of Universities of Applied Sciences (VH) that together the institutions of higher education will make annual investments of €200 million in 2015, 2016 and 2017 in advance of the revenue from the student loan system. As from 2018, this series relates to the funds from the student loan system for institutes including 'green education' (excluding Beter Benutten (better utilization) task force). The funds available to institutes increase to €757 million in 2035 and are of a structural amount of €620 million from 2065

- 90% of the funds made available following the introduction of the student loan system will be allocated via the central government grant directly to the institutes to offer them scope to adopt their individual and integral approach (expenditure areas 1 to 4 inclusive). Institutes may vary from the percentages referred to for expenditure areas 1 to 4 inclusive within their institute. The remaining 10% is reserved for specific incentives for national priorities (expenditure area 5).

** These funds increase to €135 million in 2027 and then decrease gradually to zero in 2036.

*** The funds released by the approach of the Beter Benutten (better utilization) task force increase to €200 million in 2025 (amount at the 2014 price level). The funds will be returned to education institutes for investments in the quality of education.

**** This relates to an indication of the amount for capping the funding of doctorates to 20% as recommended in the Wetenschapsvisie (vision for science). These are existing funds that are allocated in another manner.

Table 2: Breakdown of expenditure areas by universities of applied sciences/research universities (including 'green education')

	x € 1 million α	2015	2016	2017	2018	2019	2020
	STUDENT LOAN SYSTEM FUNDS UNIVERSITIES OF APPLIED SCIENCES						
	- Student loan system funds available for universities of applied sciences (62%)*	124	124	124	124	124	146
1	Small-scale, intensive education (≥50%)				62	62	75
2	Talent programmes (≤10%)				12	12	12
3	Education-related research (20%)				25	25	29
4	Study facilities and digitalization (10%)				12	12	15
5	Specific incentive for national priorities (10%)				12	12	15
6	Funds for student vouchers**						
	TOTAL FUNDS STUDENT LOAN SYSTEM UNIVERSITIES OF APPLIED SCIENCES (*excluding Beter Benutten (better utilization)****)	**0**	**0**	**0**	**123**	**123**	**146**
	OTHER AVAILABLE FUNDS UNIVERSITIES OF APPLIED SCIENCES	**4**	**19**	**15**	**10**	**10**	**0**
7	Profiling						
8	Promotion of Lifelong Learning:						
	- Current funds for flexibilization of adult education at universities of applied sciences	4	19	15	10	10	
	TOTAL AVAILABLE BUDGET UNIVERSITIES OF APPLIED SCIENCES (*excluding Beter Benutten (better utilization)*)	**4**	**19**	**15**	**133**	**133**	**146**
	STUDENT LOAN SYSTEM FUNDS RESEARCH UNIVERSITIES						
	- - Student loan system funds available for research universities (38%)*	76	76	76	76	76	90
1	Small-scale, intensive education (≥50%)				38	38	46
2	Talent programmes (≤10%)				8	8	8
3	Education-related research (20%)				15	15	18
4	Study facilities and digitalization (10%)				8	8	9
5	Specific incentive for national priorities (10%)				8	8	9
6	Funds for student vouchers**						
	TOTAL FUNDS STUDENT LOAN SYSTEM RESEARCH UNIVERSITIES (*excluding Beter Benutten (better utilization)*)	**0**	**0**	**0**	**77**	**77**	**90**
	OTHER AVAILABLE FUNDS RESEARCH UNIVERSITIES	**0**	**2**	**73**	**72**	**72**	**71**
7	Profiling						
	Funds, capping doctorate funding at 20% (Research universities)****			71	71	71	71
8	Promotion of Lifelong Learning:						
	- Current funds for flexibilization of adult education at universities of applied sciences	0	2	2	1	1	
	TOTAAL BESCHIKBAAR BUDGET WO (*excl. Beter Benutten*)	**0**	**2**	**73**	**149**	**149**	**161**

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
248	310	327	372	403	434	402	403	428	449
130	161	171	198	217	236	217	217	232	245
19	25	25	25	25	25	25	25	25	25
50	62	66	74	81	87	81	81	86	90
25	31	33	37	40	43	40	40	43	45
25	31	33	37	40	43	40	40	43	45
0	1	4	23	65	90	100	89	51	26
249	**311**	**332**	**394**	**468**	**524**	**503**	**492**	**480**	**476**
0	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
249	**311**	**332**	**394**	**468**	**524**	**503**	**492**	**480**	**476**
152	190	201	228	247	266	247	247	262	275
80	99	105	122	133	145	133	133	141	151
11	15	15	15	15	15	15	15	15	15
30	38	40	46	49	53	49	49	52	55
15	19	20	23	25	27	25	25	26	27
15	19	20	23	25	27	25	25	26	27
0	0	0	3	13	27	35	35	26	12
151	**190**	**200**	**232**	**260**	**294**	**282**	**282**	**286**	**287**
71	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**	**71**
71	71	71	71	71	71	71	71	71	71
222	**261**	**271**	**303**	**331**	**365**	**353**	**353**	**357**	**358**

α *Due to rounding off differences, amounts may not add up exactly*

* - It has been agreed with the Association of Universities in the Netherlands (VSNU) and Netherlands Association of Universities of Applied Sciences (VH) that together the institutions of higher education will make annual investments of €200 million in 2015, 2016 and 2017 in advance of the revenue from the student loan system. As from 2018, this series relates to the funds from the student loan system for institutes including 'green education' (excluding Beter Benutten [better utilization]). The funds available for institutes increase to €757 million in 2035 (universities of applied sciences €469 million and research universities €288 million) are of a structural amount of €620 million from 2065 (universities of applied sciences €384 million and research universities €236 million).

- 90% of the funds made available following the introduction of the student loan system will be allocated via the central government grant directly to the institutes to offer them scope to adopt their individual and integral approach (expenditure areas 1 to 4 inclusive). Institutes may vary from the percentages referred to for expenditure areas 1 to 4 inclusive within their institute. The remaining 10% is reserved for specific incentives for national priorities (expenditure area 5).

** The study loan system student voucher funds increase to €135 million in 2027 (of which universities of applied sciences €100 million and research universities €35 million) and then gradually decrease to zero in 2036. .

*** The funds released by the approach of the Beter Benutten (better utilization) task force increase to €200 million in 2025 (amount at the 2014 price level). The funds will be returned to education institutes for investments in the quality of education. The task force will publish its final report at the end of 2015, with the task forces conclusions and recommendations on the better utilization of the buildings of institutes of education and the public transport system. The allocation of the funds between universities of applied sciences and research universities will become clear after the publication of this report.

**** This relates to an indication of the amount for capping the funding of doctorates to 20% as recommended in the Research Agenda.

Summary

In the years ahead we must pursue rapid development to ensure that higher education in the Netherlands meets the demands of the 21st century. In September 2015, a new student loan system (studievoorschot) is to be introduced, whereby the student grant system will be transformed into a student loan system. The resultant reallocation of funds is to be invested in the future of higher education. This strategic agenda therefore considers ways in which to increase quality in a manner which is tangible for both students and university staff. In her foreword, the Minister of Education highlights a challenge which became evident during her many meetings with stakeholders: higher education must prepare students to live and work in a globalizing world which is becoming increasingly complex and unpredictable.

Higher education in the Netherlands is good, but it is not yet 'ready for the 21st century.' In 2010, the Veerman Commission concluded that the current system is not adequately 'future-proof'. The basic quality of higher education is high; students are proficient and satisfied with the education they receive. Nevertheless, it is clear that institutes of higher education cannot increase both student numbers and quality with the resources currently available to them. Moreover, higher education remains too focused on the acquisition of knowledge. In today's world, competencies and qualities such as creativity, empathy and entrepreneurial skills are of increasing importance and must form an integral part of the student's all-round development. Greater use must be made of the opportunities offered by internationalization and digitalization.

As we look to the future, this agenda sets out the action that needs to be taken in order to achieve the desired situation. Its three key themes are 'world-class education', 'accessibility, talent development and diversity', and 'social relevance'. Ambitions in each area are linked to the investment agenda.

World-class education

The ambition for 2025 is that higher education will enable all students to achieve their full potential. This calls for a greater focus on all-round development. The aim is not merely to instil sufficient knowledge to allow the student to obtain a qualification, but to provide a sound basis for personal development and socialization. The key role in this process falls to the professors and teaching staff. Good higher education must be embedded within 'communities of learning' in which there is ample opportunity for critical discussion and reflection. The increasing diversity among students demands an educational approach that is more tailored to students' needs. Institutes must be able to offer greater differentiation in both educational content and teaching methods. This requires them to identify their target groups and to define clearer and more readily recognizable profiles. They must be mindful of the different needs of specific groups of students. Study success (i.e. students obtaining the maximum benefit from their studies while graduating on time) will remain important but it is largely the result of high quality education and of effective 'matching': students must follow courses which are appropriate to their talents and abilities. A university's success cannot be measured solely by the number of degrees it awards.

We have identified several factors which can enhance the quality of higher education: small-scale learning communities and talent programmes, rich and varied learning environments, professional and inspiring teaching staff, and opportunities for experimentation, renewal and reform. Based on these pillars, the strategic agenda for 2025 focuses on the follow measures:

- The resources made available by the new student loan system will enable institutes of higher education to recruit some four thousand additional professors, tutors, mentors, and teaching staff whereupon education can be made more personal and intensive. Links between research and education will be strengthened by appointing research university staff who combine teaching with research and by appointing more lectors at universities of applied sciences (often referred to by the Dutch abbreviation for 'higher professional education': HBO).

- In terms of internationalization, we intend to increase outward mobility, to step up efforts to attract and retain international students, and to facilitate transnational education.

- The existing incentive programme for Open Online Higher Education is to be extended. All teaching staff in higher education will be asked to publish their course materials on 'open access' digital platforms by 2025. A study will examine possibilities for a national or international platform through which such materials can be shared and adapted. Institutes will be asked to accredit each other's Massive Open Online Courses (MOOCs).

- A career in education is sometimes regarded as less prestigious than a career in scientific research. This situation must be resolved by creating greater differentiation in the career paths of both teaching staff and researchers, and by appointing full professors whose responsibility is also to teach and to develop and innovate education. Every major discipline must have enough of these 'education professors' to ensure ongoing improvement and renewal.

- Comenius Grants for professors and education programme leaders will help to achieve renewal and reform in higher education. The total amount available will rise to €20 million per annum, providing 110 grants in each sector (universities of applied science and research universities).

- We shall examine whether the current National Student Survey (NSE) can be refined to provide an extensive and accurate assessment of an institute's quality culture and the extent to which students contribute to that culture.

- More funding is to be made available for applied and demand-led research into higher educational practice. The budget will eventually be in the order of €5 million per annum.

- At various points in the higher education system, we shall create greater opportunity for experimentation, renewal and reform: so-called 'rule-free zones'.

Accessibility, talent development and diversity

The ambition for 2025 is that every student in higher education should have the opportunity to develop their full potential. The challenge is to ensure that every student is 'in the right place', i.e. following a programme commensurate with his or her talents and abilities. Higher education should be as accessible as possible, free of financial, cultural or other obstacles. There remains a substantial group of young people (and parents) who are unfamiliar with the culture of higher education and regard it as 'not for people like us'. This misconception must be dispelled.

There must be far greater differentiation in course content, educational concepts and teaching methods. Increased participation in higher education has already given rise to far greater diversity within the student population, a trend which will only continue. There is a greater need for tailored and more flexible study paths, to include the transition from secondary school into higher education. If the educational programme in secondary schools and secondary vocational education (Dutch abbreviation: MBO) is adapted to provide such flexibility, there will also be consequences for higher education itself. In 2025, far greater attention must be devoted to all student groups. Alongside differentiation and flexibility, this involves having high expectations of every student and improving study success within higher education, regardless of pre-university education and background. This in turn demands greater cooperation and coordination across the educational spectrum.

Recent years have seen significant progress in achieving differentiation in the higher education courses available, although much remains to be done. We must also achieve system differentiation: there must be greater flexibility in learning paths, with more opportunities to combine courses and modules from various programmes, perhaps at different institutes or types of institute and even across the traditional dividing line between research universities and universities of applied sciences.

A greater diversity in higher education is appropriate to the diversity of the student population and the innovation of education in keeping with the new demands of the job market. Policy measures to ensure that each student is indeed 'in the right place' include the following:

- Further investment by the institutes themselves in matching and course orientation events for prospective students with a view to increasing accessibility to higher education. Ongoing attention will be devoted to each student's study progress.

- A proportion of the resources made available by the introduction of the student loan system (beginning at 10% in the early years) will be devoted to the development and expansion of programmes for talented students (e.g. Honours programmes).

- Ongoing attention will be devoted to study success, drop-out rates, the number of students who switch courses and the time taken to complete a degree course, alongside the additional investments in course orientation and matching processes. Cooperation with secondary schools and secondary vocational education will be intensified. The current 'binding recommendation on the continuation of studies' (whereby a student who has not made sufficient progress is not permitted to join the second year of a programme) will be continued. Particular attention will be devoted to the talents and abilities of each student, with greater emphasis on tailoring educational content and the guidance provided to meet student needs in the form of tutoring and mentoring. The importance of extra-curricular development will not be overlooked.

- Contact between secondary schools, centres of secondary vocational education and institutes of higher education is to be intensified by means of a regional cooperation budget *(see investment agenda under 'national priorities')*.

- Students in intermediate vocational education with the ambition and the ability to continue their studies at a university of applied science will be given every opportunity to do so. This will entail information programmes about the new student loan system, increasing financial awareness, ensuring continuity of the curriculum at various levels, and the introduction of joint programmes involving institutions of secondary vocational education and universities of applied science on an experimental basis.

- Greater differentiation in education programmes. The Associate Degree will be given a more independent status, free of the organizational restrictions imposed by its strong links to the Bachelor's programme at universities of applied science. Meanwhile the number of university of applied science graduates going on to take a Master's degree will be increased by removing the current restrictions that apply to the development of Master's degree programmes offered by these institutions.

- Progression to Master's level programmes is to be facilitated for both university graduates and graduates of universities of applied sciences. The aim is to come up with solutions that will make the transition as smooth and affordable as possible for both the student and the institution from the 2017/2018 academic year.

- Cooperation between institutes of higher education is to be intensified to include that between research universities and the universities of applied sciences, with a view to offering students more flexible programmes (with the opportunity to study elements of various disciplines at different institutes).

- Part-time higher education is to be made more flexible and geared to market demand. There are to be experiments with new forms of financing, such as the 'Lifelong Learning' personal credit.

Social relevance

The ambition for 2025 is that all institutes of higher education will have established strong and permanent links between education, research and practice. At regional level, this relevance is reflected by the physical proximity to public and private sector organizations, while the institutes will also work at national and international levels. By 2025, research universities and universities of applied sciences will form part of valuable and sustainable 'ecosystems' alongside the secondary education sector, secondary vocational education, research institutes, government departments, local and regional authorities, companies, hospitals, community centres and sports clubs.

The process of valorization – the practical application of knowledge in order to create value – will be firmly embedded throughout the higher education system. Exactly how this is to be achieved is a matter for each institute (and perhaps each faculty or department) to decide, based on its own profile. All forms of valorization are important, whether predominantly social or economic in nature. Effective profiling on the part of institutes of higher education not only creates recognizability for students and employers, but enables the institutes to establish certain specialisms at regional, national and international level. Profiling helps to ensure that the right staff and students are in the right place, and that the right kind of research is being performed. In 2025, institutes will also establish distinct profiles on the basis of their preferred educational approach. This will allow them to respond to change more quickly and effectively.

The graduates of tomorrow must offer more than professional knowledge and skills. It will fall to them to shape the society we wish to live in. They are the ones who will decide how we make the choices that determine our future. A rich learning environment, in which theory and practice are closely intertwined and in which knowledge and society support each other, is essential. Education which addresses current societal challenges or examines the real-life issues which private sector companies face will encourage students to step outside their 'comfort zone' and contribute to practical solutions. Universities are not merely allied to society, they are an integral part of society. It is therefore essential that their student and staff bodies reflect the diversity of society at large. All institutes of learning must take a central place within society and the community in the interest of their students' personal development.

The policy measures addressing these ambitions include:

- Ongoing regional cooperation to enrich the learning environment, supported by generic investment that enables recruitment of additional professors and lectors who will strengthen ties with the community. Profiling and promising cooperative ventures (in both the public and private sectors) will be encouraged by means of a regional cooperation budget.

- To strengthen the links with the labour market, students must be given full and accurate information about the career prospects relating to their choice of programme. This entails the adoption of an active alumni engagement policy and better facilitation of internships and work experience placements. These measures will also be funded from the regional cooperation budget. *(See the investment agenda under 'national priorities'.)*

- The practical application of knowledge in both the economic and social contexts is to be expanded by strengthening the links between education and research, drawing upon the latest insights in education science. Centres of Expertise, both existing and new, will focus on the major societal challenges. The 'entrepreneurial' component of education will be expanded, and education itself will be given greater recognition as a form of knowledge application.

- Further profiling, including that based on the educational approach(es) favoured by an institute, will be encouraged by means of debate and discussion about profiling activities and ambitions for the future.

- Institutes will be given better opportunities to revise and renew their educational programmes.

The investment agenda

The growth in the number of students in higher education, the increase in diversity and the resultant need to tailor education to student needs all call for additional investment. The introduction of the new student loan system will result in the release of government funding from 2018 onwards. In the meantime, the institutes themselves will devote an additional €200 million per annum to quality improvement programmes.

The additional funding that will become available in phases over the period 2018-2025 will amount to almost €1 billion per annum. The investment agenda is not a blueprint to which the institutes of higher education are bound. Rather, it presents intentions for the allocation of resources geared towards attaining the ambitions described in the strategic agenda. The key potential results of following these intentions are as follows:

- *Small-scale and intensive education*
  The additional resources will enable institutes to increase their teaching staff (professors, lecturers, tutors and mentors) by approximately 14%. Nationwide, this represents the creation of some four thousand full-time positions. To do so will require approximately 60% of the resources made available by the adoption of the student loan system.

- *Talent programmes*
  A substantial proportion of the additional resources (approximately 10% in the initial period) has been earmarked to support the development of advanced programmes for talented students (such as the Honours programmes).

- *Links between education and research*
  It will be possible to increase the number of lectors at the universities of applied sciences by 580 FTE, whereupon the institutes will achieve the stated ambition of having one lector for every 720 students. Universities will be able to appoint extra staff who combine research with education. An increase of 460 FTE represents growth of almost 5% over and above the 14% increase described under 'Small-scale and intensive education' (above).

- *Study facilities and digitalization*
  Further efforts to improve the education infrastructure are to be encouraged, whereby institutes will be given additional funding over and above the regular government funding. Approximately 10% of the resources made available has been earmarked for investment in small-scale study facilities and digitalization.

- *National priorities*
  Ten million euros will be made available in the form of Comenius Grants for professors and education programme leaders at both research university and university of applied science level. This is sufficient to award some 110 grants per year in each sector. In addition, funding is to be made available for research into higher education (theory and practice) and for experiments involving open online courses and innovation in education. The amount available will eventually be in the order of €12 million per annum. Improvement of regional cooperation to promote smooth educational progression for students and to align education with the requirements of the employment market will attract additional funding of €30 million per annum.

- *Profiling*
  The government intends to maintain current funding to support profiling and the creation of promising regional partners, which accounts for 2% of the total education budget. In addition, the research funding for universities is to be allocated differently (further to the capping of the bonus payable in respect of the number of doctorates awarded).

- *Lifelong Learning*
  The investment agenda provides an additional impulse for Lifelong Learning. The enabling legislation for the new student loan system includes a provision whereby the first four cohorts to fall under the system are eligible to receive a voucher which can be redeemed against the costs of additional training after graduation. Under the same legislation, Lifelong Learning personal credit will be made available from 2017.

- *Improved cost effectiveness of student public transport pass*
  The Higher Education Student Loans Bill announced measures intended to maximize the cost effectiveness of government expenditure on the student public transport pass. These measures are expected to result in savings which will rise to €200 in 2025. The amount thus released will be reinvested in higher education and education-related research.

Resources to cover the first four spending targets will be mostly (90%) channelled via the standard government allowance paid to the institutes; the remaining 10% is to be reserved to finance specific incentive programmes addressing the national priorities. The government has undertaken to reinvest all resources released thanks to the introduction of the new student loan system in higher education, with direct links to the Strategic Plans of the institutes and their quality agreements with the Ministry of Education, Culture and Science or, where applicable, the Ministry of Economic Affairs.

An evaluation of the performance agreements, introduced a few years ago, will deliver important 'lessons learned' for designing and developing quality agreements. Considerable attention will be devoted to the involvement of staff and student co-determination bodies, and the degree to which the institute concerned consults and acts upon the recommendations of such bodies. Institutes are expected to discuss performance and evaluation with their students and staff, who should be consulted with regard to the proposed content of the quality agreements. The minister regards this is as essential to ensuring that the agreements enjoy adequate, broad-based support. The Ministry of Education will also seek a post-evaluation dialogue with all relevant stakeholders.

The joint process which began with the minister's meetings with the various stakeholders within higher education and which focuses on the main issues and investments in higher education is to be continued. The prime objective is to ensure that all resources devoted to students make a tangible contribution to improving the quality of education.