Plan for Quality Agreements 2019-2024

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1. Introduction

This document contains the agreements Eindhoven University of Technology has with students, lecturers and other relevant stakeholders to permanently improve the quality of education. These so-called Quality Agreements are made at institutional level and serve as a basis for the distribution of the so-called studievoorschotmiddelen. These funds became available after the ending of the basic scholarship in 2015 and, in agreement with students and teachers, will be spent on 'visible quality improvement' in education.

In this document, we will first discuss the broader framework in which the Quality Agreements are placed, namely the Sector Agreement on Scientific Education 2018 (9 April 2018) between the Minister of Education, Culture and Science and the Dutch universities united in the VSNU. We then discuss the way in which Quality Agreements should be implemented locally, in accordance with the sector agreement. Section 4 discusses the conclusion of the Quality Agreements at TU/e and, finally, section 5 presents the 'Plan for Quality Agreements at TU/e'.

2. Sector agreement 2018

On 9 April 2018, the Minister of Education, Culture and Science signed a Sector Agreement with the universities on university education. In this agreement, the parties set out their Quality Agreements for higher education, the way in which universities are to be profiled and the shared priorities for the coming government term of office. The Sector Agreement covers all funded academic education (wo) as it applies for the period from 2019 up to and including 2022. Insofar as the Sector Agreement relates to Quality Agreements, it applies for the period 2019 up to and including 2024.

The Sector Agreement contains the agreements on:

1. Investing in the quality of education:
   a. Investing in studievoorschotmiddelen, via the Quality Agreements (see section 2 and following).
   b. Ensuring accessibility and progression to and from higher education: promotion of VWO-WO, care and restraint with regard to decentralized selection, transparency in progression from BSc to MSc, promotion of student welfare.
   c. The internationalization of education: controlled growth of international students, English-language programs and accessibility for Dutch students, promotion of international mobility and binding of international graduates to the Netherlands.
   d. Linking up with the employment market and stimulating entrepreneurship education: greater focus on the existing supply of courses and programs, more scope for innovation and responsiveness, more ownership for institutions, more cooperation between institutions and other parties involved, and less administrative burden.

2. Working on world-class research
   a. Profiling: via the National Science Agenda and Sector Plans. Additional research funds will be made available under the coalition agreement, of which (increasing to) €70 million will be made available through Sector Plans. In accordance with the coalition agreement, the

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1 The memorandum is based on Dutch-language Ministry documents, which is why the first version is written in Dutch. A translation will follow after the first version has been discussed with the BSc and MSc committee of the UR.
government will invest these resources mainly in science and technology research (via the lump sum).

b. Leading the way internationally in the field of Open Science: achieving the ambitions set out in the National Plan for Open Science.

c. Strengthen impact: commitment to entrepreneurship education and to promoting academic start-ups.

d. Making more use of female talent.

As preconditions:

1. Investments:
   a. For the improvement of the quality of education, the studievoorschotmiddelen will structurally make extra resources available from the budget of the Ministry of Education, Culture and Science. For the universities, this funds will increase from €77 million in 2019 to €232 million in 2024. Part of the studievoorschotmiddelen (10%) has already been earmarked for national priorities. For the remaining funds (90%) Quality Agreements will be made for the period 2019 to 2024.
   b. Annually, €39 million in profiling funds are already available (the '2% funds').
   c. Under the coalition agreement, funds will be made available for fundamental research, applied research and innovation, and research infrastructure.
   d. Further research into the funding system.

2. Transparency and accountability: by developing a permanent national overview for universities of applied sciences and universities of key data for education, research and impact.

3. Work pressure and lower regulatory pressure: planning work pressure, reducing application pressure, accreditation pressure, etc..

3. Local Quality Agreements 2019-2024

The Quality Agreements are linked to the studievoorschotmiddelen that will be employed to achieve a visible improvement in the quality of education. Institutions formulate intentions and goals on the following themes for improving the quality of education (see Appendix 1 for an explanation per theme):

1. More intensive and small-scale education (educational intensity);
2. Educational differentiation, including talent development inside and outside the study program;
3. Further professionalization of teachers (teacher quality);
4. Appropriate and good educational facilities;
5. More and better guidance of students;
6. Study success including promotion, accessibility and equal opportunities.

3.1 Quality commitment plan: content

In a plan, the institution reveals its aims to achieve with the use of studievoorschotmiddelen up to and including 2024. This plan for the use of the studievoorschotmiddelen will include:

- The intended expenditure ('intentions') on the six nationally agreed themes;
- The goals the institution wants to achieve with this spending;
- The use of studievoorschotmiddelen or the reason why no use is made of the studievoorschotmiddelen for that theme;
- How these choices fit in with the broader educational intentions and vision of the institution and the history and context of the institution, including, for example, the long-term development of the institution's budget;
What progress has been made in achieving the intentions in 2021?

Intentions and goals can apply to the entire institution, but also to certain parts of it or to specific groups of students.

The institution’s plan for the use of *studievoorschotmiddelen* can be embedded in a new institutional plan (in Dutch: *instellingsplan*), but may also be an addendum to an existing institutional plan.

### 3.2 Accountability of the plan: horizontal accountability, employee and student participation, Supervisory Board

The institutions translate the themes for the use of resources into concrete measures and policies. This takes place in a dialogue between students, lecturers, relevant external stakeholders (companies, NGO’s, other educational institutions, regional authorities), Executive Board and Deans, student and employee representatives and Supervisory Board.

The University Council has the right to consent to the plan for the use of the *studievoorschotmiddelen*. In addition, it has the right of assent (in Dutch: *instemmingsrecht*) to the part of the annual budget that concerns *studievoorschotmiddelen*, based on the consideration that these funds are part of the main budget lines of the institution. This concerns the further concretization of the multi-year budget included in the plan.

The board and the University Council also agree on the process to be followed in order to arrive at the plan for the use of the *studievoorschotmiddelen*. Employee and student representatives will be involved in good time and will thus have the opportunity to contribute ideas. The board and the University Council jointly ensure a broad involvement of the university community and agree which bodies within the institution will be involved in the process of drawing up the plan.

The plans for the use of the *studievoorschotmiddelen* are submitted to the Supervisory Board for approval after approval by the University Council.

In the annual reports of the institution from 2019 onwards, the institution will report on its progress in terms of content and process in a separate chapter. In an appendix to the annual report, the University Council is given the opportunity to report independently on the use of study advances.

### 3.3 Assessment of the plan by NVAO

The plans and the realization of the plans are independently assessed. This is aligned with the process of the Institutional Audit (Dutch abbreviation ITK), which is carried out by the Dutch-Flemish Accreditation Organization (NVAO). A separate trail for the Quality Agreements will be added to the ITK process, resulting in a separate recommendation to the Minister of Education, Culture and Science regarding the institution’s plan for the use of *studievoorschotmiddelen*. This recommendation is therefore independent of the NVAO decision on the ITK. There are three assessment points: a review of the plans (for TU/e during the ITK in autumn 2019), an assessment in autumn 2022 of the progress and involvement of the employee and student representative bodies and other relevant stakeholders, and a final evaluation. If the assessment of the plan and the progress is insufficient, the *studievoorschotmiddelen* will be made available to the teachers of the institution via the Comenius grants.
3.4 Financial
Given the Quality Agreements, the studievoorschotmiddelen for 2019 and 2020 are paid out as an unconditional lump sum (for the universities in proportion to the share of a university in the student-related funding in a year). In the period up to April 2020, the plans of the institutions will be assessed by NVAO. If NVAO gives a positive recommendation about the plan and the Minister issues a positive decision, the institution will receive its studievoorschotmiddelen in the form of quality funding for the period 2021 up to and including 2024.

4. Procedure for establishing Quality Agreements at TU/e

In the period 2015-2017, universities made pre-investments in order to improve the quality of education. The aim of using the studievoorschotmiddelen is to improve the quality of education at TU/e. This means that TU/e has invested in the areas of more intensive and small-scale education, improvement of student guidance and coaching, talent development and educational facilities and professionalization of teaching. The Netherlands Court of Audit (Nationale Rekenkamer) examined these pre-investments and found in a confidential report that it is somewhat difficult to determine whether the pre-investments of TU/e are also pre-investments according to its definition. In addition, the court found that in 2016 and 2017 the University Council had actually given its approval to the broad outlines prior to the budget.

In 2018, TU/e received for €2.9 million studievoorschotmiddelen. TU/e has made additional investments aimed at all students in the field of more intensive and small-scale education, improvement of student guidance and coaching, talent development and educational facilities and professionalization of teaching (see appendix 2 for the use of the studievoorschotmiddelen in 2018). In addition to the available budget for studievoorschotmiddelen, TU/e invested a further €1.2 million in Teaching Assistants in 2018 in order to strengthen hands-on education (more intensive, small-scale education) and accelerate the digitization of education (suitable and good educational facilities). A total of €4.1 million has therefore been reserved specifically for improving the quality of education at TU/e.

Because of the protracted lack of clarity about the allocation of studievoorschotmiddelen and the delay in the formation of the Coalition Agreement, the involvement of students and lecturers in the use of studievoorschotmiddelen for 2018 was jeopardized. The University Council then expressed the strong wish to be involved at an early stage in the discussions about the use of the studievoorschotmiddelen in order to ensure that the involvement of students and lecturers for the 2019 budget cycle is fully facilitated, in accordance with the Minister's approach. In order to ensure a clear process and clear accountability for the use of the studievoorschotmiddelen from 2018 onwards, it was agreed with the University Council at the end of 2017 that 'prior to the discussions on the spring memorandum of the budget, an initial consultation on this subject would be held with (a delegation of) the University Council (UR) as early as February 2018, resulting in a joint passage in the spring memorandum on the use of the studievoorschotmiddelen.'

In February 2018, an initial consultation took place on the use of studievoorschotmiddelen in 2019 and, furthermore, between the Dean of the Bachelor College (BC) and the Dean of the Graduate School (GS) and the BC and GS Committee of the University Council. A first proposal for Quality Agreements has

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2 See correspondence from Ummelen to University Council, dated 22-11-2017.)
been drawn up for each theme. The University Council then asked the student associations and departmental councils for input on the use of *studievoorschotmiddelen*. In summary, it emerged from this consultation round that it would be preferable for the *studievoorschotmiddelen* to be invested in matters that benefit all TU/e students and not only specific groups, such as student teams. Points of attention according to the students and teachers are:

- Small scale and intensive education: Hands-on learning, lab work, personal contact between student and teacher, lower student-staff ratio;
- Improvement of coaching and counseling;
- Study workplaces;
- Digitization: digital testing, blended learning, streaming lectures, educational innovation with ICT;
- Contests: design, hackaton;
- Courses: languages;
- Development of talent, including Honors Academy in the Master phase. This would also require the issue of badges or certificates.

In March 2018, a second meeting was held between Deans and the University Council delegation to discuss the content of the Quality Agreements and the prioritization of the six themes, based on input from the departments. It was agreed that the Quality Agreements would be formulated as commitments, for example: Number of teaching assistants to be deployed; Increase in the number of teachers; Small groups of a maximum of 5 students; All students follow a course in the Innovation Space; Development of an X-number of experiments with interdisciplinary education or with subjects that students set up themselves. In these consultations, the order of priority for the use of the *studievoorschotmiddelen* was determined:

1. Small scale and intensive education
2. Appropriate and good educational facilities
3. Teaching quality and further professionalization of teachers
4. Educational differentiation
5. Study success
6. More and better coaching and guidance for students

The agreements made with the University Council, having heard the departmental councils and study associations, are set out in a 'TU/e Quality Agreements Plan' of 2019-2024 in which TU/e includes a long-term budget that gives an overview of what TU/e intends to spend the *studievoorschotmiddelen* on.

This plan will be discussed by both Deans with:

<table>
<thead>
<tr>
<th>Body</th>
<th>Date (in 2018)</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC and GS committee of the University Council</td>
<td>24 May</td>
<td>Discuss draft of ‘Quality Agreements plan’</td>
</tr>
<tr>
<td>Education Board</td>
<td>7 June</td>
<td>Discuss draft of ‘Quality Agreements plan’</td>
</tr>
<tr>
<td>Executive Board</td>
<td>14 June</td>
<td>First discussion: decision to convey to bodies</td>
</tr>
<tr>
<td>Executive Board and deans (University Consultative Council)</td>
<td>18 June</td>
<td>Discussion</td>
</tr>
<tr>
<td>Students and teachers in the Joint Program Committee (JPC)</td>
<td>Informative</td>
<td>Right to advise</td>
</tr>
<tr>
<td>Program directors BC (OO)</td>
<td>19 June</td>
<td>For recommendation</td>
</tr>
</tbody>
</table>
5. TU/e Quality Agreement plan

The 'TU/e Quality Agreement plan' states:
- The choices made in the strategy 2030 and the (new) educational vision and the history and context of the institution (section 5.1);
- The multiannual development of the institution's budget (section 5.2);
- The intended spending of TU/e ('intentions') on the six themes, the goals TU/e wants to achieve with this spending, whether or not to use studievoorschotmiddelen, which progress has been made in 2021 with the realization of the intentions (section 5.3);
- The annual process concerning the use of studievoorschotmiddelen (section 5.4).

5.1 Educational vision and strategy 2030

The 2013 essay 'Engineers for the Future' describes a vision of education at TU/e in 2030. This vision of education fits in seamlessly with the six themes on which the quality of education can be improved (see appendix 1). For example, the educational vision states that 'personal interaction and exchange of knowledge between teachers and students is the core of academic education' (p. 27). Small scale is necessary for effective learning and digital education can be used to release capacity to maintain small scale. Small scale contributes to the desired profile of the 'Eindhoven engineer', as well as the 'design-oriented' education in workshops and laboratories developed in Eindhoven, in which, in addition to knowledge, skills are also learned. For students, this vision means that they themselves actively shape their study program, and there will be more differentiation in learning processes in which ICT will play a supporting role. The greater diversity (in terms of gender, nationality and profile) within the student population requires teachers to play a coaching role, so that students are supported personally in their learning process. Lifelong learning is a skill that students (and teachers) must develop in order to be able to keep up with in the future. Cooperation with industry is also very important in this context.

In the new TU/e strategy 2030 (from 2018), this vision of education is further elaborated and refined. Strategic themes are the profile of the Eindhoven engineer as T or Π shaped. There is a diversity of students, who choose their own learning path and develop an attitude of lifelong learning. This requires education to be flexible and modular, and that it also can be offered online and to various groups of students. It is necessary for teachers to develop new didactic and pedagogical methods in order to be able to motivate and activate these different groups of students. The research and education at TU/e is strongly interwoven, challenge-based learning being the distinguishing element. By working in (various,

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multidisciplinary) teams, students learn about real engineering problems. To this end, cooperation in the TU/e ecosystem (companies, other educational institutions, etc.) will be intensified.

5.2 Pre-investments in the TU/e budget
In 2014 the budget for 2014 and 2015 provided for funding of €2.122K for the Bachelor College, while €400K was reserved for the Graduate School only in 2014. At the time, no financial resources for educational innovation were included in the Bachelor College and Graduate School for the following years. In 2014, €750K was budgeted for ICT in education, and no funding was provided for the digitization of education for the following years.

From 2015 onwards, TU/e has invested intensively in educational innovation and quality. Initial plans have been made up in 2015. In the final budgets 2016 en 2017 the budgetted amounts in relation to these investments have been adjusted. The tabel below shows the final amounts from the approved budgets 2015, 2016 and 2017.

| Tabel 1: Pre-investments TU/e amounts x € 1.000 |  |
|---|---|---|
| **Pre-investments 2015** | begroot 2015 | Realisatie 2015 | Verschil |
| **Extra investeringen in Onderwijs (OW)** |  |
| Onderwijskwaliteit | € 6.288 | € 5.848 | € -440 |
| Onderwijsgebonden onderzoek | € - | € - | € - |
| Moderne infrastructuur | € 1.875 | € 2.499 | € 624 |
| **Total** | € 8.163 | € 8.347 | € 184 |
| **Pre-investments 2016** | begroot 2016¹ | Realisatie 2016 | Verschil |
| **Extra investeringen in Onderwijs (OW)** |  |
| Onderwijskwaliteit | € 6.080 | € 4.692 | € -1.388 |
| Onderwijsgebonden onderzoek | € - | € - | € - |
| Moderne infrastructuur | € 1.875 | € 3.769 | € 1.894 |
| **Total** | € 7.955 | € 8.461 | € 506 |
| **Pre-investments 2017** | begroot 2017¹ | Realisatie 2017 | Verschil |
| **Extra investeringen in Onderwijs (OW)** |  |
| Onderwijskwaliteit | € 4.663 | € 4.860 | € 197 |
| Onderwijsgebonden onderzoek | € - | € - | € - |
| Moderne infrastructuur | € 1.875 | € 4.478 | € 2.603 |
| **Total** | € 6.538 | € 9.338 | € 2.800 |

¹ The presented amounts are the definitive budgeted amounts in the concerning year, these amounts deviate from the amounts presented in the initial plans.
Table 1 does not include the regular growth of the SAM contribution for education based on the increased performance of the departments.

5.3 Intended expenditure on the six themes
Below we indicate for each theme the proposed spending, which goals TU/e wants to achieve, which part of the spending is financed with the studievoorschotmiddelen and which progress must be made in 2021. In discussing our intentions, we follow the order of priority chosen by the University Council (see section 4).

5.3.1 Small scale and intensive education
The theme of small-scale and intensive education is the most important for TU/e. Engineering studies are ideally served by small scale, i.e. working in small groups with coaching by a tutor on 'open' problems. The growth in the number of students in recent years has put at risk the small scale, in particular because this has not been paralleled by the growth in the number of teachers.

TU/e has chosen to invest €1.6 million in 2018 in the deployment of Teaching Assistants (graduate Master students, PhD’s or postdocs) or Teacher Assistants (Bachelor or Master students) in education. Teachers apply for these TAs once a year. The use of TAs contributes directly to improving the quality of education because it promotes small scale, eases the workload of the academic staff and stimulates challenge-based education and acceleration of digitization. The use of temporary staff gives the staff the opportunity to:

- develop hands-on and challenge-based education, for example a subject or learning line in Innovation Space or ‘open-ended multidisciplinary projects’;
- provide more and other forms of formative, qualitative feedback (interim tests);
- make good use of the opportunities offered by digital tools, which support more personalized learning, such as Digital Keys, Blended Learning, Learning Analytics, online education and Automated feedback;
- get support in linking up with the various ways in which students acquire knowledge. For example, in a community of subject teachers who share, reuse and further develop materials in order to offer students a wide range of good learning materials. But also by receiving support to offer all theoretical knowledge digitally.

Based on requests from academic teachers, program directors submit a plan for the deployment of TAs to the Deans who assess and approve them. The resources must be used additionally, i.e. not to cover costs already included in the regular plan and budget. Teachers applying for a TA provide some indicators whether the objectives they have set will be achieved. Program directors use this as a basis for drawing up an annual report on the results achieved.

**Intended expenditure:** €1 million rising to €2 million per year of the studievoorschotmiddelen for the use of teaching and teacher-assistance in education.

**Goals:** during 2018-2024, TAs will be deployed for small-scale, intensive education, challenge-based education and the acceleration of digitization and work pressure reduction for academic staff.

**Progress 2021:**
- Use of the TA resources.
- Annual report of program directors on the results achieved.
- Evaluation of the TA scheme in 2020 among teachers and students.

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4 See: Call for Teaching/Teacher Assistants, 2017.
The theme of small-scale and intensive education is also of great importance for the future of TU/e. In strategy 2030, the university states that challenge-based learning is the basis for engineers for the future. The concept of challenge-based learning is 'a framework for learning and at the same time solving practical challenges. The framework is collaborative and hands-on, asking all participants (students, teachers, stakeholders) to identify big ideas, ask good questions, discover and solve challenges, gain in-depth subject area knowledge, develop 21st century skills, and share their thoughts with the world'.

‘Challenge-based’ as a characterization of student learning:
1) is always a real-world societal, research, innovation, design or engineering challenge that provides the motivation and context for students’ learning;
2) challenge-based learning can be individual or in teams;
3) challenge-based learning can be mono- or multidisciplinary.

In the coming years, TU/e wants to focus on a number of experiments around this challenge-based learning concept, so that by 2030 this educational concept will be used for all education on campus and therefore by all students.

<table>
<thead>
<tr>
<th>Intended expenditure:</th>
<th>€500K running up to €2 million per year, partly of the studievoorschotmiddelen, partly via the budget of BC and GS, for new experiments and pilots in the field of challenge-based learning.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals:</td>
<td>in 2030, the 'challenge-based learning' educational concept will be used by all students for all on-campus education.</td>
</tr>
<tr>
<td>Progress 2021:</td>
<td>- In 2018-2019, preparations will be made for one or more experiments in the area of challenge-based learning.</td>
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<tr>
<td></td>
<td>- From 2019, at least one of the experiments will start.</td>
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</tbody>
</table>

In addition, the Deans’ budget for the coming years will include investments in pilots and experiments in the Innovation Space.

5.3.2 Appropriate and good educational facilities

The growth in the number of students and the challenge-based learning concept call for a review of the educational facilities and an increase in the number of student workplaces. The studievoorschotmiddelen are used to improve the quality of education and not to compensate for growth. However, streaming lectures offers students the opportunity to study time and place independently. Streaming is therefore a better alternative to digital lectures by a two way live connection, especially if the streamed lectures are also recorded and can be (re)viewed later. It is expected that over time the project streaming will be included in the BOOST program (accelerating educational innovation with ICT).

<table>
<thead>
<tr>
<th>Scheduled expenditure:</th>
<th>€561K in 2019, until 2023 €461K for streaming, financing from studievoorschotmiddelen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals:</td>
<td>Streaming 40 courses per quarter of an hour, lectures are available as video lectures.</td>
</tr>
<tr>
<td>Progress 2021:</td>
<td>- Prior to the expansion of streaming, a didactic analysis is carried out and the question of on-campus experience is answered.</td>
</tr>
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- The use of streaming and the contribution to the quality of education are evaluated annually.

The growth in the number of students has gradually led to a shortage of study workplaces. With the availability of the new main building, TU/ intends to furnish one of the buildings that will become available as a student workspace. This building will be completed in 2020. The costs for this are not financed from the studievoorschotmiddelen.

In recent years, TU/e has made a strong commitment to improving educational logistics by renewing the Student Information System (SIS) and partly by introducing a new Learning Management System (LMS). In addition, a great deal of progress has been made in digitizing the learning process by purchasing a state-of-the-art LMS and digital testing system, among other things. The challenge for the coming years will be to allow the standing organization to make good use of the possibilities of these digital tools, but also of many other ICT and educational innovations, such as authentic testing, Blended Learning, Learning Analytics, online education and automated feedback. A program plan is being developed to achieve the desired quality improvement in education, particularly in the area of personalized learning (personalized learning pathways). This will take into account the wide diversity of target groups, cooperation with companies and Lifelong Learning, digital support for skills development, other forms of certification (such as badges, micro-MSc), flexibility and modularization of courses, and which platforms and other technical means are needed to support all these activities. This development is seen as a prerequisite for the further introduction of challenge-based learning.

**Intended expenditure:** Development and support for the use of ICT in education via ESA and BC and GS, approximately €500K: not via the studievoorschotmiddelen. Educational innovation with ICT (BOOST program) via the studievoorschotmiddelen, €1 million in 2019 rising to €2 million annually.

**Goals:**
- Set up TU/e Online Education Centre (2 FTEs).
- Develop modular digital education (all theory is also offered online): focused on pre-MSc programs, basic knowledge, Lifelong Learning.
- Developing interdisciplinary selection packages and micro-MSc with universities in the Netherlands and abroad
- Designing the technical environment/infrastructure.

**Progress 2021:** according to BOOST program plan (December 2018 ready). Participation in one acceleration projects VSNU/SURF.

### 5.3.3 Teacher quality and further professionalization of teachers

The quality of TU/e education is determined by the quality of the lecturers. TU/e aims to keep in the upper regions of the NSE and other student surveys. In order to support this aim and to give teachers the opportunity for lifelong learning, investments will be made in the coming years:

- Teachers continue to regularly and continuously teach and learn from each other towards strategy 2030 and challenge-based learning, via so-called learning communities.
- In these communities, the role of ‘mentor’ (educational leader) is very important. This role can be filled per department. This teacher has a pivotal role when it comes to (professional) didactics and University Teaching Qualification (BKO) supervision.
- Our aim is to develop a culture in which educational performance is honored and teachers are given appreciation and recognition for their teaching qualities. This includes making teaching achievements explicitly visible and measurable (as in the case of research).
- The starting point within the culture to be formed is that managers have confidence in teachers and facilitate them, and that support services (the Personnel and Organization Department (DPO) and Education and Student Affairs (ESA)) actively support teachers in their development.
- Based on the idea that BKO contributes to the professionalism of teachers, BKO is adapted to new developments, as described in Strategy 2030, among other things whereby the BKO also stimulates the educational vision and innovation.
- Teaching performance (including BKO) must become part of a quality system, i.e. be included in the tenure track, be taken into account in the assessment of academic staff and be discussed in annual appraisal interviews, etc.

**Suggested expenditure:** biennial ‘Course in educational leadership’ in cooperation with Utrecht University. Costs €300K per course (€150K per year), financing from the *studievoorschotmiddelen*. Adjustment of BKO, making it possible to measure teaching achievements and support learning communities, financing from the *studievoorschotmiddelen* €200K.

**Aim:** every two years, 10 teacher training courses to become educational leaders.

**Progress 2021:** 14 teachers trained in 2018-2019, 8-15 trained in 2020-2021 (number subject to possible collaboration with Wageningen University).

5.3.4 Educational differentiation
The diversity of students and engineers needed for the employment market calls for a differentiated educational opportunities. For this purpose, TU/e set up the Bachelor College in 2012 and the Graduate School in 2015. Choice, the individual development of students towards a career in industry or research or their own company are the starting point for the Eindhoven educational model. This will continue in the coming years.

This does not alter the fact that differentiation of the educational opportunities, cooperation with HBO (higher vocational education) and with companies, the providing of many different ways to develop individual talents (from honors programs to student teams, from sports to music, to study association boards or participation in representation bodies) is considered to be of great importance. TU/e considers it very important that the talents of all students are recognized and valued by the institution or by internal and external parties. In the coming years TU/e wants to investigate the possibility for all students to earn badges for these different skills, achievements, qualities etc. In this way, all students can distinguish themselves on the basis of their own talents.

**Intended expenditure:** Develop digital system for badges. Costs €100K per year via *studievoorschotmiddelen*.

**Goals:** after completion of a pilot project, further develop opportunities for students to earn badges.

**Progress 2021:**
- Badges available for a wide range of talents.

5.3.5 Study success
In recent years, the success rate at TU/e has improved enormously. The accessibility of the study programs to Dutch and international students is considered to be of great importance. However, TU/e

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6 [https://youtu.be/HgLq7ybDtc](https://youtu.be/HgLq7ybDtc)
has opted for a strategy of controlled growth by introducing decentralized selection in a number of studies in order to maintain the quality of the studies as well.

The focus in the coming years will be on cooperation in the ecosystem. The education sector can benefit more from cooperation with the business sector, and cooperation with HBO institutions.

**Intended expenditure:** Further develop Bachelor College and Graduate School, cooperation with companies and HBO institutions. From the budget of BC and GS.

**Goals:** Develop coherent policies and activities aimed at cooperation in the ecosystem.

**Progress 2021:**
- Policy on cooperation between education and the ecosystem has been formulated.
- Experiments with the ecosystem have been developed.

### 5.3.6 More and better coaching for students

In the Bachelor College and Graduate School, investments are made in coaching and mentoring students. In addition, the use of TAs will also improve student guidance. It is being considered whether further investments will have to be made in the coming years in areas such as student welfare and the guidance of students to the employment market or career guidance.

**Intended expenditure:** Further develop coaching and mentoring, in Bachelor College and Graduate School, from the budgets of BC and GS. In the coming years, we will look at the extent to which studievoorschotmiddelen need to be invested in orientation of students on the labor market and on student welfare.

**Goals:** Develop coherent policy and activities aimed at coaching in the BC and mentoring in the GS, student welfare and alignment with the labor market.

**Progress 2021:**
- Update of the coaching and mentoring policy, in relation to the BC and the GS. Update of the student welfare policy and the policy aimed at orientation on the labor market. Development of relevant activities
- Implementation of revised policy in training.
- Activities focusing on the above subjects.

### 5.3.7 Summary of spending of studievoorschotmiddelen

Table 2 summarizes the use of the 2019-2024 studievoorschotmiddelen. From 2022 onwards, there will still be room for tactical maneuver in the use of studievoorschotmiddelen, which will be fleshed out in the course of the consultation with the employee and student representatives.
Table 2: Overview of the use of *studievoorschotmiddelen* TU/e

<table>
<thead>
<tr>
<th>Project</th>
<th>Project owner</th>
<th>Project leader</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TAs</td>
<td>Deans BC and GS</td>
<td>Lilian Halsema</td>
<td>DAZ</td>
</tr>
<tr>
<td>2. Challenge based learning</td>
<td>Deans BC and GS</td>
<td>Kathinka Rijk / Diana Vinke</td>
<td>DAZ</td>
</tr>
<tr>
<td>3. Streaming</td>
<td>Director ESA</td>
<td>Jim Bergmans</td>
<td>ESA</td>
</tr>
<tr>
<td>4. BOOST</td>
<td>Deans BC and GS</td>
<td>Fred Gaasendam</td>
<td>DAZ</td>
</tr>
<tr>
<td>5. Leadership in Education</td>
<td>Deans BC and GS/Departmental Deans</td>
<td>To be determined</td>
<td>DPO</td>
</tr>
<tr>
<td>6. Teaching professionalization</td>
<td>Deans BC and GS/Departmental Deans</td>
<td>To be determined</td>
<td>DPO</td>
</tr>
<tr>
<td>7. Talent policy via badges</td>
<td>Deans BC and GS</td>
<td>To be determined</td>
<td>ESA</td>
</tr>
<tr>
<td>8. Coaching for students</td>
<td>Deans BC and GS</td>
<td>Kathinka Rijk</td>
<td>DAZ</td>
</tr>
</tbody>
</table>

A **program manager** is appointed who is responsible for the overall integrity and coherence of the program, and develops and maintains the program environment to support each individual project within it. The program manager is responsible for successful delivery of the program of which the project is part. The role requires effective coordination of the projects and their inter-dependencies, including ICT and other resources, and any risks and other issues that may arise. The program manager is responsible for the annual monitoring and update of the Quality Agreements in consultation with the University Council and Financial & Economics Affairs (see below).
The **project owners** are the project's key stakeholders. The project owners are ultimately accountable for the success or failure of the project and has to ensure that the project is focused on achieving its objectives and delivering the progress results. Throughout the project the project owners are responsible for the execution of the project plans and needs to be able to take a balanced view of the project on behalf of the wider organization.

The **project leaders** are responsible for:

1. **Initiating**
   This phase begins with a project plan, which outlines the objectives, purpose, and deliverables of the proposed project. Stakeholders are identified and preliminary requirements are documented. Key outputs include the project charter which assists with planning.

2. **Planning**
   A comprehensive project plan is developed which outlines the budget, scope, duration, deliverables and quality, communications, metrics, risks, and resources.

3. **Executing**
   The project is started. The main activities associated with project execution include resource management, tracking work, team meetings and reporting on progress. The project leader should regularly assess progress to-date and adjust the original project plan as needed.

4. **Monitoring/Controlling**
   Monitoring is conducted in parallel with project execution. Using KPIs and other metrics defined in the project plan, the project leader monitors progress and performance.

5. **Closing**
   Once the project is completed, update project documentation.

### 5.4.2. Involvement of employees and students in drawing up Quality Agreements

The Executive Board and the University Council agree on the process for development the plan for the use of the *studievoorschotmiddelen*. The bodies below are involved in good time each year in the use of the *studievoorschotmiddelen* and therefore have the opportunity to contribute ideas. TU/e has chosen to make joint agreements on the use of the *studievoorschotmiddelen* in order to achieve the greatest possible improvement in the quality of education. The departmental bodies are involved through the central bodies:

- Departmental participation through the University Council.
- The University Council is advised by the Joint Program Committee, which consists of members of the departmental program committees.

The plans for the use of the *studievoorschotmiddelen* are submitted annually, after being approved by the University Council, to the Supervisory Board for approval.

### 5.4.3. Monitoring

Per quarter a financial report will be drawn up by the Management Units. On the basis of these reports a consolidated financial report for the TU/e will be drawn up. In the template of the financial report a separate paragraph for the *studievoorschotmiddelen* will be added. In this paragraph an explanation will be given by the Management Units concerning the expenses of the *studievoorschotmiddelen*. The financial progress will be compared to the annual budget, also a forecast of the expected expenses will be given. The consolidated financial report is adopted by the Executive Board and discussed with the University Council.
5.4.4. Annual reporting
In the annual reports of the institution from 2019 onwards, a separate chapter will be devoted to annual reporting on the progress made in terms of content and process. In an appendix to the annual report, the University Council will be given the opportunity to report independently on the use of the *studievoorschotmiddelen*. 
Appendix 1: Elaboration of themes for Quality Agreements

More intensive and small-scale education (educational intensity)
The relationship between teachers and students is crucial for good education. That is why it is important to further intensify the contact between the student and the teacher. This can be done, for example, by focusing on smaller groups and community formation, and by freeing up more time for personal feedback and individual coaching. In order to achieve this, a further increase in the number of teachers per student is necessary. The appointment of more teachers also makes it possible to link the content of education to social themes and research, thereby increasing the curiosity of students and their research competencies.

More and better coaching for students
It is the responsibility of universities and colleges of higher education to offer equal opportunities to all students, regardless of background, origin or prior education. Not only occasionally, when things go wrong, but also proactively and structurally. For this purpose, intensive supervision and support by, for example, professionally trained tutors, study advisors, student psychologists, student deans and study career counselors is envisaged. Better coaching prevents problems and ensures optimal development for all students.

Study success
All students with the capacity to do so must be given the opportunity to start and complete their studies successfully. Attention to the flow and accessibility of education for students in secondary education, equal opportunities, inclusive higher education, the prevention of drop-outs and the promotion of study success remain important themes for higher education. Based on an analysis of the student population’s study success, an institution may decide to focus its attention primarily on certain groups of students and/or study programs and to formulate objectives for this.

Educational differentiation
Universities of applied sciences and universities respond to the different backgrounds and ambitions of students and the needs of the employment market. They do this by offering a varied range of educational programs according to level (BSc, MSc). Investments are also made in talent programs, such as honors programs or programs in areas such as social engagement, entrepreneurship, the arts or sport. In addition, universities of applied sciences and universities can differentiate themselves by didactic educational concepts.

Appropriate and good educational facilities
It is important that study facilities and infrastructure promote intensive and small-scale education. Digital resources can be better integrated into the educational process: students must be able to make optimum use of the educational environment, both physically and digitally, in their study process. The study facilities and infrastructure must be in line with the requirements of future education.

Further professionalization of teachers (teacher quality)
Good and committed teachers are the key to high-quality education. It is possible to focus on further professionalization of teachers. This also includes greater appreciation of the activities of teachers, for example by paying more attention to teaching performance in academic education. Teachers must also be able to keep abreast of the latest substantive, didactic and digital developments. It helps to share one’s own teaching resources and to be able to use those of others. Teachers should have more opportunities to develop themselves, for example - in the case of HBO teachers - by conducting their own research.
## Appendix 2: Spending studievoorschotmiddelen 2018

<table>
<thead>
<tr>
<th>Investment category</th>
<th>Amount 2018</th>
<th>Note to the proposed use of studievoorschotmiddelen 2018</th>
<th>Note to the involvement of employee and student representatives in the proposed use of studievoorschotmiddelen 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>More intensive, small-scale education</td>
<td>€ 1.2 million</td>
<td>Hands-on Education (incl. Innovation Space), community building and Teaching Assistants*</td>
<td>In the budget for 2018, the Executive Board made a proposal for the use of studievoorschotmiddelen. The budget and, specifically, the use of studievoorschotmiddelen were discussed with and approved by the council. The proposals included in the budget were then fleshed out. The council was then consulted again on this matter.</td>
</tr>
<tr>
<td>More and better coaching for students</td>
<td>€ 0.3 million</td>
<td>Guidance and coaching of students by peers and by teachers and by alignment with the labor market</td>
<td>See previous</td>
</tr>
<tr>
<td>Invest in talent development: within and outside the study</td>
<td>€ 0.2 million</td>
<td>Stimulate student entrepreneurship and student teams</td>
<td>See previous</td>
</tr>
<tr>
<td>Appropriate and good education facilities</td>
<td>€ 1.0 million</td>
<td>Among other things, further digitization and renewal of education such as Digital Assessment, Blended Learning, Learning Analytics, online education and Automated feedback.</td>
<td>See previous</td>
</tr>
<tr>
<td>Further professionalization of teachers</td>
<td>€ 0.2 million</td>
<td>Improving quality of education through the provision of intensive educational leadership courses for, among others, program directors and directors of graduate programs</td>
<td>See previous</td>
</tr>
</tbody>
</table>
Appendix 3: Education in the budget

In 2014, the budget for 2014 and 2015 provided for the funding of the Bachelor College to amount to €2.122K, while €400K was reserved for the Graduate School in 2014. For the following years no financial resources for BC and GS were included. In 2014, €750K was budgeted for ICT in education, and no funding was provided for the digitization of education for the following years.
| Jaar | Sectorplankerning en groei | Bedrag oorspronkelijke plan | Bedrag begroting jaar x / gewijzigd plan || Bedrag realisatie | Extra (E), naar voren gehaald (V), of een combinatie (V) | A.U.B. concreet toelichten waarom dit een investering is in de kwaliteit van het onderwijs is. |
|------|--------------------------|----------------------------|---------------------------------|------------------|------------------------------------------|-------------------------------------------------------------------------------------------------|
| 2015 | Pocket Onderwijsvernieuwing en groei | 5.788 | 5.362 | V | Het toekomstperspectief maken van de onderwijsorganisatie, onder andere de inrichting van het bachelor en mastercurriculum. |
|      | Pocket Aanvulling WP | - | - | - | Het extra inzetten van wetenschappelijk personeel. |
|      | Pocket ICT vernieuwing en digitalisering | 1.675 | 2.499 | V | Digitalisatie binnen het onderwijs en onderzoek, onder andere informatiesystemen. |
|      | Sectorplan techniek | 500 | 486 | V | Een gedeelte van de sectorplan techniek midden worden ingezet voor onderwijsprogramma's. |
|      | **Totaal** | **8.163** | **8.347** | **-** | **-** | **-** |
| 2016 | Pocket Onderwijsvernieuwing en groei | 3.229 | 3.536 | V | Het toekomstperspectief maken van de onderwijsorganisatie, onder andere de inrichting van het bachelor en mastercurriculum. |
|      | Pocket Aanvulling WP | 1.500 | 1.956 | E | Het extra inzetten van wetenschappelijk personeel. |
|      | Pocket ICT vernieuwing en digitalisering | 1.675 | 1.875 | V | Digitalisatie binnen het onderwijs en onderzoek, onder andere informatiesystemen. |
|      | Sectorplan techniek | 600 | 794 | V | Een gedeelte van de sectorplan techniek midden worden ingezet voor onderwijsprogramma's. |
|      | **Totaal** | **7.204** | **7.953** | **-** | **-** | **-** |
| 2017 | Pocket Onderwijsvernieuwing en groei | 2.200 | 4.000 | V | Het toekomstperspectief maken van de onderwijsorganisatie, onder andere de inrichting van het bachelor en mastercurriculum. |
|      | Pocket Aanvulling WP | 1.200 | 60 | E | Het extra inzetten van wetenschappelijk personeel. |
|      | Pocket ICT vernieuwing en digitalisering | 1.675 | 1.875 | V | Digitalisatie binnen het onderwijs en onderzoek, onder andere informatiesystemen. |
|      | Sectorplan techniek | 600 | 630 | V | Een gedeelte van de sectorplan techniek midden worden ingezet voor onderwijsprogramma's. |
|      | **Totaal** | **5.675** | **6.530** | **-** | **-** | **-** |

Toelichting:

*) wij verwachten u voor projecten die al in 2016 zijn afgerond zowel het inmiddels gerealiseerde bedrag als het uitgebreide gerealiseerde bedrag te vermelden. Als een project nog niet is afgerond hoeft u deze kolom 'bedrag oorspronkelijke plan' te worden ingevuld.

**) de woordversterkingen zijn bedoeld om de kwaliteit van het hoger onderwijs te versterken. Wij verwachten graag van u op welke wijze u de extra woordversterkingen naar uw mening bijdragen aan de versterking van deze kwaliteit. Als u daarvoor aanvullende informatie heeft, dan is dit schema is op te nemen, dan verzoeken wij u die informatie separaat aan ons te doen toekomen.

*** Bij het opstellen van de begroting 2016 en begroting 2017 zijn de initiële plannen bijgesteld.