PSYCHOLOGY

FACULTY OF BEHAVIOURAL, MANAGEMENT

AND SOCIAL SCIENCES

UNIVERSITY OF TWENTE

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This report was finalized on 18 October 2018.

REPORT ON THE BACHELOR'S PROGRAMME AND THE MASTER'S PROGRAMME PSYCHOLOGY OF THE UNIVERSITY OF TWENTE

This report takes the NVAO's Assessment Framework for Limited Programme Assessments as a starting point (September 2016).

ADMINISTRATIVE DATA REGARDING THE PROGRAMMES

Bachelor's programme Psychology

Name of the programme:	Psychology
CROHO number:	56604
Level of the programme:	bachelor's
Orientation of the programme:	academic
Number of credits:	180 EC
Specializations or tracks:	-
Location(s):	Enschede
Mode(s) of study:	full time
Language of instruction:	English
Expiration of accreditation:	31/12/2019

Master's programme Psychology

Name of the programme:	Psychology
CROHO number:	66604
Level of the programme:	master's
Orientation of the programme:	academic
Number of credits:	60 EC
Specializations or tracks:	Conflict, Risk, and Safety (CRS) Health Psychology and Technology (HPT) Human Factors and Engineering Psychology (HFE) Learning Sciences (LS) Positieve Psychologie en Technologie (PPT)
Location(s):	Enschede
Mode(s) of study:	full time, part time
Language of instruction:	Dutch, English
Expiration of accreditation:	31/12/2019

The visit of the assessment panel Psychology to the Faculty of Behavioural, Management and Social Sciences of the took place on 3 and 4 July 2018.

ADMINISTRATIVE DATA REGARDING THE INSTITUTION

Name of the institution:	University of Twente
Status of the institution:	publicly funded institution
Result institutional quality assurance assessment:	positive

COMPOSITION OF THE ASSESSMENT PANEL

The NVAO has approved the composition of the panel on 26 October 2017. The panel that assessed the bachelor's programme and the master's programme Psychology consisted of:

- Em. Prof. R.W.J.V. (René) van Hezewijk, emeritus professor of General Psychology, in particular the psychology in distance learning, at the Open University of the Netherlands [chair];
- Prof. P.E.H.M. (Peter) Muris, professor of Clinical Psychology and Developmental Psychopathology, Faculty of Psychology and Neuroscience (FPN) at Maastricht University;
- Prof. J.M.A. (Marianne) Riksen-Walraven, emeritus professor of Developmental Psychology at Radboud University Nijmegen
- Prof. K. (Klaas) Sijtsma, professor of Methods and Techniques of Psychological Research at Tilburg University;
- Prof. H. (Hans) Supèr, research professor in Neurobiology at the University of Barcelona (Spain);
- R. (Robin) Siemann, bachelor student Psychology at the University of Utrecht [student member].

The panel was supported by E.G.M. (Mariette) Huisjes, who acted as secretary.

WORKING METHOD OF THE ASSESSMENT PANEL

Preparations on the cluster level

In the period from December 2017 through July 2018, the Psychology assessment cluster was assessed according to the new NVAO framework (2016). In accordance with this new framework, a chapter was added to the self-evaluation in which students give their view of the programme, and a 'development meeting' was added to the site visit. During this development meeting, the programme management can talk informally to the assessment panel and ask for advice about any dilemmas it is facing. The cluster consists of 26 programmes to be assessed at 11 universities. Based on the nominations submitted by the programmes in question, panel members were selected and invited to join. Given the limitations of availability, conflicts with independence and the number of programmes to be assessed, the panels and their chairs differed. The panels for the different programmes were submitted to NVAO, which approved the proposed panels.

The entire panel consisted of these experts:

- Prof. J.M.A. (Marianne) Riksen-Walraven, emeritus professor of Developmental Psychology at Radboud University Nijmegen [chair];
- Prof. W.J. (Willem) Heiser, professor of Data Theory and professor of Statistical Consulting at the University of Leiden [chair];
- Em. Prof. R.W.J.V. (René) van Hezewijk, emeritus professor of General Psychology, in particular the psychology in distance learning, at the Open University of the Netherlands [chair];
- Prof. M.H. (Marius) van Dijke, professor of Behavioural Ethics at the Rotterdam School of Management of Erasmus University Rotterdam;
- Prof. P.M.G. (Paul) Emmelkamp, professor of Clinical Psychology at the University of Amsterdam, HSK and head instructor of the GZ-programme Cure & Care Development;
- Dr. W.A. (Winnie) Gebhardt, university senior lecturer in Health Psychology at the University of Leiden;
- Prof. P.E.H.M. (Peter) Muris, professor of Clinical Psychology and Developmental Psychopathology, Faculty of Psychology and Neuroscience (FPN) at Maastricht University;
- Prof. J.M. (Jules) Pieters, emeritus professor of Applied Psychology with special focus on learning and instruction, at the University of Twente;
- Prof. W.B. (Wilmar) Schaufeli, professor of A&O Psychology at the University of Utrecht and research professor at KU Leuven;
- Prof. K. (Klaas) Sijtsma, professor of Methods and Techniques of Psychological Research at Tilburg University;

- Prof. H. (Hans) Supèr, research professor in Neurobiology at the University of Barcelona (Spain);
- Prof. C.P.M. (Cees) van der Vleuten, Professor of Education and scientific director of the Educational Development and Research Department at the Faculty of Health, Medicine and Life Sciences at Maastricht University;
- A.M. (Anna) van Oosterzee, research master student in Cognitive and Clinical Neuroscience at Maastricht University [student member];
- R. (Robin) Siemann, bachelor student Psychology at the University of Utrecht [student member];
- S. (Sarah) Stolwijk, master student Ethics of Education and Labour, Organisational and Personnel Psychology at the University of Groningen [student member];
- M. (Margit) van der Werff, bachelor student Psychology at the University of Groningen [student member].

The secretaries for the various visits were: Dr. J. (Jetje) de Groof, E.G.M. (Mariette) Huisjes MA and Dr. Erwin van Rijswoud (also project leader).

On 2 November 2017 the chairs participated a training session, including information of the purpose of the assessment, the assessment framework and the procedure. On 3 November 2017 an initial meeting was held with the chairs, panel members and secretaries. Topics of discussion included the purpose of the assessment panel, the method for the overall assessment, and the procedure for each site visit; the evaluation framework was examined, and it was agreed to hold a coordination meeting after the first six and before the last five assessment visits with the chairs, vice-chairs and secretaries. One panel member could not attend the initial meeting, so it was repeated at a later moment.

Assessments and reports
To prepare for the assessment, each programme wrote a self-evaluation report. In addition, the programme provided a suitable number of final projects (depending on the number of programmes to be assessed) and the evaluation forms, along with course files of selected subjects. In consultation with the chair, the project leader made a balanced selection of the final projects from the overview of graduates of the last two completed academic years. Prior to the site visit, the panel members shared their questions and critical findings of this material with each other and prepared the interviews.

Site visit
The project leader prepared a site visit of the programme, in consultation with the programme, the programme being responsible for the selection of the interview partners. During the site visit, which lasted two days, those responsible for the content and formal aspects of the programmes, students, lecturers, alumni, the Programme Committee and the Examination Committee, were interviewed. The visit ended with a development meeting. The programme suggested the topics of the development meeting, and was responsible for leading the conversation and taking minutes.

Reporting
The secretary prepared a draft report based on the panel's findings. After a peer review, she sent it to the panel members. The secretary incorporated their comments, and after receiving the panel's approval, the project leader sent the report to the programme management, with the request to check for factual irregularities. The management's response to the draft report was presented to the panel members, and as far as necessary the secretary adjusted the report in consultation with the chair. Then the report was approved and sent to the Board of Directors of the University of Twente.

Coordination and quality control
Given the large number of programmes to be assessed, the panels differed in composition and had different chairpersons. Therefore, explicit attention was paid to ensuring the quality and consistency of the assessments. The three chairpersons were trained simultaneously by two QANU project

leaders, and the three secretaries (one of whom was also the project leader) maintained close contact about the assessments. The project leader also attended the meeting for each assessment when the panel was preparing its preliminary findings. This allowed the assessments and the different panels to be compared and coordinated constantly.

For the assessments in which a chairperson took on her or his role for the first time, the chairperson of the previous assessment acted as the vice-chair. This allowed the procedure and method of evaluation of the different panels and chairs to be properly compared and coordinated. The panel also planned two coordination meetings, which were attended by the chairs, vice-chairs, secretaries and the project leader. The first coordination meeting concerned the assessments of RU, UU, MU, OU, UvA and VU; the second coordination meeting covered RUG, EUR, LEI, TIU and UT. The basis for the coordination was the common assertion that the fundamental quality of Dutch psychology education was being assessed from an international perspective. During coordination, the preliminary assessments of the programmes concerned were discussed and approved standard by standard.

Definitions of evaluation
In agreement with the NVAO Assessment framework for limited programme assessments, the panel used the following definitions for the assessment of the individual standards and the programme as a whole:

Generic quality
The quality that, in an international perspective, may reasonably be expected from a higher education Associate Degree, Bachelor's or Master's programme.

Unsatisfactory
The programme does not meet the generic quality standard and shows shortcomings with respect to multiple aspects of the standard.

Satisfactory
The programme meets the generic quality standard across its entire spectrum.

Good
The programme well surpasses the generic quality standard.

Excellent
The programme systematically surpasses the generic quality standard and is an international example.

SUMMARY JUDGEMENT

Standard 1

Bachelor's programme
The panel studied the final qualifications of the bachelor's programme in Psychology at the UT and found that they adequately meet the requirements regarding level and orientation as defined by the Dublin Descriptors and the requirements of the Psychology Domain as formulated by the assembly of Dutch psychology academics. The Psychology programme at the UT distinguishes itself by its focus on design and technology. Its ambition is to teach students how to analyse societal, psychological problems and to systematically design practical solutions aimed at influencing human emotions, cognition and behaviour. Because of this unique and relevant niche and the well-elaborated final qualifications, which have been discussed with representatives of the professional field, the panel judges that the bachelor's programme in Psychology at the UT systematically surpasses the generic quality standard that may be expected for standard 1.

Master's programme
The panel studied the final qualifications of the master's programme in Psychology at the UT and found that they adequately meet the requirements regarding level and orientation as defined by the Dublin Descriptors and the requirements of the Psychology Domain as formulated by the assembly of Dutch psychology academics. The panel has some reservations about the one extra final qualification which is supposed to capture the Positive Psychology & Technology track. That qualification states that the candidate should master 'diagnostics, counselling and treatment of disorder', but there is no mention of positive psychology in the final qualification. Because of its clear and relevant focus, because of the thoughtful translation of this focus into well-defined final requirements, and finally because of its practical orientation while still maintaining its academic character, the panel judges that the master's programme in Psychology at the UT systematically surpasses the generic quality standard that may be expected for standard 1. The strong points mentioned above amply overrule the reservations the panel has about the final qualifications for the Positive Psychology & Technology master track. The panel strongly endorses the management's plans to expand the Professional Field Committee and invite foreign members.

Standard 2

Bachelor's programme
The panel found the bachelor's programme of Psychology at the UT to be coherent, built up around four clear learning trajectories and explicitly phrased learning objectives, which seem to be directly derived from the final qualifications of the programme as a whole. An overarching principle throughout the three bachelor years is that freshly acquired theoretical knowledge is directly implemented in an academic process which leads up to an intervention design, thus guaranteeing that the theory is processed and understood properly. The 'Twente Model of Education' (TOM), a practice-oriented didactic model, implies that teachers of different disciplines closely co-operate, which enforces the integrated character of the programme. Students told the panel that they find the course load high, but evenly distributed. The TOM model forces them to work in a structured, regular way.

Positive points that distinguish the Twente bachelor's programme in Psychology are: its consistent and innovative focus on real-world issues and the integration of theory and practice; its intensive character with a high but evenly spread course load, many contact hours, a varied mix of didactic forms and much personal feedback. On the other hand, the panel found that clinical psychology is underrepresented and incomplete in the UT's bachelor's programme in Psychology. It regrets the fact that fewer than half of the teachers are in possession of a university teaching qualification (UTQ). Thirdly, in the panel's view, ethics should not be studied in one isolated module, but included as an integral part of the bachelor's programme, in order to educate ethically conscious 'engineering

psychologists'. On the whole, the panel judges that the bachelor's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 2.

Master's programme
The panel found that the University of Twente offers a master's programme which holds a lot of promise, serving a niche in today's and tomorrow's job market for psychologists. The panel especially admires how the 'technology' and 'design' themes are carried through consistently through all tracks. It applauds the close personal monitoring and support of students, and other effective measures that have been taken to improve feasibility. That said, the panel wishes to make a few suggestions for further improvement of the master's programme. It recommends building a more solid structure for the curriculum, which applies for all students; introducing a mandatory internship and connecting the internship with the final assignment, possibly in a new form. The panel also suggests fortification of the master track Positive Psychology & Technology (as is already being worked on). It would, in the panel's view, be beneficial if the management makes a clear choice: *either* the UT offers a full-blown clinical master track with a focus on the application of technology in mental healthcare, *or* it offers a fairly unique niche training in positive psychology. On the whole, the panel judges that the master's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 2.

Standard 3

Bachelor's and master's programmes
The panel finds that there is work to be done to enhance and reinforce the assessment system of the bachelor's and master's programmes in Psychology at the UT. A drawback of a warm and committed academic community can be that rules tend to be ambivalent, enforcement relaxed and responsibilities intertwined. The panel found that this is the case is to a certain extent at the UT. It recommends regulating the assessment system more strictly, with separated roles for all parties concerned. Independent assessment of the bachelor's and master's thesis should be guaranteed more robustly, and the basis on which final qualifications are assessed, should in all cases be larger than 10 EC. However, the panel was struck by a genuine and shared commitment to quality of testing and did not come across fatal flaws. It does therefore think that the present assessment system is sufficiently valid, reliable and independent. Compliance with the university's test framework, the test plan, the diversity of test forms, the abundance of formative testing, the careful monitoring of internships, the detailed assessment forms, and the checks of assessment quality executed by the programme director guarantee that a minimum level is achieved and in some respects amply surpassed. The panel therefore judges that the bachelor's and master's programme of Psychology at the UT systematically meet the generic quality standard that may be expected for standard 3.

Standard 4

Bachelor's programme
The panel determined that the Twente Onderwijs Model, with its close interweaving between theory and application, delivers confident bachelors, who do not experience a large distance from the job market and can make well-informed choices about their professional future. It states that there is a good connection between the bachelor's and master's programme at the University of Twente. The exception to this, as stated under standard 2, is the connection to clinical master's programmes, for which the bachelor's programme does not offer much preparation. The panel found the bachelor's theses to be adequate, demonstrating that the students fulfil the final qualifications. However, in some cases the theses were superficial in academic terms. In order to prevent such cases in the future, the panel recommends to the teachers and examiners who supervise the thesis projects to guard the academic level scrupulously. They should, in the panel's view, give priority to warranting that students demonstrate sound scientific thinking, which includes statistical competency, instead of showing that they can act according to the rituals of academe. On the whole, the panel judges that the bachelor's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 4.

Master's programme
There are many signs that the job market welcomes well-qualified masters with expertise in e-health, psychology and design, psychology and technology or positive psychology. During its site visit, the panel met some talented, inspired students and alumni. The panel studied a sample of the master's theses. It found that students generally demonstrated that they meet the final qualifications. It noted that a few master's theses were excellent. Other master's theses were quite 'light'. In order to enable all students to convincingly demonstrate that the intended learning outcomes are achieved, the panel suggests revising the master's thesis procedure, as described under standard 3. Replacing the master elective by an extra specialized course within the chosen track may also help students to gain more depth in their final assignments. These changes will make it easier to maintain rigorous academic standards, and 10 EC master's theses will be things of the past. This being said, the panel judges that the master's programme of Psychology at the UT systematically meets the generic quality standard that may be expected on standard 4.

The panel assesses the programme of Twente University according to the standards from the *Assessment framework for limited programme assessments* in the following way:

Bachelor's programme Psychology

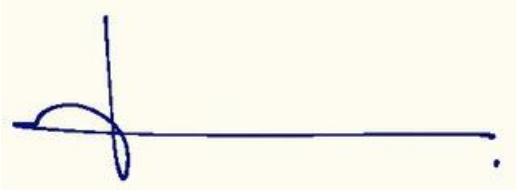
Standard 1: Intended learning outcomes	good
Standard 2: Teaching-learning environment	satisfactory
Standard 3: Assessment	satisfactory
Standard 4: Achieved learning outcomes	satisfactory
General conclusion	satisfactory

Master's programme Psychology

Standard 1: Intended learning outcomes	good
Standard 2: Teaching-learning environment	satisfactory
Standard 3: Assessment	satisfactory
Standard 4: Achieved learning outcomes	satisfactory
General conclusion	satisfactory

The chair and the secretary of the panel hereby declare that all panel members have studied this report and that they agree with the judgements laid down in the report. They confirm that the assessment has been conducted in accordance with the demands relating to independence.

Date: 18 October 2018



Prof. René van Hezewijk

E.G.M. (Mariette) Huisjes

DESCRIPTION OF THE STANDARDS FROM THE ASSESSMENT FRAMEWORK FOR LIMITED PROGRAMME ASSESSMENTS

Context
The bachelor's and master's programmes in Psychology at the University of Twente (UT) are offered by the Faculty of Behavioural, Management & Social Sciences. They fall under the responsibility of the Faculty Board, which is advised by a management team and Faculty Council. A dedicated programme director is directly responsible for the quality of both Psychology programmes. She is accountable to the Faculty Board and assisted by a programme coordinator.

The Psychology programmes at the UT are relatively young. The bachelor's programme started in 2002, the master's programme in 2005. Both programmes are rooted in the general UT mission: to advocate synergy between social and technological sciences and in this way educate students to be able to make a significant contribution to design solutions for real-world problems. The UT has an international orientation. Therefore, both the bachelor and master's programmes of Psychology are offered in English. The master track 'Positieve Psychologie en Technologie' is still offered in Dutch, but will switch to English in September 2019.

In the past few years, the student intake has fluctuated considerably: from a total of 190 first-year students in 2012, through 110 in 2015 and a peak of 384 in 2016, to 237 in 2017. In the bachelor's programme, the majority of students are from abroad (in 2017 only 33 of 237 first-year students were Dutch). Most international students are German. In the master's programme, the ratio of Dutch and international students is about even. Currently, the managers of the programme are seeking ways to accentuate its profile even better and attract young Dutch people from outside the region directly surrounding Enschede.

Since their most recent re-accreditation in 2012, students' involvement in both the bachelor's and the master's programme have been intensified, and the programme was made more activating. The 'Twente Model of Education' (TOM), a practice-oriented didactic model applied throughout the university, provides in the core of these changes. The final qualifications were revised and are now strongly connected to the programme's profile.

Standard 1: Intended learning outcomes
The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Explanation:
The intended learning outcomes demonstrably describe the level of the programme (Associate Degree, Bachelor's, or Master's) as defined in the Dutch qualifications framework, as well as its orientation (professional or academic). In addition, they tie in with the regional, national or international perspective of the requirements currently set by the professional field and the discipline with regard to the contents of the programme. Insofar as is applicable, the intended learning outcomes are in accordance with relevant legislation and regulations.

Findings
The Psychology programme at the UT distinguishes itself by its focus on design and technology. Its ambition is to teach students how to analyse societal, psychological problems and to systematically design practical solutions aimed at influencing human emotions, cognition and behaviour. The ultimate aim is to reduce problems or increase beneficial behavior, such as resilience or effective decision making. 'Design' in this context can have three meanings: designing a research project, designing an intervention, or designing a device. Usually, technology will be involved in the designs. At the UT, psychology is studied in a high-tech environment. Students learn about the interaction between humans and technology, that is, technology as a method to investigate psychological

processes, and technology as a means to influence human behaviour. This profile shines through in both the bachelor's and the master's programme.

Bachelor's programme
Bachelor graduates in Psychology at the UT are expected to possess (1) specialist knowledge and understanding, (2) research and design competencies and (3) academic and professional skills and attitudes relevant to their field. The final qualifications are specified and categorised along these lines. To give a few examples, upon graduation, the bachelors are expected to:

1. possess in-depth knowledge and understanding of theories, models, technologies, and working methods of at least two of five specialist fields of the programme. These fields are
    - Conflict, Risk, and Safety,
    - Health Psychology and Technology,
    - Human Factors and Engineering Psychology,
    - Learning Sciences,
    - Positive Psychology & Technology;
2. be able to formulate a problem for a research assignment, place it in a theoretical framework, set up applied psychological research, write a report and hold an audience-oriented, appealing presentation on their research;
3. possess dedication and skill in carrying out team projects and adequately and congenially work together with clients, supervisors, research participants and peers.

For a full overview of the final qualifications of the bachelor's programme of Psychology at the UT, please refer to Appendix 2.

The final qualifications of the bachelor's programme were discussed with the programme's Professional Field Committee. This committee consists of representatives from organisations that are likely the programme's alumni. The programme management is working on the internationalisation of this committee, which currently consists of Dutch employers. The staff have sufficient connections outside of the Netherlands to guarantee a foothold in the international academic and professional field.

The panel has studied the final qualifications of the bachelor's programme in Psychology at the UT and found that they adequately meet the requirements regarding level and orientation as defined by the Dublin Descriptors and the requirements of the Psychology Domain as formulated by the assembly of Dutch psychology academics. Thus, the intended learning outcomes fit the level and orientation of the programme and are geared to the professional field and national and international requirements.

Master's programme
At the UT psychology master students may choose one of five tracks. These are:
- Conflict, Risk & Safety
- Health Psychology & Technology
- Human Factors & Engineering Psychology
- Learning Sciences
- Positive Psychology & Technology

The master's programme aims to provide students with the specialist knowledge, competencies and skills necessary to operate autonomously as academic professionals and scientists in psychology. In line with the chosen focus, the programme should enable students to analyse societal, and psychological problems, and to design practical (technological) interventions aimed at influencing human behaviour to reduce these problems. Conflict, Risk & Safety focuses on designing interventions that improve security, with an emphasis on new technologies. Health, Psychology & Technology focuses on promoting healthy behaviour, adapting to illness and improving care, using persuasive next-generation e-health technologies. Human Factors & Engineering Psychology focuses

on the interaction between people and technology. Learning Sciences teach students to describe, explain and stimulate learning processes. Positive Psychology & Technology aims at treating psychological disorders and promoting positive mental health, with a focus on technology.

The categories of the final qualifications are the same as in the bachelor's programme. Master graduates are expected to possess at an advanced level: 1) disciplinary and specialist knowledge and skills, (2) research and design competencies and (3) academic and professional skills and attitudes. Technology as a topic is included in both the theoretical content of the master's programme and in the research and design tasks the master students perform. Both knowledge and competencies are of a more advanced level. For instance, students are required to work on a relatively sophisticated design or research assignment, with a high degree of independence, and to demonstrate the ability to contribute to the development of a scientific theory, model or tool.

The final qualifications for all master students in Psychology are matched with the Dublin Descriptors, and it is evident that all qualifications are covered. They are elaborated in detail, again in three categories: knowledge, competencies and skills/attitudes. A full overview of the final qualifications of the master's programme in Psychology at the UT is included in Appendix 2.

To illustrate the panel's findings and considerations, we highlight a few examples of the final qualifications here.

Master graduates:
- 'have the skills to critically analyse and assess concepts, theories, models, and procedures of the discipline in a professional manner, as well as the skills to apply and integrate them to solve a complex issue in a new context in the field of their chosen tracks';
- 'are able to design an intervention or instrument for complex psychological problems, using a systematic approach, taking into account the characteristics of the people involved during the design process as well as the ethical standards';
- 'possess sufficient social and communication skills and strategic insight to be able to pleasantly work together with customers, supervisors, clients and peers'.

The final qualifications are the same for all tracks. However, for the Positive Psychology & Technology, track, there is an additional qualification. These graduates:

- 'have mastered professional competences in the field of diagnostics, counselling, and treatment of psychological disorders and, in case they completed a "clinical" internship, demonstrate their capability to apply these skills to practical situations'.

The final qualifications of the master's programme were discussed with the Professional Field Committee. This includes at least one representative of the intended future work field for each master track. The committee agreed that the final qualifications are appropriate. Also, the committee noted that master graduates should be able not only to write an academic paper, but also a policy paper which meets the standards and conventions of the specific professional field. The management team is now deliberating whether such a policy paper should be included in the programme. Given the international character of the programme, another goal is to recruit more members for the Professional Field Committee from abroad.

The panel studied the final qualifications of the master's programme in Psychology at the UT and found that they adequately meet the requirements regarding level and orientation as defined by the Dublin Descriptors and the requirements of the Psychology Domain as formulated by the assembly of Dutch psychology academics. Thus, the intended learning outcomes fit the level and orientation of the programme and are geared to the professional field and national and international requirements.

Considerations

Bachelor's programme
By choosing a specific focus on the technology and design aspects of psychology, the UT has created its very own niche: a kind of engineering approach to psychology. In the panel's view, this makes the Twente programme stand out from other Dutch Psychology programmes, in a way that may well serve future social and technological developments and the ensuing demands from the job market.

The chosen profile fits in perfectly with the ambitions formulated by the UT as a whole. Psychology's focus will therefore strengthen the university's 'high-tech, human-touch'-mission, and it will enhance students' possibilities to find relevant minors, infrastructure or kindred spirits within their chosen university.

The panel appreciates how the design-and-technology focus is meticulously translated into matching final qualifications that take into account the constraints of the Dublin Descriptors, the psychology domain and the international academic and professional field. The fact that 'team skills' figure prominently in the final qualification is an example.

In summary, because of its unique and relevant niche and the well well-elaborated final qualifications, which have been discussed with representatives of the professional field, the panel judges that the bachelor's programme in Psychology at the UT systematically surpasses the generic quality standard that may be expected for standard 1.

Master's programme
Just as with the bachelor's programme, the panel admires the precise and relevant niche (design and technology) that was chosen for the master's programme. With digital approaches to prevention and cure (e-health) and the use of apps for all conceivable purposes on the rise, psychology master graduates with the mindset and the skills of an engineer undoubtedly will be able to make a difference. One of the master tracks (Conflict, Risk & Safety) is unique in the Netherlands and seems to be very relevant today. Another master track (Human Factors and Engineering Psychology) is unique as a subdomain of psychology.

Again, the focus of the master's programme is translated into well-defined final qualifications. The panel applauds the thoughtful way this is done, consistently building on the final requirements of the bachelor's programme. The final requirements for the master's thesis for instance are in line with those for the bachelor's thesis, the former clearly being more challenging. The panel wants to extend a special compliment for final requirements 2.7, which states that in order to graduate, the master student should 'provide a report (…) in a clear and concise manner, containing a logical, insightful structure, and correct language use (…)'. In the panel's view, the desirability and importance of these aspects cannot be overestimated, since the effectiveness and authority of the later professional greatly depend on them.

The master's programme of Psychology at the UT is practically oriented but sets itself off from vocational training programmes convincingly. It does so by making academic theories its core, on which the master students base their own research projects. The panel appreciates this.

The panel has some reservations about the one extra final qualification which is supposed to capture the Positive Psychology & Technology track. That qualification states that the candidate should master 'diagnostics, counselling and treatment of disorder', but there is no mention of positive psychology in the final qualification.

The panel strongly endorses the management's plans to expand the Professional Field Committee and invite foreign members. This seems appropriate given the international character of the programme and its student population. Also, the panel recommends that the programme managers to maintain a close regular relationship with this committee. The fields that the UT prepares its

students for develop rapidly. So it would be wise to stay well-informed and make adjustments in time.

In summary, because of its clear and relevant focus, because of the thoughtful translation of this focus into well-defined final requirements, with due attention to clarity, conciseness, logic, structure and correct language in communication, and finally because of its practical orientation while still maintaining its academic character, the panel judges that the master's programme in Psychology at the UT 1 systematically surpasses the generic quality standard that may be expected for standard 1. The strong points mentioned above amply overrule the reservations the panel has about the final qualifications for the Positive Psychology & Technology master tracks.

Conclusion
Bachelor's programme Psychology: the panel assesses Standard 1 as 'good'

Master's programme Psychology: the panel assesses Standard 1 as 'good'

Standard 2: Teaching-learning environment
The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Explanation:
The intended learning outcomes have been adequately translated into educational objectives of (components of) the curriculum. The diversity of the students admitted is taken into account in this respect. The teachers have sufficient expertise in terms of both subject matter and teaching methods to teach the curriculum, and provide appropriate guidance. The teaching-learning environment encourages students to play an active role in the design of their own learning process (student-centred approach).

Findings

Bachelor's programme
Admission to the bachelor's programme requires the international equivalent of a Dutch pre-university school-leaving certificate, or completing at least one year at a university of applied sciences and have sufficient marks in mathematics. Self-selection of incoming students is accomplished through matching activities that mimic the study programme. Prospective students study for a test, attend a lecture, participate in a project group and discuss their expectations in the classroom. If their expectations of the programme are not realistic, they are informed during this part of the matching day.

The bachelor's programme in Psychology at the UT includes four learning trajectories:
- theory,
- research methods,
- professional academic skills,
- design & research.

These learning trajectories pervade each of the 12 modules (15 EC per module) that constitute the bachelor's programme, emphasizing modular and project-based education. The programme follows the 'Twents Onderwijs Model' (TOM), a modular and project-based didactic concept aiming, among other things, to optimally integrate knowledge and skills, teach students to work in teams, manage projects, challenge them to perform at their best, and make them self-reliant.

We now review the curriculum succinctly. For a full overview, please refer to Appendix 3.

The first bachelor year contains four modules, each assigned to one of four theoretical themes: 'Psychology & Intervention Design', 'Social Behaviour', 'Cognition & Development' and 'The

Individual'. Central to each module is at least one project in which students work on a realistic assignment taken from practice. Each module contains a variety teaching methods, depending on the learning objective. For instance, in the theory-learning trajectory, interactive lectures and self-study predominate. To learn research methods, students watch videotaped micro-lectures in their own time and apply their knowledge in small-scale interactive tutorials ('flipping the classroom'). Professional academic skills, as well as design and research competencies, are mainly trained in tutorials.

Per module, learning objectives apply for each of the learning trajectories. So for instance for the first module in the first bachelor year ('Psychology & Intervention Design') some examples of learning objectives per learning trajectory are:
- Theory: 'At the end of the module, students will be able to recognise and differentiate between the basic areas of psychology and apply this to examples.'
- Research methods: 'Students will be able to recognise and distinguish between the various activities in the context of empirical research.'
- Professional academic skills: 'Students will be able to shape work consultation effectively.'
- Design & research: 'Students will be able to design an original and appropriate intervention for behavioural change by applying all activities of the ASCE model (analysis, synthesis, construction, evaluation, engagement and accountability) to a specific psychological problem.

During the second bachelor year, the thematic modules connect to the five tracks in the master's programme. Students must choose two thematic modules from:
- Psychology of safety
- Health psychology & applied technology
- Human factors & engineering psychology
- Psychology in learning & instruction
- Mental health

In the second semester of the second bachelor year, students practice more advanced research methods and statistics and acquire professional academic skills in two dedicated modules. During the 'Psychological and Professional Skills' module, they explore their future work field.

In the first semester of the third bachelor year, students deepen or broaden their knowledge and skills by choosing other thematic modules in psychology or from other UT programmes. Some students study abroad. The total elective space is 30 EC. In the second semester of the third bachelor year, all students participate in the 'History, Ethics and Philosophy of Psychology' module (15 EC), which places their psychological knowledge in a broader context. Students finish their bachelor's programme with a bachelor's thesis (15 EC), in which the knowledge, competencies, and skills obtained in all learning trajectories need to be integrated. They choose their topics from a list, derived from the faculty's research programme. If they do not find a topic that suits them, they may also bring in their own topic. Students go through the entire empirical cycle. Part of their research may be done in groups, but the report is written and assessed individually.

During their bachelor's programme, all students participate for 15 hours in the empirical research of other bachelor or master students.

The management has made an effort to make studying the programme feasible. Students have to acquire 45 out of 60 credit points in their first year in order to be able to proceed. The management has taken care to divide the study load evenly between semesters and modules. Finally, an elaborate scheme of meetings and in-between products helps students to limit the time they spend on their bachelor's thesis to one semester. Possibly as a consequence of these measures, the percentages of students who obtain their bachelor's degree within three or four years have increased over the past few years. 65 per cent of the students received their bachelor degree within three years, and 90 per cent within four years. From the 2014 cohort, 68 per cent of students finished the programme within three years. This is a good score, and the panel admires the achievement.

Students told the panel that they find the course load high, but evenly distributed. The TOM model forces them to work in a structured, regular way. This pressure may lead to some stress at first, but most students settle into the habit and later profit from it. Having to apply the theories they learn immediately in a project, encourages students to study them in depth. 'We really need to know our theory, or we cannot do the projects', as one student emphasised. Another student found it a pity that the programme leaves no time to discuss the pros and cons of different theories. Instead, students only have to learn them and apply them. On the other hand, the TOM model provides ample room for personal development. Working together on project assignments, students encounter all kinds of problems (differing ideas and working styles, free rider behaviour) and learn to deal with them in a mature way. Some students had expected more clinical psychology in their bachelor's programme.

As might be expected, the overwhelming presence of German students in a Dutch university sometimes leads to uneasiness. For instance, students tend to speak German during tutorials, or the German students stick together in one group. Consciousness is now raised on this issue, and the Programme Committee has come up with a code of conduct, prescribing everyone to speak only English during classes and tutorials, even if all students have German as their mother tongue. Meetings of the study association 'Dimensie' are also in English. Students hope that this will lead to more mixing of the different student groups.

Master's programme
The 60 EC master's programme in Psychology at the UT can be started in September or February. Admission is gained with a bachelor's degree in Psychology, while graduates from higher vocational training institutes have to complete a premaster's programme (45 EC or less, depending on the student's educational background). Students choose one of the five tracks. In the academic year 2016-2017, the majority (52 per cent) of students started the master's programme in Positive Psychology & Technology. The other half of the student population was more or less evenly divided over the remaining four tracks, the exception being Learning Sciences, which attracted only 5 per cent of students. Four tracks out of five are offered in English. The Positive Psychology & Technology programme is taught in Dutch. As of September 2019, this programme will be taught in English as well, with the possibility for Dutch students to practice counselling skills in their native language.

The master students are expected to work relatively autonomously. They are given ample opportunity to fill in their own learning process. In accordance with this principle, the structure of the master curriculum varies greatly, depending on the chosen tracks and the student's preferences. Specialized coursework takes up 20 or 30 EC, including a course on research methods and statistics relevant to the specific field. Students may choose to do an optional internship of 10 or 20 EC. All students write a master's thesis of 10, 25, 30 or 35 EC. If students opt for an internship, they spend less time on their thesis. All tracks include an elective advanced psychology course from another track, except Positive Psychology & Technology, which curriculum is fully loaded with specialist clinical courses. Didactic methods vary from lectures through practicals, 'colstruction', tutorials, project group meetings and presentations. For each course learning goals related to the final master qualifications are formulated, and the connection to the work field is described. For a complete overview of the master programme, please refer to Appendix 3.

In 2016-2017 72 per cent of all students chose to do an internship. One of the reasons for students not to choose an internship is that it is hard to plan, given the fact that students are expected to follow other courses in the same period as the one intended for the internship. Positive Psychology and Technology is the only track that does not plan parallel courses.
To service international students, the programme has established an extensive network across the border, aided by a staff member living in Germany and dedicated to recruiting internship positions. Thus German mental health institutions, companies such as Volkswagen, Audi and BMW, and research institutes such as Fraunhofer are now accepting master students from the UT. The network is still growing, with new contacts brought in by individual students being valued. A workshop prepares students for the internship, focusing on formulating personal learning goals and professional

conduct in the workplace. Before they start, students write an internship plan. During their internship, they are supervised by a staff member who visits the internship location at least once (twice in the case of clinical internships). To wrap up their internship, students write a reflective report in which they are expected to integrate the theoretical knowledge they acquired during their studies with practices encountered during their internship. Students describe the internship procedure as well organised. They feel well supported and have no trouble in finding an internship position.

Two lecturers supervise the master project, at least one of whom has a PhD. For most master tracks, the master's thesis takes up 25 to 35 EC, depending on whether or not a student opts for an internship. For those students in the Positive Psychology & Technology track who chose to do an internship (20 EC), the master's thesis is worth only 10 EC. During its site visit, the panel learned that these students are nevertheless supposed to go through the full academic cycle, doing less of everything, but still covering the full spectrum.

As mentioned above, the Positive Psychology & Technology track is by far the most popular of the five master tracks. Since there is little psychopathology in the bachelor's programme at the UT (which supplies most of the master students), students still need to learn a lot in this track. Especially because on top of the necessary clinical expertise, students need to take courses in 'e-mental health' and positive psychology to fit into the specific niche chosen by the university. The panel found that, understandably, this master track is only partly successful in teaching the students all they need to know to become fully qualified clinical psychologists with an extra focus on positive psychology and the use of technology on top. For instance, despite its name, the Positive Psychology track only contains one 5 EC module dedicated to 'Applied Positive Psychology'. Studying the course material, the panel missed vital themes such as personality disorders, sexuality and pain. Students are informed about the qualifications for a 'basisaantekening psychodiagnostiek' (BAPD), which they need if they wish to take part in postmaster clinical education in the Netherlands. For most international students the BAPD is of no interest , because they generally want to return to their home country after graduation. The panel was glad to hear that the clinical master track is about to implement a significant change. The programme managers announced their intention to revise the track (while at the same time switching to English in 2019) and profile it more incisive, in order to attract more clinical master students from other Dutch universities, only a few of which now come to Twente. It also aims to give the master track a truly international scope. The revised track will not only be offered in English but also be international in its content, for instance by inviting foreign guest lecturers and dealing with classification models that are used in different countries.

Whereas practically all Dutch master's programmes in Psychology struggle to fit in the necessary study material in one year, resulting in overburdened master curricula, it surprised the panel that the Twente students are relatively positive about the workload. In general, they seem to consider the course load appropriate for a master's programme. This is exceptional. The management does indeed exert itself to try to prevent delay in the master's programme. It accomplishes this by evenly dividing the course load across the different semesters and blocks, by being flexible in the moment at which students can start their internship or their master's thesis, and in possibilities to retake a test. Also, the study advisor organises meetings for new master students to help them with any problems they may come across. An extremely helpful Graduation Web has been designed to take students step by step through their thesis work. Currently, the faculty is working out a thesis tracking system so teachers can more easily track the progress of their master students.

Teachers' team

The bachelor's and the master's programmes in Psychology at the UT are taught by a multidisicplinary team of teachers, on both fixed and temporary contracts. Guest lecturers from professional fields are also involved. Small-scale tutor groups are mostly supervised by master graduates. They also supervise bachelor's theses. The current staff-student ratio for the bachelor's programme is 1:35 and for the master's programme it is 1:30. Of the staff members in the master's programme, 88 per cent obtained a PhD-degree, 80 per cent passed the English-language assessment, and 46 per cent of the team obtained a university teaching qualification (UTQ, or 'BKO' in Dutch). 28 per cent is

exempt from obtaining a UTQ, whereas 4 per cent is still in the process of obtaining one. The remaining 22 per cent are mostly unremunerated professors and temporary or new teachers. Since the programme has switched to English, the staff was assessed by the university's language centre. The number of hired staff is based on extensive allocation model for capacity planning. By deploying temporary staff for small-scale tutorials, the programme management has thus far been able to cope with the fluctuating influx of students. The current teaching methods are labour-intensive, and teachers experience a high workload in spite of the allocation model. However, they do feel autonomous in their jobs and describe the faculty as a very warm and open environment with a closely-knit social structure. They also find that because thesis themes are linked to the faculty's research programme, the curriculum provides excellent opportunities to combine their educational and research activities. Due to the modular build-up of the programme, teachers from different disciplines work together within the same project, which they enjoy. Students find their staff knowledgeable, enthusiastic, motivated and supportive. They appreciate that the group work brings them into close contact not only with other students but also with their teachers. Master students told the panel that they value the personal contact they have with their lecturers. Students describe their lecturers as open and welcoming to any suggestions or wishes students may have to shape their own learning environment.

It is no surprise to the panel that in such an intensive programme, teachers experience a high workload. This is in part compensated however by a sense of ownership of their own teaching, excellent opportunities to combine education and research and an ambitious, warm and open professional environment.

The panel found the teachers to be committed, radiating unity and apparently enjoying their work. It has no doubt that the quality of the teaching staff enables students to meet the final qualifications of the programme. The panel also learned that junior teachers receive feedback in many ways: directly from their students during the tutorials, during their UTQ training, from the evaluation results and the remarks on the evaluation forms, as well as from their colleagues in the teachers' evaluative discussions. However, the panel does want to draw attention to the fact that fewer than half of the teachers within the Twente Psychology programme are in possession of a university teaching qualification (UTQ). The panel understands that an intensive programme with many tutorials and small group meetings necessarily involves a large number of young and possibly temporary teachers who may be exempted from the UTQ-trajectory. It also duly notes that almost 80 per cent of teachers has a PhD-degree and 80 per cent passed an English-language assessment. Nevertheless, the panel recommends having some kind of widely implemented control over didactic expertise. It therefore suggests that teachers who have thus far been exempt from UTQ – either because they are on temporary contracts or because they are seasoned teachers who supposedly do not need didactic training –do qualify. Perhaps a special trajectory could be designed, tailored to their specific needs.

Programme-specific services, facilities and support
As befits a university of technology, students can use well-equipped lab spaces, one of which is a Design Lab, and another lab with facilities such as virtual reality, eye tracking, wearable technologies, location-tracking devices and camera sets to register group processes from different perspectives. Both bachelor and master students may use these facilities. Technical assistants are present to help them work with the equipment. Students are very satisfied with the facilities, not only the labs but also the areas that are provided for working in groups.

The panel was impressed by the Graduation Web, an online facility that explains every detail of the procedure for both bachelor and master's theses with crystal clearness. It offers step-by-step plans, contact information and assessment criteria. In this way, it truly helps to ease the process and prevent study delay caused by confusion or misunderstandings.

The panel found that students are closely monitored and supported. First-year students have a student mentor, a senior Psychology student who assists them with all study and practical issues. The mentor introduces the novices into the programme, the university and student life. The mentor

also discusses study and planning skills and encourages the first-year student to study. The study advisor supervises the mentor programme. Before they start, the mentors receive training. Students experience the mentors, supportive staff and study coordinators as very helpful. Some students find the information they receive about their possibilities in the job market, or postmaster education insufficient.

As was made clear to the panel from the site visit, the documents studied and the conversations held, the services, facilities and support at the Psychology programmes of the UT are of an amply satisfactory level.

Quality care
The panel found the system of quality care for both the bachelor and master's programmes satisfactory in general. Students say that they feel their opinions about the programme are taken seriously. After each module they are invited to give written feedback. On top of that, the study coordinator also organises panel meetings, during which the programme is extensively discussed in person. The panel confirmed that the Programme Committee (which advises the programme management on all aspects of the bachelor's and master's programmes) operates pro-actively and shows plenty of initiative, for instance by launching a code of conduct to facilitate the mixing of different cultures. However, in its discussion with the Programme Committee, it got the impression that the members of this Committee underestimate their own authority. In debates issues like the 10 EC 'mini-thesis', it does have the right, even the responsibility, to see eye to eye with the programme management on an equal base and intervene assertively if they think the quality of education is at stake.

The panel would like to compliment the Programme Committee for its good initiatives and encourage it to operate independently and assertively.

Considerations

Bachelor's programme
The panel is convinced that the bachelor's programme of Psychology at the UT has carved itself a distinct niche, by consistently focusing on real-world issues as a starting point for its modules and an integrated approach of theory and implementation. The programme is coherent, built up around four clear learning trajectories and explicitly phrased learning objectives, which seem to be directly derived from the final qualifications of the programme as a whole. The didactic model implies that teachers of different disciplines closely co-operate, which enforces the integrated character of the programme once more. An overarching principle throughout the three bachelor years is that freshly acquired theoretical knowledge is directly implemented in an academic process which leads up to an intervention design, thus guaranteeing that the theory is processed and understood properly. Meanwhile, by working on projects in teams, students acquire so-called 21-st century skills such as collaborating, communicating and finding creative solutions. The panel appreciates the innovative spirit expressed by the 'Twents Onderwijs Model' as applied to psychology, and considers it a budding success. The excellent lab facilities and good support offered with them, to be used by both bachelor and master students are bonus points.

On the scale between 'bachelor as a broad base' on the one hand and 'early specialisation' on the other, the Twente programme takes up a position in the middle, the panel found. Students told the panel they appreciate the balance between obligatory and elective courses. Because of the obligation to take two thematic electives, some students eventually ended up with a master track that differed from the one they originally preferred.

The panel also values the intensive character of the bachelor's programme, with a high but evenly spread course load, relatively many contact hours and a varied mix of didactic methods such as lectures, tutorials, group meetings and practicals. During their project work students are not left dangling. Tutors monitor the projects closely, so that they can intervene directly if things veer in a

wrong direction. Study skills are actively stimulated from day one, both in the course work and in the mentor programme, which students highly appreciate. Throughout the programme, students receive much feedback. The graduation data show that the Twente programme is feasible, and has improved its viability over the past few years due to targeted measures taken by the management team. In this context, the panel admires the fact that students now put in substantially more study hours than a few years ago. Last but not least, the panel is pleased with the fact that after all the team work students are expected to write their bachelor's thesis by themselves, so that their individual accomplishments can be assessed properly.

In spite of its favourable general impression, the panel still sees room for improvements in the bachelor's programme.

The first aspect that needs improvement in the panel's view is that clinical psychology – which is after all a vital component of the discipline and also a popular route for further academic and professional development – is underrepresented and incomplete in the UT's bachelor's programme in Psychology. It occupies only a small component in the mandatory coursework during the first bachelor year. Furthermore, students may choose a 15 EC elective 'Mental Health' during their second year. The panel has studied the course material for this elective and found that it barely touches upon widespread psychological syndromes such as depression, phobia, attention deficit disorder and addiction. The panel considers this a serious gap, since many of the solutions to be designed by the Psychology graduates will be in the realm of these kinds of disorders. The panel recommends that the management set up an extra elective module in the bachelor's programme specifically about psychopathology.

The second recommendation concerns the position of ethics in the bachelor's programme. This subject is now accommodated in the very last module: 'History, Ethics and Philosophy of Psychology', to be taken right before students write their bachelor's thesis. The panel is of the opinion that in order to educate ethically conscious 'engineering psychologists', ethics should not be studied in isolation, but be included as an integral part of the already well-integrated bachelor's programme. This will enable students to truly digest and incorporate ethical theories and make ethical considerations an inseparable part of their design solutions, as they should be.

In summary, the panel found that the bachelor's programme has a coherent structure around four learning trajectories, explicit learning objectives for each module and a varied mix of didactic forms. Positive points that distinguish the Twente bachelor's programme in Psychology are: its consistent and innovative focus on real-world issues and the integration of theory and practice; its intensive character with a high but evenly spread course load, many contact hours and much personal feedback. On the other hand, the panel found that the current bachelor's programme does not fully prepare students for a clinical master track. Points of improvement that the panel suggests are: an extra elective Psychopathology, integration of ethics throughout the bachelor's programme and a wider roll-out of the UTQ for the teaching staff. On the whole, the panel judges that the bachelor's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 2.

Master's programme
The panel found that the University of Twente offers a master's programme which holds a lot of promise, serving a niche in today's and tomorrow's job market for psychologists. The panel especially admires how the 'technology' and 'design' themes are carried through consistently through all tracks. That said, it wishes to make a few suggestions for further improvement.

The panel recommends that the management takes more control, by designing a fixed structure for all master tracks. For now, the panel considers their student-centeredness goes too far, bordering on arbitrariness. The differences between students in chosen course load for an internship (from 0 to 20 EC) and thesis (from 10 to 35 EC) are too large to define one master's programme. The panel strongly suggests that an internship of sufficient size is made mandatory. This may be a research or

a practical internship. In the same line, the panel recommends to replace the elective advanced psychology course (in four of the five master tracks) by an extra deepening course within the chosen track. One year is already short to specialize properly. It seems best to concentrate all efforts on the chosen track.

Most of the master tracks have a well-balanced content, the panel found. However the panel was not satisfied with the Positive Psychology & Technology track. Even though this track was deemed 'LOGO-worthy' (i.e. compatible with the demands formulated by the union of Dutch educational institutes in mental health care), the panel did not find it fully convincing, as described above under 'findings'. Also, it would like to point out that the track's name 'Positive Psychology' promises more than it lives up to, since 'positive psychology' is only a 5 EC cherry on the cake. As it happens, this master track is currently under reconstruction. The panel thinks it would be beneficial to make a choice: *either* the UT offers a full-blown clinical master track with a focus on the application of technology in mental healthcare, *or* it offers a fairly unique niche training in positive psychology, i.e. human wellbeing, resilience, growth, happiness, confidence, motivation etc., and how technology can be used to stimulate all this. In the first case, in the reviewed curriculum the clinical components should be enhanced and more room should be made for teaching about mental disorders and disfunctions. The track should also change its name. In the second case, the curriculum needs to be re-invented in consultation with future employers, predominantly focusing on positive psychology and technology.

During its visit, the panel exchanged views with master lecturers on the possibility of completing the empirical cycle within the narrow scope of 10 EC. The panel begs to differ with those of the lecturers who claim that this is indeed possible by doing just a little less of everything. The panel is convinced that 10 EC gives student insufficient opportunity for adequately formulating a hypothesis, designing a test, collecting data etc. in a scientific framework. The panel encourages the faculty to rethink the way it wants to finally test its master students' knowledge and scientific skills. The full empirical cycle does not necessarily have to be the vehicle for this. The panel recommends that the faculty makes its own choices in this matter, in consultation with other faculties. Also, to be efficient and still profound, the panel suggests that internship and final assignment are interconnected for both the research internship and the practical internship. This saves both students and teaching staff some time to do with consulting research literature on the subject.

To the panel it seems wise to incorporate in the master's programme a more extensive module about career opportunities for graduates. They evidently feel the need for such information, which is all the more understandable and relevant since the University of Twente likes to educate psychologists for non-traditional innovative jobs. It may be useful to reflect collectively on these less obvious job opportunities.

To end on a positive note, the panel would like to compliment the faculty for the relatively high feasibility of its master's programme. Thanks to amongst other things timely and effective information, close monitoring, intensive student support and a strong and international network for internships, relatively many students succeed in actually finishing their master's programme in one year. The panel considers this a best practice and a source of inspiration.

In conclusion, the panel judges the master's programme of Psychology at the University of Twente as satisfactory with room for improvement. Most important recommendations concern a more solid structure of the curriculum, which applies for all students; introducing a mandatory internship and connecting the internship with the final assignment, possibly in a new form; and fortification of the master track Positive Psychology & Technology (as is already being worked on). On the other hand the panel is enthusiastic about the consistent intertwining of technology with psychological themes through all master tracks, about the close personal monitoring and support of students and about other effective measures that have been taken to improve feasibility. On the whole, the panel judges that the master's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 2.

Conclusion
Bachelor's programme Psychology: the panel assesses Standard 2 as 'satisfactory'

Master's programme Psychology: the panel assesses Standard 2 as 'satisfactory'

Standard 3: Student assessment
The programme has an adequate system of student assessment in place.

Explanation:
The student assessments are valid, reliable and sufficiently independent. The requirements are transparent to the students. The quality of interim and final examinations is sufficiently safeguarded and meets the statutory quality standards. The tests support the students' own learning processes.

Findings

Bachelor's and master's programmes
During both the bachelor's and the master's programme, a variety of tests is used, usually at least two types of tests per module, to adequately address the range of the course's learning objectives and to improve reliability. For example: individual assignments and presentations, group assignments and presentations, open-question and multiple-choice exams. The last are used to a very limited extent, and only in combination with other ways of assignment for the same course. The lecturers are free to choose their own way of testing, but the programme director checks that the test plan is executed. In both programmes, individual assignments are the most common assessment form. This means that throughout their studies, students receive a lot of formative feedback. During its visit, the panel encountered some ambivalence about compensation and resit rules. Different conversation partners differed, and what was described in the self-evaluation report differed as well on what can be compensated by what and how often a student can resit an exam.

To guarantee quality, student assessment practices at the faculty comply with the framework that the University of Twente has set up to promote and maintain the quality of tests and assignments. Based on this framework, the programme management develops an comprehensive annual assessment plan, in which the programme's final qualifications are linked to the course objectives and assessments. This plan regulates student assessment on four levels. On the *programme level*, a comprehensive assessment plan provides an overview of which, when and how final qualifications are tested. For *modules*, the test plan describes the modules' learning objectives, which tests are included and to what extent they determine the final module grade. For *tests*, the assessment plan prescribes that students are explicitly and thoroughly informed about when and what is expected of them. Grades are to be communicated to students within 15 working days, after which they are debriefed. The *final assignment* is considered to be the bachelor's or master's thesis. Two examiners should independently assess the theses according to an extensive assessment format, which is made public through Graduation Web.

The 15 EC bachelor's thesis includes two kinds of tests: the thesis and a colloquium (an oral presentation followed by a discussion with the supervisors and a lay audience). The final thesis and presentation are assessed by two examiners, who are also the student's supervisors. They assess the bachelor's thesis on the basis of six criteria, aided by a set of rubrics. The criteria include: style of writing (which should be logical, well-structured and correct) and work process (the student should be diligent, able to process feedback etc.) One-tenth of the final mark is determined by the oral presentation of the thesis, which should be well-argued, concise and attractive. Both examiners fill out and sign her or his own assessment form. The master's thesis – which may vary from 10 to 35 EC – is assessed in a similar way. Here as well, two supervisors/examiners and six criteria are involved, and an oral presentation is part of the final assignment. The assessment criteria for the master's thesis have the same structure as the ones for the bachelor's thesis, but specify higher requirements, compatible with the specialized master level. If the two examiners cannot agree on

the final mark, they will try to resolve their differences. If this does not work, a third party will be asked to intervene. After the final presentation, the examiners give oral feedback, based on the assessment form.

In the master's programme, the majority of students choose to do an internship. The internship is assessed by the trainee student's mentor, partly based on the internship report the student has written. Before assessing the internship, the academic mentor visits the internship location at least once, twice in the Positive Psychology & Technology specialization, and consults with the professional supervising the trainee student at the workplace.

To guarantee assessment quality, the management team selects some already graded tests each year for an extra screening by the UT's Centre of Expertise in Learning and Teaching (CELT). The tests are taken from different departments, with different lecturers and different student evaluations. The Examination Board checks the suggested selection of tests. The experts from CELT provide an extensive report, indicating good points and suggestions for improvement of the assessments. These reports are discussed extensively with all concerned and actions for improvement are formulated.

To safeguard the quality of the thesis assessment, the programme management organizes an annual screening carousel. On this occasion, thirty to forty lecturers get together for one day and blindly re-assess bachelor and master's theses. The 10 per cent selection of theses is done by the Examination Board. The sample is evenly divided over different grades and different tracks. Each selected thesis is re-assessed by two independent examiners: one from the same department, one from another department. The examiners use the same assessment forms as the original assessors, and do not know the original scores. If the assessment in this screening differs substantially from the original screening, these differences are analysed. The programme management reports the results of the screening and the formulated action points for improvement to the Examination Board.

Examination Board
The Examination Board for Behavioural Sciences has six members and is formally responsible for controlling the quality of assessment for both the bachelor's and master's programme of Psychology and those of Educational Science & Technology and Communication. It supervises the assessment plans for both programmes, the quality checks on test assessments performed by CELT and the annual screening carousel to check the assessment quality of the bachelor and master's theses. The Examination Board also handles individual requests, complaints about assessments, and cases of fraud. The panel found that the Examination Board insists on written comments on the assessment form, instead of just rating the criteria on the assessment form and giving oral feedback. This completes the assessment form, clarifies a discordance between examiners if there is one, and is also helpful during the carousel rounds.

The panel's viewpoint is that the Examination Board should not delegate all responsibility for checking the quality of assessment to the programme management or Programme Board. It should not restrict itself to supervising these procedures. Instead, it should (also) take its own test samples and check the quality of assessment itself. The Examination Board told the panel it has indeed considered such measures of its own accord. The panel would like to encourage these plans wholeheartedly. It also agrees with the Examination Board that , in addition to the ratings, written comments would be a welcome addition to the assessment forms.

Considerations

Bachelor's and master's programme
The panel's general impression is that the assessment system of the Psychology programmes at the UT is adequate and has some good points: the variety of tests used, the ample formative testing, the well-chosen test criteria for the theses and the collective effort in guarding quality. Nevertheless, the panel found room for improvement. A drawback of a warm and committed academic community can be that rules tend to be ambivalent, enforcement relaxed and responsibilities intertwined. The

panel found that this the case is to a certain extent at the UT. It recommends regulating the assessment system more strictly (for instance set up generic rules for how to prepare a reliable test, stipulate the conditions for who can be an examiner, define compensation and resit rules) and substantiating these regulations. Also, the alignment between final objectives, test goals, test forms and test criteria could be made more explicit. Once this is done, the regulations should be strictly adhered to and supervised, even though the climate within the programme is trusting and informal.

In executing and supervising the assessment plan, the panel recommends that the programme management, the Programme Board and the Examination Board each stick to their distinct roles. The panel acknowledges that the carousel – where once a year colleagues blindly re-assess each other's tests and discuss what they found – is instructive and reinforces team spirit. However, it judges that this form of peer review is incidental and therefore cannot fully replace the independent check on the quality of assessment of master's theses that the Examination Board is responsible for.

As it is, all master's theses *are* independently checked by two staff members who each fill out their own assessment form. However since the second examiner also plays a role in supervising the thesis project and in most cases will probably have discussed it with the first supervisor, she or he cannot avoid being personally involved. To prevent bias, the panel recommends having examiner at a distance (perhaps from a different track), who was not in any way involved in supervising the thesis project.

In the master's thesis all final qualifications culminate. However, as mentioned above, the panel considers a 10 EC master's thesis (an option that is taken by half of all students) too narrow a basis to assess whether a student meets all of the final qualifications. These qualifications are, as mentioned in the self-assessment report: 'specialized knowledge and skills at an advanced level; research and design competencies at an advanced level, academic and professional skills and attitudinal aspects at an advanced level'. The panel states that it is very hard if not impossible for a student to demonstrate all these competencies in a final assignment that is worth 10 EC and therefore necessarily limited in scope and size. As an alternative, the panel suggests that those responsible consider that the final assignment could consist of an internship *plus* the master's thesis. These should be thematically interconnected but assessed separately. The two marks combined make up the final mark. In this scenario, a student has more opportunity to show off her or his skills and the examiners can determine to what extent the student meets the final qualifications.

Regarding the assessment of final assignments in the present system, the panel studied a sample of bachelor and master's theses and their accompanying assessment forms. In general, it agreed with the way the theses were assessed. In most of the assessment forms the panel did miss written comments and explanations of how the examiners judged the theses. A few bachelor's theses were rated a little too high in the panel's opinion, but it found no alarming deviations.

In conclusion, the panel finds that there is work to be done to enhance and reinforce the assessment system of the bachelor and master's programmes in Psychology at the UT. It should be regulated more formally, with strictly separated roles for all parties concerned; independent assessment of the bachelor and master's thesis should be guaranteed more robustly; and the basis on which final qualifications are assessed, should in all cases be larger than 10 EC. However, the panel was struck by a genuine and shared commitment to quality of testing and did not come across fatal flaws. It does therefore think that the present assessment system is sufficiently valid, reliable and independent. Compliance with the university's test framework, the test plan, the diversity of test forms, the abundance of formative testing, the careful monitoring of internships, the detailed assessment forms, and the checks of assessment quality executed by the programme director guarantee that a minimum level is achieved and in some respects amply surpassed. The panel therefore judges that the master's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 3.

Conclusion
Bachelor's programme Psychology: the panel assesses Standard 3 as 'satisfactory'

Master's programme Psychology: the panel assesses Standard 3 as 'satisfactory'

Standard 4: Achieved learning outcomes
The programme demonstrates that the intended learning outcomes are achieved.

Explanation:
The achievement of the intended learning outcomes is demonstrated by the results of tests, the final projects, and the performance of graduates in actual practice or in post-graduate programmes.

Findings

Bachelor's programme
Since 2012, 888 students have obtained a bachelor's degree in Psychology at the University of Twente. About half of the bachelor students continue with a master's programme at their alma mater, another almost 40 per cent of them left the university, mostly to enrol in a master's programme elsewhere. A little less than 10 per cent choose another master's programme at Twente University. The university has no record of the academic achievements of the bachelor students after graduation. But those who continue in Twente have no problems in moving on to the master curriculum. Alumni told the panel that, looking back, they found that the bachelor curriculum sets out the generic theoretical framework, while the master curriculum explores the application of theories in more depth. In their view, the bachelor and master curriculum have a completely different character, but are well connected.

The panel studied a sample of the bachelor's theses. It found that in about two-thirds of these theses technology plays an important part. The panel found the level of the theses it read to be adequate in general, but in some cases this was a close call. The bachelor's theses concerned were rather thin, both literally and figuratively speaking, lacking in academic depth. For instance, a few bachelor's theses did not go beyond a literature review, from which conclusions were drawn. Sometimes, mistakes were made in the use of language or in statistics, but in their assessment forms, the supervisors adequately mentioned them.

The Twente Psychology curriculum is very much focussed on preparing students for the job market, by teaching them to apply theoretical knowledge to real-life psychological problems practically from the moment they set foot in the university. In addition, the 'Psychological & Professional Skills' module in the second bachelor year prepares them for the work field. Each year a field-day is organized, to which professionals working as psychologists are invited. In their discussions with the panel, students were confident about how they were prepared to make the right choice of a master track after their bachelor, and also about their later career after graduation. This impression of the panel is underscored by the results of the National Student Inquiry, where Twente bachelor students gave the career preparation of their programme the highest score of all Dutch universities.

Master's programme
With their master's thesis as the culmination of their academic education, all students demonstrate that they meet the final requirements of the master's programme. The panel studied a sample of the master's theses. It found that students generally demonstrated that they meet the final qualifications. It noted that a few master's theses were excellent. Other master's theses were quite 'light', for instance with a fragile setup, dubious use of control groups, overly simple statistics, use of existing data sets, or merely a literature review. This is not surprising, considering that some thesis projects were executed in line with only 10 EC.

Regarding the performance of the alumni in society, a rather rosy picture emerges. In 2017 the university contacted all alumni who graduated between 2007 and 2017, enquiring about their current position. Of the 68 alumni who filled out the form, 96.7 per cent indicated that they had a paid job. Of them, 40 per cent obtained a job immediately after graduating, 66 per cent within three months and 78 per cent within six months. The respondents are satisfied with their current jobs, rating them 3.9 out of 5. 60 per cent currently have a job which requires a master's degree, 32 per cent have a job which requires a degree specifically from a university of applied sciences. About a quarter of the respondents work in health care, 17.9 per cent work for the government, 16,1 per cent works for a university of applied sciences and the rest is divided over different sectors.

These figures correspond with the panel's personal impression gained during the site visit. A number of alumni told the panel that the job market received them with open arms, and not only in the Netherlands. For instance a couple of German masters in Positive Psychology & Technology acquired positions in Germany almost immediately after their graduation. The combination of psychology and technology, or psychology and design is looked upon with interest by future employers. Health care institutions, government agencies and insurance companies all want to make a grand digital leap ahead and look to young and qualified staff who can help them to do this. One Mexican alumnus for instance got a PhD-grant from the Mexican government to become an expert in e-health.

According to some alumni, they are complimented by their co-workers for their distinct, recognizably academic approach. They feel confident in their jobs. Looking back, they specifically appreciate the applied part of their education; 'I've not read about it, I've done it', as one alumnus said. Also they appreciate that the university actively helped them to find internships and that their teachers opened up their network to them, aiming to create innovative communities.

Considerations

Bachelor's programme
The panel determined that the Twents Onderwijs Model, with its close interweaving between theory and application, delivers confident bachelors, who do not experience a large distance from the job market and can make well-informed choices about their professional future. It states that there is a good connection between the bachelor's and master's programme at the University of Twente, with the bachelor's programme providing the basis while the master's programme gains much more depth. Twente bachelors who continue their studies elsewhere do not seem to have problems. The exception to this, as stated under standard 2, is the connection to clinical master's programmes, for which the bachelor's programme does not offer much preparation.

The panel found the bachelor's theses to be adequate, demonstrating that the students fulfil the final qualifications. However, in some cases the theses were superficial in academic terms. In order to prevent such cases in the future, the panel recommends to the teachers and examiners who supervise the thesis projects to guard the academic level scrupulously. They should, in the panel's view, give priority to warranting that students demonstrate sound scientific thinking, which includes statistical competency, instead of showing that they can act according to the rituals of academia.

On the whole, the panel judges that the bachelor's programme of Psychology at the UT systematically meets the generic quality standard that may be expected for standard 4.

Master's programme
Even though relatively few alumni filled out the forms sent to them by their alma mater, the data given by those who did are quite satisfying: 78 per cent of the respondents had found a paid job within six months after graduation. Of the currently held jobs, about two-thirds is at a master level. Alumni are fairly satisfied with their jobs. The panel appreciates that the university does survey its alumni, for the data this provides may help to optimize the curriculum. For future studies, the panel recommends that the university does everything in its power to enhance the response rate. In this

way the studies can become more representative and reliable. The panel also suggests splitting up the data according to the specialized master track the alumni followed.

There are many signs that the job market welcomes well-qualified masters with expertise in e-health, psychology and design, psychology and technology or positive psychology. The panel feels that the University of Twente has found a very promising niche and is well on its way to offering society those well-trained engineer-psychologists that it craves. During its site visit, the panel met some talented, inspired students. However, as stated above, some finetuning needs to be done in the execution of the university's ideals in the master's programme of Psychology. In order to enable all students to convincingly demonstrate that the intended learning outcomes are achieved, the panel suggests (as argued under standards 2 and 3) revising the master's thesis, that is, to combine an internship with a final assignment that does not necessarily involve the full empirical cycle. Replacing the master elective by an extra specialized course within the chosen track may also help students to gain more depth in their final assignments. These changes will make it easier to maintain rigorous academic standards, and 10 EC master's theses will be things of the past.

In conclusion, the panel judges that the master's programme of Psychology at the UT systematically meets the generic quality standard that may be expected on standard 4. It does recommend making some changes in the final assignment, as was argued under standards 2 and 3.

Conclusion
Bachelor's programme Psychology: the panel assesses Standard 4 as 'satisfactory'

Master's programme Psychology: the panel assesses Standard 4 as 'satisfactory'

GENERAL CONCLUSION

Bachelor's programme Psychology: the panel assesses Standard 1 as 'good' and Standard 2, 3 and 4 as 'satisfactory'.

Master's programme Psychology: the panel assesses Standard 1 as 'good' and Standard 2, 3 and 4 as 'satisfactory'.

Conclusion
The panel assesses the *bachelor's programme Psychology* as 'satisfactory'

The panel assesses the *master's programme Psychology* as 'satisfactory'

APPENDICES

APPENDIX 1: DOMAIN-SPECIFIC FRAMEWORK OF REFERENCE

1. Inleiding

Voorafgaand aan de visitatie van de psychologieopleidingen in Nederland heeft de Kamer Psychologie, het disciplineoverlegorgaan van de VSNU, de criteria vastgelegd waaraan naar haar oordeel de academische bachelor- en masteropleiding moeten voldoen. Zij heeft daarbij aansluiting gezocht bij de uitgangspunten van de eerdere visitatiecommissies, die respectievelijk in 1988, 1994, 2000, 2006 en 2012 de opleidingen hebben beoordeeld. De criteria sluiten tevens aan op het NIP-rapport 'De kwaliteit van de psychologiebeoefening' (NIP, 1995). Daarnaast hebben we ons bij het opstellen van de criteria rekenschap gegeven van de EuroPsy criteria (EFPA, 2015). Hierbij dient aangetekend te worden dat deze laatste uitgaan van een driejarige bachelor- en een tweejarige masteropleiding. In Nederland is gepoogd in navolging van andere Europese landen ook accreditatie te verkrijgen voor het verzorgen van een tweejarige masteropleiding voor (deelgebieden van de) psychologie. Diverse aanvragen werden weliswaar goed beoordeeld door de NVAO maar niet doelmatig bevonden door het ministerie van Onderwijs. Het ministerie beriep zich o.a. op het argument dat de vierjarige opleidingen als van voldoende niveau zijn beoordeeld en meent daarnaast dat er geen bezwaar is tegen het opnemen van specialistische studieonderdelen in de bachelorfase.

Bij de bacheloropleiding psychologie gaat het om een disciplinegeoriënteerde bachelor waarbij in de meeste gevallen sprake zal zijn van doorstroom naar een masteropleiding in een subdiscipline van de psychologie (zie de nota 'Naar een open hoger onderwijs' van het ministerie van Onderwijs, november 2000). Voor de zelfstandige beroepsuitoefening als psycholoog zal de driejarige bacheloropleiding in de psychologie geen civiel effect hebben, omdat het competentieniveau na drie jaar hiervoor te beperkt is. De nadruk in de bacheloropleiding psychologie ligt op disciplinaire academische vorming en globale kennisverwerving. De bacheloropleiding psychologie biedt daarmee een uitstekende basis om door te kunnen stromen naar een masteropleiding psychologie of naar een andere (aanpalende) masteropleiding. In nauwe aansluiting op de bacheloropleiding psychologie is de 1-jarige masteropleiding psychologie een noodzakelijke voorwaarde voor de zelfstandige beroepsuitoefening als psycholoog. Daarentegen zijn de tweejarige researchmasteropleidingen psychologie of multidisciplinaire researchmasteropleidingen, b.v. in cognitieve neurowetenschap, een noodzakelijke voorwaarde tot een verdere loopbaan in wetenschappelijk onderzoek.

In de bachelor-masterstructuur gaat het om twee afzonderlijke, eigenstandige opleidingen met ieder een eigen set doelstellingen en eindtermen. Daarbij wordt enerzijds verwacht dat de bachelor een behoorlijke keuzevrijheid kent (bijvoorbeeld in de vorm van een minor) en dat na afronding van de bachelor opnieuw kan worden nagedacht over de keuze van een master, eventueel in een andere richting of aan een andere universiteit. Anderzijds blijkt uit de argumentatie van het ministerie ten aanzien van de (on)doelmatigheid van een tweejarige masteropleiding psychologie, dat de bachelor- en masteropleiding juist in hun samenhang moeten worden gezien. De gewenste specialisatie en de voorbereiding op postacademisch onderwijs vindt immers plaats in bachelor- én masteropleiding tezamen. Daarmee verschafte het ministerie de psychologieopleidingen een paradoxale opdracht, die heeft geresulteerd in een behoorlijke diversiteit tussen de Nederlandse psychologieopleidingen, waarbij vooral de omvang van de specialisatiefase en de omvang van de vrije keuzeruimte tussen opleidingen in de bachelorfase verschilt. Dit zal er toe leiden dat wanneer bachelorprogramma's met andere bachelorprogramma's worden vergeleken er aanzienlijke inhoudelijke verschillen worden gevonden. Dit geldt ook bij een onderlinge vergelijking van masterprogramma's. Wanneer echter de bachelor- en masteropleiding als één geheel worden bekeken, zijn de Nederlandse opleidingen onderling goed vergelijkbaar. Ook is duidelijk dat er inhoudelijk weliswaar verschillen bestaan, maar dat over het te bereiken eindniveau grote eensgezindheid heerst. Verschillen in profilering zullen zowel tussen opleidingen als binnen opleidingen (bijvoorbeeld tussen verschillende masterspecialisaties) altijd aanwezig zijn. Van belang is daarom vooral ook het academisch niveau van de eindtermen van de verschillende bachelor- en masteropleidingen.

In verband hiermee heeft de Kamer Psychologie zich op het standpunt gesteld dat bij het formuleren van de criteria de bachelor- en masteropleiding een organisch op elkaar aansluitend geheel vormen.

Daarbij respecteert en accepteert zij verschillen die er in de afgelopen periode tussen de verschillende opleidingen psychologie zijn ontstaan ten aanzien van de omvang van de specialisatiefase en de omvang van de vrije keuzeruimte in de bachelorfase. Wel is de Kamer Psychologie van mening dat de bacheloropleiding psychologie - mede gezien de internationale eisen - overwegend uit psychologievakken en steunvakken moet bestaan.

2. Doelstelling en aard van de academische psychologieopleiding

Het uitgangspunt bij het opstellen van de criteria is dat de psychologie een zelfstandige opleiding is met eigen doelstellingen. Die doelstellingen zijn enerzijds ontleend aan het specifiek eigen disciplinaire karakter van de psychologie als wetenschap en anderzijds aan het veld van toepassingen waarop de opleiding studenten voorbereidt. Mede bepalend voor de identiteit van de psychologieopleiding is de internationale herkenbaarheid en erkenning ervan. In Europees kader is de studentmobiliteit in de periode 2010-2016 aanzienlijk toegenomen en diverse psychologieopleidingen bieden tevens bachelorprogramma's in het Engels aan.

In algemene zin richt de psychologie zich op de wetenschappelijke bestudering van gedrag en beleving van mensen (of dieren) in hun verhouding tot zichzelf en tot hun fysieke en sociale omgeving in een complexe, multiculturele samenleving. De psychologie is een biopsychosociale wetenschap. Observatie en analyse van intrapersoonlijke en interpersoonlijke processen dienen in samenhang te geschieden met enerzijds kennis over de biologische fundering van het gedrag en anderzijds over de fysieke en maatschappelijke context waarbinnen deze plaatsvinden. Dit geldt voor alle subdisciplines van de psychologie.

De aard van de psychologie brengt mee dat in deze discipline uiteenlopende analysemodellen worden gehanteerd voor de beschrijving en verklaring van bijvoorbeeld processen van neurofysiologische, intrapsychische, interindividuele, institutionele, technologische of culturele aard. Een belangrijke taak van de psychologie is dan ook verbanden te leggen tussen de verschillende verklaringsmodellen.

Er worden diverse methoden toegepast in de verschillende gebieden van de psychologie zoals de experimentele en de quasi-experimentele methode alsmede klinische observatie, neuro-imaging, fysiologische metingen en surveys en combinaties hiervan. Kennis van verschillende veelgebruikte methoden wordt van groot belang geacht voor de academisch geschoolde psycholoog.

De psychologieopleiding bereidt de studenten voor op de psychologische onderzoeks- en beroepspraktijk. Een specifiek kenmerk hiervan is dat psychologen, net zoals medici, beslissingen nemen die het (geestelijk) welzijn en functioneren van individuele personen in belangrijke mate kunnen bepalen. Kennis over de ethiek van onderzoek en professioneel handelen is daarom onontbeerlijk. Kennis en ervaring met ICT-middelen zoals ingezet bij zorg via internet (e-Health) is ook van groot belang.

3. Gevolgen voor de inhoud van de opleiding

Voorgaande uitgangspunten leiden ertoe dat de psychologieopleiding, naar het oordeel van de Kamer Psychologie, inhoudelijk tenminste de volgende componenten dient te omvatten. Daarbij dient te worden opgemerkt dat de genoemde componenten niet per se als afzonderlijke cursus in het curriculum moeten zijn terug te vinden. De componenten kunnen ook als onderdeel van (meerdere) andere studieonderdelen in het curriculum worden aangeboden.

In de Bachelorfase:

a. inleidingen in de belangrijkste deelgebieden van de psychologie, met name de biologische psychologie, de cognitieve psychologie, de ontwikkelingspsychologie, de sociale psychologie, psychodiagnostiek en psychopathologie.

b. de steungebieden: geschiedenis van de psychologie, wetenschapsfilosofie, ethiek, methodenleer en data-analyse en statistiek;

c. onderwijs en oefening in de methoden van de psychologische wetenschap en het psychologische onderzoek (doorlopen van de empirische cyclus) en van de beroepspraktijk; de mogelijkheid om

(indien relevant en gewenst) een stevige basis te leggen om in de masterfase te kunnen voldoen aan de eisen voor de Basisaantekening Psychodiagnostiek van het NIP en de toegangskwalificatie tot de postacademische opleiding tot gezondheidszorgpsycholoog, psychotherapeut, klinisch neuropsycholoog of schoolpsycholoog;
d. naast globale kennis van de belangrijkste fundamentele deelgebieden ook globale kennis van de belangrijkste toepassingsgebieden die in de betreffende opleiding worden aangeboden;
e. een bachelorthese, hetzij een verslag van een literatuuronderzoek, hetzij een verslag van een (klein) empirisch onderzoek.

In de Masterfase:
a. inhoudelijke, specialistische kennis, afhankelijk van de masterspecialisatie;
b. gesuperviseerde praktijk- en/of onderzoeksstage;
c. (indien relevant en gewenst, mede afhankelijk van de masterspecialisatie) verdere oefening in vaardigheden voor de beroepspraktijk, zodanig dat daarmee voldaan wordt aan de eisen voor de Basisaantekening Psychodiagnostiek van het NIP en de toegangskwalificatie tot de postacademische opleiding tot gezondheidszorgpsycholoog, psychotherapeut, klinisch neuropsycholoog of schoolpsycholoog;
d. een masterthese: opzet, uitvoering en rapportage van een empirisch en/of analytisch onderzoek waarbij sprake is van een mate van zelfstandigheid.

4. Bestuurlijke en organisatorische randvoorwaarden
De Kamer Psychologie neemt als uitgangspunt dat het eigen karakter van de psychologieopleiding een zodanige bestuurlijke en organisatorische inbedding vereist dat de beslissingsbevoegdheid over het programma bij psychologen berust, met inbegrip van de examencommissie. Ten slotte acht de Kamer geregeld landelijk overleg over kwalificaties voor beroepsuitoefening en beroepsethiek tussen de psychologieopleidingen en met de beroepsvereniging van groot belang.

APPENDIX 2: INTENDED LEARNING OUTCOMES

Bachelor's programme Psychology

Final qualification 1: Specialist knowledge and understanding *Graduates of the PSY Programme at the UT possess scientific knowledge and understanding relevant to the field, which they can implement for research and design purposes. This includes the following:*	
1.1	knowledge and understanding of the conceptual framework and major and current theories, models and working methods in the fundamental disciplines of psychology; social psychology, developmental psychology, experimental psychology, bio and neuropsychology, test theory, and clinical psychology
1.2	knowledge and understanding of the accepted methods and techniques of psychological research
1.3	knowledge and understanding of the history, philosophy and ethics of psychology
1.4	in-depth knowledge and understanding of theories, models, technologies, and working methods of at least two of the five specialist fields of the programme: 1) Conflict, Risk, and Safety, 2) Health Psychology and Technology, 3) Human Factors and Engineering Psychology, 4) Learning Sciences, or 5) Positive Psychology and Technology
Final qualification 2: Research and design competencies *Graduates of the PSY Programme at the UT are at the basic level (beginner's level for master's degree, beginning professional practitioner) and are able to:*	
2.1	clearly formulate a problem statement/question definition/hypothesis for a research assignment; with a design assignment, this implies translating the needs, wishes, and requirements of clients (service providers, policy makers) or patients into a tangible problem statement
2.2	place a problem statement in a theoretical framework; this implies that scientific literature of the field concerned and adjoining fields is located, critically evaluated, applied, and described
2.3	set up applied psychological research in a systematic, transparent and scientifically responsible manner, and execute this through the substantiated selection and correct application of simple, accepted quantitative and qualitative psychological research methods and techniques for data collection and analysis
2.4	analyse a problem for a design assignment in a thematic manner using a systematic approach and design an appropriate intervention (where possible, using technological applications), taking into account the characteristics of parties involved in the design process and the people it concerns
2.5	adhere to ethical standards where applicable in setting up and executing research and design activities
2.6	based on reflection and judgement forming, derive clearly expressed conclusions and discussion from an executed research or design assignment; this includes the study of specialist scientific knowledge, scientific and practical applications, and suggestions for improvement (advice) and, if applicable, social and ethical aspects
2.7	write reports on executed research and design assignments in which current scientific norms and conventions are applied to data reproduction and literature references, such as information sources: reports have a logical, comprehensible structure, correct use of language, and an academic style
2.8	hold a target audience-oriented informative, concise and appealing presentation on an executed research or design assignment with effective use of media and adequately answer questions about the topic

Final qualification 3: Academic and professional skills and attitudinal aspects *Graduates of the PSY programme at the UT at the basic level (beginner's level for master's degree, beginning professional practitioner) possess general, academic and professional skills that they are able to implement for research and design objectives and in their later postgraduate career and professional practice. This includes the following:*	
3.1	the attitude and skill to be able to critically reflect on and judge the significance and value of scientific knowledge, as well as the ability to reflect on and evaluate their own work and professional actions
3.2	the attitude and skills to initiate their own learning and work processes, to purposefully and methodically design and direct these processes, and to achieve academic and professional growth
3.3	information competency: the ability to locate relevant information sources and to critically evaluate their usefulness and trustworthiness
3.4	dedication and skill in carrying out team projects; to cooperate on assignments in a purposeful and effective manner; to adequately and congenially work together with clients, supervisors, research participants, and peers
3.5	adequate social and oral communication skills (ability to express oneself, present a case, communicate in a professional context, present oneself in a group and in the professional field), specifically in the effective application of the rules and attitudinal aspects for psychological interviewing

Master's programme Psychology

Final qualification 1: Disciplinary and specialist knowledge and skills at an advanced level *The graduates of the MPS programme at the UT have:*	
1.1	specialist and in-depth knowledge of and insight in contemporary theories, technologies, and methods/instruments in the field of their chosen specialization
1.2	the skills to critically analyse and assess disciplinary concepts, theories, models, and procedures in a professional manner, as well as the skills to apply and integrate them to solve a complex issue in a new context in the field of their chosen specialization
1.3	knowledge of and insight in dilemmas, methods, and processes of academic and applied psychological research and the ability to assess the quality of research
Final qualification 2: Research and design competencies at an advanced level *The graduates of the MPS programme at the UT are individually and largely independently able to:*	
2.1	analyse complex psychological problems and relate them to a theoretical framework, in such a way that it results in a researchable question or a workable problem statement. In case of a design assignment, either internal or external, the student can adequately translate the needs, desires, and requirements of the clients into a tangible problem statement
2.2	make a reasoned selection of research methods and instruments that fit the problem statement and theoretical framework, and to collect, describe, process, and analyse information in an adequate and transparent manner, resulting in valid and reliable research outcomes
2.3	design an intervention or instrument for complex psychological problems using a systematic approach, taking into account the characteristics of the people involved during the design process as well as the ethical standards
2.4	reach a clearly phrased conclusion and discussion on the basis of reflection and critical judgement for an individually executed research or design assignment, in which research results are critically assessed and interpreted in relation to the original problem statement and theoretical framework, recent research and, if applicable, social and ethical aspects
2.5	in research/design assignments, provide theoretical and practical implications and convincing substantiated recommendations for further research and/or for the optimization and implementation of the developed interventions
2.6	achieve the development of new, original knowledge and ideas and to contribute to the development of theories, models and/or instruments
2.7	provide a report on the executed research and design assignment in a clear and concise manner, containing a logical, insightful structure, correct language use, an academic style of writing, and application of the common scientific standards and conventions
2.8	hold a target audience-oriented, informative, convincing and appealing presentation with effective use of media, about an executed research and/or design assignment and discuss and defend research design, results, and conclusions

Final qualification 3: Academic and professional skills and attitudinal aspects at an advanced level ***The graduates of the MPS programme at the UT have general, academic and professional skills at an advanced level that they can employ for the benefit of their future careers. The skills concerned are:***	
3.1	the attitude and skills to be able to critically reflect on and form an opinion on the meaning and value of scientific knowledge, as well as being able to reflect and pass judgement on their own work and professional actions
3.2	the attitude and skills to be able to initiate their own learning and working process, shape and adjust it in a goal-oriented and methodical manner, and bear a great extent of responsibility for their own learning and working process
3.3	information skills: being able to localize relevant recent, specialist information sources and being able to critically assess their usefulness and reliability
3.4	sufficient social and communication skills and strategic insight to be able to pleasantly work together with customers, supervisors, clients and peers
3.5	general oral communication skills (skills of expression, reasoning, communicating in a professional context, being able to present yourself in a group and the professional field)
3.6	specifically applicable to the master's specialization Positive Psychology & Technology: the graduate has mastered professional competences in the field of diagnostics, counselling, and treatment of psychological disorders and is, in case they completed a 'clinical' internship, demonstrably capable of applying these skills to practical situations

APPENDIX 3: OVERVIEW OF THE CURRICULUM

Bachelor's programme Psychology

First year

		UNITS OF STUDY/MODULES B1 2017-2018			
		Psychology & Intervention Design **15EC** 201300008 Semester 1 block 1A	**Social Behaviour** **15EC** 201300009 Semester 1 Block 1B	**Cognition and Development** **15EC** 201300010 Semester 2 Block 2A	**The Individual** **15EC** 201600103 Semester 2 Block 2B
Coordinator & examiner		J. Pouls, MSc	C.H.C. Drossaert, PhD	M.L. Noordzij, PhD	G.J. Westerhof, PhD
Exam Method		Test, assignment	Test, assignment	Test, assignment	Test, assignment
MODULE COMPONENTS PER COURSE OF LEARNING	**Theory**	Psychology: an orientation 4EC	Social (developmental) psychology 5EC	Brain, cognition & development 8EC	Personality & clinical psychology 5EC
	Research Methods (RM)	Introduction to research methodology 3EC	Descriptive & inferential statistics 6EC	Regression and analysis of variance 4EC	Data Collection & Test Construction 5EC
	Professional Academic Skills (PAS)	Project management & academic writing 1EC	Group dynamics & academic writing 1EC		Presentation Skills 1EC
	Design & Research (D&R), incl. project	Systematic Intervention Design 7EC	Needs Assessment & Intervention Design 3EC	Design & evaluation 3EC	Interview Study & Tests 4EC

Second year

Unit of Study 15EC: module code & name	***Block***	***Module components***	***Study load (in EC)***
201600004 Health Psychology & Applied Technology	1A[1]	Health psychology	5EC
		Persuasive health technology	5EC
		eHealth applied to chronic illness (incl project)	5EC
201400121 Psychology in Learning & Instruction	1A[1]	Theories of Learning and Instruction	8EC
		Research skills	2EC
		Teaching skills	2EC
		Instructional design project	3EC
201600005 Psychology of Safety	1A[1]	Theoretical models of societal safety	10EC
		Research & design in safety contexts (incl. project)	5EC
201400123 Human Factors & Engineering Psychology	1B[2]	Human factors theory	7EC
		Programming	4EC
		Research projects	4EC
201600104 Mental health	1B[2]	Psychopathology	5EC
		Psychodiagnostics	6EC
		Mental Health in practice (incl. project)	4EC
201400295 Research methods and research project	2A & 2B	To Conduct & Report a Scientific Study (incl project)	10EC
		Advanced Research Methods	4EC
		Research Poster Presentation	1EC
201600268 Professional and psychological skills	2A & 2B	Communication skills theory	4EC
		Applied communication skills	5EC
		Work field and job orientation	6EC

[1] Students choose one of the three modules offered in block 1A.
[2] Students choose one of the two modules offered in block 1B.

Third year
Semester 1: 30 EC elective options; see section 4d of the Education and Examination Regulations (2017-2018) for more information.

Semester 2:

Unit of Study 15EC: module code & name	***Block***	***Module components***	***Study load (in EC)***
201500179 History, Ethics and Philosophy of Psychology	2A & 2B	Professional ethics for psychologists	5EC
		History of psychology	5EC
		Philosophy of psychology	5EC
Bachelor's thesis (more information about the Bachelor's thesis can be found at www.utwente.nl/psy/afstudeerweb		Not applicable	15EC

Master's programme Psychology (2017-2018)

Track Conflict, Risk, and Safety (CRS)

Course code	Course name	Study load in EC
Obligatory courses CRS		
201100014	Group Dynamics and Interventions	5
201400581	Risk and Leadership in Societal and Technological Contexts[1]	5
201400580	Psychology and Crime	5
201600161	Advanced Research Methods for Conflict, Risk and Safety[1]	5
Elective courses		
192914040	Learning and Instruction[1,2]	5
201400583	Cognition and Technical Systems[1,2]	5
201400584	Design of Persuasive Health Technology[1,2]	5

[1] This course is offered twice a year
[2] Students choose one of the courses

Track Health Psychology and Technology (HPT)

Course code	Course name	Study load in EC
Obligatory courses HP		
201000136	Public Health Psychology	5
201200121	Behavioural Medicine	5
201400584	Design of Persuasive Health Technology[1]	5
201600163	Advanced Research Methods for Psychology, Health and Technology[1]	5
Elective courses HP		
192914040	Learning and Instruction[1,2]	5
201400583	Cognition and Technical Systems[1,2]	5
201400581	Risk and Leadership in Societal and Technological Contexts[1,2]	5

[1] This course is offered twice a year
[2] Students choose one of the courses

Track Human Factors and Engineering Psychology (HFE)

Course code	Course name	Study load in EC
Obligatory courses HFE		
201400583	Cognition and Technical Systems[1]	5
201300034	Resilience Engineering	5
201100126	Human Computer Interaction	5
201600162	Advanced Research Methods for Human Factors and Engineering Psychology[1]	5
Elective courses HFE		
201400584	Design of Persuasive Health Technology[1,2]	5
201400581	Risk and Leadership in Societal and Technological Contexts[1,2]	5
192914040	Learning and Instruction[1,2]	5

[1] This course is offered twice a year
[2] Students choose one of the courses

Track Learning Sciences (LS)

Course code	Course name	Study load in EC
Obligatory courses LS		
192914040	Learning and Instruction[1]	5
201400582	Learning and Individual Differences: Assessment and Intervention	5
201400002	Innovative technology-based environments	5
201600164	Adaptivity in Learning and Instruction[1]	5
Elective courses LS		
201400584	Design of Persuasive Health Technology[1,2]	5
201400583	Cognition and Technical Systems[1,2]	5
201400581	Risk and Leadership in Societal and Technological Contexts[1,2]	5
191970340	Designing Learning & Performance Support[1,2]	5

[1] This course is offered in block 1B and possibly also in block 2B
[2] Students choose one of the courses

Track Positive Psychology & Technology (PPT)

Course code	Course name	Study load in EC	Block
201000091	Counseling en gespreksvaardigheden[2]	5	1A / 2A
201000093	Verdieping psychopathologie	5	1A / 2A
201300032	Toegepaste positieve psychologie	5	1A / 2A
201600163	Advanced Research Methods for Psychology, Health and Technology[1]	5	1B / 2B
201000094	Cognitieve en gedragstherapie[2]	5	1B / 2B
201000092	eMental health	5	1B / 2B

All PPT courses are offered twice a year.
[1] This course is offered in English.
[2] For the written (partial) exams in this course the following rules are applicable: if the quality of the written exam is not sufficient (mark lower than 5,5), students can do a re-sit but cannot score a higher grade than 6 at the second attempt (this also applies when a student hasn't participated at the first attempt, similar to the rules for assignments). Furthermore, if the exam is graded with a mark 5.5 or higher (pass), this grade is final.

*Master's thesis and/or Internship**

Name	***Study load in EC***	***Exam format***	***Examiner***
Master's thesis Conflict, Risk and Safety	25 (or 35)	Exam/assignment	**Examiner(s) as described in the thesis contract.**
Internship master Psychology	10	Exam/assignment	**UT supervisor as described in the internship contract**

* The internship in the master is optional. When an Internship is possible the student conducts a master's thesis of 25EC. When a student does not go on an Internship a master's thesis of 35EC is conducted.
More information about the master's thesis and the requirements can be found at:www.utwente.nl/psy/afstudeerweb
More information about the internship and the requirements can be found at: www.utwente.nl/psy/stageweb

APPENDIX 4: PROGRAMME OF THE SITE VISIT

3 July 2018, University of Twente

Tijd		**Activiteit**
11.00	13.30	Voorbereidend overleg en inzien documenten (incl. lunch)
13.30	14.15	Gesprek met inhoudelijk verantwoordelijken
14.15	14.45	Overleg panel
14.45	15.30	Gesprek met studenten bacheloropleiding
15.30	16.15	Gesprek met studenten masteropleiding
16.15	16.45	Overleg panel + open spreekuur
16.45	17.30	Gesprek met alumni
18.30	21.00	Diner (voorbereiden tweede dag)

4 July 2018, University of Twente

8.30		Aankomst panel
8.30	9.00	Rondleiding BMSlab
9.00	9.15	Inzien documenten, voorbereiding gesprekken
9.15	10.00	Gesprek met docenten bacheloropleiding
10.00	10.45	Gesprek met docenten masteropleiding
10.45	11.00	Overleg panel
11.00	11.30	Gesprek met selectie leden van de Opleidingscommissies bachelor en master
11.30	12.15	Gesprek met leden van de Examencommissie
12.15	13.00	Lunch, inzien documenten
13.00	13.30	Voorbereiden eindgesprek met formeel verantwoordelijken
13.30	14.00	Eindgesprek met formeel verantwoordelijken
14.00	16.00	Opstellen voorlopige bevindingen
16.00	16.45	Ontwikkelgesprek
17.00	17.15	Mondelinge rapportage voorlopig oordeel

APPENDIX 5: THESES AND DOCUMENTS STUDIED BY THE PANEL

Prior to the site visit, the panel studied 15 theses of the bachelor's programme Psychology and 15 theses of the master's programme Psychology. Information on the selected theses is available from QANU upon request.

During the site visit, the panel studied, among other things, the following documents (partly as hard copies, partly via the institute's electronic learning environment):

- Minutes of the Programme Committee
- Annual reports of the Examination Committee
- Test plans
- Results of test screenings
- Explanation of the test criteria for bachelor and master's theses and rubrics
- Exam Regulation
- Graduation Web
- Internship information for organizations, lecturers and students
- Course schedules and timetables

For the following courses, the full portfolio was made available, which included exams as well as literature, overviews of sessions, assignments, course work and course evaluations:

First bachelor year: 'Cognition & Development' (Module 3)

Second year bachelor: elective module 'Psychology of Safety' (Module 5)

Third year bachelor: 'History, Ethics & Philosophy of Psychology' (Module 11)

Master track Conflict, Risk & Safety: module 'Psychology & Crime'

Master track Human Factors & Engineering: module 'Advanced Research Methods for HFE'

Master track Health Psychology and Technology: 'Behavioural Medicine'

Also the panel studied the complete literature list of the elective bachelor module Mental Health and the master courses in Positive Psychology & Technology.