

Assessment report
Limited Programme Assessment, including Distinctive Quality Feature Entrepreneurship

Master of Science Business Administration

University of Twente

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1. Executive summary

In this executive summary, the panel presents the main considerations which have led to the assessment of the quality of the programme Master of Science Business Administration of the University of Twente as well as to the assessment of the Distinctive Quality Feature Entrepreneurship for this programme, which have been assessed according to the applicable NVAO Assessment Frameworks.

Programme assessment

The University of Twente (UT) is a relatively small university with about 11.000 students and 3.500 staff members. Its mission is to provide innovative scientific education and research in an international context and with interactive involvement of industry. The Master of Science Business Administration (BA) is a programme of the Faculty of Behavioural, Management and Social Sciences (BMS), one of the five faculties of the UT.

The learning outcomes are organised in line with the universities' profile of educating students as researchers, designers and organisers. The documentation convinced the panel that the intended learning outcomes comply with the Meijers criteria and consequently with the Dublin descriptors. The panel noticed in the intended learning outcomes the scientific focus, the attention for (entrepreneurial) skills and attitudes, and the integrated international and entrepreneurial approach. Unfortunately, the programme's comparison to other, similar, universities concentrates more on positions in the market and general profiles of the universities than on profiles of the master programmes themselves.

The panel met very enthusiastic and dedicated staff and students. The design of the programme is accompanied with clear schemes showing the alignment of intended learning outcomes, module objectives and assessments. Disciplines are well represented in courses and related to staff's research.

The panel appreciates that a variety of companies are involved with the programme, especially through guest lectures, supervising thesis projects, and by providing datasets. The board of practitioners functions as an advisory board. According to the panel, the programme provides substantial flexibility for individual routes due to: the possibility to enter the programme in September and February, the individual learning agreements, only a few sequenced mandatory courses, and that electives can be chosen from six different tracks. The panel found the entry requirements clear for all groups of students: Dutch, European¹ and non-European. It also noticed that the division in the composition of Dutch, European and non-European students has not reached the programme's ambitions yet, and that marketing efforts have been made to improve this.

The panel considers arrangements for monitoring study progress, study advice and counselling to be adequate. The panel has understood that students appreciate the personal approach provided by the structure of the programme, the dedication of staff, and the favourable staff student ratio of 1 : 13. The panel found various arrangements for staff development and professionalisation, including stimulating educational research among staff. Unfortunately these activities are not yet included in the workload model.

The panel met an examination board that is very aware of its role regarding the quality of testing and assessment. It checks meticulously whether nominated examiners fulfil the criteria, screens tests, initiates an external peer review of theses and checks whether Plan-Do-Check-Act cycles are properly realised. The panel found an adequate assessment plan for the programme, and elaborated test plans for the courses and the tests, which show expertise among staff regarding testing and assessment. It appreciates how the faculty advisor and the expert on testing from CELT, the Centre of Expertise on Learning and Teaching, support the programme management, the examination board, and the staff in optimising the quality of testing and assessment. The discussions made clear that CELT and the examination board identify some issues that deserve attention. This complies with the issues that the panel found, namely the quality of

¹ European implies EU/EEA

questions and explicating assessment criteria. According to the panel, it is a pity that tests can hardly be screened as frequently as the examination board would like to, due to limited capacity with CELT.

The panel studied a total of fifteen master theses, with a representative distribution of grades. Grades provided are comparable to the ones of the panel. They also compare internationally. The panel has some concerns regarding the rubrics for assessing and grading the theses. First, it observed that the comments accompanying the scores are often lacking or meagre. Other external peer reviewers reported to have had similar observations. Second, the rubric for the master thesis is similar to the one used for the bachelor thesis. It became clear during the site visit that the programme did consider the rubrics for the bachelor and the master thesis carefully and that they relied on the difference in scale and scope between the bachelor and the master level. Nevertheless, the panel still believes that the difference between bachelor and master could be more and better specified and incorporated when using the Meijers criteria for bachelor and master more explicitly in defining the rubrics.

According to the panel the theses prove the achievement of the intended learning outcomes and the research based profile of the programme. The vast majority of graduates find a job within six months after graduation, often with the company where they realised their thesis project. Alumni mentioned that their careers are positively influenced by the 'technical flavour' and their experience with working in projects. The indicative analysis of the LinkedIn group of BA graduates from the UT shows that they end up in appropriate functions such as project or programme manager; consultant; or IT, HRM or purchasing professional. They find jobs mainly in the sectors information technology, consultancy, finance and manufacturing.

The panel assesses the programme Master of Science Business Administration of the University of Twente to be satisfactory and recommends NVAO to grant re-accreditation to this programme.

Distinctive quality feature Entrepreneurship assessment

The panel noticed that staff and students were clearly aware of the university's and the programme's vision and policies regarding entrepreneurship. Both groups illustrated how the entrepreneurial profile and character of the UT is thoroughly incorporated and integrated in this educational programme as well as in research, due to the many and close collaborations with industry in projects, via guest lectures, etc. The board of practitioners is a valued sparring partner for the programme when it comes to the entrepreneurial profile and the curriculum. The panel appreciates the recent initiative to define and monitor entrepreneurial indicators and discuss the results with the programme committee and the board of practitioners. The panel considers the link between these indicators and the entrepreneurial objectives and strategies to be adequate.

The panel found that the learning outcomes regarding entrepreneurship were well formulated, especially those concerning design. They are also convincingly linked to the Meijers criteria, and consequently also to the Dublin descriptors. The panel appreciates how the intended learning outcomes are further operationalised in the learning objectives of the courses.

The panel considers the disciplines contributing to an entrepreneurial approach of business administration as well represented in courses. Course content is related to the research of the staff, which is often realised in close cooperation with companies. The panel appreciates that a variety of companies are involved with the programme, especially through guest lectures, in projects, by supervising thesis projects and by providing datasets, etc. According to the panel, the programme provides not only substantial flexibility for individual routes and individual profiling, but also invites to practice entrepreneurial behaviour in study careers. Students need to choose most of their electives in the track on Entrepreneurship, Innovation and Strategy (EIS) when they opt for a degree certificate and diploma supplement mentioning entrepreneurship as a specialisation. If they like to emphasise their entrepreneurial profile even more, they can not only choose all electives within the EIS track, but also consider a double degree at the Technical University of Berlin. Students provided the panel with convincing examples of the variety of possibilities they have at

their disposal to develop themselves as an entrepreneur. They indicated that using these possibilities often in itself requires an entrepreneurial attitude, which they experience as stimulating.

The panel regrets that the staff has limited professional experience with entrepreneurship, although they do have industrial experience, but this is partly counterbalanced through cooperation with companies in research projects and in incubators. Furthermore, staff from companies often contribute to the programme by guest lectures and by supervising students in their practical experiences in industry during thesis projects. According to the panel the arrangements for professionalisation regarding entrepreneurship may be exploited better in the future, although some instances were given in which educational and entrepreneurial professionalisation were combined.

The panel appreciates that the assessment of entrepreneurial competences is integrated in the overall assessment. Theses studied by the panel prove the achievement of the intended learning outcomes regarding entrepreneurship. The panel noticed that a substantial number of thesis projects is realised in companies. The panel values that the vast majority of graduates finds a job within six months after graduation, regularly with the company where they realised their thesis project. The panel comprehends the practitioners reporting the adequate entrepreneurial skills of graduates, and alumni reporting that their careers are positively influenced by the 'technical flavour' and their experience with working in projects and with companies.

The panel assesses this programme to meet the distinctive quality feature Entrepreneurship requirements and advises NVAO to award this distinctive quality feature to the programme.

Date: 24-4-2019

Panel chair

Dr. A Blackburn

Secretary

Drs. J. Braaksma

2. Assessment process

Certiked VBI received a request to conduct a limited programme assessment for the re-accreditation of the academic degree programme Master of Science Business Administration, including the assessment of the distinctive quality features Entrepreneurship and Internationalisation for this programme. This request was submitted by the University of Twente.

The panel composition was as follows

- Dr. A. Blackburn, retired, formerly associate dean, Oxford Brookes Business School, Oxford Brookes University
- Dr. C. Terlouw, senior researcher & consultant, emeritus professor Saxion University of Applied Sciences
- Dr. J.W. Wierda, professor media marketing and internationalisation, Glion les Roches Gruyère University of Applied Sciences, Montreux Switzerland
- Marijke Speelberg, MSc, recently graduated student Master Global Business and Master Sustainability, Erasmus University Rotterdam.

On behalf of Certiked, drs. W.J.J.C. Vercouteren and drs. J. Braaksma served as the process coordinator and secretary in the assessment process. All panel members and the secretary signed a statement of independence and confidentiality. Certiked requested the approval by NVAO of the proposed panel of experts to conduct this assessment. NVAO have given their approval.

The panel conducted this assessment on the basis of the NVAO Assessment Framework of 20 December 2016 (Staatscourant nr. 69458). For the assessment of the distinctive quality feature Entrepreneurship, the panel proceeded according to the NVAO Assessment Framework of September 2013.

The following procedure was adopted. The panel members studied the documents presented beforehand by programme management, including fifteen theses selected by the process coordinator. The grade distribution in the selection was ensured to conform to the grade distribution in the list sent by programme management.

Before the date of the site visit, on 27 February 2019, there has also been a conference call with representatives from the EPAS bureau, the chair of the panel, the process coordinator and the secretary in order to align procedures to be followed in this joint visitation². On 4 March 2019, the panels had a meeting to discuss the preliminary findings concerning the quality of the programme and the distinctive quality features it applied for³, including those concerning the theses. They also discussed how to get organised and cooperate in order to serve both sets of procedures and assessment frameworks, of EPAS and NVAO. On the basis of the input of the NVAO panel, the secretary summarised the questions, which served as a starting point for the discussions with the programme representatives during the site visit. On 5, 6 and 7 March the panels conducted the site visit at the University of Twente campus. They did so in accordance with the schedule drawn up and agreed upon beforehand.

A draft version of this report serving NVAO accreditation was finalised by the secretary, having taken into account the information presented as well as the findings and considerations of the panel. The panel members studied the draft report and made a number of changes. Thereupon, the secretary drew up the final report. This report was presented to programme management to be corrected for factual inaccuracies. After having been corrected for these factual inaccuracies, the report was sent to the institution's Board to accompany their requests for re-accreditation and for being awarded the distinctive quality feature Entrepreneurship.

² The EPAS peer review team consisted of:

dr. A. Blackburn, chair and prof. J.S. Law, dr. C. Terlouw and mr. E. Carlier members

³ Entrepreneurship, included in this report and Internationalisation reported separately following the ECA format

3. Basic information about the programme

Administrative information about the programme:

Name programme in CROHO: Master of Science Business Administration
Orientation, level programme: Academic Master
Grade: MSc
Number of credits: 60 EC
Specialisations: Not applicable
Location: Enschede
Mode of study: Full-time
Registration in CROHO: 60644

Administrative information about the institution:

Name of institution: University of Twente
Status of institution: Government-funded university
Institution's quality assurance: Approved

4. Findings, considerations and assessments programme

The University of Twente (UT) was founded in 1961. It is a relatively small university with about 11,000 students and 3,500 staff members. Its mission is to provide innovative scientific education and research in an international context and with interactive involvement of industry. Furthermore, it focuses on a 'high tech human touch' (HTHT) approach whereby technical sciences and social sciences are connected.

The UT is known for its entrepreneurial and international character.

Master programmes do not follow the TEM model emphasising problem-oriented and project-based learning in an international environment in all undergraduate programmes. However, the Master of Science on Business Administration programme (BA) does incorporate active learning in order to stimulate an entrepreneurial mindset and behaviour, including sensitivity for ethics, responsibility and sustainability (ERS). The BA programme is offered by the Faculty of Behavioural, Management and Social Sciences (BMS), one of the five faculties of the UT. Within the Faculty of BMS, groups of departments are clustered. The BA programme belongs mainly to the High Tech Business cluster, but faculty from other clusters are also involved.

4.1 Standard 1: Intended learning outcomes

The intended learning outcomes of the programme have been concretised with regard to contents, level and orientation; they meet international requirements.

Findings

The self-assessment report (SAR) describes how the programme aims for graduates who are pioneering and curious with an inclusive mindset. Their abilities are centered around three roles: research, design and organize, independently and through projects. They have a profound social and economic impact. They are well prepared to work in a specialised junior management (advisory) role in an international context or further specialise in a PhD or PDEng programme. The programme formulated twelve intended learning outcomes which are organised per role: research (4), design (4) and organise (4). It is illustrated how they relate to each of the Meijers criteria⁴ and consequently comply with the Dublin descriptors. The SAR also mentions that the programme signed the Principles for Responsible Management Education (PRME). Furthermore, it describes the focus on academically oriented competences, and how the intended learning outcomes also address skills-based and affective-based goals. It also mentions that the internationalisation theme is prominent in all three roles as the intended learning outcomes include that students have to research in an international context, design solutions for international business problems, and gain intercultural skills in their role as organiser. The entrepreneurial theme is particularly covered by the intended learning outcomes categorised under the design and organise roles. The board of practitioners functions as an advisory board for the programme and its intended learning outcomes.

A comparison has been made with other universities offering international oriented business programmes. The comparison with programmes abroad focusses on positions in the market and general profiles of universities. It is mentioned that Dutch students mainly choose regional bachelor programmes, whereas international students pay more attention to rankings when deciding where to study for a master degree. The programme compares itself more in depth with universities of a similar size and age. They chose the University of St Andrews for its international outlook, the University of Texas at Dallas for its research reputation, and the University of Strathclyde for its teaching portfolio. Furthermore, the programme has some close partnerships for offering double degrees at master level. This applies to the Technical University of Berlin, Lappeenranta-Lathi University of Technology and the University of L'Aquila.

⁴ Meijers, A. W. M., Borghuis, V. A. J., Mutsaers, E. J. P. J., Overveld, van, C. W. A. M., & Perrenet, J. C. (2005). Criteria voor academische bachelor en master curricula = Criteria for academic bachelor's and master's curricula. (2e, gew. dr. redactie) Eindhoven: Technische Universiteit Eindhoven.

Considerations

The learning outcomes are organised in line with the universities' profile of educating students as researchers, designers and organisers. The documentation and the staff's explanations convinced the panel that the intended learning outcomes comply with the Meijers criteria and consequently with the Dublin descriptors. The intended learning outcomes also correspond to the professional field. The panel noticed in the intended learning outcomes the scientific focus, the attention for skills and attitudes, and the integrated international and entrepreneurial approach. Unfortunately, the programme's comparison to other, similar, universities concentrates more on positions in the market and general profiles of the universities than on the content profiles of the master programmes themselves.

Assessment of this standard

These considerations have led the assessment panel to assess standard 1, *Intended learning outcomes* to be satisfactory.

4.2 Standard 2: Teaching-learning environment

The curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes.

Findings

Curriculum

The programme consists of four core courses (15 EC), electives from specialisation tracks (20 EC), and the thesis (25 EC). The core courses are: Entrepreneurial leadership & responsible organisational design, Qualitative methods in business research, Quantitative and design methods in business research, and Business valuation & corporate governance. The six specialisation tracks are: Entrepreneurship, Innovation and Strategy (EIS), Financial Management (FIN), Human Resource Management (HRM), International Management (IM), Purchasing and Supply Chain Management (PSM) and Strategic Marketing and Digital Business (SMDB). Faculty staff allocated to the tracks are involved in research in that particular field. If students opt for a degree certificate and diploma supplement mentioning one of the tracks, they have to choose at least three electives within one specialisation track. When opting for a double degree, the study programme includes two core courses (Business development from a network perspective and Information services, 10 EC), the Master Class BA (5 EC), the thesis (25 EC), and four other courses (20 EC). Which four other courses depends on the double degree programme and the comparison of this programme with the partners' programme in order to eliminate overlap. Excellent students may follow one of the UT's three extracurricular honours programmes for master students focussing on research, design or organise (30 EC).

Only the core courses on business research are explicitly sequenced. They always have to be realised in the second quartile of the student's programme. Each student prepares an individual learning agreement regarding his or her planned programme which has to be approved. The individual learning agreements aim to encourage students to take responsibility for their own learning and development, and to help them in planning and monitoring their progress. It is also informative for programme management when it comes to planning the delivery of courses. Students reported, however, that they perceive the individual learning agreement mainly as a formality, although some admitted that it helped them in making up their minds when planning their study path. Nevertheless, they wonder whether the individual learning agreement could be extended into something more functional in their study career.

Teaching methods aim for blended learning by using an electronic learning environment (Canvas), and offering course specific arrangements of interactive lectures, tutorials, case studies, group work and seminars. Thus the programme, utilises the before mentioned teaching methods for active learning by students, supported by the staff. Evaluations from 2017-2018 show that students are generally satisfied as they grade most courses between 7,0 and 8,5. Only the course on qualitative methods scored badly (4,4). During the visit faculty shared with the panel that the course has been completely revised in the meantime

and that its new structure is better appreciated by the students as well as the lecturers.

The panel wondered how quantitative and qualitative research methods are addressed in the programme. Faculty explained that in the course on quantitative methodology five analytical techniques are trained in groups during application sessions. The final exam of this course is individual. A similar, mandatory, methodological course is available for qualitative research methods. Furthermore, in the specialisation track course 'HRM and innovation' research techniques are applied to real datasets. The analyses result in recommendations to the company concerned. The panel also wondered how ethics, responsibility and sustainability (ERS) and corporate learning experiences are embedded in the programme. Faculty explained that ERS is explicitly addressed in the core course on Entrepreneurial leadership and responsible organisational design (ELROD), and more implicitly in other courses like the ones on governance (core) and change management (IM track). They also illustrated how corporate experiences are provided by guest lecturers, for example through an employee from PWC addressing big data, and in courses by applying research techniques on datasets from companies. Students mentioned some examples where corporate and international aspects are combined; for example a guest lecture about HRM in French perspective given by an employee of Thales.

Entrance requirements, mobility through the programme and guidance

Applicants with a bachelor's degree in business administration from a Dutch research university can enter the programme. Entrance criteria for other applicants are: a bachelor's degree in BA administration, or a closely related field, a background in scientific research methodology and sufficient proficiency in English (i.e. academic IELTS 6.5, TOEFL 90, Cambridge CAE-C or CPE). International applicants also need a GMAT score of at least 600. Dutch students need to have command of English and mathematics at the Dutch pre-university level. All applicants also have to write a motivation letter. For applicants not fulfilling the entry requirements there is a pre-master's programme of up to 30 EC. For students from universities of applied sciences the pre-master focusses on research methodology and academic writing/skills. They can do at least a part of this pre-master as a minor in their bachelor study. For applicants from Saxion and Windesheim Universities of Applied Sciences it is possible to complete the pre-master in the context of their minor. Furthermore, there are agreements with these institutions regarding requirements for English and mathematics.

A student from a research university holding a degree in another field has to complement content-related shortcomings. The panel wondered whether the entrance requirements are equal for all students as the GMAT is only requested for applicants with a bachelor degree from outside Europe, and a pre-master might be expensive for these students. The panel also wondered whether this might be a hindrance for them. The panel has been told that only students with a non-European bachelor degree have to prove their command of analytical skills with a GMAT level, as other students prove this with their European bachelor degree. Nevertheless, the panel recommends to rethink the entry requirements in relation to possible barriers for application of potential international students.

The programme intends to enrol an international group of students who have been academically trained in business administration on bachelor's level. The envisioned student body is composed of 55% Dutch students, 35% other European students and 10% non-European students per cohort. For the academic year 2017/2018, the percentages are 74%, 19% and 7% respectively⁵. About two-third of these 164 students is male and one-third female. Most students entered via a pre-master programme; within the pre-master programme most students are Dutch. Students can enrol twice a year. They are encouraged to participate in double degree programmes (120 EC) in order to gain international experience (2017/18: 7,3%).

When asked about the limited number of students following a double degree, students replied that they think it has little value added for their CV. Faculty argued that especially a double degree in Berlin could provide a useful more practical approach to the mainly research based one of the UT. The SAR describes that the main themes for students applying for this BA programme include organisational culture change, smarter purchasing and corporate responsibility, and social entrepreneurship. Therefore the programme decided to emphasise in its marketing that students will learn to design smart, innovative solutions in an

⁵ For the September intake of 2018-2019 these figures are respectively 70%, 27% and 3%.

international context with limited emphasis on technology. Students reported that they chose this programme because of the possibilities for profiling and/or double degrees, its depth, its uniqueness and the personal touch.

Students on a visa have to obtain at least 30 EC per year due to the national Modern Migration Policy Act. Personal circumstances can be a reason for delaying the MOMI advice for a year. If this occurs, students are monitored and guided more intensively; not only by the study advisor, but if necessary also by student counsellors or psychologists. During the site visit, it became clear that personal circumstances increasingly influence study progress. This is one of the reasons that study advisors invite all students shortly after registration for a meeting to get to know each other, to develop the individual learning agreement and, if necessary, to establish whether any individual arrangements are or might become necessary. The programme management approves the individual learning agreements by mandate of the examination board.

Exchange opportunities for staff and students are stimulated within the European Consortium of Innovative Universities (ECIU). Under the Erasmus exchange programme 100 exchange agreements are settled. Each double degree programme has a contact person who assists students and staff in getting double degrees organised formally. In 2017-2018 twelve students followed a double degree at either the Technical University of Berlin for the EIS track, or the Lappeenranta-Lathi University of Technology for the SMDB or the PSM track. The newest double degree is with the University of L'Aquila on HRM. Programme management told that preliminary explorations have been started with the AACSB accredited University of Munster, especially for double degrees for the FIN and SMDB track.

International internships are difficult to organise within the 60 EC of this programme. Therefore students instead regularly realise their thesis abroad (in 2017 13% and in 2018 16% of the students). The inflow of double degree students coming from other universities (12%) contributes to a more balanced population of the international classroom in this BA programme. Programme management declared that about 25% of the master students gets experience abroad either via their thesis project and/or through a double degree.

Staff

UT policy states that all staff who have attained the position of full, associate or assistant professor should hold a doctorate degree and have (or gain) international experience. All BA staff (31) in these positions comply with this policy. Most faculty (27) have a university teaching qualification (UTQ). Of all faculty, 9 have (almost) full-time industrial experience and 14 are female⁶. The 13 non Dutch staff consists of 8 different nationalities. Besides this, 4 of the 18 Dutch faculty have registered international experience of more than one year. The staff student ratio is 1:13.

In principle, faculty are expected to spend 80% of their time on teaching and 20% on research. In the workload model, other factors influence the distribution of research and educational tasks as well; for example research grants obtained, special tasks like coordinating, being on the programme committee or the examination board; etc. Professionalisation regarding teaching is stimulated and facilitated in several ways, for example through educational research in the context of the senior university teaching qualification (SUTQ) and through preparing papers on educational topics. Two staff members did some research on assessment in preparation of their SUTQ and several papers have been presented. A recent paper, for example, addresses the relationship between cross-cultural competences and international entrepreneurial intentions.

Further development of educational leadership is stimulated through participation of groups of UT staff in the Executive Educational Leadership Programme offered by the University of Utrecht.

During the site visit, professionalisation has been discussed with several interlocutors. It became clear that workload is an issue and that professionalisation is not (yet) incorporated in the workload model. There are many interesting opportunities, mostly stimulated by and paid for by the university. However, using them

⁶ Figures in the documentation sent before the visit and more recent ones provided at the request of the panel during the site visit differ. Here the figures provided during the site visit are used.

makes staff sometimes feel guilty towards colleagues as they have to take over work which needs to be done. According to student surveys and the students met, teaching qualities of staff are appreciated.

Considerations

The panel met very enthusiastic and dedicated staff and students. They all showed enthusiasm and pride with regard to the integrated, international and entrepreneurial character of the programme. The design of the programme is accompanied with clear schemes showing the alignment of intended learning outcomes, module objectives and assessments. Disciplines are well represented in courses and related to staff's research. According to the panel, the programme provides substantial flexibility for individual routes due to the possibility to enter the programme in September and February, only a few sequenced courses and electives to be chosen from six different tracks. The choice of electives is a bit constrained for good reasons when a student aims for a specialisation on his certificate and diploma supplement. The panel appreciates the individual learning agreements students have to develop and get approved. However, it appeared that students evaluated these agreements as not functional enough for planning their learning path. The panel agrees with the students that this could be further developed. The panel was slightly concerned about the small extent to which ERS is actively addressed in the programme. Upon closer investigation in one of the meetings, ERS turned out to be more present in the programme than first thought, especially in the ELROD course.

The panel appreciates that a variety of companies are involved with the programme, especially through guest lectures, supervising thesis projects and by providing datasets etc. The board of practitioners functions as an advisory board. They underlined this to the panel by reporting that several of their suggestions have been implemented, either fully or adjusted for practical reasons. Staff and students are clearly aware of international aspects, despite the fact that the student population is not yet as balanced as intended, and staff has to be keen on gaining international experience. The panel noticed that staff members were not only aware of this necessity but that they were also prepared to invest in it. The same applies for entrepreneurship.

The panel found the entry requirements clear for all groups of students: whether they have a Dutch, other European or non-European bachelor degree. The panel wondered why only non-European degree students have to provide an adequate score on the GMAT as this might well prevent them from applying for this BA programme. It has been explained that European degree students guarantee adequate proficiency in English and mathematics via their bachelor degrees. The panel also noticed that the division of Dutch, European and non-European degree students does not yet reach the programme's ambitions, but also noticed that marketing efforts have been made to improve the balance. The panel considers arrangements for monitoring study progress, study advice and counselling to be adequate. It fully understands that students appreciate the personal approach provided by the structure of the programme, the dedication of staff, and the favourable staff student ratio of 1 : 13. The panel found various arrangements for staff development and professionalisation, including stimulating educational research among staff. Unfortunately these activities are not yet included in the workload model.

Assessment of this standard

These considerations have led the assessment panel to assess standard 2, *Teaching-learning environment* to be good.

4.3 Standard 3: Assessment

<i>The programme has an adequate assessment system in place.</i>
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Findings

The programme's assessment plan shows how the learning objectives of the courses (per course and per track) relate to the intended learning outcomes, the number of ECs allocated per course, how each learning objective is assessed, and whether students are assessed as a group or individually. Test plans per course provide more detailed information about how courses are tested and assessed exactly. These test plans are

made available before courses start. The grading of courses is based on multiple tests of different formats, thus ensuring triangulation. In addition to written tests, assignments, presentations and reports are used for grading. When group work is concerned, at least 50% of the grading of a course has to be based on individual performances. Sometimes minimum grades are required for sub tests in order to pass the course. For written tests, resit opportunities are offered in the following quartile. Students can use resits for improving grades and for making up for missed tests. If a course is not passed after a resit, it cannot be finalised within that academic year.

At the moment, a pilot is running with peer reviewing of testing and assessment among staff. Each year sets of assessments of two courses are screened by an expert in testing and assessment of CELT, the Centre of Expertise in Learning and Teaching. Experts from CELT established that the quality of testing and assessment has improved over the years. When asked which issues still deserve attention, they mentioned formulating questions more clearly and making criteria more explicit. The programme management discusses the results of the screenings with the course coordinator, who is responsible for improvements. Students reported that they experience testing and assessment as generally fair and varied. They illustrated how they experience group testing in addition to individual testing as valuable, because it requires a more in depth and to real live connected preparation. They appreciate that the assessment criteria are available beforehand. When individual tests are graded they do get their grade, but not the original work they delivered which sometimes complicates interpreting the teacher's feedback. Nevertheless, they appreciate that feedback is almost always provided and can be discussed during tutorials.

The documentation describes that students are expected to demonstrate with their thesis that they are able to independently develop and implement a research- and/or design-oriented project that fits with the expertise and research interests of the track the student follows. They have to justify models, theories, methodology and techniques used, and the process of the research/design. Finally the student has to present and defend the findings in a public colloquium. Theses are realised in two phases. The first phase, which has to result in a pass, consists of a realistic and relevant research proposal, and an acceptable version of the chapters on methodology and theory. The second phase concerns the actual realisation of the project and the writing of the thesis, and is completed with the public colloquium. Each phase has its own assessment matrix provided through the thesis manual. The panel wondered to what extent theses should have implications for research and practice. It also wondered how many theses are design-oriented. Programme management explained that most theses cover research and design and that about 25% of the theses are oriented towards design or action research.

Theses are assessed and graded with a rubric by the supervisor and a second examiner. This rubric seems adequate for the intended learning outcomes regarding research, but less so for the ones regarding design and organise. The fifteen theses studied by the panel show that the rubric is always used but that additional arguments for the grading often lack or are insufficient. This sometimes made it difficult for the panel to understand why a particular grade was awarded. Grades provided by the supervisors and examiners are comparable to the ones of the panel and comparable internationally.

The examination board has recently decided to organise an external peer review of theses by staff members from two EPAS accredited partners, one in Croatia and one in Finland. Their findings show both similarities and differences with the ones of the panel. Similar are the conclusions that explaining comments related to scoring in the rubric are often insufficient. Unlike the panel, however, the peer reviewers consider the grading to be rather low. When the panel discussed these issues with the examination board, the board argued that theses are always assessed by two supervisors, and accompanied by an advice from a representative from the company involved. They also mentioned that they recently introduced internal 'thesis carousels' for calibration reasons. Furthermore, they told the panel that the interpretation problems with the rubric have been signalled to the programme management. The panel suggested to include an extra column in the rubric in order to invite examiners to be more explicit in their comments. In addition, the panel wondered why the rubrics for the bachelor and the master thesis are almost similar. The examination board replied that the difference between bachelor and master lies mainly in scale and scope. The panel nevertheless suggested to incorporate more differences in the specification of the bachelor and master rubrics for theses, which could be realised by incorporating the Meijers criteria for

bachelor and master more explicitly.

The examination board explained to the panel how they developed from reactively fulfilling formal tasks to proactively concentrating on the responsibilities regarding the quality of testing and assessment. An example is the interactive website which they developed for dealing with requests of students. The annual report also lists several tasks mandated to the programme management and the programme director; for example deciding on entry qualifications, authorising learning agreements, and signing certificates. In the process of issuing examiner rights to the teachers (and providing exemptions under certain circumstances), the examination board monitors the teaching qualifications, English language skills, PhD and content expertise of teachers. The annual report of the examination board shows that from the 70 examiners nominated, 68 were appointed in 2017/2018. From these appointed examiners, 58 meet all criteria set. The other ten examiners received a so called 'waiver'. Screening tests is an important element in guarding the quality of testing and assessment. The panel has been told that tests of examiners with a waiver and/or striking evaluations or complaints from students receive priority in the long-term screening plan. The aim of this plan is to screen each year two master courses. The minutes show, however, that this cannot be realised due to limited capacity within CELT.

Considerations

The panel met an examination board that is very aware of its responsibilities regarding the quality of testing and assessment and is well in control. It mandated several tasks to both the programme management and the programme director, and streamlines regular tasks, like requests from students, as much as possible. These efforts have created time for checking seriously whether examiners nominated fulfil the criteria set, screening tests, initiating an external peer review of theses, and checking whether Plan-Do-Check-Act cycles are properly realised.

The panel found an adequate assessment plan for the programme, test plans for the courses and tests. The panel appreciates how the faculty advisor and the expert on testing from CELT support the programme management, the examination board, and the staff in optimising the quality of testing and assessment. The discussions made clear that CELT and the examination board identify some issues that deserve attention. These comply with the issues that the panel found, namely the quality of questions and explicating assessment criteria. The panel regrets that the screening of tests cannot be done as frequent as the examination board would like, due to limited capacity within CELT. The grades provided to the theses are comparable to the ones of the panel and compare internationally. The panel has some worries about the rubrics for assessing and grading theses. First, it observed that the comments accompanying the scores are often lacking or meagre. Other external peer reviewers reported to have had similar observations. Second, the rubric for the master thesis is almost similar to the one for the bachelor thesis. It became clear during the site visit that the programme did consider the rubrics for the bachelor and the master thesis carefully, and that they rely on the difference in scale and scope between the bachelor and the master level. Nevertheless, the panel still believes that the difference between bachelor and master could be more and better specified and incorporated when using the Meijers criteria for bachelor and master more explicitly in defining both rubrics.

Assessment of this standard

The considerations have led the assessment panel to assess standard 3, *Assessment* to be satisfactory.

4.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

With their thesis, students are expected to demonstrate that they can independently develop and implement a research- and/or design-oriented project which fits with the expertise and research interests of the track he or she follows. The fifteen theses studied by the panel show appropriate topics for master theses in BA. They certainly reflect the achieved learning outcomes and the research based focus of the programme. Graduates of the BA programme are valued by employers. The SAR mentions that this is expressed in the professional contacts staff has, and by the fact that graduates regularly get a job offered at the company where they did their thesis research. Also, 67% of the graduates found a job within one month and a total of 91% within six months after graduation. Members of the board of practitioners illustrated that alumni end up in various positions in organisations varying from start-ups to big international companies. Alumni explained how their careers in industry are positively influenced by especially the ‘technical flavour’ they got and their experience with project work throughout their educational career at the UT. The panel noticed limited provisions for maintaining contacts with alumni and following their careers. Programme management explained their difficulties in this respect and presented the best alternative they could think of so far, which is analysing the LinkedIn group for BA graduates from the UT. This group includes 342 BA graduates from the UT. The analysis shows that about 1/3 has a function as a consultant or (policy) advisor; 1/3 is in marketing & sales, general management, professional finance or business development; and the others ended up as project or programme manager, IT professional, researchers, HRM professional, or purchasing professional. The top four sectors where graduates find jobs are, according to this inventory: information technology, consultancy, finance and manufacturing.

Considerations

According to the panel the theses prove the achievement of the intended learning outcomes and the research-based profile of the programme. The vast majority of graduates finds a job within six months after graduation, regularly with the company where they realised their thesis project. Alumni mentioned that their careers are positively influenced by the ‘technical flavour’ and their experience with working in projects. The indicative analysis of the LinkedIn group of BA graduates from the UT shows that BA graduates after their master end up in appropriate functions like project or programme manager; consultant or IT, HRM or purchasing professional. They find jobs mainly in the sectors information technology, consultancy, finance and manufacturing. The panel noticed limited provisions for maintaining contacts with alumni and following their careers. Therefore, the panel advises the programme management to pay more attention to alumni policy, and in particular to the development and maintenance of an alumni-network.

Assessment of this standard

The considerations have led the assessment panel to assess standard 4, *Achieved learning outcomes* to be satisfactory.

5. Findings, considerations and assessments Entrepreneurship

5.1 Standard 1: Entrepreneurship vision and strategy

The programme has a clear vision on entrepreneurship, supported by internal and external stakeholders, has an entrepreneurship strategy and objectives and evaluates and improves these.

Findings

The vision of the programme is 'to educate pioneering and curious graduates with an inclusive mind-set, who can research, design and organise both independently and thorough projects with a profound social and economic impact, and are well-prepared to work in a specialised junior management (advisory) role in an international context or further specialise in a PhD or PDEng programme'. The entrepreneurial elaboration of the UT's four core values includes social and technological innovation for pioneering, embracing ambiguity referring to curiousness, social impact showing up in inclusiveness and an entrepreneurial mindset and behaviour to be proud of.

The documentation describes that the BA programme intends to strengthen their students' entrepreneurship by providing them with knowledge about entrepreneurship, innovation and business development; by developing entrepreneurial skills and attitudes and by providing opportunities for interaction and engagement with business. Examples of such opportunities and stimulating circumstances are projects that students execute at companies for theses, the UT's spin off Novel-T supporting start-ups and the Entrepreneurial Challenge competition. The UT is also the only Dutch university with a student union where students 'do more than a degree' for example by volunteering in a variety of associations and projects.

In order to monitor entrepreneurial goals, the programme developed eight entrepreneurship indicators in 2018, focussing on managerial questions like: the type of students attracted (2), the use of opportunities exploited by students (3) and what students do when graduated (3). For each indicator, targets are set per year. The indicators themselves will be evaluated after three years. Monitoring reports will not only be presented to the programme committee, but also to the board of practitioners. Another evaluative project is the educational research project of a staff member heading for his STQ. He addresses in his research the question how to further improve students' interaction with business and the development of their business skills.

The board of practitioners is an important stakeholder when it comes to evaluating policies regarding entrepreneurship. Representatives of this board illustrated how they suggest adjustments in the programme, for example regarding practical experience, and the profile of the programme. They also contribute to the links with alumni, especially since several board members are alumni themselves.

Considerations

In the documentation and during the site visit, the panel noticed that staff and students were clearly aware of the university's and the programme's vision and policies regarding entrepreneurship. Both groups illustrated how the entrepreneurial profile and character of the UT is thoroughly incorporated and integrated in this educational programme as well as in research, especially due to the many and close collaborations with industry in projects, via guest lectures, etc. The board of practitioners is a valued sparring partner for the programme when it comes to the entrepreneurial profile and the curriculum.

They suggest improvements which are implemented when necessary and possible.

The panel appreciates the recent initiative to translate the vision into a testable policy by defining and monitoring entrepreneurial indicators, and discuss the test results with the programme committee and the board of practitioners. The panel considers the link between these indicators and the entrepreneurial objectives and strategies to be adequate.

Assessment of this standard

The considerations have led the assessment panel to assess standard 1, *Entrepreneurship vision and strategy* to be good.

5.2 Standard 2: Intended learning outcomes

The intended learning outcomes include entrepreneurship objectives, match (inter)national views and include entrepreneurship competencies.

Findings

The learning outcomes are organised in line with the university's profile of educating students as entrepreneurial researchers, designers and organisers. The programme formulated twelve intended learning outcomes which are organised per role: research (4), design (4) and organise (4). It is illustrated how they relate to each of the Meijers criteria⁷ and consequently comply with the Dublin descriptors.

The entrepreneurial theme is particularly covered by the intended learning outcomes falling into the categories of the design and organise roles, for example in 'designing rigorous solutions for business problems in an entrepreneurial way' and in 'creating value for business based on academic competences'. In line with the intended learning outcomes, courses have sets of learning objectives. The extent to which entrepreneurial aspects are incorporated varies, but in almost all the course objectives, entrepreneurship occurs at least implicitly.

Considerations

The panel found that learning outcomes regarding entrepreneurship were well formulated, especially those concerning design. They are also convincingly linked to the Meijers criteria and consequently the Dublin descriptors. The panel appreciates how the intended learning outcomes are further operationalised in the learning objectives of the courses.

Assessment of this standard

The considerations have led the assessment panel to assess standard 2, *Intended learning outcomes* to be satisfactory.

5.3 Standard 3: Teaching-learning environment

The curriculum, competencies and/or experiences of students, study methods and the teaching-learning environment enable students to achieve the entrepreneurship intended learning outcomes.

Findings

The core course Entrepreneurial leadership and responsible organisational design (ELROD) is pivotal in explicitly addressing entrepreneurship. Other core courses address entrepreneurship implicitly. For the ELROD course students for example have to be able to 'combine the different perspectives underpinning entrepreneurial leadership to develop responsible organisational designs fostering long-term organisational survival'. The specialisation track Entrepreneurship, innovation and strategy (EIS), which is by far the most popular one according to the programme management, focusses entirely on entrepreneurship.

Entrepreneurship is also addressed in other tracks. For example in the track 'Strategic Marketing & Business Information' where in the course 'It-based knowledge management for business innovation' ICT-tools are applied to entrepreneurship. Another example is the track 'Financial Management' where a complete course is devoted to 'Entrepreneurial finance'. Moreover, the entrepreneurial mindset is

^{7 7} Meijers, A. W. M., Borghuis, V. A. J., Mutsaers, E. J. P. J., Overveld, van, C. W. A. M., & Perrenet, J. C. (2005). Criteria voor academische bachelor en master curricula = Criteria for academic bachelor's and master's curricula. (2e, gew. dr. redactie) Eindhoven: Technische Universiteit Eindhoven.

addressed in different tracks. For example in the HRM track where a course objective is to ‘discuss the ways in which organizations and employees innovate HRM systems’. And in the SMDB track there are course objectives like ‘recognise and formulate strategic and business problems including current and future opportunities for business development based on real-life cases in the international/global context’ and ‘design solutions for strategic and marketing problems for business development based on proper foresight techniques’. Furthermore, students can extend their research oriented entrepreneurial education by following the double degree programme at the Technical University of Berlin which is more practice oriented. E.g. by following the Double Degree course ‘Business development in network perspective’ in which the concepts are related with entrepreneurship.

The documentation explains that the programme preferably admits students with a bachelor degree in business administration or a related field. All applicants have to write a motivation letter wherein they explain why they are applying for this international and entrepreneurial business administration master programme. Students with a non BA bachelor degree are able to enter the programme after following a pre-master. During the pre-master they have to follow the course ‘Global entrepreneurship & business’ in order to ensure a sufficient entrepreneurial oriented base in business administration for successfully completing this master programme.

Corporate interactions take place in projects; through providing cases, datasets and guest lectures; in supervising graduation assignments; in the context of incubators; and in the board of practitioners. The board of practitioners is a sparring partner for the programme when it comes to keeping its international and entrepreneurial profile and content up to date. Representatives of the board gave several examples of their advices being followed up by the programme. Students told the panel that they appreciate the corporate contacts, and would even like to have more workshops etc., especially provided by bigger, international organisations. They appreciate being able to do their thesis project with a company. They also mentioned how they develop their entrepreneurial competences, for example when contributing to activities of the student association ‘Stress’ and the yearly recruitment fair (Bedrijvendagen).

Considerations

The panel considers disciplines contributing to an entrepreneurial approach of business administration to be well represented in courses. Not only in the specialisation track on entrepreneurship, but also in other tracks. Course content is related to research of staff, which is often realised in close cooperation with companies. The panel appreciates that a variety of companies are involved with the programme, especially through guest lectures, in projects, by supervising thesis projects and by providing datasets etc. The board of practitioners obviously functions as an advisory board contributing to keeping the programme up to date, also from an entrepreneurial point of view. According to the panel, the programme provides not only substantial flexibility for individual routes and individual profiling, but also invites to practice entrepreneurial behaviour in study careers. It does so due to: the possibility to enter the programme in September and February, the individual learning agreements, the very limited number of sequenced courses, and electives to be chosen from six different tracks. When students opt for a degree certificate and diploma supplement mentioning entrepreneurship as a specialisation, they need to choose most of their electives in the EIS track. If students like to emphasise their entrepreneurial profile even more, they not only can choose all electives within the EIS track, but they can also consider a double degree at for example the Technical University of Berlin. Students provided the panel with convincing examples of the variety of possibilities they have at their disposal to develop themselves as an entrepreneur. They indicated that using these possibilities often in itself requires an entrepreneurial attitude, which they experience as stimulating.

Assessment of this standard

The considerations have led the assessment panel to assess standard 3, *Teaching-learning environment* to be good.

5.4 Standard 4: Staff

The staff composition, the qualities of staff members and the knowledge of staff members of recent trends in the professional practice are consistent with the teaching of entrepreneurship subjects.

Findings

All core staff of the programme (31) has a doctorate and most of them (27) have a university teaching qualification (UTQ). Of all faculty, 9 have explicit (almost) full-time industrial experience, according to the documentation varying from internships and graduation assignments to having worked in business for many years before switching to the university. Staff also provides executive education and closely cooperates with companies in research projects. Additionally, guest lecturers from industry contribute to the programme by providing cases, giving lectures and workshops, and supervising students during thesis projects.

During the site visit, the panel paid special attention to the professionalisation of the staff, not only regarding education but also regarding entrepreneurship. Some examples were given which illustrated how heads of department encourage faculty to combine educational and entrepreneurial professionalisation; for example by following a course on developing MOOCs about entrepreneurship. To the panel's surprise, no one mentioned arrangements like 'staff internships' at companies. The panel nevertheless got the impression that involvement of staff members with incubators and start-ups also contribute to keeping up with recent trends in entrepreneurship.

Considerations

According to the panel the professional experience of staff with entrepreneurship is limited, although the staff does have industrial experience. This is partly counterbalanced through the cooperation with companies in research projects and in incubators. Furthermore, staff from companies often contribute to the programme by guest lectures and by supervising students in their practical experiences in industry during thesis projects. The arrangements for professionalisation regarding entrepreneurship may be exploited better in the future, although some instances were given in which educational and entrepreneurial professionalisation were combined.

Assessment of this standard

The considerations have led the assessment panel to assess standard 4, *Staff* to be satisfactory.

5.5 Standard 5: Achieved learning outcomes

The examinations and assessments and the careers of the programme graduates demonstrate the entrepreneurship learning outcomes to be achieved.

Findings

Faculty confirmed the description of the assessment of entrepreneurial learning outcomes in the SAR which indicates the integration of these learning outcomes in the overall assessments. Faculty also illustrated how entrepreneurial learning outcomes are assessed during the programme more specific in projects, portfolios and reflection reports. With their theses students are expected to demonstrate that they can independently develop and implement a research- and/or design-oriented project which fits with the expertise and research interests of the track the student follows; e.g. the track on entrepreneurship, innovation and strategy (EIS). The fifteen theses studied by the panel show appropriate topics for master theses in entrepreneurial business administration and reflect the achieved learning outcomes. The documentation mentions that in 2017 and 2018 respectively 74 and 52 graduation projects have been executed at companies like Accenture, Ericson, KPMG, Liberty Global, Philips and Thales. Students mentioned to be looking forward for example: to joining the international company where their thesis project runs, to prepare a PhD on

negotiating, to a job requiring practical leadership skills and to starting an own business.

Graduates of the programme are valued by employers. Graduates regularly get a job offered at the company where they did their thesis research. 67% of the graduates found a job within one month and a total of 91% within six months after graduation. Members of the board of practitioners illustrated that alumni end up in various entrepreneurial positions in organisations varying from start-ups to big international companies. They also expressed their appreciation of graduates taking initiatives. Alumni explained how their entrepreneurial careers in industry are positively influenced by especially the ‘technical flavour’ they got and their experience with project work throughout their education at the UT.

Considerations

The panel appreciates that the assessment of entrepreneurial competences is integrated in the overall assessment. Theses studied prove the achievement of the intended learning outcomes regarding entrepreneurship. The panel noticed the substantial number of thesis projects realised in companies. It values that the vast majority of graduates finds a job within six months after graduation, regularly with the company where they realised their thesis project. It comprehends the practitioners reporting the adequate entrepreneurial skills of graduates and alumni reporting that their careers are positively influenced by the ‘technical flavour’ and their experience with working in projects and with companies.

Assessment of this standard

The considerations have led the assessment panel to assess standard 5, *Achieved learning outcomes* to be satisfactory.

6. Overview of assessments

Programme assessment

Standard	Assessment
Standard 1. Intended learning outcomes	Satisfactory
Standard 2: Teaching-learning environment	Good
Standard 3: Assessment	Satisfactory
Standard 4: Achieved learning outcomes	Satisfactory
Programme	Satisfactory

Distinctive quality feature Entrepreneurship assessment

Standard	Assessment
Standard 1. Entrepreneurship vision and strategy	good
Standard 2: Intended learning outcomes	Satisfactory
Standard 3: Teaching-learning environment	good
Standard 4: Staff	Satisfactory
Standard 5: Achieved learning outcomes	Satisfactory
Distinctive quality feature Entrepreneurship	Satisfactory

7. Recommendations

In this report, a number of recommendations regarding the programme quality have been listed. For the sake of clarity, these are brought together here. They are:

1. Extend the individual learning agreement to a tool that is more functional in a student's study career.
2. Pay more attention to the alumni policy, and in particular to the development and maintenance of an alumni-network.
3. Rethink the entry requirements in relation to possible barriers for application of potential students
4. Specify the difference between bachelor and master criteria for thesis more and better in the thesis assessment rubrics by using the Meijers criteria
5. Enlarge the capacity of the examination board in order to evaluate peer reviewing of testing and assessment within the tracks of the course.

Besides the general recommendations mentioned above, the panel recommends concerning the distinctive quality feature Entrepreneurship to pay more attention to professionalising faculty with regard to professional entrepreneurship, for example by organising 'staff internships' at companies.