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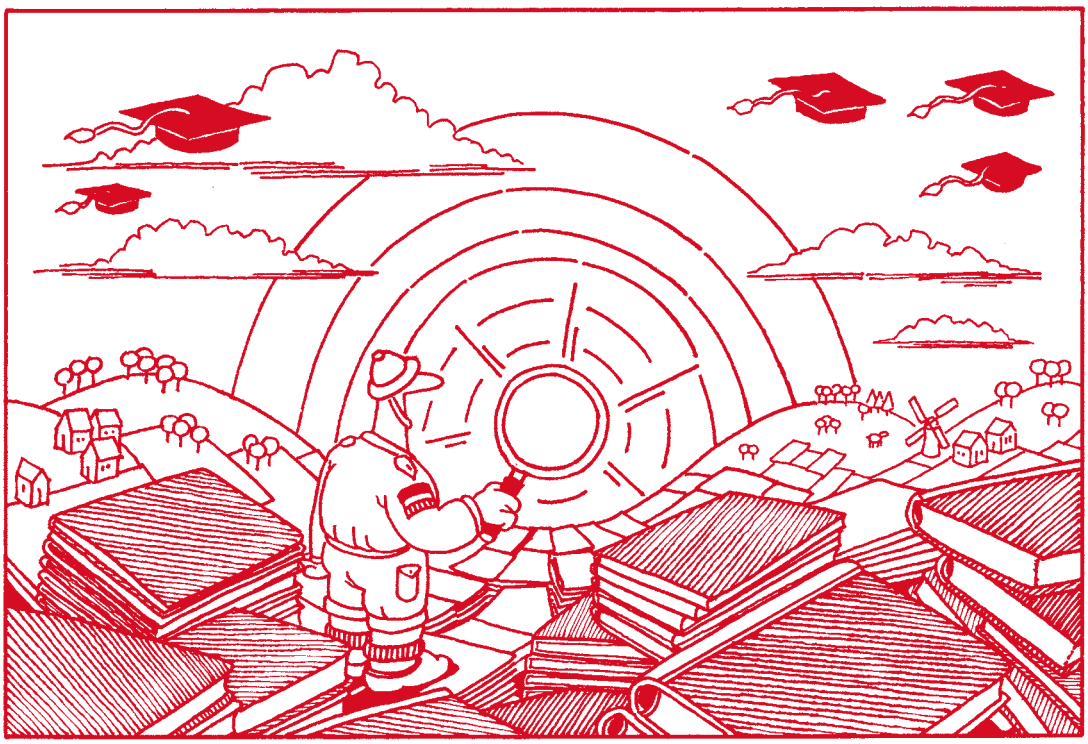
Accreditation Organisation of the Netherlands and Flanders



Research Master Review 2007

The exploration of a new domain

december 2007

Foreword

NVAO is pleased to present this report on a new type of programme that was only introduced into academic higher education in the Netherlands in 2003: *the Research Master's Programme*. The report contains the results of a survey conducted among lecturers, administrators and assessors about the (intended) quality of research master's programmes and the way in which the assessment process took place. By now, 116 programmes have already been assessed positively, which means that a few hundred students have commenced such a programme. Some have already completed their programme.

Furthermore, the report contains contributions that were voiced at the conference held on 5 June 2007 about *Research master's programmes in the university landscape*. The contributions by Prof. Dr Rudy B. Andeweg, on behalf of the Social Sciences Council of the Royal Netherlands Academy of Arts and Sciences (KNAW), Dr Sijbolt Noorda, chair of the Association of Universities in the Netherlands (VSNU) and Prof. Dr Frits van Oostrom (president of the KNAW) comprise different perspectives and recommendations regarding research master's programmes. However, these contributions and the outcomes of the survey do have one thing in common: research master's programmes are regarded as enriching the landscape of university programmes. Familiarity with the research master's programmes should be stimulated and they can present talented students with an additional challenge. Thus, research master's programmes warrant additional attention and appreciation!

I would like to close by thanking the KNAW, VSNU, PNN, ISO and LSVb for their cooperation and efforts in, together with NVAO, bringing research master's programmes to the attention of a wider public. We all hope that this report will make an additional contribution to this aim.

Karl Dittrich
(Chair of NVAO)

The Hague, December 2007

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Summary

What is a research master's programme (RMP)? What distinguishes RMPs from the regular master's programmes provided by universities in the Netherlands? What are the prevailing views within the academic community about the introduction of RMPs? To what extent are stakeholders satisfied with the assessment process for RMPs? What visions are there regarding the future of RMPs and how are these visions expected to be realised? These were the central questions in a study carried out by NVAO: *the Research Master Review (RMR 2007).*

In 2003, universities in the Netherlands introduced the RMP as a new type of academic programme with a specific focus on the acquisition of research skills. In contrast to the regular master's programmes at Dutch universities, RMPs have a programme length of *two years* instead of *one year*. The programmes are embedded in high-quality research environments and participation is reserved for a select group of bachelor's degree graduates.

In RMR 2007 qualitative and quantitative research methods were combined. In its entirety, the project consisted of four components: a *literature study,* a *dossier analysis*, a *survey* and a *conference*. NVAO took the initiative for RMR 2007 with the following aims:

- to give publicity to the RMP,
- to create more clarity regarding the distinctive profile characteristics of RMPs,
- to take stock of the initial experiences and most recent expectations regarding RMPs,
- to evaluate the functionality of the assessment process, as part of NVAO's internal quality management.

The outcomes of RMR 2007 show that the academic community received the RMP with great enthusiasm. Both lecturers and students are very positive about these programmes. Moreover, the various stakeholders are more than satisfied with the assessment process.

One of the major points for concern is the relatively small enrolment. By giving more publicity to the RMP and by profiling this type of programme more as being an *orientation* on research and less as a *definitive choice* for the profession of researcher, the RMP could become an even greater success, with a larger enrolment and more graduates.

Introduction

Background and aims

In the autumn of 2003, universities in the Netherlands introduced a new type of programme: the *Research Master's programme (RMP)*. RMPs are programmes with a length of two years and an explicit focus on the acquisition of research skills. RMPs are embedded in high-quality research environments and only students who were awarded above-average grades in the bachelor's phase of their studies are eligible for participation in these programmes.

Several years after the first RMPs had commenced, NVAO took the initiative for the *Research Master's Review* (RMR 2007). The aims of this review can be explained using four themes.

Well-liked and yet unknown? Attention for the RMP

RMPs were introduced not long ago and it is therefore not surprising that they are not widely known throughout society. However, the observation that RMPs are also comparatively unknown within the academic community and to policymakers is surprising: after all, almost all universities in the Netherlands offer one or more RMPs. This limited familiarity with RMPs is in sharp contrast to the great enthusiasm with which the RMP is received by a significant proportion of the academic community.

The question is not only what the reason is for this limited familiarity with RMPs, but also what can be done about it. More and better researchers are needed for the development of the knowledge society and the RMP was introduced with the intention of meeting this need. Raised awareness of and attention for this new type of programme is therefore desirable. NVAO hopes to make a modest contribution to this end through the RMR 2007.

Differentiation in university master's programmes: the profile characteristics of the RMP

With the introduction of the Bachelor's-Master's system, higher education in the Netherlands underwent a number of major changes. Compared to the previous system, the current system has greater differentiation in the various types of academic higher education programmes, at least at the level of master's programmes: for example, in addition to the "regular" academic master's programmes and the research master's programmes, there are now educational master's programmes and there are universities that present certain programmes as "top master's programmes" and "prestige master's programmes" (which, however, NVAO does not recognise as such).

This differentiation in master's programmes seems to go hand in hand with confusion about where exactly the distinction between the various types lies. Through its RMR 2007, NVAO attempts to define the so-called *distinctive profile characteristics* of the RMP, so that the characteristic differences that distinguish them from other university master's programmes can be set out more clearly.

Initial experiences and recent expectations

The use of the term "review" in the title of this publication is perhaps somewhat misleading. What you will definitely *not* find here is a *yields analysis* or an *efficiency assessment* of RMP education: for such a study it is still too early. RMR 2007 is therefore expressly meant as an *exploration* into this

type of university master's programme, to gauge initial experiences of the introduction of RMPs, as well as to take stock of recent expectations about the outcomes of RMPs. By publishing the findings of this "domain exploration", NVAO hopes to encourage the dialogue regarding these new master's programmes. Improved coordination in the further development of RMPs will hopefully be the result.

Assessment of assessment

However, the immediate motivation for the RMR 2007 was to improve the functioning of NVAO itself within the framework of internal quality assurance, by asking stakeholders to assess the assessment process and make suggestions for improvement. At the same time, NVAO hopes that lessons can be drawn from this exploration to shape the assessment process for RMPs that are eligible for "re-accreditation" six years after the initial assessment.

Research questions

RMR 2007 was intended to generate answers to the following questions:

- *In what way do RMPs distinguish themselves from the regular master's programmes provided by universities in the Netherlands? In other words: what are the profile characteristics of RMPs?*
- *What are the prevailing opinions about the introduction of RMPs within the academic community?*
- *To what extent are stakeholders satisfied with the assessment process for RMPs?*
- *What are the visions for the future of the RMP and how are these visions expected to be realised?*

Approach

RMR 2007 consists of four sub-sections in which qualitative and quantitative research methods were combined:

1. *Literature study*
2. *Dossier analysis*
3. *Survey*
4. *Conference*

The following five chapters discuss the methods used and the results of the various components of the research project. In the final chapter, the outcomes of the literature study, the dossier analysis, the survey and the conference are brought together. The appendices include an explanation of the abbreviations used in this publication and an overview of all RMPs offered by universities in the Netherlands.

Prelude to the research master's programme

Introduction

How did the RMP come into being? What were the reasons for the introduction of the RMP? This chapter answers these questions. Based on several policy texts, an outline of the developments in Dutch higher education that prompted the introduction of the RMP follows.

Policy context

Towards the end of the 1990s, discussions started in the Netherlands on the need to incorporate a preparatory track towards PhDs within the old "doctoraal" programmes (which lead to an academic qualification equivalent to MA or MSc). One of the first times this issue was explicitly addressed was in the so-called sciences covenant of May 1998. In this covenant, agreements were made between the government and six universities (Leiden University, Utrecht University, the University of Groningen, the University of Amsterdam, the VU University Amsterdam and the Catholic University of Nijmegen, which is now known as the Radboud University Nijmegen) on the rationalisation of the number of sciences programmes offered; the need to broaden the enrolment and the need to give more attention to the training of researchers.

The sciences programmes – mainly the physical sciences, chemistry and mathematics – were plagued by a constantly decreasing number of students, which created several bottlenecks. The costs incurred to maintain all programmes per institution versus the limited number of students were considered too high, the demand of the labour market and strong need for graduates with a sciences degree could not be met, the average age of the teacher population in secondary education in these crucial sciences subjects was increasing and it became increasingly more difficult to find native candidates for PhD programmes, threatening academic research within these fields. In addition, a very detailed international comparison of the curricula of physics programmes, conducted by the Sengers Commission, pointed out that Dutch programmes were structurally a year too short. It appeared that Dutch students had four years to process the same amount of subject material for which students in the rest of Europe had five years.

The sciences covenant included a proposal to differentiate within the "doctoraal" programmes between a social track (for general application purposes), a communicational/educational track (mainly aimed at jobs in education) and a research track (a preparatory programme for future PhD students). For the universities and their programmes it was of the utmost importance that the government should agree on extending the length of these sciences programmes with a fifth year, albeit this last year would not be publicly funded.

After the 1999 Bologna Declaration, when the transition to a bachelor's-master's structure became generally accepted in the Netherlands, discussions were resumed on the subject of these research tracks. These discussions were boosted and ran parallel with the discussions on the length of the future master's programmes. As far back as February 2000, the KNAW Council for the Humanities made a call for the implementation of an 18 months' to two years' research track in academic higher education.

Almost at the same time, the then Minister of Education Hermans requested the Education Council of the Netherlands to advise him on the consequences for the Netherlands regarding the European development to implement a two-cycle system in higher education. For this purpose, the Education Council set up an advice commission headed by Dr A.H.G. Rinnooy Kan. The commission presented its report on 23 June 2000 and it was published by the Education Council on 5 July 2000. One of the issues put forward by the commission was that in many disciplines a differentiation would be created at the master's level between a more professionally-oriented track and a more research-oriented track. The commission considered the latter as an intermediate step between a master's degree and a PhD and found it only reasonable that this would result in these programmes having a two-year track. During the legal process that led to the general introduction of the bachelor's-master's structure in higher education, one main issue that had to be tackled was whether the transition of academic programmes into a three-year bachelor's and a one-year master's would be considered equivalent with international developments in Europe, where it was more common to have a two-year master's programme. Especially in the humanities and the social and behavioural sciences, many voices were heard in favour of a two-year master's programme.

Within the Association of Universities in the Netherlands (VSNU) this was also the brunt of the discussion and authoritative advice on this issue was requested as well. In its advice report published on 30th October 2001, the Cohen commission differentiated between three types of orientation of a master's degree: a social track, an educational track and a research track. The commission was in favour of a two-year master's programme where the last two tracks were concerned, but deemed a one-year master's programme sufficient for the social track, with the exception of some programmes in oriental languages and programmes in comparative international law.

The advice on the educational track was adopted by the Cabinet, but on the further differentiation within master's programmes yet another external commission was asked to produce an advice report. This request for advice was in accordance with Minister Hermans' political viewpoint to create more room within academic higher education in the Netherlands for qualitative differentiation. Among the "high plains" of higher education more "mountain tops" would have to stick out.

The "Top master's working group" was established and was chaired by the former president of the Royal Netherlands Academy of Arts and Sciences, Reneman. Their advice report entitled *"Over de top: Duidelijkheid door differentiatie" [Top notes: Transparency through differentiation]* was published in October 2002. In this report a new distinction was made between discipline-oriented master's programmes and profession-oriented master's programmes (the latter being programmes preparing for professions like doctor, lawyer and pharmacist). Apart from these two, another category of "research master's programmes" was created. According to the Reneman working group, it would be up to the labour market and the students to decide which master's programmes belonging to the first two categories would be considered top-level master's. As regards the research master's, the Reneman working group opted for the Netherlands Accreditation Organisation (installed only a few weeks earlier) to assess whether these master's programmes were indeed top-level and thus required a two-year curriculum.

Reneman aimed quite high. This was clear from the definition of the research master's: "a programme that meets the demand for scientific researchers in a large number of disciplines (including interdisciplinary and multidisciplinary fields of study) and that prepares for a PhD in those disciplines. The contents of a research master's programme should be linked to the thematically/disciplinarily structured, top-quality level scientific research carried out by the organisational unit that is also responsible for drawing up the curriculum. (Top master's working group, p.10).

Elsewhere, the report described additional specific criteria required for a research master's programme: close links with research groups with a proven, continuous and high level of quality possessing a certain critical mass, with demonstrable added value to the instructional process (for example tutoring, top courses, application of high standards) and graduates that will gain access to renowned PhD programmes. (Top master's working group, pp. 16-17). Although the working group considered the research master's as an intermediate stage leading to a PhD, the working group pointed out that graduates would of course also qualify for entering the labour market, for example in research jobs for which no specific specialisation is required.

The report of the Top master's working group confirmed the previously mentioned need to offer research master's programmes, as there was a strong demand for it. In a letter dated 15 April 2003, the then State Secretary for Education Nijs requested the Netherlands Accreditation Organisation (NAO) to develop a procedure to assess applications for extending the length of some specific programme categories, along the lines of the report of the Cohen Commission regarding exceptions to the one-year duration and the exceptional case of the research-oriented master's.

The State Secretary pointed out that the research master's programmes should explicitly prepare students for research-oriented professions *"in which the emphasis on doing scientific research would be more pronounced than in a regular academic master's programme. I consider the research master's as a new type of academic programme in higher education for which the standards still need to be defined.' […] As it concerns a new type of programme, I urge you to advise which requirements such programme should meet."* (letter from State Secretary Nijs, pp. 2-3).

Apparently, the higher education sector was very keen on having these new master's programmes assessed, considering the fact that the NAO submitted the requested protocol to the State Secretary's office as early as 23 April 2003. In its protocol, the NAO strongly emphasised the "academic context" in the application procedure for research master's. In this respect, the NAO stated: *"If this [academic context] does not attain the required quality level, it cannot be assumed that the programme will attain the desired level required by the international context, even if the programme has a two-year duration. This is indeed a prerequisite, but is in itself insufficient."*

High demands should therefore be set for the selection of students, the intended learning outcomes and the research environment. When assessing a research master's programme, a lot of attention should be given to the capacity of the available research infrastructure, the quality of staff and researchers involved in the programme and the reputation of the research group(s) involved. The NAO informed the State Secretary that the protocol had been established on 22 April 2003. For the assessment of research master's programmes, NAO entered into an agreement with the KNAW. The assessment as to the contents of the programme would in the first instance be carried out by two KNAW commissions, but later on by several more.

Reasons for the introduction of research master's programmes

During the discussions on the need to have research master's programmes, a large number of arguments in favour of the introduction of this new type of programme were presented. In the following overview, these arguments have been structured, although we do not claim to be comprehensive. The following 7 clusters of arguments have been mentioned:

1. Competition between Europe and the rest of the world
This argument originates from the Barcelona and Lisbon objectives. In 2010, Europe should be as competitive as the USA and major Asian nations. A prerequisite to attaining this is the availability of a high-level research structure. Research master's programmes could contribute considerably to the training of good researchers;

2. Competition between the Netherlands and the other countries in Europe
From a Dutch perspective, it is not only necessary to view the situation from the position of Europe compared to the rest of the world, but also from the national position of the Netherlands compared to the other countries in Europe. The Netherlands is not self-sufficient and should therefore make use of its assets, like creativity and innovation. Research can play a major part in this;

3. Research contributes to economic growth
In the Netherlands, ever more voices are heard that warn against the weak link between research and productivity. It has become generally accepted that research is the most important prerequisite for innovation and creativity. Hence, the emphasis on research is becoming ever more important. Good research requires advanced skills and research master's programmes can contribute to training these skills;

4. There are not enough researchers in the Netherlands
Graduates in the Netherlands have relatively little interest in research jobs. This can be attributed, on the one hand, to the enormous competition from all commercial and public sectors in society and, on the other, to the lack of career opportunities within research environments. For some years, more resources have become available for scientific research that involves young researchers and teachers. These individually allocated resources greatly stimulate them to opt for a career in research;

5. There are not enough PhDs in the Netherlands
The education system for PhD students is greatly appreciated and is successful, but the returns are low and the average time to finish a PhD dissertation is too long. A research master's programme would offer a good preparation before starting a PhD and would increase returns from research programmes during the PhD phase;

6. High-quality programmes attract international talent
The bachelor's-master's structure could stimulate student mobility. It is expected that mobility is mainly stimulated by delivering salient quality. As a beacon of high-level quality, the research master's would attract more potential researchers from abroad. This would entail that the available PhD positions would be better occupied with better qualified students;

7. Demographic developments in the Netherlands
The population in the Netherlands is ageing and its share of youths is decreasing. Eventually, this could lead to research environments at universities, research institutions and companies losing their vitality. Programmes offered in the Netherlands that create opportunities for Dutch and foreign students to become researchers should therefore be stimulated.

The accreditation of new research master's programmes

Introduction

How does NVAO assess RMPs and what criteria does it use? This chapter contains a comprehensive description of the assessment procedure for new RMPs and the initial accreditation framework used in this procedure.

The RMP initial accreditation framework TNO-OZM

Accreditation applications for new RMPs are assessed using the initial accreditation framework TNO-OZM (in full: *Toetsingskader Nieuwe Opleidingen: Domeinspecifieke uitwerking voor Onderzoeksmaster's, [Initial Accreditation Framework: Domain-specific outlines for Research Master's Programmes])*.[1] The framework shows where the differences are between RMPs and regular university master's programmes: for RMPs, specific requirements are set regarding the *aims and objectives,* the *curriculum* (which includes the *selection of students),* and *staff. [Since 12 October 2007 there is also an accreditation framework with domain-specific outlines for extant research master's programmes. Both frameworks are available at www.nvao.net.]*

Aims and objectives

It is a requirement for all university master's programmes that the intended learning outcomes correspond with what is usual, within the Netherlands and abroad, for comparable programmes, whereby the students are taught to carry out scientific research within a particular discipline. Two additional requirements apply to the aims and objectives of RMPs that should ensure that these programmes are specifically focused on the development of research skills:

- *The achieved learning outcomes of the programme should, without substantial additional education or training, enable a transition to a research-oriented position or a track leading to a PhD. (1.1)*[2]
- *The length of the research master's programme is two years. The programme must prepare students for:*
  - *positions requiring research competences and experience beyond the level that can be expected on the basis of the usual link with research within academic higher education, and*
  - *positions or educational tracks in which research is conducted in monodisciplinary or interdisciplinary fields of science for the purpose of writing an academic thesis and obtaining a PhD. (1.3)*

Curriculum

In all instances, the curriculum of a university master's programme should correspond with the current developments in the relevant disciplines and ensure that students acquire research skills. The intended learning outcomes should be translated into learning objectives and there must be clear cohesion between the objectives on the one hand and the curriculum, the didactic concept, the work formats and method of assessment on the other. Several more stringent requirements apply to RMPs in respect of the academic context, the focus on research and the proof of competence that rounds off the programme.

1 In the first years, RMPs were assessed using the Protocol Onderzoeksmaster's *[Research Master's Programmes Protocol].* TNO-OZM has been used since 1 September 2004.

2 The numbers between round brackets refer to the corresponding criterion in the framework.

- *The curriculum must be embedded in a verified good to excellent level research environment and to that end, it meets the following criteria.* (2.1)
- *The research nature of the curriculum can also be demonstrated through comparison with a regular master's programme and through comparative positioning in a national and international perspective.* (2.1.2)
- *The programme is completed with a substantial test of research competence, which is deemed of scientific value in the discipline concerned.* (2.1.3)
- *The intended curriculum, the educational concept, the study methods and the learning assessments reflect the intended learning outcomes.* (2.2.1)
- *The name of the programme corresponds to the programme's content.* (2.2.2)
- *The curriculum is of an integrated nature, in the sense that both programme years offer cursory components as well as components focusing on an introduction to and training of research skills. The intended courses contribute to the coherence of the curriculum.* (2.3)

TNO-OZM gives instructions as to how the extent to which the intended curriculum meets the specific RMP criteria can/should be demonstrated:

- *The academic context plays an important part in the assessment of research master's programmes. An indication of a "good" level would be a score of at least good, as established in external assessments. NVAO deliberately opted for the level of "good" in relation to the internationally desirable high level of the programme. If the programme is embedded in, e.g., a Graduate School and/or research school, this must be stated here. (Note to 2.1)*
- *The institution must indicate, if relevant, to what degree the research master's programme differentiates from other one- or two-year master's programmes. (Note to 2.1.2)*
- *The institution must further define the intended final paper (master's thesis), which should demonstrate clearly that this can serve as a preparation for a subsequent route aimed at obtaining a PhD (for instance by formulating a research proposal). In all cases, the student must be offered the possibility of setting up his/her master's thesis in such a way that it prepares for a route aimed at positions of a research-oriented nature within the public or private sector. (Note to 2.1.3)*
- *The institution must provide a further specification of the curriculum, with a short description of the contents for each of the curriculum components, as well as the amount of ECTS credits it carries. In addition, a list must be provided of the departments or the teachers responsible for the various components. The specification must make clear in what way the proposed courses contribute to the research nature of the curriculum. (Note to 2.2.1)*

All academic master's programmes should aim at a curriculum that is feasible from the students' point of view and which, in terms of format and content, is in line with the qualifications of the enrolling students. Because RMPs are expected to have a relatively intense and demanding curriculum that entitles students to an additional year of student grants, the RMP initial accreditation framework requires that participation is reserved for a select group of bachelor's degree holders. The framework also sets a number of conditions regarding the way in which selection can take place:

- *In its admission of students, the programme, in compliance with Article 7.30b of the Act on Higher Education and Scientific Research (Dutch Act) [Wet op het hoger onderwijs en wetenschappelijk onderzoek (WHW)], enforces a selection with regard to demonstrated knowledge and skills on the part of the student to the effect that enrolled students may readily be expected to meet the high requirements of the programme and to successfully complete the programme. This means that the students must have obtained an above-average result in their bachelor's programme, which demonstrates their aptitude for the research master's programme. Enrolment in the second year of the research master's programme is not precluded (upon selection on the basis of a suitable entry level). (2.5)*

- *The point of departure will be the minimum average mark to be obtained in the course of a relevant academic bachelor's programme (WO-bachelor's degree) and the final mark of the bachelor's thesis, or the "Top-something-per cent" students in the bachelor's programme must have attained. If available, the most recent prospectus of the related bachelor's programme or in any case information on the curriculum of the bachelor's programme(s) qualifying students for enrolment in the research master's programme. If applicable, the admission requirement pertaining to English language proficiency must be substantiated on the basis of a minimum level with quantitative standards. (Note to 2.5)*

Staff

Every new university master's programme must have sufficient staff capacity in order to commence. It is also required that teaching is provided (in part) by researchers who are demonstrably contributing to the development of their discipline. Moreover, the staff employed should always have sufficient didactic and organisational skills to realise the intended curriculum. However, for RMPs, more is desired from the academic context than a teaching staff of sufficient quality alone:

- *Sufficient research capacity of verified good to excellent level is available within the academic environment in which the programme is embedded. (3.1)*
- *The "academic context" needs to be reviewed for the group(s) actually involved in the programme(s). The deciding factor will be the judgement of the KNAW panels that are involved in the assessment of the application at the request of NVAO. The panels will have to arrive at a judgement on the basis of the information provided by the institution concerned. That information may include external assessment reports, CVs of the teachers involved in the programme, the programme's positioning in graduate schools or research schools or other evidence of a good research quality. In all cases, however, NVAO will only give a positive advice if the KNAW panels award at least the qualification "good" to the academic context in which the programme is offered. A breakdown into the individual and the collective research quality can have a clarifying effect on the structure of the information dossier. (Note to 3.1)*
- *Additionally, the staff must have demonstrable experience in the effective training and coaching of newly-qualified researchers. (3.3)*
- *For instance: an overview of the number of PhD candidates coached by the staff members involved. (Note to 3.3)*

Regarding the *services, internal quality assurance* and the *conditions for continuity,* the same requirements apply to both RMPs and regular university master's programmes. Therefore, just like other university master's programmes, RMPs are obliged:

- to provide adequate tutoring and information;
- to observe a systematic approach in quality assurance whereby members of staff, students, alumni and the relevant occupational field are actively involved;
- to guarantee the entire curriculum can be completed;
- to invest sufficiently in establishing the programme; and
- to have available sufficient resources to cover losses in the start-up phase.

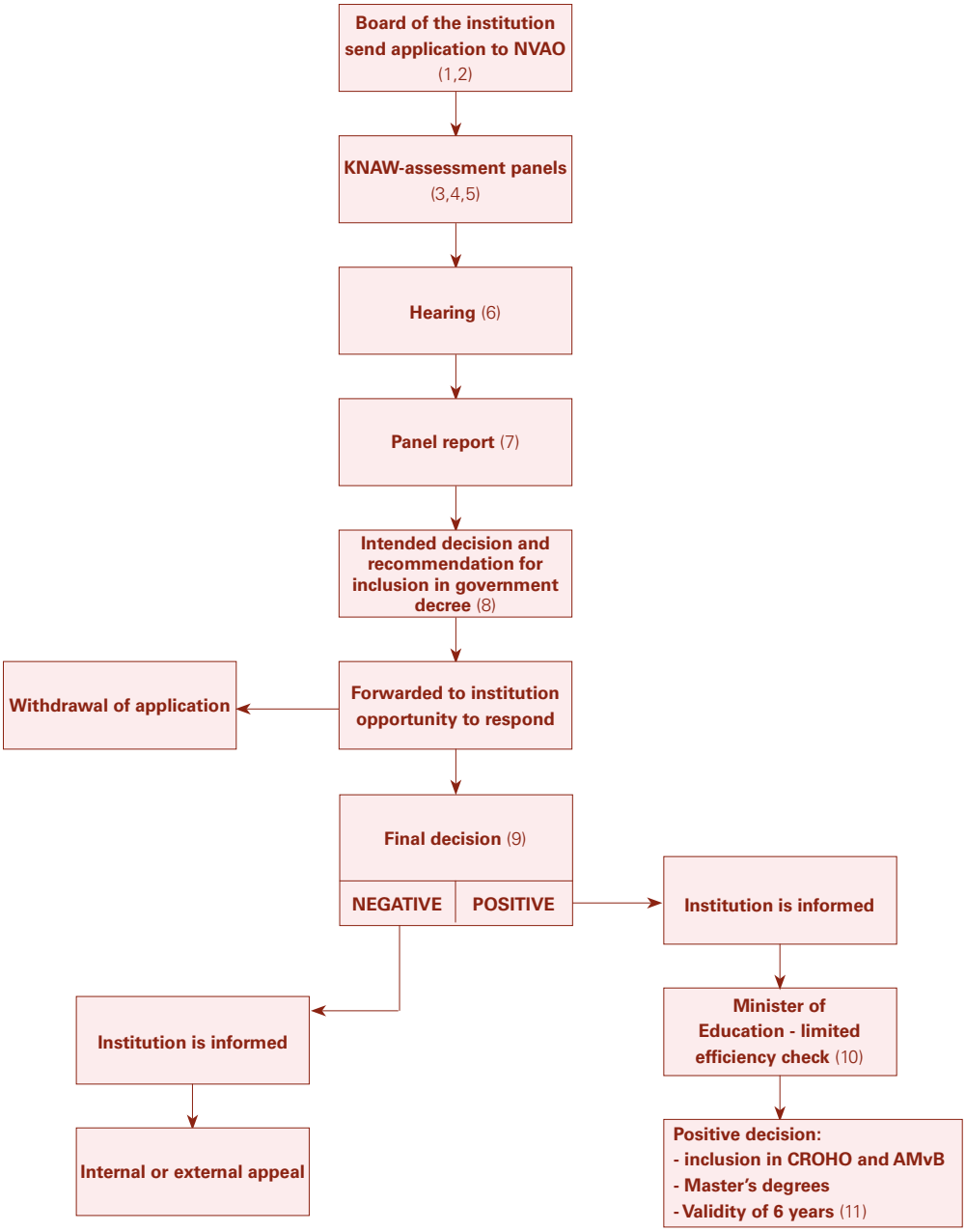
The assessment procedure for new RMPs

New RMPs are assessed by panels of the Royal Netherlands Academy of Arts and Sciences (KNAW) specially appointed for this purpose. There are currently five KNAW Research Master's Programmes Assessment Panels in the Humanities, Social Sciences, Behavioural Sciences, (Bio)Medical Sciences and Earth Sciences. NVAO policy advisors act as secretaries to these assessment panels.

The assessment procedure for new RMPs consists in the following steps:[3]

1 The board of the institution submits an application.
2 NVAO assesses the completeness of the application and if necessary, requests additional information.
3 If the application is sufficiently complete, the application is sent on to one of the KNAW panels. NVAO policy advisors act as secretaries.
4 The panel devotes an initial meeting to the application and if necessary, obtains advice from members of another KNAW panel or from external experts.
5 Subsequently, the panel sets down a list of questions and the institution is asked to answer these in writing.
6 The answers to the questions may result in the panel inviting a delegation from the institution to attend a hearing.
7 The panel then sets out its conclusions in a recommendation to the presidium of the KNAW. Subsequently, the presidium of the KNAW advises the board of NVAO.
8 Based on this KNAW recommendation, NVAO formulates an intended decision. The institution then has several weeks to withdraw its application.
9 The final decision of NVAO is in turn a recommendation to the Minister.
10 The Minister then conducts a limited macro-efficiency check.
11 Only after the programme has passed this check can it be registered in the Central Register for Programmes of Higher Education (CROHO) and included in the Order in Council *[Algemene Maatregel van Bestuur (AMvB)]*.

3 The (Bio)Medical Sciences Panel does not follow this assessment procedure in the usual way but rather integrates steps 3 to 6.


Board of the institution send application to NVAO (1,2)
KNAW-assessment panels (3,4,5)
Hearing (6)
Panel report (7)
Intended decision and recommendation for inclusion in government decree (8)
Withdrawal of application
Forwarded to institution opportunity to respond
Final decision (9)
NEGATIVE
POSITIVE
Institution is informed
Minister of Education - limited efficiency check (10)
Positive decision:
- inclusion in CROHO and AMvB
- Master's degrees
- Validity of 6 years (11)
Institution is informed
Internal or external appeal

Dossier analysis

Introduction and method

A dossier is compiled for each accreditation application submitted and these dossiers are stored in the NVAO archives. For RMR 2007, data from the hardcopy RMP dossiers was entered into a database and analysed. Two important subpopulations can be classified within the entire population of dossiers: 1) the dossiers of positively assessed applications *(n=113)*, and 2) the dossiers of withdrawn applications *(n=43)*. The dossiers of the two subpopulations were analysed in different ways.

Within the subpopulation of withdrawn applications, all applications with a negative assessment were analysed *(n=37)*. Within the subpopulation of positively assessed dossiers, a proportionally stratified random sample was selected with a size of one-third of the total subpopulation *(n=38)*. In this method of sampling it is determined in advance whether important groups *("strata")* can be identified within the population. The relative size of each stratum in the sample is equal to that in the population. Three stratification variables were defined for the dossier analysis:

- the nature of the decision (with two levels, *"positively assessed"* and *"withdrawn")* ;
- the year of the decision (with four levels, *"2003", "2004", "2005",* and *"2006");* and
- the scientific field (with three levels, *"Humanities", "Social and Behavioural Sciences",* and *"Biomedical Sciences and Geosciences").*

	HUM			SBS			BMG			Total		
	Tot	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**
2003	22	11	11	14	10	4	1	1	0	37	22	15
2004	37	32	5	35	29	6	9	5	4	81	66	15
2005	11	8	3	10	4	6	3	2	1	24	14	10
2006	1	1	0	8	6	2	5	4	1	14	11	3
Total	***71***	***52***	***19***	***67***	***49***	***18***	***18***	***12***	***6***	***156***	***113***	***43***

	HUM			SBS			BMG			Total		
	Tot	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**	***Tot***	**Pos**	**Wtd**
2003	22	50%	50%	14	71%	29%	1	100%	0%	37	59%	41%
2004	37	86%	14%	35	83%	17%	9	56%	44%	81	81%	19%
2005	11	73%	27%	10	40%	60%	3	67%	33%	24	58%	42%
2006	1	100%	0%	8	75%	25%	5	80%	20%	14	79%	21%
Total	***71***	***73%***	***27%***	***67***	***73%***	***27%***	***18***	***67%***	***33%***	***156***	***72%***	***28%***

HUM = *Humanities,*
SBS = *Social and Behavioural Sciences,*
BMG = *Biomedical Sciences and Geosciences,*
Tot = *total number of applications submitted,*
Pos = *positively assessed applications,*
Wtd = *withdrawn applications.*

Submitted applications

In the period from September 2003 to June 2007, NVAO accepted a total of 156 RMP applications for processing, of which 113 *(72%)* were positively assessed and 43 *(28%)* were withdrawn. In almost all cases, the reason for the withdrawal of an application was a negative assessment by the KNAW panel *(n=37)*. In a few cases, applications were withdrawn even before the KNAW panel had formulated its assessment.

The highest number of applications was submitted in 2004 *(n=81)* and, relatively speaking, the most applications were also assessed positively in that year *(81%)*. The highest numbers of applications were assessed by the KNAW Humanities panel *(n=71)* and the Social and Behavioural Sciences panel *(n=67)*. These panels assess relatively more applications positively *(73%)* than the Biomedical Sciences panel *(63%)*. The two applications dealt with by the Geosciences panel were both assessed positively.

The majority of applications, 70, received a positive assessment on their initial submission; 40 applications received a positive assessment after reclassification and only 3 applications needed to be submitted a third time before receiving a positive assessment. Only five applications were withdrawn and (to date) have not been resubmitted. In most cases, a hearing was part of the assessment procedure.

The highest numbers of positively assessed RMPs were submitted by the UU *(n=22)* and the UvA *(n=18)*, the two universities with the highest numbers of enrolled students. Three positively assessed RMP applications were submitted by a cooperation between two or three universities. Four universities did not submit any RMP applications: OUNL, TUD, TUE, and WUR.

University	HUM	SBS	BMG	*Total*
UU	10	11	1	***22***
UvA	9	9	0	***18***
UL	11	4	0	***15***
RuG	7	5	1	***13***
VU	7	3	2	***12***
RU	4	4	1	***9***
UM	1	4	3	***8***
EUR	1	2	4	***7***
UvT	1	4	0	***5***
UT	0	1	0	***1***
UU/KTU	1			***1***
RU/UvT	1			***1***
UvA/EUR/VU		1		***1***
Total	***53***	***48***	***12***	***113***

HUM = *Humanities,*
SBS = *Social and Behavioural Sciences,*
BMG = *Biomedical Sciences and Geosciences,*

Features of positively assessed applications *(n=38)*

Enrolment

Students who wish to participate in a RMP have to meet relatively high admission conditions. Most programmes, for example, require candidates to have attained above-average results in the bachelor's phase of their studies (an average of 7.6 across all programmes). Other programmes set the requirement that students have to be awarded an 8 for their bachelor's thesis. Some programmes have additional admission criteria: that candidates have received good results in the bachelor's phase for particular discipline-specific or methodological courses, that they are competent in statistical data analysis or that they have completed their bachelor's programme without any (or with slight) delay.

Almost all RMPs require that candidates explain their motivation and interest in a letter and/or interview. Moreover, in about half the cases, at least one letter of recommendation is required. Several programmes ask candidates to write a research proposal.

Because most RMPs are taught in English, it is often required that candidates can demonstrate their command of that language. To this end, they have to submit their scores for certain standardised tests. In most cases, a minimum score is required in the Test of English as a Foreign Language (TOEFL), varying from 550 to 620 (or 213 to 250 for the digital version of the TOEFL). Half the RMPs (also) accept students with a minimum score of 6-7 in the International English Language Testing System (IELTS). Some programmes also request candidates to submit one or more papers in English when applying.

Almost all programmes offer the possibility of "lateral entry": students who have completed a comparable regular master's programme can (sometimes after a short preparatory programme) enrol in the second year of a RMP. A small number of programmes explicitly state that exceptions to the admission requirements may be made.

Most of the dossiers provide information about the maximum number of students that can be admitted to a RMP. The maximum number in cohort is, on average, 25 students whereby the smallest programme admits a maximum of 10 students and the largest a maximum of 60. Some dossiers also provide information about a certain *"top x percentage"* of graduates from the bachelor's phase who are eligible for admission. The percentages listed vary from 5% to 20%, with an average of 15%.

Curriculum and academic context

The descriptions of curricula clearly show the focus on the acquisition of research competencies. Of the total 120 ECs, an average of 36 ECs (with a standard deviation of 24 ECs) are allocated to research projects – not including the final *master's thesis* – and 28 ECs (with a standard deviation of 10 ECs) for separate methodological courses. In many programmes training in methodological skills is integrated, as far as possible, with deepening substantive knowledge of the field of studies. RMPs are intensive for both students and lecturers: much work is done in small groups and students regularly have to complete assignments, write papers and give presentations. On average, the final master's thesis takes up 35 ECs (with a standard deviation of 13 ECs). In many programmes it is expected that the thesis meets the requirements of a research proposal for a PhD study, or meets the requirements for a publishable article in a scientific journal.

Although a number of universities and faculties keep to a fixed format for the design of RMP curricula, there is absolutely no sign of a "prototypical RMP curriculum". The great diversity in the composition of the programmes is reflected in the large standard deviations of 10-24 ECs.

The majority of RMPs are embedded in graduate schools. Although different organisational forms exist, the typical graduate school at a university in the Netherlands is an organisational unit within a faculty in which different departments join forces to train RMP and PhD students. In some cases, RMPs are provided (in part) by an interuniversity research school.

Compared to other types of academic master's programmes, international cooperation is hardly more intensive than in RMPs. Many RMPs offer students the possibility of following part of their study at a foreign university. In only a few RMPs is a significant part of the programme provided by a foreign institution or is an internship abroad mandatory.

Features of negatively assessed applications *(n=37)*

Of the 43 withdrawn applications, 37 were applications that the KNAW panels had assessed negatively. An analysis of the content of the negative KNAW assessment reports showed that the major shortcomings lay in the area of 1) *curriculum, aims and objectives, 2) staff deployment* and 3) the *selection of students*.

Curriculum, aims and objectives

Shortcomings in curriculum, aims and objectives were the most frequently mentioned reasons for negative assessments of RMP applications. Often, the KNAW found these applications to be insufficiently elaborated or not distinct enough from regular master's programmes. For a number of applications, although educational objectives had been formulated that met the initial accreditation framework criteria, the panel members were not convinced that these aims could be realised with the proposed curriculum. Some applications were assessed negatively because substantive courses and practical work in research were not programmed in both years, or because the name of the programme was not congruent with the curriculum content.

Staff deployment

In the academic environment in which RMPs are embedded there must be sufficient research capacity of a proven good to excellent level and there must be demonstrable experience in the effective training and tutoring of young researchers. This involves both the *quality* and the *quantity* of lecturers. In the first years, assessments of this quality were mainly based on reports from the assessments of university research institutes that were carried out under the auspices of the VSNU. Because these reports became outdated over the course of time, in later years alternative measures became increasingly important in assessing the quality of the research environment: CVs and key publications of the teaching staff, overviews of completed PhDs, or lists of research grants acquired in open competition and awarded research prizes. Applications for programmes that, in the view of the KNAW, did not meet these qualitative and/or quantitative requirements for teaching staff, or which could not make quality and quantity sufficiently transparent, were negatively assessed.

Selection of students

The initial accreditation framework sets down that participation in RMPs is reserved for students of whom it can be reasonably expected that they will meet the high requirements set by the programmes and that they will successfully complete the programme. Programmes may only admit students who obtained above-average results in the bachelor's phase of their studies. In the KNAW recommendations for negatively assessed applications objections to the proposed method of student selection are frequently encountered. In a number of cases the KNAW panels found that the proposed selection procedure was not described sufficiently clearly, in other instances they found the admission requirements too low or not transparent.

The analysis showed that all negatively assessed applications were flawed in multiple respects. There was not a single case where the negative assessment was due to a failure to meet only one of the criteria mentioned above.

Survey

Introduction and method

Taken as a whole, is the introduction of the RMP a positive addition to the range of university master's programmes? What reasons were important for submitting a RMP application? How could the assessment procedure and the initial accreditation framework be improved? Is the current differentiation in university master's programmes a desirable development? These and other questions were put to three different groups directly involved with RMPs: 1) members of the KNAW panels who had been involved in assessing RMP applications, 2) rectors and deans (R&Ds) who make up the boards of universities and faculties and 3) coordinators and lecturers (C&Ls) of RMPs.

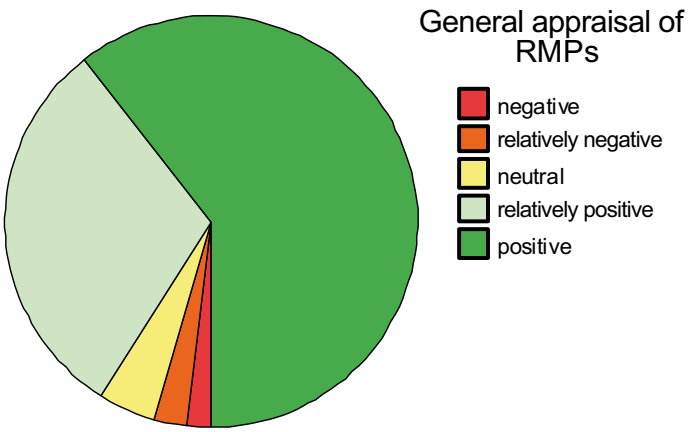
In total, 242 persons were approached in writing to participate in the survey. Of these, 161 *(67%)* returned a completed questionnaire. In order to maximise the response, the Dilman method (1978) was used. At least four representatives from each university that offers one or more RMPs participated in the survey. In addition, all five KNAW panels were represented by at least three respondents. Based on the response rates, it can be said that the sample is representative of the target population and that the results can be generalised.

Respondent Group	Approached	Response	
KNAW panel members	21	17	81%
Rectors & Deans	60	42	70%
Coordinators & Lecturers	161	102	63%
Total	***242***	***161***	***67%***

General appraisal of the introduction of RMPs

The overwhelming majority of respondents experience the introduction of RMPs as a positive development. RMPs are especially seen as enriching the range of higher education programmes, because they offer institutions the possibility of selecting the students most talented and most interested in research. Working with talented and motivated students who desire to be challenged and have the ambition of a career in science is inspiring for lecturers. When teaching this select group of students, much more explicit attention can be devoted to training research skills in order to prepare the students for a possible PhD trajectory. In this way, RMPs meet society's need for more and better researchers. Moreover, RMPs are regarded as a means by which institutions can profile the distinctive features of their research programmes, which can bolster their recognisability and competitive position.

Yet not all respondents are equally enthusiastic about the introduction of RMPs and even positive respondents mention several objections. For example, several respondents wonder whether too many of the same RMPs are being offered and whether the introduction of RMPs might not result in regular master's programmes eventually becoming degraded to "second rate". Some respondents experience RMPs, which have to be offered independent of regular master's programmes, as a heavy burden for the institution because relatively large amounts of attention and resources are devoted to a small number of students. Despite the fact that according to some, the number of students demonstrating an interest in participating is somewhat disappointing, in general the introduction of RMPs is seen as a welcome educational innovation.



Reasons for introducing RMPs

The respondents were asked to what extent, in their opinion, the introduction of RMPs could contribute to the following five educational objectives:

1. improving the quality of training programmes for future researchers;
2. improved contiguity with PhD trajectories;
3. an improved profiling of the distinctive features of the research programme provided by the faculty and/or institution;
4. producing a considerably greater number of qualified researchers, both within and outside universities; and
5. attracting foreign students.

	Total	KNAW	R&D's	C&D's
Beter researcher training	***1***	1	1	1
Contiguity with PhD track	***2***	2	2	3
Profilling research	***3***	3	4	2
More researchers	***4***	4	3	4
Foreign students	***5***	5	5	5

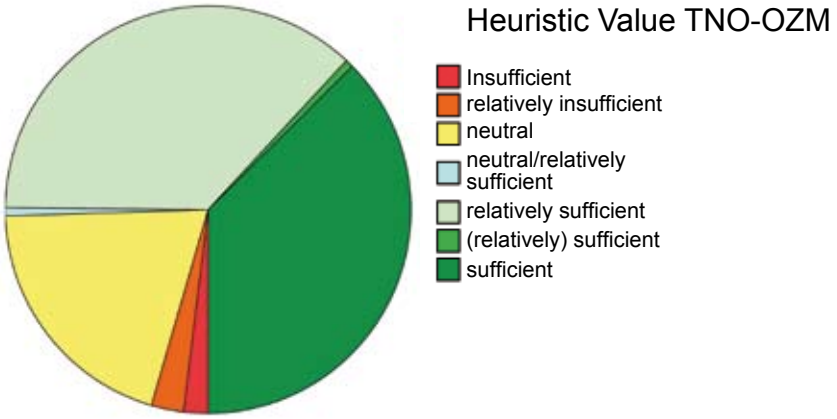
The figures in this table indicate ranking

According to all three respondent groups, RMPs first meet the objective of improving the quality of training programmes for future researchers and in the last place, the goal of attracting more foreign students. Opinions differ as to the extent to which RMPs contribute to the remaining three goals. The differences are not large but nonetheless significant. Several respondents spontaneously mentioned another reason for the introduction of RMPs: not wanting to fall behind other departments within the same institution.

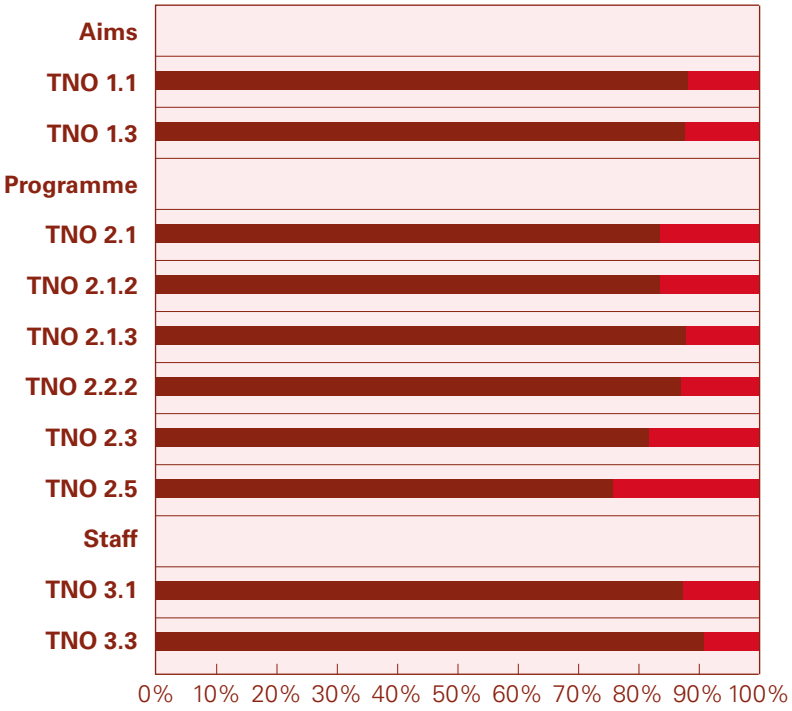
Appraisal of the initial accreditation framework

In the survey, the respondents were asked their opinion of the initial accreditation framework for RMPs (TNO-OZM), which is used as an *assessment instrument* by the KNAW panels and used as a *design instrument* by the institutions. In answer to the question of whether the initial accreditation framework provides a satisfactory basis for assessing and/or compiling an application, three-quarters

of the respondents are positive. The remaining one-quarter is largely neutral; only a single respondent finds the initial accreditation framework to be simply "hot air", "educational nagging", or to only offer "the appearance of accuracy". However, the large majority are reasonably to well satisfied with the initial accreditation framework.



Subsequently, the respondents were presented the ten different passages from TNO-OZM, in which the RMP-specific criteria are set out. The question was asked whether the respondents would like to make any amendments to the passages and if so, what these would be. The results show that there is a broad support base for the framework: for virtually all sections, the majority of respondents do not seem to want any changes to be made.



If we analyse the commentaries of the respondents in more detail, we mainly find suggestions for subtle changes to the formulation and word choice with the intention of setting out the criteria more clearly (*"put more emphasis on…"*, or *"describe this more clearly"*, *"add…"*, and *"you should rather use the word …"*). Other commentaries of the respondents were not so much suggestions for amendments, but rather critical comments on the desirability or usability of the criteria (*"pay more attention in the assessment to this important criterion"*, or *"this is obvious, isn't it?"* and *"this requirement cannot be assessed!"*). Across the board, the commentaries of the respondents show little sign of a desire to loosen the assessment requirements or to make them more stringent. This suggests that the majority of respondents believe that the standard has been set correctly.

There is one exception to this general trend. One-quarter of the respondents desires amendment of criterion 2.5:

'In terms of form and contents the intended programme is in line with the qualifications of incoming students. For admission to the degree programme and in compliance with Article 7.30b of the WHW, such a selection with regard to the apparent knowledge and skills of the student is employed by the institution that there is a reasonable chance that the students who are admitted shall comply with the high requirements set by the study programme and that they shall complete the study programme successfully. This means that the students must have achieved a higher than average result on the bachelor's study programme, which proves their suitability for entering the research master's degree programme.'

Several respondents ask what exactly the phrase "above-average" means ("higher than a 7, or higher than / equal to an 8?") or ask to loosen the criterion by only requiring above-average results for bachelor's programme courses relevant to the RMP concerned. A larger number of respondents find that it could be made more stringent. Several would prefer "considerably higher" or even "excellent" results to be required, lateral entry to be only possible for candidates who have followed a similar first-year programme, or even to rule out the possibility of lateral entry completely. However, more frequently the suggestion is made to set admission requirements of *interest*, *motivation*, or *ambition*, in addition to above-average results.

Nonetheless, most respondents ask for more freedom in the selection procedure to be observed, particularly because otherwise enrolment would be too limited to keep the programmes viable. After all, study results attained in the past are reasonable but not definite predictors of future study success. An above-average interest, motivation and ambition for a career in research are regarded by virtually all respondents as the deciding factors. Some respondents would therefore like to make their selection on the basis of a letter of motivation and an intake interview, an entrance exam, a short preparatory programme or a training and research proposal. Above-average performances on such selection measures should be able to compensate for *(not* higher than) average study results.

Appraisal of the assessment procedure

Compared to the respondents' appraisal of the initial accreditation framework, the responses concerning the assessment procedure are less enthusiastic – at least, amongst a limited number of representatives of the institutions. For example, a number of respondents find the procedure too labour-intensive and bureaucratic and there is a demand for more freedom for the institutions. Also, responses are on occasion negative about the composition of the KNAW panels. The assessors were felt to be lacking expertise and too conservative, to entertain pet subjects or to consider matters more from a political rather than substantive motivation. According to one respondent, the procedure makes an ad-hoc impression because the different KNAW panels do not observe the assessment criteria in a uniform manner.

At the same time, there is criticism from the side of the KNAW as well. According to some panel members, the applications are insufficiently elaborated, compiled with a surprising degree of nonchalance or far from complete, especially regarding the description of the proposed programme, staff deployment, the conditions for continuity and the system of internal quality assurance. The KNAW members have no further suggestions for improving the procedure, are reasonably satisfied about the input of the experts and exceptionally satisfied about the way in which NVAO policy advisors perform their duties as secretaries.

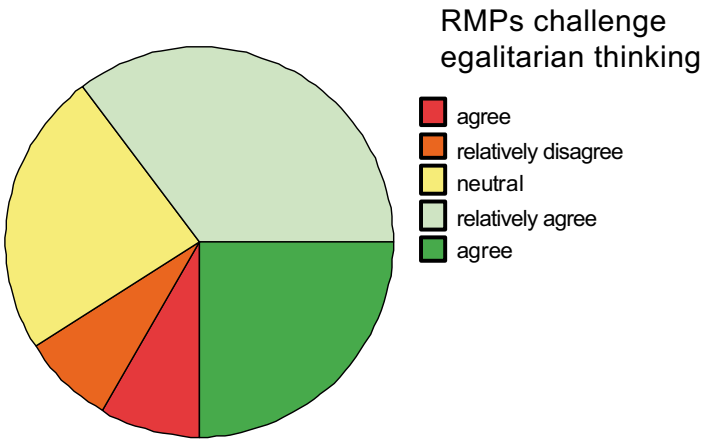
Despite the sometimes severe mutual criticism, the survey results show that there is no particularly strong desire to drastically change the method of assessment. Most of the KNAW members are satisfied about the submitted applications, most of the representatives of the institutions voice no objections about the panels; some even experience a reduction in the level of bureaucracy of the procedure. Virtually all parties involved set great store by the various components of the procedure (including the written questions, the hearing and formulating recommendations).

Equality, differentiation, qualification

Although at its heart the Netherlands seems to be an extremely egalitarian society, differentiation is nonetheless a distinctive characteristic of the Dutch educational system (OECD, 2004). An initial broad selection sometimes takes place in the penultimate year of primary school, when most pupils are 11 years old. Equality and differentiation are therefore two themes that have been discussed for decades in the social debate about education in the Netherlands.

Equality

In the questionnaire, respondents were asked to indicate the extent to which they agreed with the statement that the introduction of RMPs has led to egalitarian thinking in higher education in the Netherlands becoming subject to discussion. The majority of the respondents agree (moderately) with this statement. In the commentaries in this regard there are a few cheers and sighs *("Doesn't seem bad to me," "Thank God!")*. According to others, there are many other matters that have brought the equality principle under discussion, or the move in this direction was already made when the *University College* in Utrecht was established. One respondent notes that it is more likely that the introduction of RMPs was itself the result of egalitarian thinking being brought under discussion (rather than the other way round, as suggested in the questionnaire).

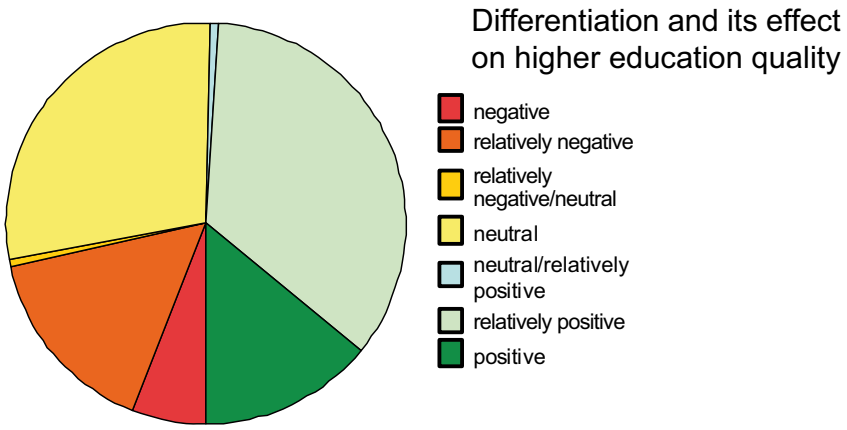


Differentiation

The respondents were also asked to what extent they experience the current differentiation in the range of master's programmes as a positive development for the improvement of the quality of academic education in the Netherlands. Based on the outcomes, it can be concluded that opinions are divided within the academic community regarding this issue. About half the respondents are (moderately) positive and about a quarter of the respondents are neutral about the contribution of the current differentiation to the quality of academic higher education. The remaining quarter of the respondents are (moderately) negative.

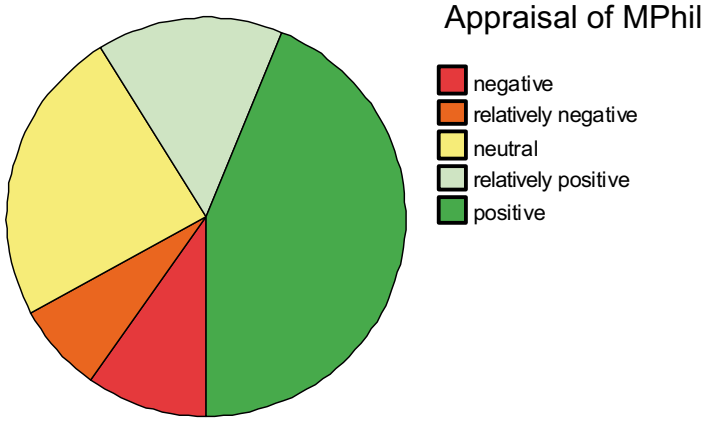
The objection most frequently voiced is that the diversity in the types of master's programmes goes hand in hand with a great lack of transparency in respect of content. According to a number of respondents, the distinctions are somewhat artificial and the current differentiation leads to a high degree of confusion both at home and abroad, because "no one can explain the differences anymore". Other respondents are of the opinion that the so-called "top master's programmes" and "prestige master's programmes" should be abolished: "all master's programmes should be "top" in their category" and "too many categories obscure the options".

Thus, only about half the respondents are positive about the current differentiation in higher education in the Netherlands, because "you deliver customised work by aligning with the interests and wishes of students and society", and "through differentiation, students often arrive at the right place more easily".



Qualification

Finally, the respondents were asked their opinion of the title awarded to RMP graduates, i.e., the possibility of awarding the title of MPhil alongside that of MA and MSc. Some 60% of respondents are (moderately) positive: this title better reflects the distinction between RMPs and regular master's programmes and would perhaps increase the appeal of RMPs for students. The remaining 40% of respondents are neutral about this issue or (moderately) negative. A number of respondents find it misleading "because in general, RMPs do not contain philosophy" and the MSc title better indicates that a programme for training future researchers is involved. Within the faculties of law, the preference is often for the title LLM for RMP graduates. Moreover, according to some respondents, the title MPhil is largely regarded abroad as a ***dis***qualification: "MPhil has a very specific meaning in the UK, a ***failed*** PhD". Several respondents believe that an MPhil would only lead to confusion: "the fewer different titles the better".



Conference

Introduction

On Tuesday 5 June 2007, and in concert with the KNAW, the VSNU, the Netherlands Rectors Conference and the student organisations ISO, LSVb and PNN, NVAO organised the conference *The research master's in the university landscape*. The conference was held in the Nieuwe Kerk on the Spui in The Hague. The programme consisted of three sections: a talk about good practices, lectures and a closing forum discussion.

Good practices

The first speaker was Prof. Dr. Louk Hagendoorn, who gave a presentation about the six RMPs provided by the Graduate School of Social and Behavioural Sciences of Utrecht University. This was followed by a discussion about the good experiences with RMPs moderated by Dr. Joop Sistermans (chair of the AWT Advisory Council for Science and Technology Policy). In addition to Prof. Dr. Louk Hagendoorn, the participants in this discussion were:

- Dr. Jacques Bos (director of the Philosophy department at the UvA)
- Prof. Dr. Bram Buunk (professor of Evolutionary Social Psychology at the RuG and member of the KNAW Assessment Panel for RMPs in the Behavioural Sciences),
- Prof. Dr. Maarten Janssen (general director of the Tinbergen Institute),
- Prof. Dr. Jan Sixma (professor emeritus of Haematology at the UU, former chair of the Health Council of the Netherlands and member of the KNAW Assessment Panel for RMPs in the Biomedical Sciences), and
- Prof. Dr. Ted Splinter (Erasmus Medical Centre and director of the RMP *Clinical Research* at the EUR).

Round table

Lectures

The next section of the conference consisted of four lectures. The first lecture, given by Dr. Karl Dittrich *(chair of NVAO)* addressed the initial outcomes of the NVAO survey (the dossier analysis and survey), which were treated in earlier chapters of this report. The three other lectures were given by:

- Prof. Dr. Rudy Andeweg, chair of the Scientific Council for Social Sciences (SWR) committee that conducted a study into the contiguity of RMPs with the PhD trajectories in the Social Sciences,
- Dr. Sijbolt Noorda *(chair of the VSNU),* and
- Prof. Dr. Frits van Oostrom *(president of the KNAW).*

Forum discussion

The conference closed with a discussion about the future of RMPs moderated by *Loek Vredevoogd (former chair of NVAO).* In addition to Rudy Andeweg, Sijbolt Noorda, Frits van Oostrom and Karl Dittrich, three representatives from student organisations participated in the discussion: Bart Buijs (ISO), Inger de Bruin (LSVb) and Gertjan Tommel (PNN).

Forum discussion

The following pages contain the full contributions of Rudy Andeweg, Sijbolt Noorda and Frits van Oostrom. This chapter ends with a number of interviews by P. G. Kroeger and Jonathan Zondag of *ScienceGuide* with Joop Sistermans and the current representatives of the student organisations ISO, LSVb and PNN.

Prof. Dr. Rudy Andeweg

FIRST IMPRESSIONS

Research Master's programmes in the Social Sciences

(by Rudy B. Andeweg, Leiden University)

In 2004, accredited two-year research master's programmes were offered for the first time and by now they have turned out the first graduates. Obviously, it is as yet too early to take stock completely but it is still not too late to record the first impressions in view of possible improvement measures. To this end, the Social Sciences Council (SWR) of the Royal Netherlands Academy of Arts and Sciences (KNAW) has set up a committee to study how research master's programmes function in practice, with a special focus on the contiguity between research master's programmes and the PhD training programmes offered at research institutions.[4] At the beginning of 2007, a written questionnaire was sent to the coordinators of all NVAO accredited research master's programmes (a total of 47 programmes on 1 January 2007) in the field of the social sciences (in the broad sense, including the social and behavioural sciences, economics and business administration and law). The response amounted to 83 per cent (39 returned the questionnaire). At the same time, members of the commission also interviewed the directors of nine of the 28 research institutions recognised by the Research School Accreditation Committee (ECOS) within the same cluster of disciplines.

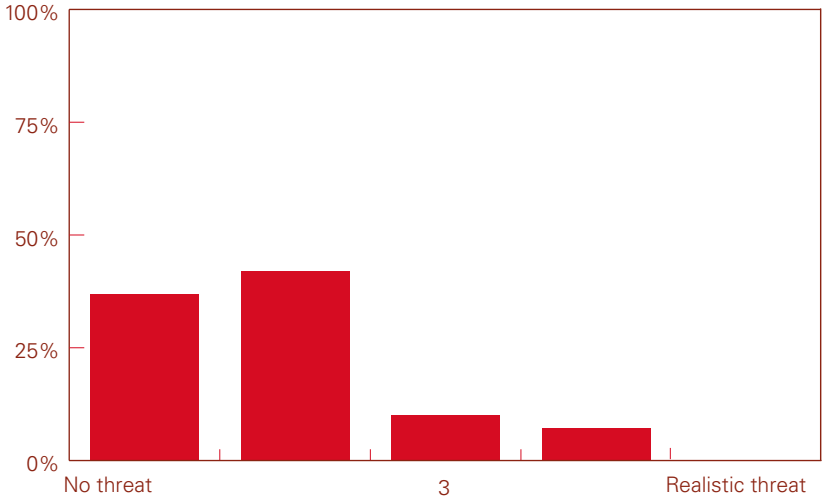
Points of satisfaction

Growth

The eagerness with which research master's took off within the social sciences shows that there was a great need for such programmes. As will be pointed out later, it is certainly not because it is financially attractive that RMPs are offered. Still, at least 20 research master's programmes were offered immediately in 2004. A year later, about 33 research master's programmes were offered and in 2006 there were 36 such programmes. (These figures relate to the figures in our survey, the real figures are slightly higher.) The enrolment figures show a similar growth: from 158 enrolled students in 2004, to 342 in 2005 and 424 in 2006. Although comparison with figures provided by the VSNU shows that these figures also slightly underestimate reality, there is certainly no question of covering, let alone exceeding, the demand for RMP students in the social sciences. For example, in 2005, 570 researchers obtained their PhD in the social sciences: 314 in the social and behavioural sciences, 143 in economic sciences and 113 in law. Of course, so-called "external" PhD students (those enrolled in a PhD training programme without being employed by the university) are included in these figures, but then again not all PhD students eventually obtain their PhD. If we assume that both factors cancel each other out, this would mean that in 2005, these 570 PhDs made way for 570 new PhD student vacancies. Of course, one has to take into account that not all research master's graduates have the ambition or the potential to become a PhD student (more about this later) but on the other hand, the survey respondents pointed out that they expect that in the future most PhD students will be recruited from research master's graduates. Additionally, one also has to take into account that the research master's success rate is not 100% (again, more about this later) and it does not seem exaggerated to estimate the desired enrolment in the social sciences at more than 1,000 students a year.

4 The committee consisted of Prof. Dr R.B. Andeweg (professor of Empirical Political Sciences, Leiden University), chair; Prof. Dr H.B.G. Ganzeboom (professor of Sociology and Social Science Methodology, VU University Amsterdam), Prof. Dr P. Rietveld (professor of Transport Economics, VU University Amsterdam), ms. Prof. Dr J.M.A. Riksen-Walraven (professor of Developmental Psychology, Radboud University Nijmegen), Dr J.F.M. Sonneveld (Netherlands Centre for Research Schools and Graduate Schools (the PhD Centre), IVLOS Institute of Education, Utrecht University) and ms. Dr A. Vollering (secretary to the SWR), secretary to the committee. The report *Research Master's programmes in the Social Sciences: First Experiences [Onderzoeksmasters in de Sociale Wetenschappen: Eerste ervaringen]* has been published by KNAW.

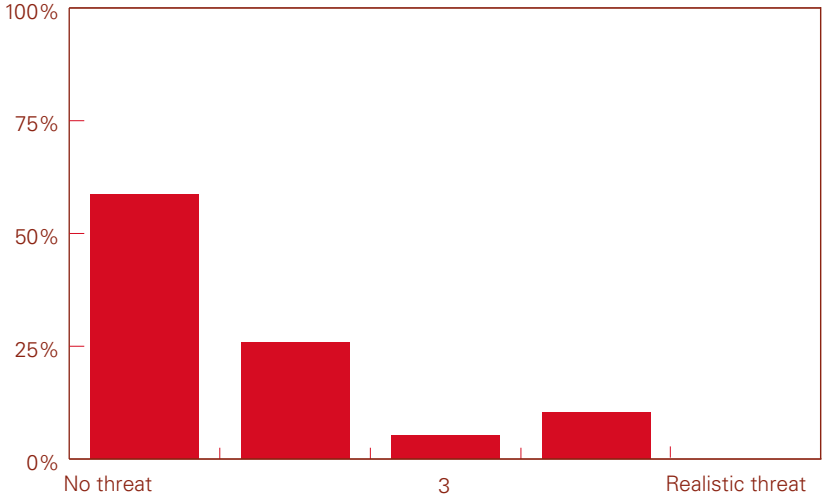
The research master's coordinators hardly consider lack of future employment for research master's graduates that enter the research market as a potential threat. There seems to be plenty of room for further growth.



Insufficient demand for researchers

High level

A second remarkable observation is the high quality and the high level of ambition that characterises these research master's programmes. This certainly holds true for the qualifications of the teaching staff. The accreditation of a research master's programme is conditional on an outstanding evaluation of the research environment of the programme concerned, according to the latest research quality assessment. Although there may have been personnel changes since a programme was last accredited, the deployment of highly qualified teaching staff, at least in terms of their rank, is still impressive. Research master's programmes claim that on average half of the teaching hours should be taught by full professors, which is indeed realised. In addition, on average, 30 per cent of the teaching hours should be taught by associate professors, which is nearly realised, as it comes to 26 per cent. These are remarkable figures, given the full and associate professors' already heavier workload in terms of research and management responsibilities. Nevertheless, getting good researchers to teach in research master's programmes has not been a problem. Apparently, the need for these programmes is so high that there is a strong willingness to invest in them personally.

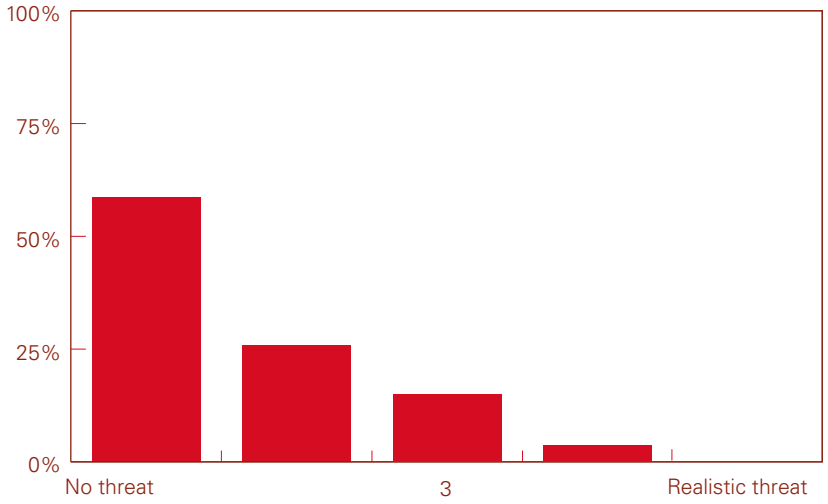


Good researchers do not want to teach in RMPs

The high quality can also be seen in the high demands placed on the thesis, which is the end product of the programme. This is reflected in the workload that is assigned to it: an average of 26 ECTS in the curriculum. Only three out of 39 research master's programmes in our survey require an "ordinary" thesis. However, in another sixteen cases, the thesis has to be written in accordance with the quality requirements for a publishable article in an international, peer-reviewed scientific journal. In yet another seventeen cases, in addition to this requirement for the thesis, students must also submit an elaborate research proposal, in most cases, a proposal that would meet the requirements of the open competition for public funding in the field of Social and Behavioural Sciences within the Netherlands Organisation for Scientific Research (NWO).

Notwithstanding these demanding requirements, the students' completion rate is relatively high. First estimates can only be given for the research master's programmes that opened their doors in 2004. Of all students who enrolled in 2004, 22 per cent dropped out prematurely but 63 per cent had already graduated at the time of the survey (January – February 2007), that is within the nominal programme length, or with only a couple of months' delay. For 2005 and 2006, the picture is not yet complete. At the beginning of 2007, 10 per cent of the students who enrolled in 2005 had dropped out prematurely and 7.5 per cent of the students who had enrolled in 2006. These figures do not give cause to expect lower completion rates in the future.

Finally, research master's programmes themselves have a high opinion of their own graduates. Seventeen research master's expect their graduates to meet all of the entry requirements for the one or two PhD training programmes for the (sub-)discipline concerned. Fifteen research master's go even further and expect their graduates to be more than just adequately qualified for these PhD programmes. This could pose a threat for PhD training programmes: part of their ground is cut from under their feet by research master's as far as their teaching programme is concerned. Almost three quarters of the coordinators of research master's programmes expect their graduates to be able to complete a PhD thesis within three years time. Amongst research master's coordinators there is hardly any concern about defective contiguity with extant PhD training programmes.



Limited contiguity with PhD training programmes

Points of concern

Diversity

It is difficult to generalise over all research master's programmes, as they are so diverse. This is reflected in their curriculum, for example. The average distribution of the workload across module types is not surprising: in addition to the substantive modules, a relatively high number of ECTS is assigned to methodological training and to the thesis.

Curriculum composition for all research master's programmes and per discipline.
Average number of ECTS per module; the standard deviations are given between brackets

	Sub-stance	Methods-	Skils-	Internship	Thesis	Other	Total
All research master's	43 (17)	28 (15)	8 (6)	9 (10)	26 (7)	6 (10)	120
Law	41 (9)	24 (13)	8 (4)	12 (14)	22 (7)	14 (16)	120
Economics / Business	57 (20)	24 (11)	7 (8)	0 (0)	29 (2)	4 (9)	120
Administration Sociology / Anthropology Psychology	38 (12)	40 (12)	4 (7)	17 17	22 (18)	0 (9)	120
Psychologie	46 (18)	20 (11)	7 (5)	13 (11)	29 (8)	6 (9)	120
Pedagogial and Education Science	46 (14)	26 (9)	6 (8)	9 (10)	20 (17)	13 (17)	120
Political Sciences / Public administration	51 (14)	28 (13)	9 (7)	0 (0)	25 (6)	7 (9)	120
Social Geography	40 (14)	27 (5)	13 (7)	6 (9)	30 (0)	5 (7)	120
Social Science	25 (13)	34 (31)	12 (8)	14 (4)	28 (6)	6 (10)	120
Other	23 (21)	53 (14)	5 (9)	15 (5)	23 (3)	2 (3)	120

What is more surprising is that the standard deviations are so high, with a relative exception for the master's thesis. These deviations can be partly explained by the character of the disciplines concerned. A research master in the legal field will have a stronger focus on qualitative methodology than, for example, a research master in economics. Nevertheless, discipline-specific demands do not explain all the variation. Moreover, even within disciplines, standard deviations are often high: more than 13 for methodological modules both in law and in political sciences/public administration, or between 18 and 20 in the substantive component in psychology and in economics. This diversity within disciplines can be an obstacle for the contiguity with PhD training programmes. We have already pointed out that research master's programmes offer the same kind of courses that are taught in PhD training programmes, but if the curriculum of research master's programmes differs within the same discipline, it becomes very difficult for the relevant research institutions to adapt their PhD curriculum to the new situation.

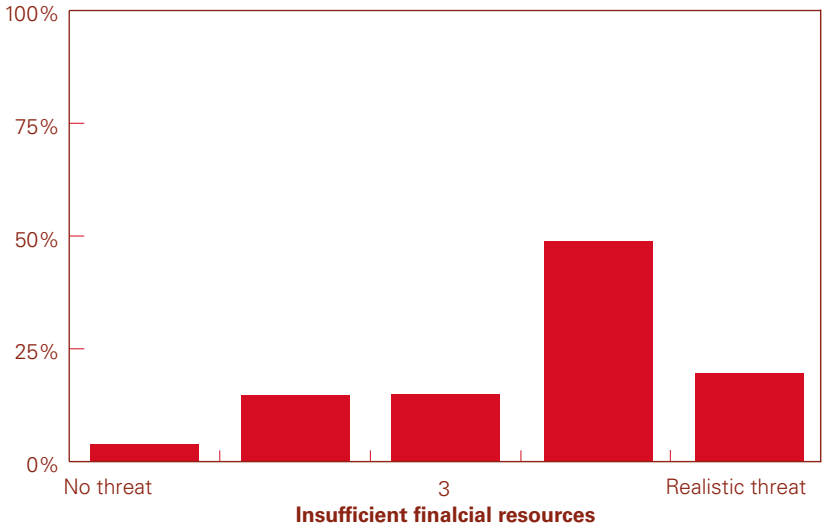
It is also striking that different degrees are granted. Most research master's students are granted the title of MSc, a small number is granted the title of MA or an equivalent discipline-specific title (for example LLM for law research master's), and one out of five RMPs grants the title of MPhil. Some research master's coordinators indicated that they would prefer the MPhil to their current MSc or MA. Probably, the underlying reason for this is that the MPhil is the only title that is never granted to a one-year programme and that it therefore better expresses the specific character of a research master's degree.

Local character

It is remarkable to see that most research master's programmes have a strong local orientation. In organisational terms, most research master's are embedded within a single university: either they are offered at a local ECOS recognised research institution (10 research master's), or they are offered at a local graduate school, mostly confined to a single faculty (16 research master's). Only three locally accredited research master's in public administration cooperate across university boundaries, and only one research master's is offered by an interuniversity research institution (the Tinbergen Institute). Even if part of the curriculum is open to students from other programmes (on average one third of the total number of ECTS), there is hardly any form of co-production with partners from outside the institution. The same goes for student recruitment. In 2006, 61 per cent of the incoming students was recruited from a bachelor's programme (or sometimes another master's programme or the former Drs) within the same discipline offered at the same university. One out of five incoming students came from abroad and only 15 per cent had previously studied at another Dutch university. This is remarkably asymmetrical with the PhD training programmes. While virtually all research master's have a local character, most PhD programmes are (still) offered by interuniversity research institutions. This asymmetry does not contribute to dovetailing education between research master's and PhD training programmes.

Financing

According to the coordinators, the most severe threat to their research master's programme is lack of financial resources.



This is partly due to the sometimes very limited enrolment in research master's programmes. In 2006, there were eleven research master's with a new intake of five students or less. The average minimal annual enrolment desired is fifteen students, but this number has not yet been attained. Obviously, there is still some work to be done here. A less local recruitment policy might help, as well as another way of presenting these programmes. From my own experience, I found that the "research master's" label can deter talented students. When, during the third year of their university studies, they have to make the decision whether or not to opt for a research master's, they are put off by the idea that this implies a lifetime commitment to a career in research. They are quite right in not yet wanting to make such an irrevocable choice, but it is also completely unnecessary because research master's programmes offer quite a large scope of future possibilities. It would be better to present the research master's as an Honours track. Incidentally, the low enrolment is by far not a sufficient explanation for the concerns about financing. By definition, research master's are aimed at a small and especially select group of students: the average annual maximum enrolment desired still does not exceed 23 students. Moreover, this type of education is extremely intensive given the high demands, and should be offered by the best, therefore usually the most expensive, teaching staff. On top of that, it is a two-year programme. Public funding does not reckon with this factor, and research master's programmes are funded in the same way as one-year "ordinary" master's programmes. Some research master's are fortunate in that the university reallocates its public funding in favour of its research master's programmes, to the detriment of other programmes. We already mentioned that good researchers are currently willing to teach in research master's programmes, but that this seems mostly instigated by their own professional pride and the conviction that this form of education is desirable. It is questionable whether this alone can provide a solid basis for the viability of the research master's programme in the long run.

In conclusion

In some respects, the dust has not yet settled on the new research master's programmes in the Social Sciences. Undoubtedly, in the next couple of years, measures will be taken to remedy their growing pains, i.e., diversity which is not always functional, modest enrolment figures, the often very local set-up, the repercussions on research institutions and the PhD training programmes (including the length of the PhD programmes). What is already apparent is that research master's are quite clearly in a class of their own. When comparing them with the "ordinary" master's programmes on aspects like the composition of the curriculum, the qualifications of the teaching staff, the demands on the master's thesis and the completion rates, it becomes quite apparent that we are dealing with a genuine educational innovation, and not with a way to escape the cursed (also by this author) one-year programme length of most master's programmes. To the extent that concerns about such an escape route are behind the lack of financial resources provided for research master's, these concerns are clearly unfounded.

The future of talent, the talent of the future

(contribution by Sijbolt Noorda, chair of the VSNU)

Offering young potential researchers scope to develop their talents is in everybody's interest!

This viewpoint is obviously endorsed by young, talented people themselves, but universities and other research institutions also strongly agree with this statement. Talented people who have the ambition and the qualities to do research, want to be able to develop their talents. This calls for a stimulating environment, good examples and challenging opportunities. Universities are making efforts to provide the above, not only because this is one of their main activities, but more specifically, because it is in their own interests, i.e., the future development of scientific research. Without new highly-qualified talent, they would slide down to a lower quality level; they would not be able to handle new developments in research and would consequently lose their competitive edge in the research world. If a university or research institution has to cover such losses in more than one field, it will no longer be a serious competitor in the battle for the already scant research resources; it will not be a preferred research partner for international business and it will not attract top scientific researchers and the best young talent. If a university does not offer a "breeding programme" for young talent, it will not be able to maintain its position in higher spheres, let alone that it will be able to improve, especially compared to richer competitors. On balance, it will have insufficient allure to attract and keep the desired new generation of scientific researchers. Eventually, it will burn its own fingers.

Dr. Sijbolt Noorda

The last three words of the aforementioned appeal *(in everybody's interest)* indicate that it concerns more than just an internal academic interest. A prosperous development of academic research serves a much broader base. The training of young scientific researchers is not only internal in-company training

pertaining to one university or the university sector. Society at large increasingly needs highly qualified entrepreneurs, professionals and workforce. Much can be said in abstract terms about the "knowledge economy" or the "knowledge society", but the key figures have always been the academics and other highly qualified men and women. Academics with their specific competences and experience in research play an important part in this select company. This is not only true for research-intensive companies, but also for policy departments of public authorities, universities of professional education and consultancy agencies. In the seventies, master's graduates and engineers gradually replaced PhDs in all of kinds of jobs, including in secondary education. The underlying reasons were probably noble and generous, but this resulted in a continuing egalitarian climate and an underestimation of qualified extra knowledge and experience. Instead of pleading for more PhDs and giving higher rewards for extra qualifications, success stories on the excellent performance of master's graduates were being heard and told. Long live levelling in the Netherlands! If one observes the situation in Germany, for example, one will see a completely different picture. The appreciation for Frau or Herr Doktor cannot be considered as the hierarchal remains of a traditional society, it reflects a just appreciation for literacy and numeracy.

The introduction of the three-tiered structure *(bachelor / master / PhD)* at Dutch universities was a major step forward for the development and nurturing of potential research talent. What I am referring to specifically is the "cut" after the bachelor's phase, the introduction of a two-year research master's and its harsh selection criteria. The new structure is being put into practice more or less along the lines of the 2001-2003 plan. The advantage of the swift introduction was that unlike in other countries, there was only one system at one given moment, which contributed to the transparency both for students and the labour market. Additionally, the major aspect of this new structure, i.e., the partition between undergraduate and graduate studies, current in the international context, could play a useful part. For the young generation of would-be researchers, it is of major importance that the master's phase is a specific part of their studies. This paved the way for the introduction of the *research* master's programmes which, compared to the programmes under the old system, stimulate students who have research ambitions by means of a *specific programme*. Their choice, contrary to what was common in the past, is no longer an individual choice. Especially in fields of studies with a large enrolment, these tracks were hard to find, let alone achieve.

In the meantime, these research master's are well established and have been accredited (***2007: 114***). However, not much use has been made of them *(enrolment 2004: 506 / 2006: ± 860)*: a head start was made for the Culture & Linguistics sector, but the Behavioural and Social Studies sector is lagging behind. Medicine, Physical Sciences and Technical Sciences are not included in these figures. In these fields of study, specific research master's programmes are still scarce and/or are only recently being offered.

The first experiences give cause for satisfaction regarding the recognition of the quality of the programmes and the extent to which these programmes attract students, including students from abroad. The specific curriculum designed for a relatively homogenous group of highly qualified students offers more opportunities and, especially more impetus and challenges than a standard programme for the average student would offer. At the same time, however, I worry about the relatively low appeal. From the students' point of view (personal development opportunities), from the universities' point of view (future potential), and in the interest of society (need for knowledge), I would heartily welcome a larger enrolment.

What causes these relatively low enrolment figures? I suppose there are three major factors that play a crucial role in this. The first one is that it is yet too early, the three-tiered cycle still needs to become fully established. Another more important factor presumably, is the insecurity and hesitation students feel towards what follows after the research master's programme. In some cases it seems that enrolment figures are kept low on purpose and that the research master's is presented as a pre-PhD track for which

the volume is subject to the previously determined chances of being allowed to move on to a PhD track. Or only few students envisage a PhD after having finished their research master's. A third factor related to this is the presumed insecurity about the value of a research master's title on the labour market outside the university sector. Do the extra efforts pay off sufficiently?

What needs to be done? In my opinion, it is essential in the first place to consider the research master's as an independent track with its own intrinsic value and not only or mainly as a pre-PhD track. Qualified young researchers can be of much more importance and can be equally deployed elsewhere than merely at the entrance gate to a PhD. The important issue here is to broaden the demand for qualified graduates who have successfully completed a research master's programme and make it more transparent. If the labour market cannot appreciate this extra qualification, this will not contribute to students deciding to put themselves out and make that extra effort. The tendency to appreciate personal qualifications is comprehensible, the tendency to underrate academic qualifications is not. For the purpose of external transparency, it would be recommendable to implement distinctive titles. It would not be a bad idea to attribute the title of MPhil to research master's. The outside world would then equally understand that it concerns a specific qualification.

Secondly, it is worth considering making curricula not too narrow. A very specialised research master's programme is not attractive to students and obliges them to make a binding choice relatively soon, which in view of the dynamics of scientific developments, is of no use. A research master's student wants to obtain a qualification in research, without being pinned down to a specialisation at this stage.

Third and last, the prospect of the third cycle, the PhD track, could be made a lot sunnier. The current low number of available PhD positions is not a satisfactory criterion for defining the desired enrolment into the research master. These numbers should be much higher. The number of PhD students at universities in the Netherlands is also low in comparison with universities abroad and the Minister of Education has rightly requested the universities to do something about it. This can also take place outside the traditional PhD track. We should strive for a more differentiated palette for the third cycle. The increased internationalisation will lead to more sponsored fellowships. Some universities are already experimenting with it, but the currently applicable labour legislation does not make it easy for them. I also strongly support dual arrangements in collaboration with employers in business, (higher) education institutions and the government: PhD students that are allowed time on the job to write their PhD thesis or PhD students who teach part-time, in short, broadening and differentiating the PhD track. This will lead to research master's attracting more students.

In conclusion, a general remark. Differentiation is an important trend in Higher Education. For a long time, we were satisfied with the distinction between universities ("WO" institutions with an academic orientation) and "hogescholen" ("HBO" institutions with a professional orientation). The Dutch binary system offered students and the labour market sufficient options and kept the differences cleverly clear. In the course of time we realised that things are, or at least should be, a bit more complex. In practice, the binary standard programmes stimulate too generally and therefore too weakly. Those who want more than the basic programme are supposed to find things out on their own. It is a good thing that the universities have distanced themselves from this too simplistic a world view. Bachelor's programmes are now offered in several different versions, with extra challenges as a structural provision. Master's programmes are moving in the same direction. I consider that to be a great profit, which can only rise when the research master's programme becomes more successful.

The independent value of research master's programmes

A vision from the Academy

(contribution by Frits van Oostrom, president of the KNAW)

Prof. dr. Frits van Oostrom

On 5 June 2007, the day NVAO held the symposium on the research master's programme, it was exactly 26 years ago that I obtained my PhD. During the preparation for my speech, this fact made me look back on how, in the past, young, talented students were prepared for a career in research. I do not mention this to put myself in the picture but because I think it can contribute to making our approach towards research master's programmes more transparent and that it can steer us in the right direction if we look at it not only from the present's point of view, but also from a broader and more historic perspective. This viewpoint fits in well with the Royal Academy of Arts and Sciences' policy, as we dedicate ourselves to sustainable science.

Obtaining my PhD was the crowning of my temporary assignment as a researcher to work on my PhD thesis. We would now consider this a PhD student's programme, as it also covered a period of four years. I came through the selection for this programme thanks to my good grades during my previous studies, which I finished in five and a half years; this was considered quite swift at the time. My studies consisted of three years of undergraduate studies and just over two years of graduate studies, which were rounded off with the traditional weighty thesis, which I finished in half a year. After that, as I mentioned earlier, I entered the PhD track.

Why am I telling you all this? For the older people among us, it will help to bring into focus the perspective on the research master's:

– We should not consider this kind of master's programme, which can directly follow a three-year bachelor's programme, primarily as an initial PhD track and therefore, as a kind of purgatory before the actual PhD track.
– We ought to consider the research master's as a programme following a bachelor's programme, which is exactly what it is, as it follows a three-year basis of academic studies.

These statements presuppose that our minimal starting point is to hold on to the actual quality level. We could choose differently and start bargaining away with titles and thus creating inflation of our system of titles. The latter happens on too many occasions already. I do not consider this the right way forward; least of all that it should be our mission. On the contrary, we should deal in quality and to ensure quality we need a system of accreditation. When discussing the level potential research master's students should have at the time of enrolment, we should make it quite clear that we are not dealing with "proto-PhD students", but with bachelor's graduates who would have been just undergraduates under the old system and who are, in my opinion, even less equipped intellectually than the former undergraduates.

This can be illustrated according to the following:

– The level of incoming students at universities is somewhat lower than before, maybe not for all subjects in equal terms, but it is true that the content quality at secondary education has declined considerably. This cannot only be deducted from the continuous, but somewhat scattered complaints

coming from universities, but also from empirically founded long-term research by the education specialist from Groningen, professor Greetje van der Werff.
– University studies have also undergone considerable changes. Writing a thesis under the old system entailed a lot of research and the thesis itself had more substance than the current bachelor's thesis. Willem Hofstee pointed out that, compared to twenty years ago, the same diploma is obtained in half of the time. The time that students devote to jobs on the side has increased.

When I was studying, I also had a job on the side, being a student assistant. I owe a lot to that job. As a student assistant, I was directly involved in research and education. These kinds of jobs that are reasonably accessible to students deserve more attention. However, although these kinds of jobs could actually contribute to having better qualified students, there is not yet a system in place for student assistant jobs. All the more reason to full-heartedly support the proposal made by KNAW and ISO to develop such a system.

At this moment, if we want to take research master's students seriously and treat them in the right manner, we cannot conclude otherwise than that we need to take the following into account:
– We need to let them learn as students and not having them do their own research yet, as with PhD students.
– The above places strong demands on the research master's as an educational programme.
– Attention given to the educational programme places strong demands on the assessment. The KNAW realises how important it is to ensure its quality.

The context of bachelor's programmes is quite diverse. There are bachelor's with a high level of research incorporated into the programme and a very good teacher/student ratio. But if we want to set up a research master's programme in, for example, law, we need to take into account that the teacher/student ratio in law faculties is usually 1:50. This requires a completely different set-up of the programme than the ones for smaller fields of study.

If we make no differentiation between the different programmes and fields of study and if we tend to set them up according to the image that fits or should fit our own field of study, then we will create a phantasmagoria and the ensuing accreditation procedure will also be a farce. Possible consequences could be disappointment both from the side of the teaching staff and from the students, results that are below average and poor enrolment, the latter relating both to quality as to quantity.

In any case, enrolment is a concern. At this moment, we do not have all the figures but the first results are not optimistic. An image is portrayed of a large array of programmes, resulting in very scant enrolment figures per programme. Let me give you the example of a faculty with 52 master's programmes, some of them showing an annual enrolment figure of 0.2 students. What happens then is very predictable. Efforts are made towards "focus and mass", but this immediately leads to all efforts being dedicated to mere quantity. Faculties are clustering and the focus is moving to the background, with the ensuing loss of quality.

One solution would be more nationwide cooperation. This may hamper the positioning of separate universities, but we should look at it from a national perspective. What is important for Utrecht or Leiden is not the issue, but what is important for the Netherlands and what is good for students and teaching staff. One can draw the comparison with research schools. Most of these schools were set up at a national level and, for the quality they offer, they deserve much more affection and support, but instead we let them cope on their own.

Another step forward would be to make a tabula rasa of the great many numbers of master's programmes. I predict this is exactly what will happen within the next four years. Additionally, it should be advocated to lengthen all master's programmes and offer them all as two-year programmes, as the current difference between one- and two-year master's is not well founded. In the current situation, there is a proliferation of all kinds of master's: the research master's, the educational master's, the professional master's and the regular master's. Let us make a clean break with all these separate master's. In fact, this is what is happening already, but behind the scenes because it is forced upon universities caused by poor enrolment figures and by the ever increasing costs per student. We should not do this for opportunistic reasons however; there is also much to say for it out of principle. The educational master's, for example, is forcing 20-year old bachelor's students to make an irrevocable choice for the teacher's profession. In general terms, the Netherlands offers a beautiful "polder" landscape, but it is too parcelled out and there is a strong need for space, not in the least for the students themselves.

Apart from joining efforts against proliferation and against parcelling out research master's programmes, another essential step should be taken. A higher enrolment for this type of programmes should be realised by stimulating the younger generation to opt for research master's programmes. However, academic researchers and policy makers should beware of projection and of one-sidedly proclaiming the ideal academic path as the only and prevailing standard. The undesired effect of this would be that 20-year old students would be forced to decide in their third year whether or not they want to become a top-notch researcher, and only when they envisage that kind of future for themselves, would they choose for the research master's. For many students, for the research master's programme and eventually for society at large, this would be a missed opportunity.

The research master's should offer an *orientation* on research. This would make it possible for students to decide whether research suits them and if they would be suited for research. At the same time, students should have the guarantee that even if they do not continue with fulltime research by doing a PhD later on, they will have built up a more than sound basis to take up something else. The latter is a very valid argument, because there are many types of research apart from the purely academic kind. There is applied social science research, different kinds of marketing research and research in educational settings. Apart from taking up another kind of research, another thing that research master's students learn is the skill to be critical and ask questions. Young academics should learn a way of thinking that will educate them for life and in which they learn to differentiate between what we know already in society and what we do not yet know. It essential to care about the difference between the two.

Summarising, we have plenty of reasons to attribute an intrinsic value to the research master's and to set up this kind of programme accordingly, instead of viewing the research master's as a link between the bachelor's degree and the PhD and as an all-or-nothing choice between scientific research and another career. In this view we need to set up, re-gauge and assess the research master's system. If we make the students' choice for a research master's less fragmented and less total, it would come as no surprise to me if research master's programmes attracted more students, resulting in higher enrolment, which will eventually bear fruit for scientific research in particular and for the whole of society in general.

Subsequently, by reasoning on the basis of trust and the educational philosophy behind it, instead of on the basis of bureaucratic micromanagement, more space will be given to accreditation. This will make it much more interesting to assess these programmes and from the programmes' viewpoint, much more interesting to be assessed. We can even consider involving young researchers and alumni to participate in the assessment procedure. If this means that the KNAW should take a step back because its members and the renowned scientists appointed by KNAW should form part of a broader assessment commission in an accreditation procedure, I would not have the slightest problem with that.

Dr. Joop Sistermans

The palette of the master's

(Interview with Joop Sistermans by Pieter Gerrit Kroeger, ScienceGuide)

Joop Sistermans, president of the Advisory Council of Science and Technology (AWT) gladly welcomed the invitation to be a moderator in the panel discussion during the research master's seminar organised by NVAO. This fitted in very well with thinking through and advising AWT on linking research and education in higher education, as he told PG Kroeger, editor in chief of ScienceGuide, afterwards.

'I agreed to take on this role not only because Karl Dittrich asked me to, although that alone would have sufficed. The decisive factor, however, for taking on this mission was the progress we are making in linking research to higher education, both at universities and universities of professional education. I was informed subsequently that shortly after this seminar, another seminar would take place on the "HBO master's". Excellent, I thought, because we need to consider both professional and academic higher education as part of the same palette of different master's programmes with diverse orientations. I see both as complementary. It would therefore be a great pity if we lose ourselves in discussions about binary nomenclature.'

'This complementarity offers both universities and universities of professional education more possibilities, both in research and in education, without one of them losing its identity. Let me give you the example of lectureship. I am a great supporter of having lecturers at universities of professional education as well. At the same time, universities should play a role in this; they should train lecturers and staff from among their own circles and from research projects. This would lead to the improvement of research skills within lectureships and profession-oriented research in professional higher education. In this way, academic and professional higher education can be complementary and they can strengthen each other's quality. I think we should stimulate this even further. Since I have been president of AWT, the president of the Netherlands Association of Universities of Applied Sciences (HBO-raad) is also a permanent member of the presidents' conference of knowledge organisations that AWT has been chairing for 40 years and whose participants further include the Scientific Council for Government Policy (WRR), the Netherlands Academy of Technology and Innovation (AcTI), the Netherlands Organisation for Scientific Research (NWO), the Association of Universities in the Netherlands (VSNU), the Royal Netherlands Academy of Arts and Sciences (KNAW) and the Netherlands Organisation for Applied Scientific Research (TNO).'

At the seminar your "broad approach" to the research master's initially met with strong opposition.

'Oh yes, but I was prepared for this. The tone of the first presentations was that R & D takes place within universities and that pre-selection for it takes place during the master's. I countered by stating that this approach may be too narrow if you want to offer a master's to talented bachelors that would stimulate their interest and offer them skills for doing scientific research. Scientific research that is taking place in business and other knowledge centres should also be part of such a master's programme. If a master's programme can only lead to a subsequent PhD track, it is aimed at too few talented young academics and that should not be our intention.'

In the middle of the discussion during the seminar, the president of the Royal Netherlands Academy of Arts and Sciences (KNAW), Frits van Oostrom expressed his own very individual standpoint regarding this issue: 'We should make it quite clear that we are not dealing with "proto-promovendi", but with

bachelor's graduates who would have been just undergraduates under the old system and who are, in my opinion, even less equipped for R & D and knowledge development than the former undergraduates. This is not something that comes from me alone. The OECD made a fundamental analysis on the subject when studying higher education in the Netherlands. In my point of view, this means we need to let the research master's students learn and not have them do their own research yet, as PhD students. The above puts strong demands on the research master's as an educational programme. This also places high demands on the Royal Netherlands Academy of Arts and Sciences. The Academy will have to reconsider the composition of our assessment committees and integrate more knowledge on education in them.' *At that moment you were glowing on that stage. Why was that?*

'I so totally agreed with his line of reasoning. Not everyone present there must have expected such an analysis coming out of his mouth, but what he said is just so true, isn't it?
The university bachelor is being taught scientific research skills. After having received a broad education, the student will start to "sniff out" what kind of research fascinates him/her and what he/she seems to able to grasp and able to do. After that, the student will be focusing on scientific research in the broad sense. To prepare the student for this, that is what the research master's is for.'

'These bachelors with a broad-based education, interested in and looking for more in-depth knowledge, are the ones we need more of! So you should not limit the research master's to a kind of purgatory before the actual PhD track, as Van Oostrom described it, as being the only possible kind of research master's that students are allowed to participate in. On the contrary, bachelors should be stimulated to become fascinated by all kinds of scientific research.'

This vision was severely criticised by those who thought that this would lead to master's programmes being unable to dedicate themselves to potentially excellent researchers.

'I am very familiar with this reasoning; it is called the *inevitability theory.* When I was involved in pharmaceutical research and R&D in business, I already strongly opposed this theory. What this theory proclaims is the following: "Just invest tons of money in excellent scientific research and something positive will always come out of it." And of course, it does. But that does not mean something is actually done with these results. What is needed is a highly-developed research culture in which all kinds of organisations and people are involved. Then something is actually done with the results. A high plain is necessary for a mountain top to stick out.'

During the first discussion it was pointed out that many research master's are quite small in size. Sijbolt Noorda showed us some very alarming figures on the reality as to the substance of these master's. In this respect, Frits Van Oostrom strongly advocated nationwide cooperation between universities to focus on offering research master's in core research areas.

'During the seminar it was repeatedly mentioned that cooperation on important research areas can be quite successful. I completely agree with Van Oostrom on this subject and I also think it is a very good approach. It struck me that in reality, only faculties of economic sciences cooperate in such a way. I would strongly suggest extending these forms of cooperation on a more nationwide basis. In my view, faculties of medical sciences could successfully put this in motion as well.'

'Additionally, business R & D should participate in this as well. Companies are certainly willing to do this. They simply want to have the best people and do not want disciplinary or geographical factors to limit them in finding these people. Besides, we should look even further. NVAO serves as a good example for

cooperation on quality assurance in higher education between the Netherlands and Flanders. Why could we not envisage such broad cooperation when it concerns the research master's and not only consider such cooperation as a national phenomenon?'
What did you learn from these discussions?

'Something funny happened. The medical people said that they were not so keen on having a research master's programme. "We already have a similar programme and therefore we do not really need it". Because something is already well organised from their side, it makes it unnecessary for others in the knowledge sector, is that it? Well, to me it works precisely the other way round. Apparently, we already have something here that makes our higher education system complete and that makes it possible to optimally develop young talent in higher education.'

'Wouldn't it be nice if we could get this properly organised in our country? Even more so because research master's programmes also attract young talent to our higher education system from abroad. After the bachelor's programme, this young talent will then be able to continue their studies here with a broad-based research-oriented programme and afterwards be able to proceed with all kinds of excellent scientific research. We will then have something to show for it and we will have strong appeal. We can thus further build on this integral foundation in professional and academic higher education in the years ahead. Not a bad prospect at all.'

The student perspective

(Interviews with the Dutch National Union of Students (LSVb), Dutch National Students Association (ISO) and the PhD Network of the Netherlands (PNN) by Jonathan Zondag, ScienceGuide)

Gertjan Tommel (PNN), Bart Buijs (ISO), and Inger de Bruin (LSVb)

Top education for all

Lisa Westerveld, chair of the LSVb, notes that among students there is still a considerable lack of clarity regarding research master's programmes: 'There should be more information available. When you follow a research master's programme, it now seems as if it is a matter of course to enter the field of research. We therefore like to see research master's programmes undertaken by students who want to explore the field of research.'

'We believe it is a shame that selection is often made on the basis of grades alone. Why not look at the motivation of students? Research master's programmes are often used as honours programmes. This tendency is widespread: at some universities people are quick to talk about an honours programme when a student undertakes something outside the curriculum. We do not believe this is a good thing: all students should be able to undertake extra things outside the curriculum. Top education should be accessible for all. Yesterday, in preparation for this interview, I phoned a research master's programme student whom I know from playing football. She is doing a research master's programme. She said: "This is the kind of education I always wanted to have. Tutoring is on a small-scale. This is education as it should be available everywhere, in bachelor's programmes too."'

Lisa's colleague Joanneke Krämer adds: 'What a pity so many students miss out on the opportunity of a well-taught programme because they do not specifically desire to pursue a PhD trajectory. This kind of top education should be expanded. Standard master's programmes should become more like the research master's programmes. Often, there are few lectures given in standard master's programmes. It would be a good thing if the level of the standard master's programmes was a bit higher". Utrecht University has begun a form of top education in the bachelor's phase with its Law College. The university hopes and says that this top education for a small group also benefits education in general, for example,

when lecturers develop a teaching format for the Law College with which they are so satisfied, they subsequently apply this same format in the general bachelor's programmes. '
The LSVb responds with scepticism to this statement: 'Lecturers can only use their time once. Naturally there is cross-pollination on occasion. But, on the other hand, there are also lecturers who are specially appointed to the Law College and therefore do not teach "ordinary" students. We believe that universities should have highly qualified professors teaching first-year courses as well.'

Internally, the LSVb is examining research master's programmes in more detail. The LSVb National Assembly of University Parties (LOF) is already making an inventory of how graduate schools and types of top education are organised at various universities. For example, university council members can keep their executive boards on their toes with the best practices of other institutions.

Doing away with transfer master's programmes

For ISO chair Bastiaan Verweij, the NVAO conference on research master's programmes offered a good opportunity to get to know his discussion partners for the ISO year ahead and to hear what they had to say. 'The whole of The Hague was there, and at the same time, you learn something about a subject that will be an issue in the coming year.'

The current ISO board is therefore keeping a close eye on research master's programmes. 'Recently, we were talking to Frits van Oostrom about these programmes and he was surprised by the desire in the Netherlands for everyone to obtain a master's title. In the US, a master's title means you have dropped out of a PhD trajectory.'

The ISO believes that research master's programmes are a good initiative. They offer precisely the type of education you would expect from a master's programme. On the other hand, ISO chair Bastiaan Verweij has some concerns about transfer master's programmes in academic higher education (WO) and professional higher education (HBO): 'The danger of transfer master's programmes is that you devalue bachelor's programmes.'

'I can imagine that universities of professional education want to offer professional master's programmes for people with broad experience in their particular occupational field. Suppose you work for youth care services and your organisation comes up against a difficult problem that you cannot quite grasp. In such a situation, a master's degree, with a great deal of practice-oriented research relevant to the sector, would be useful.'

'But I do not see why HBO master's programmes are necessary if they have no research component. This is why we want the government to be cautious in its funding of HBO master's programmes. HBO master's programmes should only commence if there is a need for them within the business community. And if the business community has a need for specific master's programmes it should contribute towards financing them.'

'I also asked Minister Plasterk why he is financing HBO master's programmes. I have heard from MKB-Nederland *[Association of Small and Medium-sized Businesses in the Netherlands]* that there is actually no need at all in the business community for publicly funded master's programmes.'

'The Netherlands Association of Universities of Applied Sciences (HBO-raad) was not pleased, to say the least, by our critical questions about HBO master's programmes: "You do not represent HBO students,"

they accused us. Just by chance, I myself have completed a HBO programme. But apart from that, the HBO-raad could not substantiate the demand or need for transfer master's programmes at the HBO level. I asked, but they had not a single study at hand that demonstrates such a demand. They should therefore first have a talk with MKB-Nederland, for example, to find where the missing links are in the supply chain of programmes. There should not only be discussion about HBO master's programmes but a support base for their elaboration as well.'

The criticism levelled by the ISO is not only aimed at HBO transfer master's programmes. 'As far as we are concerned, a bachelor's university programme should also offer access to the labour market. This is not the case at the moment. For this reason, you have to follow a master's programme after the bachelor's phase. In this sense, even research master's programmes are transfer programmes. That is wrong, because it was never the intention when the bachelor's-master's degree system was introduced. Bachelor's programmes should be complete degree programmes that offer access to the labour market. If necessary, the bachelor's programmes at universities can be converted into 4-year programmes. In that case, master's programmes need to offer something completely different. In principle, a master's degree should take two years because with the current one-year master's programmes there is little time for in-depth study or for expanding skills.'

'Incidentally, this does not mean that we believe that master's programmes in the academic higher education sector can be disconnected from bachelor's programmes at this time. Currently, the quality and the labour market value of a bachelor's degree is too low. Only once something has been done about these factors can we talk more about the idea of making master's programmes independent study paths once again.'

A fully-fledged graduation moment

An important function of research master's programmes is that lecturers and students can test whether there is sufficient chemistry between them to enter into a PhD trajectory together. But research master's programmes are more than this, according to PNN: 'Research master's programmes should be fully-fledged graduation moments.'

Gertjan Tommel, member of the board of the PNN (PhD Network of the Netherlands), on the NVAO conference about research master's programmes: 'An excellent initiative. I appreciate Karl Dittrich's appeal, which said: "Let's stop and take stock for a time, examine how things develop further, before we introduce the next reform of the education system." Every four years we get new plans from new ministers. You have to give certain things the chance to develop and I believe this applies to research master's programmes.' According to Tommel, however, more funding is needed to make a success of graduate schools: 'In its 2008 budget, the Ministry of Education, Science and Culture set aside 2 million euros to set up graduate schools using the model of American top universities. Of course this is too little. PNN has always said: the success of that type of university is based on the enormous financial reserves that such universities have at their disposal.'

'The PPN believes that research master's are a good initiative. Students with a research master's degree are qualified to make a flying start on a PhD trajectory. You have been awarded an MPhil, and that is an excellent title. Research master's programmes demonstrate whether or not there are signs of good chemistry between professor and student. You can test this out a little. And this is very important because a much-voiced complaint in PhD studies is that there is a lack of chemistry between student and professor. This is also the major reason behind delays or dropping out.'

'PNN is against shortening the duration of PhD studies of people who have been awarded research master's degrees. After all, such degrees are not part of a PhD trajectory and therefore should not be positioned as such. In addition, many PhD candidates already work under pressure of time. In practice, Arts/Social Sciences students take almost six years to complete their PhD studies, Science students take 4.5 years. It is therefore not a good idea to reduce the PhD studies to 3 years! It would not be good for the universities, nor would it be good for the motivation of students, at least not if you expect consistent quality.'

'Research master's programmes should be linked to society in its entirety, because society as a whole needs highly qualified researchers. NGOs, companies and the government; this is the broad demand that research master's programmes have to meet. In practice, during research master's programmes, every professor is selecting his/her future research assistants. In that respect, you only attract students who want to undertake a PhD trajectory afterwards. And yes, you neglect those students who do not want to obtain a doctorate.'

'It should not be the case that someone who has completed a research master's programme by definition has to continue and obtain a PhD. We should regard research master's programmes not as a special type of education but rather as standard education for people who would like to see if research is something for them. Currently, 80% of students who complete a research master's programme move on to research positions at their own university. This concerns me. For a large part, research master's programmes are intended to allow you to take a look behind the scenes of your university. Afterwards, you should spread your wings and move on to another university and take a look behind the scenes there. It's nice and easy to stay within your own organisation. It also makes things nice and easy for your own organisation.'

'But it does make things difficult for qualified people from outside. Because if students with a research master's degree already have a contract in their pocket for a PhD trajectory, other qualified people without a research master's degree will no longer be considered. And that is a pity. This was also discussed during the conference: for PhD studies, professors give preference to students who have completed a research master's degree at the same university. I believe this is a bad business. The award of a research master's degree should be a complete, independent graduation moment.'

Synthesis

Introduction

In this chapter, the outcomes of the literature study, the dossier analysis, the survey and the conference are brought together and we will return to the research questions. The first section deals with the question of what exactly distinguishes RMPs from regular university master's programmes. The last two sections focus on the appraisal of the introduction of RMPs and the assessment process and the visions for the future for RMPs.

Profile characteristics of research master's programmes

Based on the outcomes of the RMR 2007, we can answer the question as to how RMPs are distinct from regular university master's programmes. The distinguishing profile of RMPs can be summarised in the three features below:

1. *Objectives and curriculum specifically focused on the acquisition of research competencies.*
2. *An academic context of unquestionably high quality that strives for excellence, and*
3. *Selection of students with above-average academic performances and ambitions.*

Positive experiences and expectations

What is noticeable in the first instance, is the great enthusiasm with which the RMP seems to have been received as an important educational innovation. Over 90% of the respondents to the NVAO survey experience the introduction of the RMP as a positive development. As made clear in the Elsevier survey (cf. Annex C), students too are positive about their programmes, especially about the quality of the lecturers. Apparently, there was a strong need in the academic community for a two-year, research-oriented master's programme intended for a select group of talented and ambitious students: within the short time span of 4 years, 116 RMPs have already been positively assessed by NVAO.

Although it is still too early to make concrete statements in this regard, the yield from the first RMP cohorts is promisingly high compared to regular university master's programmes. Most of the parties involved expect that RMPs will be more contiguous with a possible PhD trajectory and a career as researcher within the university than is the case for regular master's programmes. Moreover, according to many, RMPs are better geared to the widely felt societal need for more and better researchers for the knowledge society. Also, RMPs might help to put the profession of researcher more clearly on the map.

In general, the assessors are satisfied with the quality of the submitted RMP applications and the large majority of applicants is satisfied about the assessment process. The accompanying initial accreditation framework for RMPs, TNO-OZM, seems to have a broad support base among all stakeholders. Virtually all the applications that were initially assessed negatively, were assessed positively in the second (or sometimes third) instance. It therefore seems justified to conclude that within the domain of RMPs, the accreditation system clearly serves an improvement purpose.

Points for improvement and lessons for the future

According to most of the parties involved, higher enrolment in RMPs is desirable – and even *necessary* according to others – to keep RMPs viable. Apart from the limited familiarity with RMPs, the reason for the relatively low enrolment can probably be found in the image of RMPs as "pre-doctorate classes", as "the gateway to a PhD". For students with no ambition to obtain a PhD, it is currently not clear what the added value of completing a research master's programme would be, given that it requires (a great deal) more effort than a regular master's programme. Several proposals have been made to encourage enrolment in RMPs. In the first place, RMPs could be profiled more highly as an independent type of master's programme, with their own intrinsic value. More as a programme that offers an *orientation* on research and less as a *definitive choice* for the profession of researcher. In this respect, the KNAW president is considering focusing more on properties like the appreciation of a critical approach and caring about the difference between what we – as a society – know, and what we still do not know. But no matter how the profile crystallises further, enrolment would certainly benefit from a greater familiarity with RMPs.

To make the specific qualifications of graduates visible, to the "outside world" as well, the introduction of a distinct title has been proposed. The chair of the Association of Universities in the Netherlands (VSNU) does not think it would be a bad idea to confer the title of MPhil on the successful completion of a RMP. However, some respondents to the NVAO survey have the objection that in some countries this title carries somewhat negative connotations. For example, in the United Kingdom, where the MPhil is awarded to "PhD dropouts". Although some 60% have no objection to the use of the title of MPhil in addition to that of MA and MSc, the latter (MSc) is generally preferred. Within law faculties, the preference is sometimes for the title of LLM for RMPs graduates.

NVAO and certainly those directly concerned with the processing of RMP applications, are convinced that the quality of these master's programmes must remain extremely high. Moreover, the orientation towards research should provide a clear distinction between these programmes and regular master's programmes. There is, after all, no reason to consider the latter category of master's programmes as less valuable or even "second rate".

In the years ahead, NVAO expects to receive few new applications for research master's programmes from the fields of the Humanities and Behavioural and Social Sciences. In general, reasonable "cover" has already been realised within these disciplines. This does not apply to the exact sciences and technological sciences. It would appear advisable for these disciplines to also consider a more research-oriented type of programme.

It is the Netherlands' ambition to be one of the leaders in the European Union in the pursuit of the knowledge society.[5] Moreover, a recent study by the Netherlands Bureau for Economic Policy Analysis (CPB) indicates that high levels of knowledge and skills are particularly important for productivity but that the Netherlands has not reached the top of the highest knowledge level in international terms. Therefore, a policy that results in rising performances at the high and top skills levels in (higher) education could improve the productivity of the Netherlands.[6] The introduction of research master's programmes seems to be a concrete step in this direction. It is now time to trace out this route further so that the next steps can be taken. Through the *Research Master Review 2007,* NVAO hopes to make a contribution to this end.

5 Netherlands Ministry of Education, Culture and Science. (2006). Making the most of talented researchers.

6 Minne, B., Rensman, M., Vroomen, B., & Webbink, D. (2007). Excellence for productivity? The Hague, NL: CPB Netherlands Bureau for Economic Policy Analysis.

Appendix A

List of abbreviations

AcTI	the Netherlands Academy of Technology and Innovation
AMvB	Governmental Order in Council *[Algemene Maatregel van Bestuur]*
AWT	the Advisory Council for Science and Technology Policy
BA	Bachelor of Arts
CROHO	the Central Register of Higher Education Programmes
ECOS	the Research School Accreditation Committee
ECs	European Credits
ECTS	European Credit Transfer System
EUR	Erasmus University Rotterdam
HBO	professional higher education
IELTS	International English Language Testing System
KNAW	the Royal Netherlands Academy of Arts and Sciences
KTU	Catholic Theological University
LLM	Master of Laws
LOF	National Assembly of University Parties
MA	Master of Arts
MPhil	Master of Philosophy
MSc	Master of Science
NAO	the Accreditation Organisation of the Netherlands
NVAO	the Accreditation Association of the Netherlands and Flanders
NWO	the Netherlands Organisation for Scientific Research
OUNL	the Netherlands Open University
PhD	Doctor of Philosophy
RMP	Research Master's Programme
RuG	Groningen University
SWR	Scientific Council for Social Sciences
TNO	the Netherlands Organisation for Applied Scientific Research
TNO-OZM	Initial Accreditation Framework: Domain-specific outlines for Research Master's Programmes [Toets Nieuwe Opleidingen: Domeinspecifieke uitwerking voor Onderzoeksmaster]
TOEFL	Test of English as a Foreign Language
TUD	Delft University of Technology
TUE	Eindhoven University of Technology
UL	Leiden University
UM	University of Maastricht
UT	University of Twente
UU	Utrecht University
UvA	University of Amsterdam

UvT	University of Tilburg
VSNU	the Association of Universities in the Netherlands
VU	VU University Amsterdam
WO	academic higher education
WRR	the Scientific Council for Government Policy
WUR	Wageningen University and Research Centre

Appendix B

List of all positively assessed RMPs

Erasmus University Rotterdam
- Clinical Epidemiology
- Clinical Research
- ERIM Master of Philosophy in Business Research
- Institutions: Erasmus Research Master in Philosophy and Economics
- Justice and Safety & Security (starts 1/9/2008)
- Molecular Medicine
- Neuroscience
- Philosophy in Economics (in cooperation with UvA)
- Research in Public Administration and Organisational Science

Radboud University Nijmegen
- Behavioural Science, the study of behaviour regulation
- Cognitive Neuroscience
- Historische Wetenschappen: Ideologie, Mentaliteit en Maatschappelijke Praktijk [Historical Sciences: Ideology, Mentality and Social Practice]
- Kunst en Visuele cultuur in historisch perspectief [Art and visual culture in historical perspective]
- Language and Communication: The Empirical Study of Human Communicative Capacities (in cooperation with UvT)
- Letterkunde en Literatuurwetenschap: Nieuwe Filologie [Literary Sciences: New Philology]
- Molecular Mechanisms of Disease
- Onderneming en Recht [Enterprise and Legislation]
- Social and Cultural Science: Comparative Research on Societies
- Wijsbegeerte [Philosophy]

Groningen University
- Art History and Archaeology: Material Culture Studies in Art, Architecture and Archaeology
- Behavioural and Cognitive Neurosciences
- Classical, Medieval and Renaissance Studies (CMRS): Text and Context in Pre-modern and Early Modern Times
- Clinical and Psychosocial Epidemiology
- Economics and Business: Production, Organisation and Marketing
- Functionaliteit van het Recht [Functionality of Law]
- Human Behaviour in Social Contexts
- Linguistics: Neurolinguistics and Models of Grammar
- Literary and Cultural Studies: Literature and Performing Arts in Society
- Modern and Contemporary History: Transformation and Acceptance
- Philosophy: Knowledge and Knowledge Development
- Regional Studies: Spaces and Places, Analysis and Intervention
- Religious Symbols and Traditions

Leiden University
- African Studies
- Asian Studies
- Educational Sciences: Normal and Deviant Patterns of Attachment and Self Regulated Learning
- History: Societies and Institutions
- Latin American and Amerindian Studies
- Linguistics: Structure and Variation in the Languages of the World
- Literature
- Middle Eastern Studies
- Philosophy: Rationality
- Political Science Research: Institutional Analysis
- Psychology: Decision Making and Action Control in Self-Regulation of Human Behaviour
- Public Administration: Institutional Change and Reform
- Western and Asian Art History in Comparative Perspective

University of Maastricht
- Business Research
- Cognitive Neuroscience, Neuropsychology and Psychopathology
- Cultures of Arts, Science and Technology
- Economic and Financial Research
- Nutrition and Metabolism: Fundamental and Clinical Aspects (starts 1/9/2008)

University of Twente
- Social Systems Evaluation and Survey Research

Utrecht University
- Art History of the Low Countries in its European Context
- Development and Socialisation in Childhood and Adolescence
- Dutch Language and Literature
- Economics
- Educational Sciences : Learning in Interaction
- Gender and Ethnicity
- Selective Utrecht Medical Master (SUMMA): Medicine / Clinical Research
- Historical and Comparative Studies of the Sciences and Humanities
- History: Cities, States and Citizenship
- Human Geography and Planning
- Linguistics: the Study of the Language Faculty
- Literary Studies: Literature in the Modern Age
- Media Studies
- Medieval Studies
- Methodology and Statistics of Behavioural and Social Sciences
- Migration, Ethnic Relations and Multiculturalism
- Musicology
- Philosophy
- Psychological Health Research
- Rechtswetenschappelijk onderzoek [Research in Law]
- Research in Public Administration and Organisational Science
- Sociology and Social Research
- Theology (in cooperation with KTU Catholic University Utrecht)

University of Amsterdam
- Archeologie [Archaeology]
- Cognitive Science
- Communication Science
- Cultural Analysis
- Educational Sciences
- Geschiedenis [History]
- Human Geography, Planning and Development Studies
- Information Law (currently being checked for macro-efficiency)
- Kunstwetenschappen [Art Sciences]
- Linguistics
- Literary Studies
- Media Studies
- Metropolitan Studies
- Nederlandse letterkunde [Dutch literature]
- Philosophy in Economics (in cooperation with EUR)
- Psychology
- Religious Studies
- Rhetoric, Argumentation and Philosophy
- Social Sciences
- Wijsbegeerte [Philosophy]

University of Tilburg
- Grondslagen en Methoden van de Rechtswetenschap [Foundations and Methods of Law]
- Language and Communication: The Empirical Study of Human Communicative Capacities (in cooperation with RU)
- Philosophy in Business
- Philosophy in Economics
- Research in Public Administration and Organisational Science
- Social and Behavioural Sciences
- Theology
- Wijsbegeerte [Philosophy]

VU University Amsterdam
- Architectuurgeschiedenis [Architectural History]
- Cognitive Neuropsychology
- Geosciences of Basins and Lithosphere
- Geschiedenis na 1400 [History after 1400]
- Geschiedenis van de beeldende kunst [History of the fine arts]
- Letterkunde [Literary Sciences]
- Linguistics
- Oudheidstudies [Medieval Studies]
- Palaeoclimatology & Geo-Ecosystems
- Philosophy in Economics
- Reformed Theology
- Social Psychology: Regulation of Social Behaviour
- Social Research: Organisational Sciences, Political Science and Sociology

Appendix C

Student assessments of research master's programmes

(published in Elsevier Thema Studeren, October 2007)

RESEARCH MASTER'S: WHICH STUDENTS ARE THE MOST SATISFIED?

Scientific quality	Rank	Rating
RU Nijmegen	1	7,7
UvT Tilburg	2	7,6
UU Utrecht	3	7,5
RuG Groningen	4	7,4
VU Amsterdam	5	7,3
EUR Rotterdam	6	7,2
UL Leiden	7	7,0
UvA Amsterdam	8	6,9
average		***7,3***

Curriculum and tutoring	Rank	Rating
RU Nijmegen	1	7,7
UvT Tilburg	2	7,6
UU Utrecht	3	7,6
RuG Groningen	4	7,6
EUR Rotterdam	5	7,4
VU Amsterdam	6	7,2
UL Leiden	7	7,2
UvA Amsterdam	8	7,1
average		***7,4***

Quality of teaching staff	Rank	Rating
UvT Tilburg	1	8,3
RuG Groningen	2	8,1
UU Utrecht	3	8,1
EUR Rotterdam	4	8,1
RU Nijmegen	5	8,0
VU Amsterdam	6	7,9
UL Leiden	7	7,8
UvA Amsterdam	8	7,6
average		***8,0***

Data: Elsevier/ResearchNed 2007 © Elsevier

CULTURE AND LANGUAGES	UL Leiden	RuG Groningen	UU Utrecht	UvA Amsterdam	VU Amsterdam	RU Nijmegen	Average
Scientific quality	**6,7**	**7,3**	**7,4**	**6,5**	**6,6**	**7,6 +**	***7,0***
preparation for research position	6,2	7,0	7,1	6,5	6,7	7,9 +	*6,9*
preparation for PhD trajectory	6,0	6,5	6,7	6,4	6,0	6,9	*6,4*
current international scientific theory	7,4	7,2	7,9 +	6,5 –	6,8	7,9 +	*7,3*
acquiring research qualification	6,8	7,5	7,3	6,5	6,5	7,6	*7,0*
development of research skills	7,1	7,9	7,4	6,9	7,3	7,9	*7,4*
linking research to scientific theories	6,9	7,4	7,4	6,5	6,7	7,6	*7,1*
solving multi- and interdisciplinary issues	6,7	7,2	7,3	6,6	6,6	7,7 +	*7,0*
linking education to research	6,1	6,9	7,1	6,2	6,0	6,9	*6,5*
international contacts	6,8	7,5	7,9 +	5,8 –	5,6	7,4	*6,8*
the final master's thesis	7,1	8,2 +	7,9	7,4	7,1	8,1	*7,6*
coherence of the programme	6,0	6,8	7,4 +	6,2	6,4	7,0	*6,6*
Curriculum and tutoring	**6,9**	**7,6**	**7,6 +**	**6,9**	**7,1**	**7,6**	***7,3***
coherence of courses and obligatory assignments	7,0	7,5	7,5	6,9	7,4	7,4	*7,3*
possibility of completion within the set time	7,3	7,7	7,5	7,5	7,1	6,9	*7,3*
good link-up at entrance level	7,0	7,8	7,5	7,4	7,6	7,1	*7,4*
examinations congruent with lectures	7,5	8,1	8,0	7,6	7,5	7,5	*7,7*
involvement representatives from professional practice	7,0	7,6	7,7	6,6	6,7	8,1 +	*7,3*
transparency on intended learning outcomes	6,0	7,3 +	7,2 +	6,3	6,3	7,6 +	*6,8*
quality of tutoring	6,9	7,6	7,5	6,5	7,3	7,8	*7,3*
personal attention for students	7,2	8,3 +	8,0	7,0 –	7,5	8,7 +	*7,8*
Quality of staff	**7,6**	**8,2 +**	**8,1**	**7,5 –**	**7,7**	**8,0**	***7,8***
expertise in discipline	8,3	8,7	8,7	8,0 –	8,3	8,6	*8,4*
didactic quality	7,4	7,9	7,8	7,3	7,3	7,8	*7,6*
methodological knowledge and skills	7,8	8,3	8,2	7,6 –	8,4	8,1	*8,0*
experience with scientific research	8,5	8,8	8,9	8,3	8,7	8,6	*8,6*
commitment and enthusiasm	7,7	8,5	8,6 +	7,8	8,1	8,6	*8,2*
preparation for lectures	7,3	7,7	8,0 +	7,2	7,4	7,9	*7,6*
preparation for assignments and thesis discussions	7,1	8,0 +	7,5	7,2	7,5	7,7	*7,5*
ability to contact lecturers outside classes	7,7	8,6 +	7,8	7,5	7,7	7,7	*7,8*
supervision assignments	7,1	8,1 +	7,6	6,9 –	7,7	7,3	*7,4*
proficiency in the English language	7,8	7,7	8,0	7,5	7,7	7,6	*7,7*
quantity of staff	6,9	7,4	7,8 +	7,0	5,9	8,1 +	*7,2*
percentage of curriculum taught in English	76,5	24,8 –	77,4 +	47,9	17,5 –	23,8 –	*44,6*

+ significantly above average, at 95% reliability
– significantly below average, at 95% reliability
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SOCIAL AND BEHAVIOURAL SCIENCES	UL Leiden	RuG Groningen	UU Utrecht	UvA Amsterdam	VU Amsterdam	RU Nijmegen	UvT Tilburg	Average
Scientific quality	**7,5**	**7,4**	**7,6**	**7,5**	**7,7**	**7,6**	**7,8**	***7,6***
preparation for research position	8,2	8,0	8,1	7,7	7,7	8,2	7,9	*8,0*
preparation for PhD trajectory	7,4	7,8	7,9	7,2	7,5	7,8	7,5	*7,6*
current international scientific theory	8,0	7,3	7,9	8,1	7,9	8,1	8,3	*7,9*
acquiring research qualification	7,9	7,8	7,9	7,6	8,1	7,7	8,3	*7,9*
development of research skills	8,5	8,0	8,3	8,2	8,5	8,3	8,6	*8,3*
linking research to scientific theories	7,8	7,3	7,6	7,4	7,9	7,9	8,0	*7,7*
solving multi- and interdisciplinary issues	6,6	6,8	6,8	6,8	6,6	6,9	5,8	*6,6*
linking education to research	7,1	6,4–	7,4	7,0	7,4	7,4	6,9	*7,1*
international contacts	6,4	7,3	6,3	7,4	7,3	5,9–	8,3+	*7,0*
the final master's thesis	7,4	7,4	8,1	7,9	8,4	7,9	8,0	*7,9*
coherence of the programme	7,4	7,0	6,8	7,4	7,8	7,3	6,7	*7,2*
Curriculum and tutoring	**7,6**	**7,5**	**7,5**	**7,5**	**7,7**	**7,8**	**8,1**	***7,7***
coherence of courses and obligatory assignments	7,9	7,3–	7,8	7,9	8,0	8,0	7,7	*7,8*
possibility of completion within the set time	6,7–	7,4	7,7	7,7	7,3	7,4	8,4+	*7,5*
good link-up at entrance level	7,6	7,2	7,3	7,7	7,3	7,6	8,2	*7,6*
examinations congruent with lectures	7,8	7,7	7,8	8,1	7,7	8,2	8,5	*8,0*
involvement of representatives from professional practice	7,4	7,2	7,3	7,2	7,4	7,5	8,3	*7,5*
transparency on intended learning outcomes	7,6	7,2	7,3	7,3	7,6	7,7	7,4	*7,4*
quality of tutoring	7,7	7,8	7,6	6,8–	7,9	8,1	8,4+	*7,8*
personal attention for students	8,2	8,4	8,2	7,7	8,0	8,5	9,1+	*8,3*
Quality of staff	**8,1**	**7,9**	**8,1**	**7,9**	**8,5**	**8,0**	**8,6+**	***8,2***
expertise in discipline	8,6	8,3	8,6	8,3	8,8	8,6	9,1+	*8,6*
didactic quality	7,7	7,8	7,7	7,4	7,7	7,7	8,1	*7,7*
methodological knowledge and skills	8,3	7,9	8,2	8,2	8,9	8,1	9,0+	*8,4*
experience with scientific research	8,8	8,7	8,8	8,8	9,2	8,9	9,3	*8,9*
commitment and enthusiasm	8,4	8,4	8,3	7,9	8,8	8,7	8,9	*8,5*
preparation for lectures	8,2	7,3	8,0	7,8	8,3	7,8	8,1	*7,9*
preparation for assignments and thesis discussions	7,9	7,2	7,9	7,5	8,3	7,8	8,1	*7,8*
ability to contact lecturers outside classes	8,1	8,4	7,9	8,2	8,8	7,9	8,9	*8,3*
supervision assignments	7,9	7,8	7,9	7,8	8,2	7,7	8,4	*8,0*
proficiency in the English language	7,5	7,5	7,1	7,3	8,62+	6,7–	8,2+	*7,6*
quantity of staff	8,1	7,3	8,5	7,9	8,3	8,1	8,2	*8,1*
percentage of curriculum taught in English	84,7	86,2	78,7	86,4	96,2+	66,8–	77,3	*82,3*

+ significantly above average, at 95% reliability
– significantly below average, at 95% reliability
Data: Elsevier/ResearchNed 2007 © Elsevier

	ECONOMIC SCIENCES			LAW		
	RuG Groningen	UvTilburg	Average	UU Utrecht	UvTilburg	Average
Scientific quality	**7,4**	**7,6**	***7,5***	**8,0**	**7,9**	***7,9***
preparation for research position	7,8	7,4	*7,6*	8,3	8,5	*8,4*
preparation for PhD trajectory	8,3	7,5	*7,9*	7,8	8,6	*8,2*
current international scientific theory	7,5	8,5	*8,0*	8,1	7,8	*7,9*
acquiring research qualification	7,9	7,6	*7,8*	8,2	8,0	*8,1*
development of research skills	8,3	8,1	*8,2*	8,3	8,2	*8,2*
linking research to scientific theories	7,5	7,9	*7,7*	7,6	7,8	*7,7*
solving multi- and interdisciplinary issues	6,4	6,9	*6,6*	7,4	8,2	*7,8*
linking education to research	6,9	7,3	*7,1*	8,3	6,8	*7,6*
international contacts	5,9	6,3	*6,1*	7,7	7,3	*7,5*
the final master's thesis	7,6	8,1	*7,8*	8,0	8,0	*8,0*
coherence of the programme	7,1	7,6	*7,3*	7,3	7,8	*7,6*
Curriculum and tutoring	**7,7**	**7,2**	***7,4***	**7,7**	**8,0**	***7,9***
coherence of courses and obligatory assignments	7,9	8,0	*7,9*	7,7	7,8	*7,7*
possibility of completion within the set time	7,6	7,3	*7,5*	7,0	7,4	*7,2*
good link-up at entrance level	7,5	6,2	*6,9*	7,3	8,0	*7,7*
examinations congruent with lectures	8,1	7,6	*7,8*	7,9	8,0	*8,0*
involvement representatives from professional practice	7,0	6,6	*6,8*	7,9	7,8	*7,8*
transparency on intended learning outcomes	7,7	7,0	*7,3*	7,8	8,3	*8,0*
quality of tutoring	8,0	7,1	*7,6*	8,3	8,6	*8,4*
personal attention for students	8,5	7,2	*7,8*	8,4	8,8	*8,6*
Quality of staff	**8,2**	**7,9**	***8,1***	**8,2**	**8,6**	***8,4***
expertise in discipline	8,6	8,8	*8,7*	8,7	8,8	*8,8*
didactic quality	7,8	7,1	*7,5*	8,1	8,3	*8,2*
methodological knowledge and skills	8,3	8,0	*8,1*	8,0	8,8	*8,4*
experience with scientific research	8,8	8,9	*8,8*	9,1	9,0	*9,1*
commitment and enthusiasm	8,3	7,9	*8,1*	8,6	8,9	*8,8*
preparation for lectures	8,2	7,5	*7,8*	7,7	8,1	*7,9*
preparation for assignments and thesis discussions	8,1	7,3	*7,7*	8,0	8,2	*8,1*
ability to contact lecturers outside classes	8,3	8,0	*8,1*	8,2	8,7	*8,4*
supervision of assignments	7,9	7,5	*7,7*	8,1	8,3	*8,2*
proficiency in the English language	8,0	8,4	*8,2*	7,8	8,3	*8,1*
quantity of staff	8,1	8,1	*8,1*	8,2	8,8	*8,5*
percentage of curriculum taught in English	96,3	99,0	*97,7*	58,0	80,0	*69,0*

+ significantly above average, at 95% reliability
– significantly below average, at 95% reliability
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	PHYSICAL SCIENCES				HEALTH
	RuG Groningen	UvA Amsterdam	RU Nijmegen	Average	EUR Rotterdam
Scientific quality	**7,6**	**8,0**	**7,8**	***7,8***	**7,2**
preparation for research position	8,2	8,4	8,1	*8,3*	7,7
preparation for PhD trajectory	7,9	8,0	7,6	*7,8*	6,4
current international scientific theory	7,6	8,4	8,3	*8,1*	7,7
acquiring research qualification	8,1	8,1	7,9	*8,0*	7,8
development of research skills	7,9	8,2	8,1	*8,1*	7,7
linking research to scientific theories	7,5	8,2	8,3	*8,0*	7,2
solving multi- and interdisciplinary issues	7,4	8,4	7,9	*7,9*	6,3
linking education to research	7,3	7,8	7,4	*7,5*	6,8
international contacts	6,5	7,7	6,1	*6,8*	6,6
the final master's thesis	8,1	6,6	8,4	*7,7*	7,4
coherence of the programme	6,8	6,7	7,8	*7,1*	7,2
Curriculum and tutoring	**7,4**	**7,5**	**7,6**	***7,5***	**7,4**
coherence of courses and obligatory assignments	7,3	7,9	8,0	*7,7*	7,4
possibility of completion within the set time	7,7	6,7	7,4	*7,3*	7,9
good link-up at entrance level	7,1	7,0	7,3	*7,1*	7,6
examinations congruent with lectures	7,9	8,1	7,6	*7,9*	7,7
involvement of representatives from professional practice	8,1	8,2	8,3	*8,2*	8,2
transparency on intended learning outcomes	7,2	7,4	7,5	*7,3*	6,6
quality of tutoring	7,2	7,5	6,9	*7,2*	6,5
personal attention for students	7,5	7,8	7,3	*7,5*	7,2
Quality of staff	**8,0**	**8,0**	**8,1**	***8,0***	**8,0**
expertise in discipline	8,6	8,5	9,0	*8,7*	8,7
didactic quality	7,8	7,9	7,3	*7,7*	7,4
methodological knowledge and skills	8,2	8,1	8,5	*8,3*	8,1
experience with scientific research	8,9	9,0	9,3	*9,1*	9,2
commitment and enthusiasm	8,3	8,8	8,2	*8,4*	8,4
preparation for lectures	7,2	8,2	7,6	*7,7*	7,9
preparation for assignments and thesis discussions	7,5	6,6	7,5	*7,2*	7,2
ability to contact lecturers outside classes	7,8	8,2	7,9	*8,0*	7,9
supervision of assignments	7,4	6,6	7,1	*7,0*	7,5
proficiency in the English language	8,3	8,0	8,0	*8,1*	7,8
quantity of staff	7,9	8,5	8,3	*8,2*	8,1
percentage of curriculum taught in English	95,8	97,0	90,0	*94,3*	97,1

+ significantly above average, at 95% reliability
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Appendix D

RMR 2007: a collective effort

NVAO	EXTERN
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Stephan van Galen **Fred Mulder** **Anja Detant** **Christel Verhas** **Rikkert de Boer** **Steven David** *steering group*	**Uipko Berghuis** *database designer,* *IT West Nederland*
IJda van den Hout *conference organisation*	
Annerieke van der Beek **Rob Nijdam** *data processing*	

COLOFON

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The exploration of a new domain

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