

Algemene gegevens / General Information

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Projectleden / Project members

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Projectgegevens / Project information**Samenvatting / Summary**

Over the last fifteen years, institutions for higher vocational education in the Netherlands have been transformed into universities of applied sciences (UASs). Applied research is an increasingly important part of the activities within the 39 Dutch UASs. All UASs, as part of their mission, closely work together with industry, small and medium-sized enterprises (SMEs) and other organisations.

In theory, and perhaps in practice too, the UASs' emphasis on application and intensive collaboration with businesses creates potentially serious issues of particular conflicts of interests. So far, little is known about the policies, measures and good practices taken by the UASs to foster responsible conduct of research (RCR) and to prevent questionable research practices (QRPs) and research misconduct (RM).

This research project aims to increase our understanding of the current practices in the UASs to foster RCR and to prevent QRPs and RM, and of the policies and (educational) measures that should be developed with priority according to those involved. This knowledge should contribute to the improvement of the ethical quality of research and the formulation of recommendations that help the UASs with formulating policies and (educational) measures to ensure RCR and prevent QRPs and RM.

To that end, a wide web-based survey among all research groups/institutes in the UASs will be performed into the policies, measures and 'good practices' in the UASs to promote RCR and to prevent QRPs and RM. In addition we will conduct focus group interviews with relevant stakeholders concentrating on their experiences, views on conflicts of interest (CoI), and the need for further policies and measures. Finally we will prioritise the policies and measures advocated using a Delphi study among experts and UAS professors.

The findings of the study will be published in peer reviewed and professional journals and presented on a national symposium with the aim to formulate a national policy for the UASs in our country

Trefwoorden / Keywords

'Research Integrity'; 'universities of applied sciences'; 'responsible conduct of research'.

Samenwerking / Collaboration

Samenwerking tussen onderzoek en praktijk / Cooperation between research and practice:

Ja / Yes

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Inhoud / Content

Probleemstelling / Problem definition

Ever since the introduction of professors ('lectoren') in 2001, applied research has a structural and unmistakable position within the Dutch universities of applied sciences (UASs). The aim of the research activities in the UASs is to improve both the performance of professionals by fostering scientific competencies among teachers in higher vocational education, and the evidence based innovation of professional practice. There are now about 600 professors in the UASs engaged in research, often collaborating with teachers and students, with a total researchbudget in 2014 of about 165M€. Most professors work in close cooperation with academic and other research centers (De Jonge, 2016).

As research at the UASs is initiated for the most part by questions and problems within professional practice and researchers at the UASs strive for results which can be implemented in practice, most professors and their researchers at the UASs have a close relationship with the professional field they work for. UAS professorships are (partly) funded by industries, local or national authorities, small and medium sized enterprises (SMEs) or public sector companies (such as healthcare, educational, welfare institutions). Often these companies are actively involved in the research projects, especially in research funded by the most important funding agency for the UASs, the RAAK program, in which the involvement of (public sector) companies during the project is mandatory. More than one in five professors runs a company (De Jonge, 2016).

Apart from the Code of Conduct 'Gedragscode Praktijkgericht onderzoek voor het HBO' (HBO-Raad, 2010), it seems that UASs, with a few exceptions, have only just started to think about the promotion of RCR and the prevention of QRPs and RM. Some UASs have committees to advise its researchers on the assessment obligation under the Medical Research Involving Human Subjects Act (WMO). Ethical questions concerning research by allied health professionals or nurses are usually addressed by regional accredited medical research ethics committees (MRECs) in the academic medical centers. In social studies as well as in technical studies within the UASs a proper structure for advice and direction on RI and RCR is almost completely lacking (van Gorp & Andriessen, 2015). Most UASs also lack appropriate conditions for data handling such as a research infrastructure in which research data can be stored securely and systematically, based on a data management plan.

Although research at the UASs is relatively new and still small, it is rapidly growing. Therefore time seems right to develop a national strategic plan that describes what is needed, in terms of policies, measures and education (including blended learning) to advance RCR at the UASs in The Netherlands. Such a plan should contain both a clear picture of these needs and how to

deal with them, and concrete proposals on how to enhance collaborative efforts in promoting and safeguarding RCR and preventing QRPs and RM.

So far, little is known about the policies, institutional measures and educational activities that are currently being developed by the UASs to promote and safeguard RCR and to prevent QRPs and RM, nor about the possible conflicts of interest (Cols) researchers in the UASs are confronted with or how they handle these issues. Also a clear picture is missing of the views of researchers and research administrators in the UASs on what the priorities are to prevent QRPs and RM, and to promote RCR.

Relevantie / Relevance

UASs aim to the development of knowledge and innovations of professional practice by the design and testing of practices, procedures, interventions, instruments and materials, mathematical modelling and product development.

Research within the UASs does not differ from research within the academic centres in its aim to generate relevant, valid and reproducible knowledge in an efficient way. Also in the obligation to foster RCR and to prevent QRPs and RM, UASs do not differ from academic centres. However, although research capacity in the UASs is rapidly growing, research in most of the UASs in The Netherlands still is relatively small and still in an initial phase. Likewise, policies and (educational) measures that take care of RCR are in most of the UASs absent or in early development.

Such policies and measures are of importance for the UASs not only in view of the now growing number of research involving human subjects, but also in view of the fact that many professors and researchers at the UASs have close ties with industries, SMEs and public sector institutions. For example; more than 20% of the professors at the UASs run their own company and often industries awards research contracts (De Jonge, 2016). For example, in one of the most important funding programmes for the UASs, the 'Nationaal Regieorgaan Praktijkgericht Onderzoek SIA', funding is only possible if the research questions are dictated by professional practice. Moreover, local and national government is in more than a third of professorships client and in many cases researchers are 'cocreator' of policies (De Jonge, 2016). Yet, to what extent this 'responsiveness' to the questions and demands from these companies or governmental administrations may lead to Cols among researchers and their institutions, to exactly what kind of conflicts these relationships may give cause, and in what ways UASs and researchers handle possible conflicts, is barely known.

A national plan will help UASs by indicating and prioritising the policies and measures that are needed to ensure RCR and RI in the UASs and the procedures to handle (possible) Cols. To obtain such a national plan it is necessary to know the present situation at the various UASs in our country. A comprehensive survey should give a better understanding of both the problems researchers and administrators face (problems that may differ between the various sectors), the policies, institutional measures and good practices (including educational activities) that have been developed so far and that are needed in the near future.

The plan needs to take into account the essential differences between the various sectors and industries in which UAS conduct their research. The present study intends to contribute to this plan by presenting its findings at a national symposium to the association of UASs (Vereniging van Hogescholen) in order to urge the association to stimulate UASs in taking measures to ensure RCR and RI.

Kennisoverdracht, implementatie, bestendinging / Knowledge transfer, Implementation Consolidation

The results of this project will be offered to the 'HBO Knowledge Base' which offers public access to research output and theses from the Dutch UASs. Results will be published in peer reviewed and professional journals and at the website of the Vereniging van Lectoren.

Results of the studies and the recommendations will be also presented at a national symposium for researchers and research administrators from the UASs in our country in April 2019. This symposium will be organised in collaboration with NWO/SIA, the association of UASs (Vereniging van Hogescholen) and the association of professors in UASs (Vereniging van Lectoren). The goal of this symposium is the formulation of a plan that describes both the policies and measures that the UASs should take to ensure RCR and RI and that can stimulate UASs and the association of the UASs to take the necessary steps.

Doelstelling / Objective

The current research project aims to contribute to RCR by developing a national plan for the UASs that describes what is essential, in terms of policies, measures and (educational) activities to maximize RCR at the UASs in The Netherlands, and how these can be achieved.

To that aim this project will provide a comprehensive investigation into:

- a. policies, institutional measures and (educational) activities currently developed by the UASs to promote and safeguard RCR and to prevent QRPs and RM;
- b. the main issues and dilemma's with regard to RCR, QRPs and RM researchers in the UASs are confronted with and how researchers and UASs administrations handle these issues. Special attention will be given to possible Cols and the way researchers and administrators handle (possible) conflicts.
- c. views of researchers and research administrators in the UASs on what need to be done (policies, measures and education) and what need to be done first (with priority) to prevent QRPs and RM, and to promote RCR.

Plan van Aanpak / Strategy

This study consists of three phases.

05/2017 - 12/2017: Study A.

To obtain a comprehensive overview of current practices, we will search the websites of all UASs for information on relevant policies and activities and complete this information with a survey using the online survey program Limesurvey©. Survey questions will be drawn from the survey 'Research Integrity Practices in Science Europe Member Organisations' by Science Europe, including questions on the presence of policies, measures and instruments with respect to raising awareness of and commitments to RCR, QRPs and RM, mentoring and education, whistle-blowers, sanctions and appeal (Science Europe

Working Group on Research Integrity, 2016). We will include questions about the presence of advisory/ethical committees in the UASs, data handling practices, the collaboration with academic centres, MRECs, as well as questions on the nature and strength of the relationship with industries, SMEs and public sector institutions, and on RM (Bouter, Tjink, Axelsen, Martinson, & ter Riet, 2016). The questionnaire will be tested for validity in a small sample (5) of experts.

We will send an invitation to all professors, unless they are member of a research group or research institute. In that case an invitation will be sent to the leading professor of that group or institute. In this invitation a brief explanation will be given of the aim and procedure of the consultation, the questions posed and the way the information will be used. The professors will then be asked to fill out the specified web form that can be opened by a link. Participants will have the opportunity to attach additional relevant information such as reports, policy papers, websites, etc. After follow-up telephone calls and paper reminders for non-responders a response rate of 35% is deemed possible.

To assess potential non-response bias we will perform a non-response analysis by a short survey into the reasons for non-response and differences between responders and non-responders on key variables (e.g. area of activity, ties with industry/companies).

Data collected will be described 'overall' (national level) and by area of activity using descriptive statistics, completed with the collected written materials.

11/2017 – 6/2018: Study B

The second study is about problems and obstacles researchers may encounter in safeguarding RCR. Special attention will be given to obstacles and problems that (may) occur in performing research commissioned by industry, SMEs and public sector institutions and to the nature and possible sources of Col.

To this aim we will perform focus groups with a stratified (purposive) sample of professors in all the research institutes in the UASs. We will take care that all sectors in higher education are involved: economy; technology; health and healthcare; art; welfare; agro and food; education. As for focus groups eight to ten participants is considered the norm (Carlsen & Glenton, 2011), we will interview from each sector eight professors in a focus group. One focus group session will be held with professors each from a different sector. Participants will receive an invitation to participate in which the aim and procedure of the interview, the questions posed and the way the information will be used, are explained.

The groups will be moderated by an experienced interviewer who will be assisted by a trained observer. The moderator will explore the participant views on and experiences with problems and dilemmas in safeguarding RCR at the UASs in general and policies and measures they consider necessary. For relevant items we will make use of the data collected in Study A and the literature on efforts to address issues of RI (Hiney, 2015). In addition we will explore experiences with Cols and ask for views on institutional requirements for identifying, disclosing, and managing Cols, how Cols are recognized and the steps to nullify or mitigate conflicts. Moreover, we will ask participants for views on how Cols should be disclosed or – when disclosure is not enough – what measures are to be recommended.

All questions will be incorporated in a scheme that will guide the interviews. Interviews will be recorded and written up as a transcript. The content of transcripts will be qualitatively analysed and categorised by two independent investigators using Atlas.ti (ATLAS.ti Scientific Software Development) by using the constant comparative approach (Hsieh, 2005). The trustworthiness of the interpretations and the collected recommendations will be ensured by a member check with focus group participants, who will review the findings for validity.

Results will be described according to the COREQ guidelines (Tong, Sainsbury, & Craig, 2007).

5/2018 - 2/2019: Study C.

The results of the interviews in Study B will be summarized in a list of obstacles and possible policies, measures and education. With the aim to develop consensus on priorities in the policies and measures we will offer the collected information to two panels: one panel with 20 professors/experts in the field of research integrity and one panel with 20 PhD's and researchers from the UASs in our country (Okoli & Pawlowski, 2004; Skulmoski & Hartman, 2007). We will do this by using a modified Delphi study approach, i.e. a structured process that uses a series of 'rounds' to gather and structure information for decision making and reaching group consensus (Linstone & Turoff, 2002). Although there is only little evidence on the necessary number of rounds in a Delphi study, usually two or three rounds are considered adequate (Hasson, Keeney, & McKenna, 2000). Participants in both panels will be asked, via the web-based survey program Limeservice@,

to rank the importance of each recommendation on a 1–5 Likert scale and to offer a brief explanation (in two or three sentences) of their choices. As feedback is essential in getting decisions, in the second round each participant is given the panels' results (median, lowest, and highest ratings), the participant's response, and an anonymous summary of all comments received.

In the third round we will structure the consensus procedure during a meeting with a selection of five participants from each panel by applying the Nominal Group Technique (NGT) (Delbecq, Van de Ven, & Gustafson, 1986) so that each participant can write down his ideas which are then discussed and prioritized one by one by the group. The results of this study will also be described according to the COREQ guidelines (Tong, Sainsbury, & Craig, 2007).

Prof. dr. Lex M. Bouter (VUmc) and prof dr J. Tillie (HU/UvA) are involved in this project as project advisors. Both are willing to give scientific advice during the course of this project.

Expertise, voorgaande activiteiten en producten / Expertise, prior activities and products

Dr. D. Andriessen is lector 'Applied Research Methodology at University of Applied Sciences Utrecht. He was chair of the Ethics Committee that developed the 'Gedragscode Praktijkgericht onderzoek voor het HBO' and is member of the 'Begeleidingscommissie herziening Nederlandse Gedragscode Wetenschapsbeoefening of the VSNU'.

Prof. dr. Lex M. Bouter, VU Medical Center (VUmc) and Vrije Universiteit (VU), Amsterdam, the Netherlands
Lex Bouter is professor of Methodology and Integrity. Before that he held a chair in Epidemiology and was rector of his

university. He was vice-chair and methodologist of the Dutch Central Committee on Research involving Human Subjects. Lex Bouter is currently involved in teaching and research regarding responsible conduct of research, questionable research practices and research misconduct. He was chair of the committee that drafted the Research Program 'Fostering Responsible Research Practices' and he organizes and co-chairs the 5th World Conference on Research Integrity, Amsterdam, May 2017. Lex Bouter authored about 700 publications contained in Web of Science, which have been cited more than 44,000 times. He has supervised 74 PhD students, of whom to date 14 were appointed as professor.

Dr. A. Van Gorp is senior researcher at University of Applied Sciences Utrecht and an expert in research ethics. She wrote her PhD on ethical aspects in engineering design processes.

Dr. M. Hermsen is associate professor 'Care for people with intellectual disabilities' of the Research Centre for Social Support and Community Care, HAN. With a background in (medical) ethics, she has many years of experience in moral deliberation in health care and was a member of several ethics committees in health care. At present she is a member of the HAN Ethical Advisory Committee.

Dr. G. Ter Riet is principal investigator at AMC. He focusses his research on diagnostic and prognostic research, systematic reviews and meta-analysis, and Research integrity, professional dilemmas and publication bias in clinical and animal research.

Dr R. van der Sande has, as a former senior staff member of the Dutch Advisory Council for Health Research, a broad experience in research policy and research innovation. He now is lector 'Primary and Community Care' at HAN UAS, and president of the HAN Ethical Advisory Committee.

Prof dr. J. Tillie is full professor at the University of Amsterdam and Dean at the Amsterdam UAS's. He is an expert in research methodology.

Dr. E. Wouters is lector 'Health Innovations and Technology' at Fontys UAS. She is president of the Fontys Ethical Research Committee. At present she is preparing a book on research ethics, to be published early 2017.

Drs. C. Nijsten is senior officer Research at the Faculty Health and Social Studies at the HAN University of Applied Sciences. She coordinates the research programs at the Faculty and is vice president of the HAN Ethical Advisory Committee.

Publicaties / Publications

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Referenties / References

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