Higher education lecturers' criteria for 'Good Research'

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Creating Tomorrow

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CREATING TOMORROW

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ABSTRACT

This article explores the criteria for 'good research' employed by lecturers in traditional universities and institutes of higher professional education. The implementation of research-related activities in the latter created a repositioning of both types of Dutch institutions, similar as in many European higher education systems. The higher education institutes state their mutual difference is based on different types of research and research education, being more fundamental (or 'Mode 1') versus being more applied (or 'Mode 2'). Lecturers' criteria for 'good research' potentially have a considerable influence on the research character in different higher educational types, both in education and research. Hence, this study assumes that the presumed institutional differences can be seen in their lecturers' criteria for 'good' research. In a focus group and interview study, participants were asked to elaborate on personal examples of 'good' and 'nongood' research. A thematic analysis resulted in six themes on 'good research'. The differences between both groups of lecturers found are related to the value of the research, and do not reach the core of research quality. This shows how the policy intent to steer on institutional differences actually is successful, but also limited. Implications are discussed.

INHOUDSOPGAVE

1. INTRODUCTION

Since the end of the 19th century, teaching and research have gone hand-in-hand at Europe's traditional universities (Ruegg, 2004). Over the last few decades, and as an effect of choices imputed by the massification of the university system, institutes of higher professional education (HPE) drifted to become similar institutes as the universities (Griffioen & De Jong, 2013; Teichler, 2008); they became part of the higher education system, such as the *hogescholen* in the Netherlands and Belgium and the *Fachhochschulen* in Germany. Some became part of the university system, such as the now post-1992 universities in the UK. As an effect, these institutions have been transforming themselves from teaching-only institutions into institutions that generate new knowledge through research (Kyvik & Skodvin, 2003).

Within the Dutch system of higher education, the new research activities introduced the HPE explicitly into the domain of the traditional universities. As an effect, the policy directions of both types of institutes – and especially of the HPE institutes - increasingly state that they are of a different educational character than the other, also based on the difference in research education for students: educating 'professional scholars' in the traditional universities and training 'scholarly professionals' in HPE (Griffioen, 2011; Van der Rijst & Visser-Wijnveen, 2011). These differences are often presumed to be in line with the differences between Mode 1 and Mode 2 research, as theorized by Gibbons et al. (1994). The stated differences in research orientation within both types of institutions imply a conception of 'good research' at institutes for higher professional education based on their more 'applied (or Mode 2)' research and a different conception of research at the traditional universities, based on their more 'fundamental (or Mode 1)' conception of good research.

The current study presumes that if these institutional differences exist on a day-to-day level, they need to be present in the research conceptions of their lecturers. Lecturers in higher education are the gatekeepers of what constitutes research in future high level professionals through research education, since lecturers directly influence the content and form of educational programs and the norms they teach in the classroom (Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, & Visser, 2009). And, as far as their function as researchers, they also direct research toward what they consider right by setting examples and through peer reviews. So, where research conceptions of lecturers directly influence what constitutes (good) research and research-related activities (Murtonen & Lehtinen, 2005; Webster, Pepper, & Jenkins, 2000), they also influence the character of their higher education institutes, based on their choices both within as outside of the classroom (Stokking, Van der Schaaf, Jaspers, & Erkens, 2004). Hence, the current study considers the research conceptions of lecturers of traditional universities and of lecturers of higher professional education to observe if the presumed institutional differences between both types of institutes are manifest.

2. THEORETICAL OVERVIEW

The current study is positioned in line with three different but related strands of research: a) the nature of research, b) the assessment of research quality, and c) the examination of research by students and researchers. The highlights of each of the three strands will be explained and will result into Figure 1 to give an overview of relevant types of criteria applied as part of these different strands of research, which will be later on used to characterize the current study on criteria for 'good research'. Furthermore, this overview can also be used as a foundation to inform frameworks of research quality and other policy perspectives.

2.1 CONCEPTIONS ON THE NATURE OF RESEARCH

The first strand are studies on the conception on the nature of research, which question what research *as such* consists of (so far) in the eyes of senior academic administrators, research supervisors, and students. Often, the results of these studies are typologies on what constitutes 'research', mostly based on characterisations of research through the presence or relevance of 'attributes', 'activities', and/or 'the researcher'.

Kiley and Mullins' (2005) study on supervisors resulted in four different attributes for research, in which the essence of research was characterized as: a) technical, ranging from rigorous application of systematic methods to well defined problems, b) creative and innovative, based on new knowledge through an innovative approach, c) integrating complexity, bringing together complex knowledge/data in new ways, or d) about new ways of seeing, which could be about the world, a problem, or oneself. The research conceptions of post-doctoral students that Pitcher and Åkerlind (2009) studied, as well as those of doctoral students studied by Pitcher (2011) were a bit differently labelled as being a) explorative, b) spatial (being about a field or area), c) constructive (about building knowledge, filling gaps), or d) organic (go with the flow). These attributes were somewhat in line with the study by Prosser, Martin, Trigwell, Ramsden, and Middleton (2008) on how university academics experience research, which resulted in different scales of the space the research intents to influence, ranging from a single topic to the change of a field.

Another way found to characterize research is based on different 'activities' being present. The studies of Meyer, Shanahan, and Laugksch (2005) and of Levy and Petrulis (2012) who both evaluated students' conceptions on research showed a typology of 'activities' as a result. In these studies, students conceived 'research' as a) the gathering of information, b) discovering something ('truth' in the study of Meyer et al.), c) a process wherein the student learns and develops ideas, d) exploring others' ideas or research studies, and e) discovering or solving problems. A similar perspective on 'activities' characterizing research was found by Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, and Visser's (2009) in their metaphor study with the results ranging from the 'disclosing of patterns' to the 'creation of patterns'.

Next to 'attributes' and 'activities', another characterisation of the nature of research is by 'the researcher's role. Åkerlind's (2008) meta-analysis resulted in four dimensions: a) research intentions, b) research outcomes, c) research questions, and d) research processes. She then

empirically added 'being a researcher' to the results. The 'researcher perspective' is also central in the results of Visser-Wijnveen et al. (2009), who related the range of activities they found to the positioning of the researcher: from 'being absent' or irrelevant in the results, to the researcher being fully central in the process and the results (generating a different type of results). A similar range was modelled by Brew (2001), although she combined the position of the researcher with an axis with the dimension from tangible products (e.g., articles) to intangible processes (e.g., learning).

So, overall, the studies on conceptions of research so far resulted in different 'attributes', 'activities', and 'researcher perspectives' combined with Akerlind's (2008) 'intentions', 'outcomes', 'questions', and 'processes' as prerequisites for 'research'.
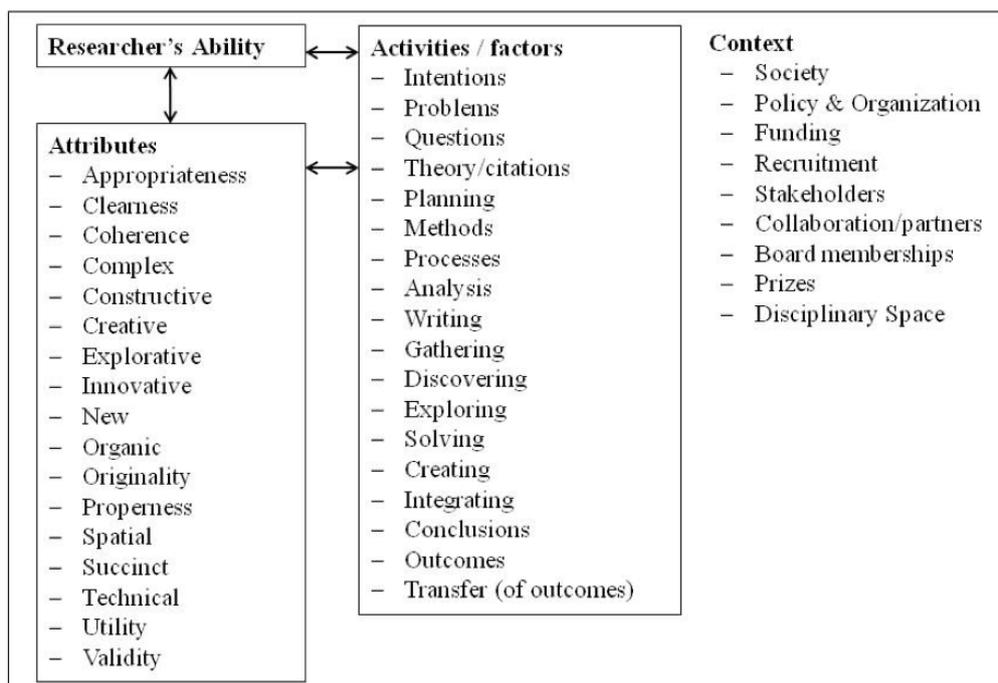
Figure 1: Overview of Criteria on (Good) Research as found in the Three Research Strands combined.

2.2 CONCEPTIONS IN THE ASSESSMENT OF RESEARCH QUALITY

The second strand of research considers criteria for 'good' research in the assessment of 'research quality'. And, although it seems–based on this label–that this research strand considers 'good' and 'non-good research', it mostly intents to define the best *system* of research incentives to compare research outcomes, efficiency, and effectiveness of a research institute, university or country. These systems of criteria are often called 'research quality control' (Albert, Laberge, & McGuire, 2012; Ochsner, Hug, & Daniel, 2012), 'research evaluation' (Hemlin, 1993), or 'scientometrics' (Donovan, 2007).

Within this second strand Albert, Laberge, and McGuire (2012) distinguished between the afore mentioned Mode 1 and Mode 2 for their research (in line with Gibbons et al., 1994) and argued that to assess the 'research quality' of mode 2 type of research, the system of research criteria should be expanded beyond the traditional 'peer review' by adding criteria such as

'utility', 'external stakeholders', and 'valid research problems' beyond the scientific field. Albert and colleagues (2012) also referenced previous work by Hessels and Van Lente (2008) who stated that scientists do not seem to have adopted criteria related to mode 2 types of research. Oschner, Hug, and Daniel (2012), in their study among academics in the humanities party, found similar 'impact-related criteria' such as 'third party funding', 'collaborations', 'transfer to society', and 'board memberships' but also more mode 1-related criteria such as 'citations', 'prizes', and 'recruitment'. Oschner and colleagues (2012) also found a researcher-related criterion in 'the assessed scholar'. In their study, Hemlin and Montgomery (1990) and Hemlin (1993) considered 'good and non-good research' in a similar qualitative manner as in the current study. The results of both studies combine aspects of the aforementioned second strand, such as 'research financing' and 'policy and organisation of research' as well as criteria more similar to the third research strand, such as 'method' or 'correctness' of the research. Interestingly enough, the qualitative study did not (Hemlin & Montgomery, 1990), where the quantitative follow-up (Hemlin, 1993) did find disciplinary differences in research conceptions. In conclusion, this second research strand mostly results in research quality criteria from a more aggregated, systems, or context perspective (see also Figure 1).

2.3 EXAMINATION OF RESEARCH BY STUDENTS AND RESEARCHERS

The last strand of research on 'good research' considers criteria for research in the perspective of examination criteria lecturers apply in judging students' theses, or in judging colleagues' work in peer reviews and in association with application for funding. This strand is closest to the current study since the quality of single research projects (and not systems for, or essence of research) is primarily considered. Webster, Pepper and Jenkins (2000) found nine criteria that were most commonly applied in the examination of undergraduate research: a) clear problem and questions, b) clear disciplinary context, c) appropriate research methods, d) shown ability to analyse material, e) evidence of critical thinking, f) conclusions based on evidence and material, g) clear and coherent argumentation, h) clear and succinct writing, and i) properly sited sources. One can see these criteria are already very different from most 'research quality control' criteria as applied in the aforementioned strand of studies. The criteria found by Webster and colleagues (2000) are in line with the results of several other studies in which the criteria applied in secondary education, undergraduate, and graduate research was examined (De Kleijn, Mainhard, Meijer, Brekelmans, & Pilot, 2013; Hand & Clewes, 2000; Stokking et al., 2004; Woolf, 2004). De Kleijn and colleagues (2013) showed how master's thesis supervisors found 'the content of written work' and 'the use of theory' to be the most important criteria. In addition to the list of Webster and colleagues (2000), some studies found 'planning of the research' to be mildly important as criterion (De Kleijn et al., 2013; Stokking et al., 2004). Research on criteria for master's theses, PhD dissertations, or studies by researchers confirms a similar list of criteria (Bourke & Holbrook, 2013; Golding, Sharmini, & Lazarovitch, ifirst 2013; Hemlin, 1993; Kiley & Mullins, 2005).

Other studies (Hand & Clewes, 2000; Webster et al., 2000) show how guidelines for criteria are not always used consistently or considered consistently valuable by lecturers, not even when applied to a single group of students. Furthermore, although the list of criteria is confirmed in several studies, in PhD research and in research by academics, the attributes or norms

attached to the criteria seem more prominently present than in the aforementioned studies, such as 'an *appropriate* method', 'an *effective* application', or 'an *convincing* approach'. Guetzkow, Lamont, and Mallard (2004) specifically considered the attribute 'originality' and concluded that originality can be taken into account in any of the other factors found. Finally, Kiley and Mullins (2005), as well as Albert, Laberge, and McGuire (2012), found that researchers' opinions on research are influenced by the way the results are communicated with the carrier of the communication (e.g., journal with high impact rate) as the main influence.

In conclusion, the three combined research strands provide four types of research criteria: a) activities or factors within the research, b) attributes that can be assigned to these activities and factors, c) the ability or position of the researcher, and d) the context in which the research takes place. Depending on the research strand and/or focus, different criteria are applied to define (good) research. For an overview of all criteria found, see Figure 1. The current study will show whether lecturers in higher professional education (HPE) and lecturers in traditional universities each apply similar criteria in defining 'good' and 'nongood' research.

3. METHOD

3.1 SAMPLE

Two groups of lecturers were part of this study: a) lecturers from five institutes of HPE (Nh=25), who previously participated in an elaborative survey study, were asked to join in further research; b) university lecturers (Nu=20), who were gathered using a snowball-method (Westerkamp & Van Veen, 2008). Of all the lecturers, 58% were male, 60% had over 5 years of teaching experience, 53% had a research responsibility in their work, 51% were related to social sciences, and 42% were related to sciences. The largest group (60%) had a master's degree, 20% had a doctorate, and 20% had a bachelor's degree as the highest qualification.

3.2 DATA COLLECTION

The data collection was executed in a pragmatic design consisting of two phases. First, the HPE lecturers were asked to participate in a focus-group session (five sessions with each 4-8 participants), since it was expected that HPE lecturers would be better able to construct and formulate their thoughts through interaction with other lecturers due to their often inexperience to talk about research criteria (Bloor, Frankland, Thomas, & Robson, 2001).

Second, the university lecturers were asked to participate in individual interviews, since it was expected that it would be more difficult to find an adequate number of university lecturers to participate in focus-group sessions at a previously determined time and location than it was for HPE lecturers due to an expected difference in the sense of urgency to talk about research criteria. And since the objective of study was both the themes as applied in 'good research' by lecturers in higher education and the possible differences between the two groups of lecturers in particular, no substantial effects of the difference in questioning is expected.

Both the interviews and the focus group sessions were set up in a similar, open-ended way. At the beginning of every session, the participant(s) were asked to come up with one example of good research and one example of nongood research (instead of "bad research", which is more plural-interpretable, see also Kiley & Mullins, 2005).

In the focus groups, lecturers took turns introducing their examples while the other participants remained silent. After all focus-group participants were done explaining their individual examples (usually after half an hour) the lecturers were asked, with as little interference as possible from the moderator, to discuss amongst themselves what they considered good and nongood research, and why. The discussion during the second half mostly lasted one hour before the lecturers started repeating their previous arguments and no further insightful information came to light in the discussions.

During the interviews, lecturers often started with one example and the interviewer asked for clarification, probing and following-up with questions about the first example for 20-30 minutes. The other example, and underlying reasoning, was discussed during the last 10-15 minutes of

the interview. The interview would end when the interviewee indicated that the interviewers' summary was complete and that there were no other aspects to add.

3.3 ANALYSIS

All focus-group meetings and interviews were audio recorded, transcribed *at verbatim*, and collectively analysed in three steps via a thematic analysis (Edmondson, 1999) using Atlas.ti. First, all separate arguments and statements concerning criteria for good and nongood research of the first part of the focus group meetings were labelled *in vivo*. Then codes covering similar themes were grouped and classified. After extensive discussions between the two coders, and testing the developed code system on both types of transcripts, the result was a classification system of six themes. This system was then applied to all transcripts. The second coder coded 10% of all transcripts, resulting in a Cohen's Kappa of .90.

THEME	CRITERIA	HPE	University
A) Design of the research			
Theoretical Background and	Well-formulated Research questions, sub-questions and hypotheses	✓✓	✓✓
Research Questions	Aware of previous research	✓✓	✓✓
	Well-defined concepts	✓	✓
	Not based on unfounded personal assumptions/biases	✓	✓
Methodological and	Suitable research methods to study research question(s)	✓✓	✓✓
Technical Set-up	Reliable and valid methods	✓✓	✓✓
	Discipline-specific methods	✓	✓
	Researcher is aware of the method's pros and cons	✓	✓
	Student research: feasible planning	✓	✓
B) Quality of the final product			
Style and Form	Writing, structure & cohesion	✓✓	✓
	Publishable article	✗	✓✓
Content	Answer to the research question	✓✓	✓✓
	New insights	✓	✓✓
	Recommendations	✓	✓
	A convincing story	✗	✓
	Different perspectives on the findings	✓	✓
Argumentation &	Conclusions based on results	✓	✓✓
Substantiation	Arguments supported by right sources	✓	✓
	Valid and applicable arguments	✓	✓
Transparency &	Transparency about steps taken	✓✓	✓✓
Accountability	Replicable and duplicable	✓✓	✓✓
	Openness about choices made	✓	✓
	Transparent argumentation	✓	✓
	Clearly visible results	✓	✓
C) Conduct of the Research			
Correct conduct	Correct execution of all phases of a study	✓✓	✓✓
	No manipulation	✓	✓✓
Thorough conduct	No quick and dirty research	✓✓	✓
	No lazy research	✗	✓
Dealing with uncertainties	Pro-active choice making	✓	✗
D) Value of the research (outcome)			
Utility value	Applicable or utilizable outcome	✓✓	✗
	Valuable for businesses, organizations, society	✓	✗
	Valuable for teaching	✓	✗
	Valuable for students' professional careers	✓	✗
Scientific value	Valuable contribution to scientific field	✗	✓✓
	Setting things in motion (new research)	✗	✓
E) Researcher-related criteria			
Qualities of the	Knowledge of the researcher	✓	✓✓
researcher	Communication and cooperation skills	✓	✓
	Intelligence of the researcher	✓	✓
	Ability to wield multiple perspectives	✓	✗
	Nature of the researcher	✓	✗
	Creativity	✗	✓
Positioning of the	Think and act independent	✓	✓
researcher	Personal involvement with topic	✓	✓
	Positioning towards organization that commissions the research	✓	✗
	Awareness of (funding) stakeholders	✗	✓
F) The topic of the research and its origin			
Topic origin	Problems brought up by businesses	✓	✗
	Topics brought up by lecturers	✓	✗
	Topics of students' interest	✓	✗
	Funding of a study	✗	✓
Topic relevance	Social relevance	✓	✓
	Scientific relevance	✗	✓✓

✓- topic was mentioned as criterion; ✓✓-topic was mentioned as criterion by more than half of the lecturers; ✗-topic was not mentioned

Table 1: Overview of Lecturers' Themes on 'Good Research' and their Underlying Criteria.

4. FINDINGS

Categorizing the lecturers' criteria showed that the total group of lecturers distinguished six themes on 'good research', each of which had two or more underlying types of criteria. Table 1 lists all themes and underlying criteria, in order of prevalence.

THEME A: THE DESIGN OF THE RESEARCH

Every lecturer brought up criteria concerning this aspect. Two criteria were prominent and discussed by both types of lecturers: a) theoretical background and research questions, b) methodological/technical set-up.

With regard to the first theme, a number of criteria were put forward by the lecturers: research questions, sub-questions, and hypotheses should be well-formulated and clearly demarcated; researchers should be aware of previous studies and literature on the research topic; all (theoretical) concepts used in the research should be well-defined beforehand; and researchers should not base their research on unfounded personal assumptions or biases. As one lecturer (respu 8) explained:

A good preparation is knowing what [research on the topic] has been done and how your research question fits within that context. If you are not aware of what has been done, you are either inventing a wheel or researching something that is useless because previous research has shown that it is impossible.

With regards to the methodological/technical set-up of the research, most lecturers indicated that the chosen research methods should be suitable to study the research questions or test the hypotheses, and the chosen methods should be sound, reliable, and valid. What requirements should be met differed between the lecturers, and seemed to be related to disciplinary differences but not to the HPE or university context. Requirements that were brought up more than once were: size and representativeness of the sample/data, appropriate statistical techniques, a good experimental design, the use of multiple research methods (triangulation), using a qualitative or quantitative design, conducting research systematically, cyclical and continuously, using an unbiased method that can convince even the most sceptic readers, and taking context and other influential factors into account.

THEME B: QUALITY OF THE FINAL PRODUCT

Almost all lecturers made clear that they look at the way the research is presented to them in the final product when separating good from nongood research. Most HPE lecturers talked about students' research reports, but advisory reports and (academic) articles also came up.

With regards to the first theme, 'style and form of the final product', many lecturers stated that a good research report is well structured, has cohesion, has no spelling or grammatical errors, and is written understandably. One lecturer (respu 13) explained:

It's all about convincing [your reader] …. When you have done a very good study but report it very badly, then … people will think, 'I understand it might be a relevant study, but I cannot get through the article, it is written down so badly'. Then people will put the article aside and [your contribution to the field] is lost.

Furthermore, some university lecturers made clear that articles published in peer-reviewed journals are often good research, since checks and balances have established that it has a certain quality.

With regards to the 'content of the research', most lecturers (Nu=20; Nh=20) explained how they determine the quality of research on the basis of content of the final product. Lecturers stated that the final product should contain an answer to the research question, recommendations, a good story, and different perspectives on the findings. Most university lecturers stated that good research articles should contain new insights. Several HPE lecturers believed that a report should be tailor made to the organization for which the research was conducted and include utilizable recommendations for that specific organization.

Many lecturers, mostly working at HPEs, brought up three criteria concerning 'argumentation and substantiation' of the final product (see Table 1). Several university lecturers noted that nongood research often draws conclusions that are too general or too far fetching to be supported by the research results.

Finally, most lecturers (Nh=18, Nu=16) stressed that 'transparency' is a prerequisite of good research and should include the steps taken in the research, as well as openness about the choices made by the researcher. One lecturer (resph 1, session 2) stated, 'The most important thing is to account for the different choices made, but what those choices exactly are is less important', which the lecturers related to the replicability of a study. Another form of transparency concerned argumentation and clear results.

THEME C: CONDUCT OF THE RESEARCH

Almost all lecturers (Nh=22, Nu=13) stated that they believe a study needs to be well executed in order to be considered 'good research'. Three criteria are part of the lecturers' statements. Regarding the first criterion, 'correctness of the conduct', most lecturers stated that data should be correctly processed, material and methods should be correctly applied, and analyses should be conducted correctly. The opposite of this, noncorrect execution of the research, was brought up by several university lecturers in their example of nongood research. Their examples ranged from inaccurateness, to data manipulation, to plain fraud.

With regard to the 'thoroughness of the conduct', several lecturers stated that it is wrong to quickly jump to conclusions. One lecturer (resph 5, session 5) explained that many of his students do 'quick and dirty' research in which they come up with a solution for a problem without properly studying the underlying problem. Several university lecturers complained about the 'lazy research' of some of their colleagues who always take the same approach to research even when it is not relevant. It lacks depth.

The third criterion, 'dealing with uncertainties', was only brought up by some HPE lecturers. They stated that when confronted with difficulties, student-researchers should dare to make proactive choices such as stopping the research if there are not going to be any useful results, changing the (methodological) design if the chosen set-up is not working, or changing the research questions if another question turns out to be more relevant.

THEME D: THE VALUE OF THE RESEARCH AND ITS OUTCOME

Almost all lecturers stated that good research needs to have a certain value. However, the two groups of lecturers talked about a different two types of value. The HPE lecturers (and two university lecturers) talked about a utility value, whereas most university lecturers discussed the scientific value.

Most HPE lecturers considered the utility value to be the factor that distinguishes HPE research from university research. For most lecturers, the utility value meant that a study should result in an applicable or utilizable outcome.

The scientific value was what most university lecturers found very important. Most university lecturers explained that research should be valuable in their scientific field in order to be considered 'good research', hence it mostly needed findings that are a useful contribution to the existing knowledge and theories in that field, as in providing new theories, models, discoveries, or insights. Several lecturers described that 'very good' research answers 'the significant questions' that need answers for their discipline to progress.

THEME E: RESEARCHER-RELATED CRITERIA

The results show how researcher-related criteria can be divided in two types. Two-thirds of all statements about characteristics of the researcher concerned specific qualities a researcher should have to be able to conduct good research such as specific knowledge about research methodology and statistical analysis, and about the topic they are researching. Several HPE lecturers stressed that a good researcher should have a curious nature and a critical research mentality. With regards to nonstudent researchers, several HPE and university lecturers stated that the ability to share knowledge, to involve others, and to work cooperatively was an important characteristic of a good researcher. As one lecturer (respu 14) explained:

A researcher should be critical enough to think, 'My idea is just an idea, I am enthusiastic about it, but I have to judge it critically'. This is often done by talking about it with colleagues, visiting conferences ... at the moment you publish it, you should have taken all possible tests.

Some HPE and university lecturers explained that the intelligence of a researcher is important: "[To be able to] think outside the box, wield multiple perspectives and handle a bigger complexity, you simply need more brainpower" (resph 4, session 4). Furthermore, several HPE lecturers agreed that good information skills, such as the ability to read and assess research articles, to consider multiple perspectives and approaches, and also creativity and the ability to connect different theories/studies within the research field are important competences.

The second researcher-related aspect considered the positioning of the researcher toward the research. Several lecturers stated that good research can only be conducted by researchers who think and act independently and objectively, who are critical about their own research, and who are aware of their biases or assumptions. Some lecturers differed on whether researchers should be involved and passionate about their topic, and whether they should not be involved within their topic in real life in order to remain able to study it from a distance. Furthermore, with regards to (student) research commissioned by an external company or organization, several HPE lecturers stated that the researcher should act independently from (company) instructors, while other HPE lecturers stated that a good researcher should be adaptive to the needs/wishes of these instructors. In the same regard, three university lecturers stated that the researcher should be aware of the context in which the research takes place: awareness of (funding) stakeholders involved in the research, as well as awareness over other influencing (contextual) factors. Finally, several HPE and university lecturers put forward the idea that a prejudiced researcher can never produce good research.

THEME F: THE TOPIC OF THE RESEARCH AND ITS ORIGIN

The last theme found shows how the topic of a study was an important aspect for a large group of lecturers to define 'good research'. A smaller group of lecturers concluded that their perception of the quality of a study is not related to the topic or theme at all. Among the first group, two themes were discussed. First, with regards to the origin of the research topic/theme, lecturers from institutes of HPE brought up different criteria than the university lecturers. Three criteria brought up by HPE lecturers were: 1) problems brought up by external organizations or businesses provide good research because they are helpful to the organizations that the students will work at in the future, 2) topics brought up by lecturers provide good research because they can improve their teaching or the study's curriculum, and 3) problems related to students' own interests provide good research because they will improve the students' interest. The first criterion seemed to be associated with teaching in business-related disciplines, while criteria 2 and 3 did not seem to be associated with the lecturers' disciplinary background. Interestingly, none of the university lecturers discussed these three criteria, except for two lecturers who related external-topic origins to funding-types that are less neutral and, hence, good research.

On the other hand, most university lecturers (Nu=14), but none of the HPE lecturers, stated that good research focuses on a topic or theme that is scientifically relevant such as something new, something that can contribute to the scientific field, or to scientific knowledge in general. This is highly related to the *scientific value* of research, which was discussed before; however, scientific relevance is related to the intention to contribute to science, instead of judging its' value on basis of the outcome of the research. Furthermore, several lecturers (Nu=5, Nh=1) brought up the criterion that good research should (also) be socially relevant. It should provide new insights or evidence for discussions happening in politics or problems within society.

5. DISCUSSION AND FUTURE PERSPECTIVES

The goal of this study was to explore the criteria used by lecturers in higher education to judge 'good research'. Furthermore, attention was given to the differences and similarities of these criteria between lecturers in HPE and traditional universities. The results show that Dutch lecturers from traditional universities and lecturers from institutes for Higher Professional Education mostly apply similar criterion in distinguishing 'good research' from 'nongood research', structured in six themes: a) the design of the research; a) the quality of the final product; c) the conduct of the research; d) the value of the research outcome; e) researcher-related criteria; and f) the topic of the research and its origin.

When these results are compared to the model based on previous research (see Figure 1), it becomes clear that the lecturers in this study apply criteria related to the activities or attributes within the research, as well as to the researcher executing the research. Only aspects d) and f) have a more indirect relation with the context of the research as criterion.

The presumed differences between mode 1 (theory oriented) and mode 2 (practice-based) types of research does become manifest in the research criteria that both groups of lecturers apply in this study. The differences are found in criteria related to the 'value of the research', as well as to the 'topic of the research'. One can even state that this aspect touches a difference in how the function (or nature) of research is perceived. But at the same time are these differences between both groups of lecturers limited to 'the context' of research, namely what goes into the research process (research topic), and what comes out of it (relevance of outcomes). The core what constitutes good research and its process does not seem to be differently perceived between both groups of lecturers, since the other criteria applied to research as such are mostly similar (although there is a difference in frequency). So the notion by Hessels and Van Lente (2008) that scientific researchers do not apply Mode 2-releated criteria is also reconfirmed for 'scientific' lecturers. But lecturers in HPE do apply aspects of Mode-2 criteria.

Based on these results one can say that the intention of especially HPE policy makers to frame their research as Mode-2 (and therefore different) is manifest in the criteria the HPE-lecturers apply. The newly developed frameworks in HPE for the assessment of research quality will have had their influence in this regard. In the frameworks for assessing the work of students, the origin of a thesis topic is defined as needing to be directly relevant for a professional field (Stapert, 2012), while in traditional universities the scientific relevance is still clearly emphasized. Also in the quality frameworks for research funding, companies and societal organisations need to be explicitly present as partners to make a proposal from HPE eligible (SIA, 2014). And although this is also more and more the case in the funding systems the Dutch traditional universities apply to, it remains to be of less importance in the judgements of quality.

But while can be concluded that these types of steering mechanisms do show their results, the question remains whether the intended differences in research between HPE and traditional universities were supposed to be limited to criteria related to value only. At least theoretically, more substantial differences are presumed between theory oriented and practice-based types of research (Gibbons et al., 1994; Nowotny, Scott, & Gibbons, 2001). These differences for

instance yield from the active role of clients and users of results in the practice-based research process, with theory oriented research being more based on the notion of 'distance'. These types of differences in theory presume not only differences in value, but also different types of activities and modalities in research practice, and therefore in criteria for good research at the core. But one can wonder whether enough is known about the practicalities of these differences to be able to implement them into the work of higher education institutes. It is not unlikely that a lack of knowledge about these differences in practice result in a lack of difference in steering at the core level of research in both types of institutes. If the explication of these core differences was (and is) actually intended, policy officers and higher education researchers should collaborate to define the practical differences between theory oriented research and practice-based research. And then it is probable that the current steering mechanisms are able to put them into practice.

In conclusion, the present study provides a comprehensive list of six empirical themes lecturers in both traditional universities and applied higher education find relevant in discerning 'good research' from 'nongood research'. The differences between lecturers in Higher Professional Education and lecturers in traditional universities seem related to the policy intentions of these institutes, but do not seem to reach the core of criteria for good research. If more explicit differences are intended between research in both types of institutes, before further implementation is possible, higher education policy and higher education research should collaborate to further empirically define the differences between theory oriented and practice-based research.

REFERENCES

Åkerlind, G. (2008). An Academic Perspective on Research and Being a Researcher: an Integration of the Literature. *Studies in higher education, 33*(1), 17-33.

Albert, M., Laberge, S., & McGuire, W. (2012). Criteria for assessing quality in academic research: the views of biomedical scientists, clinical scientists and social scientists. *Higher Education, 64*(5), 661-676.

Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001). *Focus Groups in Social Research*. London: Sage.

Bourke, S., & Holbrook, A. P. (2013). Examining PhD and Research Masters Theses. *Assessment & Evaluation in Higher Education, 38*(4), 407-416.

Brew, A. (2001). Conceptions of Research: A Phenomenographic Study. *Studies in higher education, 26*(3), 271-285.

De Kleijn, R. A. M., Mainhard, T. M., Meijer, P. C., Brekelmans, M., & Pilot, A. (2013). Master's thesis projects: student perceptions of supervisor feedback. *Assessment & Evaluation in Higher Education, 38*(8), 1012-1026.

Donovan, C. (2007). Introduction: Future pathways for science policy and research assessment: metrics vs peer review, quality vs impact. *Science and Public Policy, 34*(8), 538-542.

Edmondson, A. C. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly, 44*(2), 350-383.

Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge. The dynamics of science and research in contemporary societies.* London: Sage.

Golding, C., Sharmini, S., & Lazarovitch, A. (ifirst 2013). What examiners do: what thesis students should know. *Assessment & Evaluation in Higher Education*. doi: 10.1080/02602938.2013.859230

Griffioen, D. M. E. (2011). Onderzoek in het Hoger Beroepsonderwijs: opleiden tot 'Professional Scholar'. *TH&MA, 3*, 52-56.

Griffioen, D. M. E., & De Jong, U. (2013). Academic Drift in Dutch Non-university Higher Education Evaluated: A Staff Perspective. *Higher Education Policy, 26*, 173-191.

Guetzkow, J., Lamont, M., & Mallard, G. (2004). What Is Originality in the Humanities and the Social Sciences? *American Sociological Review, 69*(2), 190-212.

Hand, L., & Clewes, D. (2000). Marking the Difference: An investigation of the criteria used for assessing undergraduate dissertations in a business school. *Assessment & Evaluation in Higher Education, 25*(1), 5-21.

Hemlin, S. (1993). Scientific Quality in the Eyes of the Scientist. A Questionnaire Study. *Scientometrics, 27*(1), 3-18.

Hemlin, S., & Montgomery, H. (1990). Scientists Conceptions of Scientific Quality. An Interview Study. *Science Studies, 1*, 73-81.

Hessels, L. K., & Lente, H. (2008). Re-thinking new knowledge production: A literature review and a research agenda. *Research Policy, 37*, 740–760.

Kiley, M., & Mullins, G. (2005). Supervisors' Conceptions of Research. *Scandinavian Journal of Educational Research, 49*(3), 245-262.

Kyvik, S., & Skodvin, O.-J. (2003). Research in Non-university Higher Education Sector - Tensions and Dilemmas. *Higher Education, 45*(2), 203-222.

Levy, P., & Petrulis, R. (2012). How do first-year university students experience inquiry and research, and what are the implications for the practice of inquiry-based learning. *Studies in higher education, 37*(1), 85-101.

Meyer, J. H. F., Shanahan, M. P., & Laugksch, R. C. (2005). Students' Conceptions of Research. I: A qualitative and quantitative analysis. *Scandinavian Journal of Educational Research, 49*(3), 225-244.

Murtonen, M., & Lehtinen, E. (2005). Conceptions of Research and Methodology Learning. *Scandinavian Journal of Educational Research, 49*(3), 217-224.

Nowotny, H., Scott, P., & Gibbons, M. (2001). *Re-Thinking Science. Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity Press.

Ochsner, M., Hug, S. E., & Daniel, H. D. (2012). Indicators for Research Quality for Evaluation of Humanities Research: Opportunities and Limitations. *Bibliometrie - Praxis und Forschung, Band 1: 4 URN: urn:nbn:de:bvb:355-bpf-157-0*.

Pitcher, R. (2011). Doctoral Students' Conceptions of Research. *The Qualitative Report, 16*(4), 971-983.

Pitcher, R., & Åkerlind, G. S. (2009). Post-Doctoral Researchers' Conceptions of Research: A Metaphor Analysis. *International Journal for Researcher Development, 1*(2), 160 - 172.

Prosser, M., Martin, E., Trigwell, K., Ramsden, P., & Middleton, H. (2008). University Academics' experience of Research and its relationship to their experience of Teaching. *Instructional Science, 36*, 3-16.

Ruegg, W. (2004). *A History of the University in Europe. Universities in the Nineteenth and Early Twentieth Century* (Vol. 3). Cambridge: Cambridge University Press.

SIA. (2014). RAAK Publiek. Retrieved 24 October, 2014, from http://www.regieorgaan-sia.nl/content/RAAK-regeling/raak-publiek

Stapert, R. F. (2012). Beoordelingskader Eindwerkstuk hbo Bachelor / Master. The Hague: Hobeon.

Stokking, K., Van der Schaaf, M., Jaspers, J., & Erkens, G. (2004). Teachers' Assessment of Students' Research Skills. *British Educational Research Journal, 30*(1), 93-116.

Teichler, U. (2008). The End of Alternatives to Universities or New Opportunities? In J. S. Taylor, J. B. Ferreira, M. De Lourdes Machado & R. Santiago (Eds.), *Non-University Higher Education in Europe*. Dordrecht: Springer.

Van der Rijst, R. M., & Visser-Wijnveen, G. J. (2011). Undergraduate Research and Inquiry in the Netherlands. *Council for Undergraduate Research Quarterly, 32*(2), 32-36.

Visser-Wijnveen, G. J., Van Driel, J. H., Van der Rijst, R. M., Verloop, N., & Visser, A. (2009). The Relationship between Academics' Conceptions of Knowledge, Research and Teaching - a metaphor study. *Teaching in Higher Education, 14*(6), 673-686.

Webster, F., Pepper, D., & Jenkins, A. (2000). Assessing the Undergraduate Dissertation. *Assessment & Evaluation in Higher Education, 25*(1), 71-80.

Woolf, H. (2004). Assessment criteria: reflections on current practices. *Assessment & Evaluation in Higher Education, 29*(4), 479-493.

HIGHER EDUCATION LECTURERS' CRITERIA FOR 'GOOD RESEARCH'

This article explores the criteria for 'good research' employed by lecturers in traditional universities and institutes of higher professional education.