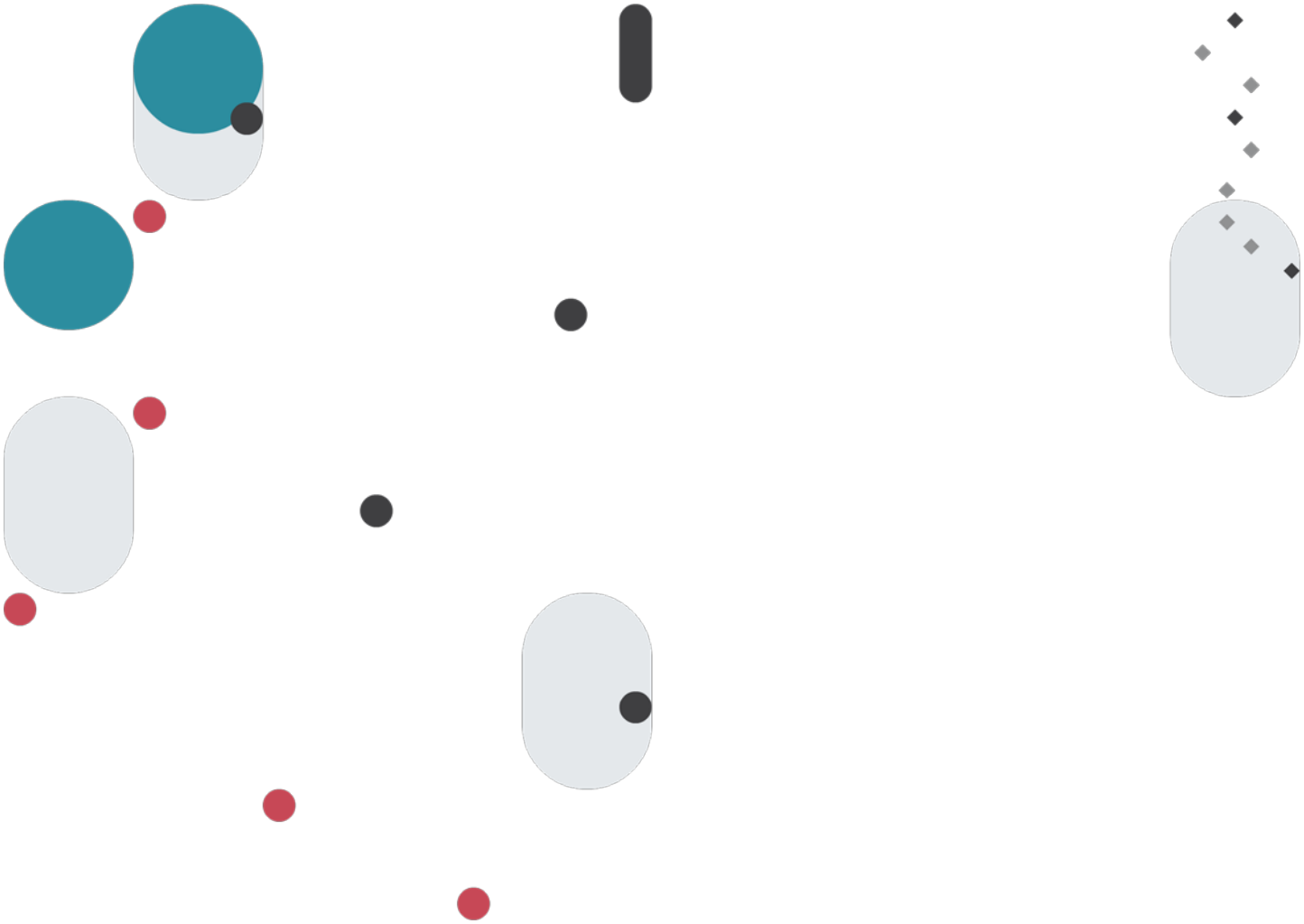

The relationship between research and teaching in the humanities

Results from a survey to academic staff in Norwegian universities and colleges

Svein Kyvik

Working Paper 2015:21

NIFU

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Preface

On request by the Research Council of Norway, Department for Humanities and Social Sciences, NIFU has undertaken a brief analysis of the relationship between research and teaching in the humanities. This analysis is based on data drawn from a survey to academic staff in Norwegian higher education institutions. The report is written by Svein Kyvik, Senior Researcher at NIFU.

Oslo, November 2015

Sveinung Skule
Director

Nicoline Frølich
Head of Research

Contents

Summary

The purpose of this paper is to enhance our understanding of how research and teaching are related in the humanities in Norwegian higher education institutions, and at all levels. This analysis is based on data drawn from a survey undertaken in 2013 to academic staff in universities and colleges. In addition, we refer to previous Norwegian studies on the interaction between teaching and research.

While this relationship is more or less taken for granted in the training of PhD candidates and master students, there is an ongoing discussion on what this relationship should imply at the bachelor level. Hence, most of the research literature dealing with this issue concerns the undergraduate level.

In total, 80 percent of the teachers report that they to a large (27%) or some (53%) extent present their research to bachelor students. In this respect, there are no differences between teachers in old universities, new universities and university colleges. Furthermore, there are only small differences between teachers of different academic ranks. Moreover, there are no differences between productive and inactive academic staff in terms of scientific and scholarly publishing.

Few teachers (25 %) involve bachelor students in their research. Slightly more teachers in the university colleges than in the old universities involve students to some extent, and a larger share of academic staff in the new universities and in the university colleges than in the old universities agree that bachelor students to a higher degree should be involved in research. Moreover, lecturers are more inclined to engage bachelor students in their research projects than are professors.

The interaction between research and teaching in the humanities differs in some respects from the other academic fields. While a higher percentage of humanities teachers than their counterparts in the natural sciences, medicine and technology reported that their research influence their teaching of undergraduate students, far fewer answered that supervision of PhD candidates and master students was part of their own research.

1 Introduction

1.1 The relationship between teaching and research in higher education

There seems to be a common understanding among academics, educational bureaucrats and politicians in Norway, as well as internationally, that there should be a link between research and teaching at all levels in higher education. However, while this relationship is more or less taken for granted in the training of PhD candidates and master students, there is an ongoing discussion on what this relationship should imply at the bachelor level. Hence, most of the research literature dealing with this issue concerns the undergraduate level.

The idea to enhance the relationship between research and teaching at the bachelor level originated in the USA in the 1960's. The purpose was to raise the interest for graduate studies and a research career in the STEM fields. Later, this idea was acclaimed by *The Boyer Commission on Educating Undergraduates in the Research University* (1998), as a general recommendation for all disciplines.

Outside the USA, researchers and teachers have discussed this issue mainly in the UK and Australia, which the research literature on undergraduate education strongly reflects. However, in these countries, questions concerning the impact of research-based education as a pedagogical tool for the improvement of teaching and student learning have been more in the forefront (Brew & Boud 1995, Jenkins, Breen and Lindsay 2007; Brew 2013; Malcolm 2014).

The literature on the relationship between teaching and research at the undergraduate level has primarily discussed the extent to which teaching practice will improve if academic staff engage in research, and the extent to which students will learn more if they are taught in a research mode (Jenkins 2004, Healey 2005, Brew 2006, Jenkins, Breen & Lindsey 2007, Healey & Jenkins 2009).

While some studies have examined whether research-oriented staff are better or worse teachers than their teaching-oriented colleagues (Hattie & Marsh 1996), others have a more normative approach; to develop students' interest in research at an early phase of their training; and to contribute to developing skills, insights, and critical thinking (Brew 2006, Healey & Jenkins 2009).

In the scholarly literature, many different interpretations of research-based education are used. Based on this literature, Jenkins, Breen & Lindsey (2007: 61) suggest that linking research and teaching from the perspective of student learning is achieved when:

1. *Students learn how research within their disciplines leads to knowledge creation.*
2. *Students are introduced to current research in their disciplines.*
3. *Students learn the methods used to carry out research in their disciplines.*

4. *Students are motivated to learn through knowledge of and direct involvement in research.*
5. *Students carry out research.*
6. *Students participate in research conducted by their lecturers.*
7. *Students learn and are assessed by methods resembling research procedures in their disciplines.*
8. *Students learn how research is organized and funded.*
9. *Students become members of a school or department and university culture within which learning, research and scholarship are integrated.*
10. *Students' learning is supported by systems and structures at departmental, institutional, and national level that facilitate staff scholarship and research in the pedagogy of the disciplines as well as disciplinary scholarship and research.*

Governmental guidelines for research-based education at the bachelor level in Norwegian higher education include the first seven items in this list. These are in accord with the recommendations in the *European Qualifications Framework* (EQF), which suggest that candidates holding a bachelor degree as a part of their total learning outcome should be informed about research and development within their field of study. In addition, they should be involved in research conducted by their teachers, and they should conduct a small R&D project as part of their final bachelor assignment (Kyvik et al. 2015). This implies that teachers should provide bachelor-students with knowledge and skills in theory and research methods. Healey (2005) argues that there is an increasing amount of evidence that one of the most effective ways in which undergraduate students might benefit from research is through active engagement in the research process. This implies that students should do some project work or write a bachelor thesis founded on research or some kind of investigative work under the supervision of an experienced researcher as an integrated part of their education.

In the research literature, a common argument is that teachers who conduct research deliver better teaching than those who are not active in research (e.g. Jenkins, Breen & Lindsay 2007). According to this argument, it is not sufficient to read and get an overview of relevant research literature to provide high quality teaching; the teachers must undertake research themselves. However, the research literature on the relationship between research, teaching quality, and student learning is inconclusive. A partial explanation might be that even in research universities, staff members have to teach courses for which they have not done any research themselves and must base their lectures on reading research done by others.

While some studies report a positive relationship (e.g. Bauer & Bennett 2003, Craney et al. 2011, Laursen, Seymour and Hunter 2012, Visser-Wijnveen et al. 2012), other studies report a very weak or no relationship at all (Hattie & Marsh 1996), or student dissatisfaction with research-orientated teachers (Astin 1993, Zamorski 2002, Turner et al. 2008). As Trowler and Wareham (2008) point out, only few studies have given these negative effects attention, probably due to the normative position taken by many scholars who assume that teaching and research at the undergraduate level can and should be interlinked.

1.2 The purpose of this paper

The purpose of this paper is to enhance our understanding of how research and teaching are related in the humanities in Norwegian higher education institutions, and at all levels. This analysis is based primarily on data drawn from a survey undertaken in 2013 to academic staff in universities and colleges (Waagene & Reymert 2015). In addition, we refer to previous Norwegian studies on the interaction between teaching and research. We hypothesize that this relationship varies with institutional type: old universities, new universities, and university colleges, primarily due to their different roles in the training of doctoral candidates and master students. In addition, we assume that the relationship between research and teaching differs between academic staff members due to two parallel career tracks; a research oriented (associate professor and professor) and a teaching oriented (lecturer, senior lecturer and docent).

The main questions to be investigated are as follows:

- To what extent do staff members in different institutions and academic positions present their research to students?
- To what extent do staff members in different institutions and academic positions involve students in their research?
- How important are formal research groups in the training of PhD candidates and master students?
- Do strongly research-oriented staff members have other attitudes to the importance of research-based teaching than their less research-oriented colleagues?
- Does the relationship between research and teaching in the humanities differ from other academic fields?

Many more questions might have been important to investigate, but in this report we have to confine ourselves to those issues that can be illuminated by the survey data.

Before we present the results of our analyses, a few words need to be said about the notion of *research* as used in this report.

1.3 The notion of research

The concept of research is commonly used as a denominator for a variety of academic activities: basic research, applied research, development work, scholarly writing, etc. However, the meaning of this concept as used in the humanities literature, in policy documents, and in everyday life varies much. The OECD definition, which is used for producing R&D statistics, distinguishes between basic and applied research and experimental development (OECD 2002). The latter category includes activities separate from research but obviously strongly related to applied research. A previous survey to permanent academic staff in the Norwegian universities found that in 2008, 68 % of the staff in the humanities characterized their research as mainly basic, while 14 % defined it as mainly applied. These results can be further elaborated using data from a similar survey undertaken in 2001. In that survey, approximately 70 % of the academic staff in the humanities classified their R&D activities as mostly basic research, while about 20 % characterized it as predominantly applied, and more than 10 % as mainly development (Gulbrandsen & Kyvik 2010). The study mentioned several examples on such activities: The development of a Norwegian language alternative to the predominating English-American to characterize the working operations in the oil and gas industry; the development of textual databases for research purposes; the contributions by linguistics in the development of software for stimulating reading abilities among immigrants; and the development of new methods and devices in archaeological research (Gulbrandsen & Kyvik 2010: 353). Such activities are included in the notion of research as used in this report, because academics themselves obviously regard this kind of work as research when they are asked to respond to surveys about their activities. Likewise, disciplinary scholarship is included as part of the research concept. Academic scholarship can be regarded as the reworking and redefinition of existing knowledge and concepts (Kogan 2004). This is in all fields an activity which is usually part of the research process, but in the humanities, it may be a separate activity, not necessarily undertaken as a part of, or a prerequisite for starting a research project. Finally, academic staff often regard curriculum development as a kind of R&D activity, and such development work is subsequently included in the notion of research in this report, to the extent that individual staff members themselves have done so.

1.4 Data and methods

Data are drawn primarily from a survey in 2013 to 8,460 permanent academic staff members at all public universities and colleges in Norway. In total, 4,440 persons responded to the survey, giving a response rate of 52.5 percent.

In the field of humanities, 725 persons responded to the survey. Of these respondents, we have excluded persons holding an academic/administrative leadership position. Thus, 688 persons are included in the analyses.

Scientific disciplines are in Norway defined according to a national classification system developed by The Norwegian Association of Higher Education Institutions. According to this system, which forms the basis for national R&D statistics, the humanities include the following disciplinary groups:

- Linguistics
- Literature
- Cultural studies
- History
- Archaeology
- Folklore studies/ethnology
- Musicology
- Art history
- Architecture and design
- Theology and religion
- Philosophy
- Film and theatre studies

Due to the limited number of respondents in each of these categories, it is not meaningful to show the results for the individual disciplinary groups.

In the analyses, we distinguish between (a) institutional categories, (b) academic rank, and (c) publication productivity.

Institutional categories

We distinguish between three types of institutions (N = number of humanities staff who responded to the survey):

- 'Old universities' (the four universities in Oslo, Bergen, Trondheim and Tromsø) (N = 418)
- 'New universities' (the four institutions upgraded to universities between 2005 and 2011) (N = 199)
- 'University colleges' (22 Institutions) (N = 89)

There were only 19 respondents in the category 'specialized university institutions', which has been omitted in these tables.

We do not find it meaningful to distinguish between individual institutions within each of these three categories. In the three largest institutions – the universities in Oslo, Bergen and Trondheim – the humanities are organised in separate faculties. In the other cases, there are typically joint faculties for the humanities, social sciences, and/or educational sciences.

Academic rank

We distinguish between four categories of academic positions:

- Professor (incl. docent) (N = 227)
- Associate professor (N = 238)
- Senior lecturer (N = 59)
- Lecturer (N = 164)

Professor and associate professor are typical research oriented positions, while senior lecturer and lecturer are teaching oriented positions. The holders of the latter positions do not have a PhD (with a few exceptions).

Publication productivity

The publication data is drawn from a bibliographic database that has been developed in Norway as a common and complete documentation system for all scientific and scholarly publications (Cristin). This database has complete coverage of all peer-reviewed scientific and scholarly publications, including journal articles, monographs, book chapters and conference series in all fields of research (Sivertsen 2010). Different publications give different publication points at two different levels (see Table 1.1). Level 1 is the ordinary scientific publication channel, while Level 2 is confined to prestigious journals and publishers.

Table 1.1 Publication points for different publications at different academic levels.

	Level 1	Level 2
Articles in scientific journals	1	3
Chapters in anthologies	0,7	1
Monographs	5	8

If there are more than one author on a publication, the publication points are shared between the authors. Hence, the amount of publication points is dependent on cooperation, which again is dependent on the academic field. It is much less common to be many co-authors of a publication in the humanities than in other fields; subsequently humanists tend to have more publication points than academics in most other fields.

We use the total number of publication points in the three-year period 2011-2013 as an indicator of individual research productivity. Examinations of different data sets at different time intervals indicate that a three-year publication period provides reliable results (Pao 1985, Kyvik 1991, Abramo et al. 2012).

Table 1.2 shows that the academic staff in the humanities is highly stratified in terms of publication productivity. One third of the staff members in permanent positions did not have publication points at all during the period 2011-2013. This percentage is identical to the average of non-publishers in the higher education sector.

Table 1.2 Academic staff in the humanities by number of publication points 2011-2013.

	Percent	Number of staff
0 publication points	34	236
Less than 1 publication point	12	82
1-1.9 publication points	17	114
2-3.9 publication points	15	104
4-6.9 publication points	13	87
7 and more publication points	9	65
Total	100	688

Table 1.3 reveals the large differences across institutional type in publication productivity, particularly with regard to the percentages of academic staff with no registered publication points at all. In this three-year period, 27 percent of the permanent humanities staff in the old universities were not registered with publication points in Cristin. This is a far higher percentage than the average of non-publishers for all permanent academic staff in these universities (18 percent). This difference can partly be explained by the composition of the permanent academic staff. In the humanities, 19 percent of the respondents are constituted by university lecturers and senior lecturers, which is similar to the social sciences (20 %), but higher than in medicine and health (15 %), technology (5 %), and the natural sciences (2 %). Still, the percentages of professors and associate professors with no publication points is higher in the humanities than in the other fields.

Table 1.4 shows that the number of non-publishers is far smaller among professors and associate professors, than among the lecturers.

Table 1.3 Academic staff in the humanities by number of publication points 2011-2013 and by institutional category. Percentages.

	Old universities	New universities	University colleges
0 publication points	27	39	47
Less than 1 publication point	11	10	15
1-1.9 publication points	17	13	19
2-3.9 publication points	19	10	9
4-6.9 publication points	15	17	7
7 and more publication points	12	12	3
Total	100	100	100

Table 1.4 Academic staff in the humanities with no publication points 2011-2013 by institutional category and rank. Percentages.

	Old universities	New universities	University colleges	Total
Professor	12	10	13	13
Associate professor	21	23	28	23
Senior lecturer	51	36	61	54
Lecturer	79	78	67	73

2 Previous Norwegian studies (1992, 2001)

2.1 Introduction

The relationship between research and teaching in the humanities has previously been studied in surveys in 1992 and 2001 to academic staff in the Norwegian universities. In the 1992-survey, 385 permanently employed academic staff responded (response-rate = 67%). I 2001, 421 persons responded (response-rate = 55%).

Three issues were examined:

- The influence of research on teaching
- Impulses from teaching on research
- The relationship between supervision of graduate students and the research performance of supervisors

An important part of these studies was to compare these issues across different academic fields.

2.2 The influence of research on teaching

In the 1992-survey, academic staff were asked about the extent to which they thought their research influenced their teaching (Figure 2.1). Most academics answered that this was the case 'to a great extent' at the PhD level, more than were of the same opinion about the master level, but very few responded that their research influenced their teaching at the undergraduate level (Figure 2.1). A significantly higher percentage of teachers in the humanities than in the other academic fields thought that their research influenced their teaching of undergraduate students (Smeby 1998). Most likely, the main reason is that research in the humanities is more easily understandable and of greater general relevance to bachelor students than is highly specialized research in the STEM fields.

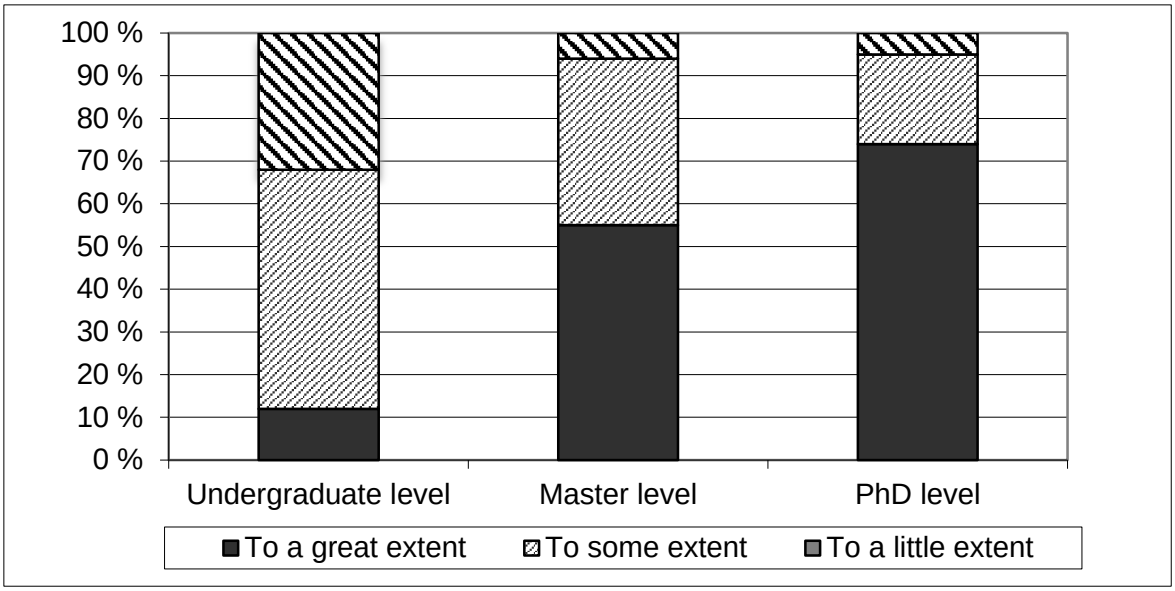

Figure 2.1 Percentages of university staff in the humanities in 1992 who thought their teaching was influenced by their research to 'a great extent', to 'some 'extent', or to 'a little extent', by teaching level.

2.3 Impulses from teaching on research

In the 1992-survey, university staff were also asked about the extent to which teaching gave impulses to their research, e.g. in the form of ideas and constructive criticism. The higher the teaching level, the higher the percentage thought this was the case. Very few answered that teaching of undergraduate teaching had any impact on their research (Figure 2.2). However, a significantly higher percentage of academic staff in the humanities (and the social sciences), than in the natural sciences, medicine and technology responded that teaching gave impulses to research 'to some extent' (Smeby 1998).

An explanation for this difference might be related to the finding reported above; that more teachers in the humanities than in the other academic fields responded that their research influenced their teaching of undergraduate students. When students are exposed to the research of their teachers, they also have the opportunity to give feedback, which in turn might stimulate further thinking by the teachers.

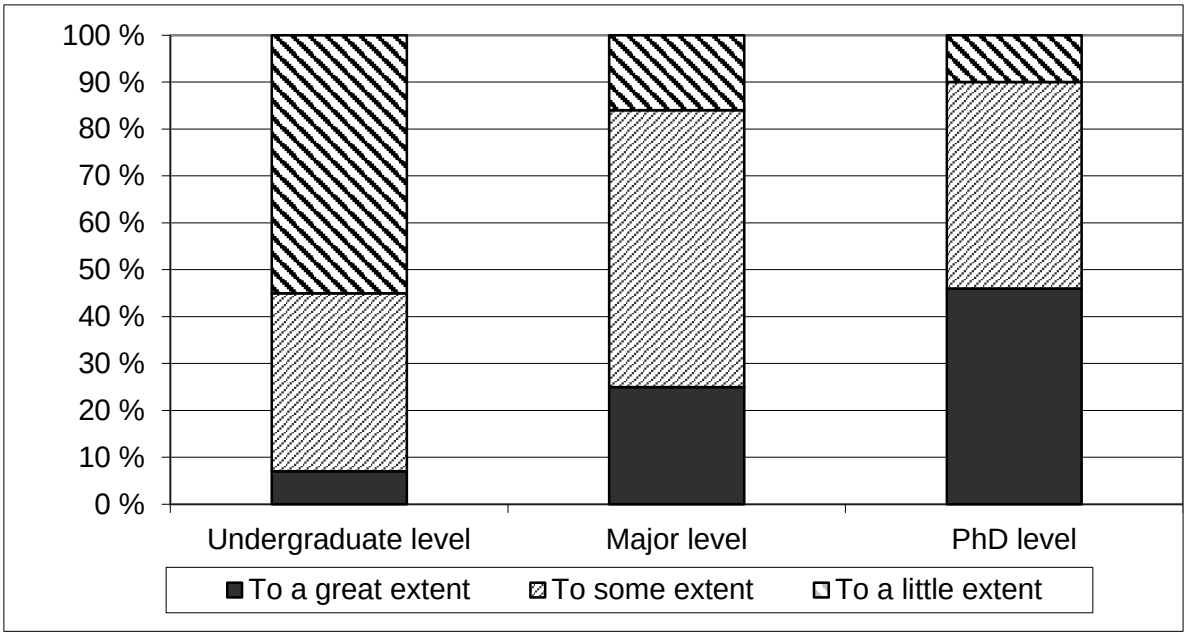

Figure 2.2 Percentages of university staff in the humanities in 1992 who thought that teaching gave impulses to their research to 'a great extent', to 'some 'extent', or to 'a little extent', by teaching level.

2.4 Supervision of graduate students

In previous surveys (1992 and 2001), academic staff at Norwegian research universities were asked about the extent to which they regarded the supervision of master and PhD students as part of their own research (Kyvik & Smeby 1994). Reply alternatives were 'to a great extent', 'to some extent', 'none', and 'doesn't apply'. The answers were very consistent across the two surveys.

Table 2.1 shows that the proportion of staff who answered that supervision was part of their own research 'to a great extent' was much lower in the humanities (and the social sciences) than in the natural sciences, medicine and technology. The primary reason is that in the humanities (and the social sciences), it is far less common for students to choose topics that are related to the research projects of their supervisors.

Table 2.2 Percentages of university academic staff who in 1992 and 2001 assessed the supervision of master students and PhD candidates to be part of their own research to 'a great extent', by academic field.

	Master students		PhD candidates	
	1991	2000	1991	2000
Humanities	8	5	18	15
Social sciences	7	9	19	24
Natural sciences	31	26	60	63
Medical sciences	30	36	59	62
Technology	22	15	67	57
Total	21	18	49	46

3 Research-based teaching (2013)

3.1 Introduction

It is not possible to give a comprehensive picture of the relationship between research and teaching in the humanities based upon the 2013-survey due to few relevant questions to academic staff. Nevertheless, those questions that were posed in the survey provide valuable information on the following issues:

- The extent to which academic staff present their research to students.
- The extent to which teachers involve students in their research.
- The extent to which teachers agree that bachelor students to a larger degree should be involved in R&D-projects.
- The role of research groups in the training of PhD-candidates and master students.
- Attitudes to teaching by academic staff.

3.2 Presentation of teachers' research to students

Between one fourth and one third of the humanities teachers report that they present their research to PhD candidates, master students and bachelor students 'to a large extent' (Table 3.1). For many staff members, particularly in the university colleges, this question was not relevant to the PhD level and the master level. On the other hand, 80 percent reported that they to a large or some extent presented their research to bachelor students. It is an interesting finding that there is no difference between teachers in old universities, new universities and university colleges with regard to the presentation of their research to bachelor students (Table 3.2).

A possible explanation is the academic drift of university colleges, which may lead to a stronger emphasis on the interaction between research and teaching at the bachelor level than in the old universities, because in the latter institutions, this interaction is primarily taking place at the master- and PhD-levels.

Table 3.1 Percentages of academic staff in the humanities who present their research to students, by teaching level.

	PhD candidates	Master students	Bachelor students
To a large extent	30	38	27
To some extent	15	37	53
To a small extent	2	4	9
Not relevant	52	21	11

Table 3.2 Percentages of academic staff in the humanities who present their research to bachelor students, by institutional category.

	Old universities	New universities	University colleges	Total
To a large extent	25	26	31	27
To some extent	54	44	54	53
To a small extent	9	15	6	9
Not relevant	12	15	9	11

3.3 Involvement of students in teacher's research

Very few humanities teachers involve students (and particularly bachelor students) in their research 'to a large extent' (Table 3.3). However, at the bachelor level, slightly more teachers in the university colleges than in the old universities involve students to some extent (Table 3.4). Furthermore, a larger share of academic staff in the new universities and in the university colleges than in the old universities agree that bachelor students to a higher degree should be involved in R&D projects (Table 3.5). A possible explanation is that academic staff in the old universities collaborate with PhD candidates and master students, and that they due to limited time have less opportunity to engage with bachelor students.

Table 3.3 Percentages of academic staff in the humanities who involve students in their research, by teaching level.

	PhD candidates	Master students	Bachelor students
To a large extent	18	10	3
To some extent	18	32	21
To a small extent	8	23	41
Not relevant	56	35	35

Table 3.4 Percentages of academic staff in the humanities who involve bachelor students in their research, by institutional category.

	Old universities	New universities	University colleges	Total
To a large extent	3	5	4	3
To some extent	17	25	28	21
To a small extent	43	32	41	41
Not relevant	37	38	28	35

Table 3.5 Percentages of academic staff in the humanities who agree that bachelor students to a higher degree should be involved in R&D-projects, by institutional category.

	Old universities	New universities	University colleges	Total
Strongly agree	18	10	18	17
Partly agree	33	54	46	39
Undecided	32	13	27	28
Partly disagree	11	14	6	10
Strongly disagree	7	10	4	6
Total	100	100	100	100

3.4 The role of research groups in the training of PhD candidates and master students

At the old universities, slightly more than 50 percent of the permanent academic staff in the humanities are members of a formal research group. In the natural sciences, medicine and health, and technology, approximately 80 percent of the academic staff are members of a research group, and in the social sciences, this applies to about 70 percent.

The relative importance of the research group differs much across fields (Kyvik & Vabø 2015). In the humanities, only 23 percent of the group members conduct their research 'to a large degree' in the group, and 57 percent undertake their research 'to a large degree' alone. In contrast, 60 percent of the members in medicine and health conduct their research 'to a large degree' in a formal group, and only 15 percent conduct their research alone.

Of those humanities teachers who are members of a research group, less than 40 percent involve PhD students in their research projects 'to a large extent'; the same percentage as in the social sciences. In medicine and health, this applies to 60 percent, and in the natural sciences and technology to more than 80 percent of the group members.

Far fewer group members involve master students in their research 'to a large extent'; less than 20 percent in the humanities and social sciences, 25 percent in medicine and health, and about 40 percent in the natural sciences and technology.

4 Research competence, research orientation and research-based teaching (2013)

4.1 Introduction

Are research-oriented academic staff better teachers for undergraduate students than are teaching-oriented staff? Will bachelor education improve if the teachers engage more strongly in research? Do teachers at the bachelor level need to undertake research themselves in order to provide research-based teaching? These questions have been much discussed in Norway as well as internationally, and empirical findings are inconclusive.

The survey to academic staff in 2013 provides some information that might enlighten this issue beyond what is reported in the scholarly literature. We have used two indicators on research competence and research orientation of academic staff: (a) academic rank, and (b) publication productivity, and examined whether rank and productivity affect the degree to which teachers present their research to bachelor students, the extent to which they involve bachelor students in their research, and their attitudes to involving bachelor students in their research projects.

We hypothesize that the higher the rank, and the more publishing active teachers are, the more engaged they are in presenting their research to students and in involving them in their research, and the higher they value the involvement of bachelor students.

4.2 Presentation of teachers' research to bachelor students

There are surprisingly small differences across academic ranks in the propensity to present their research to bachelor students; lecturers are as active as professors (Table 4.1).

Likewise, in this respect there are no differences between academic staff members according to number of publication points (Table 4.2).

These findings do not however imply that it is of no importance whether research-based teaching is undertaken by lecturers or full professors, or by active or inactive academic publishers; just that there are no differences in the share of academic staff who report that they present their research to bachelor students.

Table 4.1 Percentages of academic staff in the humanities who present their research to bachelor students, by rank.

	Professor	Associate professor	Senior lecturer	Lecturer
To a large extent	30	22	30	28
To some extent	47	60	60	50
To a small extent	11	8	3	11
Not relevant	12	11	7	11

Table 4.2 Percentages of academic staff in the humanities who present their research to bachelor students, by publication productivity.

	To a large extent	To some extent	To a small or no extent	Not relevant
0	27	51	8	14
0-1	29	55	11	5
1-2	26	54	12	8
2-4	27	56	6	11
4-7	18	60	7	15
7 and more	32	47	14	7

4.3 Involvement of bachelor students in teachers' research

Slightly more senior lecturers and lecturers than professors and associate professors involve bachelor students in their research (Table 4.2). Hence, the teaching-oriented staff members according to academic rank are more inclined to engage bachelor students in their R&D projects than their research-oriented counterparts. The same picture appears in Table 4.3, showing that the most productive humanists are the least inclined to involve bachelor students in their work. Furthermore, slightly more senior lecturers and lecturers than professors and associate professors agree with the statement that bachelor students to a larger degree should be involved in R&D-projects (Table 4.4). Finally, there are no differences between productive and inactive academic publishers in their attitudes to involving bachelor students in their research (Table 4.5).

A major explanation might be that professors and associate professors supervise master- and PhD-students, some of which are writing theses connected to the work of their supervisors, and that the professor group accordingly have less time or interest than lecturers in involving bachelor-students in their research projects.

Table 4.2 Percentages of academic staff in the humanities who involve bachelor students in their research, by rank.

	Professor	Associate professor	Senior lecturer	Lecturer
To a large extent	3	3	5	6
To some extent	16	17	32	27
To a small extent	46	44	34	34
Not relevant	35	36	29	33

Table 4.3 Percentages of academic staff in the humanities who involve bachelor students in their research, by publication productivity.

	To a large extent	To some extent	To a small or no extent	Not relevant
0	7	24	29	40
0-1	3	19	51	27
1-2	2	21	44	33
2-4	3	20	43	34
4-7	-	17	46	36
7 and more	-	13	61	27

Table 4.4 Percentages of academic staff in the humanities who agree that bachelor students to a larger degree should be involved in R&D-projects, by rank.

	Professor	Associate professor	Senior lecturer	Lecturer
Strongly agree	17	15	20	28
Partly agree	33	39	49	28
Undecided	31	25	27	39
Partly disagree	11	14	-	5
Strongly disagree	9	7	4	-
Total	100	100	100	100

Table 4.5 Percentages of academic staff in the humanities who agree that bachelor students to a larger degree should be involved in R&D-projects, by publication productivity.

	0	0-1	1-2	2-4	4-7	7 and more
Strongly agree	14	17	16	15	21	18
Partly agree	42	49	39	37	30	39
Undecided	30	19	26	33	25	25
Partly disagree	9	9	11	8	16	11
Strongly disagree	4	6	8	8	9	7
Total	100	100	100	100	100	100

5 Conclusion and discussion

In this paper, we have undertaken an analysis of the relationship between research and teaching in the humanities in Norwegian higher education institutions based on data drawn from a mail survey to academic staff. We hypothesized that this relationship varies with institutional type: old universities, new universities, and university colleges, primarily due to their different roles in the training of doctoral candidates and master students. In addition, we assumed that the relationship between research and teaching differs between academic staff members due to two parallel career tracks; a research oriented (associate professor and professor) and a teaching oriented (lecturer, senior lecturer and docent).

The main questions were as follows:

- To what extent do staff members in different institutions and academic positions present their research to students?
- To what extent do staff members in different institutions and academic positions involve students in their research?
- Do strongly research-oriented staff members have other attitudes to the importance of research-based teaching than their less research-oriented colleagues?
- Does the relationship between research and teaching in the humanities differ from other academic fields?

Firstly, a main finding is that 80 percent of the teachers report that they to a large (27%) or some (53%) extent present their research to bachelor students. In this respect, there are no differences between teachers in old universities, new universities and university colleges. Furthermore, there are only small differences between teachers of different academic ranks. Moreover, there are no differences between academic staff members according to number of publication points.

Secondly, very few teachers involve students (and particularly bachelor students) in their research ‘to a large extent’. In fact, at the bachelor level, slightly more teachers in the university colleges than in the old universities involve students to some extent, and a larger share of academic staff in the new universities and in the university colleges than in the old universities agree that bachelor students to a higher degree should be involved in research. Moreover, lecturers are more inclined to engage bachelor students in their research projects than are professors. A possible explanation is that academic staff in the old universities and holding a higher academic position collaborate with PhD candidates and master students, and that they due to limited time have less opportunity to engage with bachelor students. Another possible explanation is the academic drift of new universities and university colleges, which leads to a stronger emphasis on the interaction between research and teaching at the bachelor level than in the old universities, due to their weaker role in the training of master students and PhD-candidates.

Thirdly, survey data indicate that the interaction between research and teaching in the humanities differs in some respects from the other academic fields (Kyvik & Aamodt 2015). A 1992-survey to academic staff in the universities found that a significantly higher percentage of teachers in the humanities than in the other academic fields thought that their research influenced their teaching of undergraduate students, and that teaching gave impulses to research. A main reason is that research in the humanities is less specialized and of greater general relevance to students (Smeby 1998). Surveys undertaken in 1992 and 2001 found that far fewer of the academic staff in the humanities (and the social sciences) than in the natural sciences, medicine and technology answered that supervision of PhD candidates and master students was part of their own research 'to a great extent'. The primary reason is that it is far less common for humanities students to choose topics that are related to the research projects of their supervisors (Kyvik & Smeby 1994). This finding is supported by the latest survey, which shows that of those humanities teachers who are members of a research group, far fewer involve PhD candidates and master students in their research projects than is the case in the other academic fields (apart from the social sciences).

In a comprehensive review of the literature on the relationship between research and teaching at the bachelor level, with an emphasis on engineering and the sciences, Prince, Felder & Brent (2007: 290) state that:

> *'There can be little doubt that potential synergies exist between faculty research and undergraduate teaching, but empirical studies clearly show that the existing linkage is weak. Several meta-analyses of the literature on the research-teaching nexus discredit the notion that faculty research productivity improves students' educational experience. Faculty research is not widely and effectively integrated into undergraduate courses. There are barriers to doing so in engineering and the sciences, and when integration does occur it may have both positive and negative effects on the quality of instruction.'*

The authors believe, however, that research has a clear *potential* to make significant contributions to the quality of undergraduate education. Even though this conclusion is confined to engineering and the sciences, we assume that it is of relevance also to the humanities, both with regard to the current situation and the prospects for the future.

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