The research-teaching nexus in the humanities : variations among academics

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Chapter 3

The ideal research-teaching nexus in the eyes of the academics – building different profiles

3. The ideal research-teaching nexus in the eyes of academics – building different profiles[2]

Strengthening the connection between research and teaching has been in popular theme in higher education research. However, it is unclear what form this relationship can take. Several authors have presented categories and dimensions to clarify this relationship, and the aim of this project was to contribute to this discussion by understanding what academics' ideal research-teaching nexus would look like. The ideal images of thirty academics were investigated using a mental visualisation assignment. Respondents were encouraged to describe in detail what for them the linkage between research and teaching would look like in the ideal situation. Five profiles of the research-teaching nexus could be distinguished: teach research results, make research known, show what it means to be a researcher, help to conduct research, and give students research experience. These profiles are related to dimensions proposed earlier in the literature on the research-teaching nexus.

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3.1 Introduction

Strengthening the connection between research and teaching has been a popular theme in higher education research (Barnett, 2005; Jenkins et al., 2003), as universities have been going through significant changes in recent decades - one of the most important being the massification of higher education (Smeby, 2003). The old ideal of Wilhelm von Humboldt - the common pursuit of knowledge by teacher and student (Simons, 2006) - is still an important image of what universities should be: a place where research and teaching are united. However, this unity is not easily realised, and many universities and academics struggle with the issue. One of the main problems in the discussion about the research-teaching nexus is that the term is used for many different kinds of 'activities' in the university, and that many different words are used for the same activity. Several authors (Brew, 2003; Griffiths, 2004; Healey, 2005; Neumann, 1992; Robertson, 2007) have recently come up with categories or dimensions to help the academic community get to grips with the variety of meanings inherent in the concept of the research-teaching nexus. Our point of departure is that there is no one or best way of relating research and teaching (Elsen et al., 2009); the richness is in the diversity of ways in which research and teaching might be linked. We will discuss several models that demonstrate that diversity; consequently, models that do not differentiate between various forms of the research-teaching nexus are not taken into account.

3.1.1 Categorisations of the research-teaching nexus

One of the researchers trying to understand the different ways of linking research and teaching is Neumann (1992). She conducted an interview study among academic administrators from several disciplinary backgrounds and distinguished three different ways of relating research and teaching: the tangible nexus, the intangible nexus, and the global nexus. The tangible nexus focuses on the transmission of current knowledge, i.e., recent outcomes of the teacher's research, to the students. The intangible nexus focuses on influencing students' perception of the status of knowledge and on their disposition towards knowledge. The global nexus is at a different level: instead of focusing on the individual level attention is paid to the departmental level, more precisely to the impact of the department's research programme on the curriculum. We would argue that the global nexus is closer to the tangible than the intangible nexus, as both are focused on content.

Griffiths (2004) paid attention to different characteristics of the relationship. In his attempts to grasp the different forms the relationship between research and teaching could take, he was strongly influenced by Boyer's ideas (1990). Griffiths (2004) described three dimensions. First, the relationship can be specific, directly related to concrete projects of the teacher, or diffuse, consisting of a more general way of thinking based on the academic's research experience. Second, the research can be embedded weakly or integrated strongly in the teaching. In the first case research results merely function as input for the curriculum, while in the second case the approach to teaching is influenced as well: more attention is paid to the process of knowledge production with students more or less becoming partners in research. The third and last dimension is the direction of the relationship; it is either unidirectional, flowing from research to teaching, or reciprocal, with research and teaching profiting from each other. Bearing these dimensions in mind, Griffiths (2004) identified four different forms of the research-teaching nexus: research-led, research-based, research-oriented, and research-informed. However, he does not explain how these four forms were related to the earlier presented dimensions. Interestingly, Griffiths (2004) also included pedagogical research (research-informed), next to three forms of discipline-based research.

Healey (2005) built on Griffiths' ideas (2004) by putting these different forms into a model. From a curriculum perspective he distinguishes three dimensions. In his model the dimensions student-focused vs. teacher-focused and students as participants vs. students as audience form one axis, and emphasis on research content vs. emphasis on research processes and problems the other. In this way four different ways of shaping to the research-teaching nexus can be distinguished: research-led (research content & students as audience), research-tutored (research content & students as participants), research-based (research processes & students as participants), and research-oriented (research processes & students as audience). Later, Healey deleted the first dimension (Jenkins et al. 2007, 29), a decision we will follow in this chapter.

Robertson (2007) produced a categorisation based on the intensity of the linkage between research and teaching. Category A is labelled weak, symbolising the almost non-existence of a relationship between research and teaching. Research and teaching are separate tracks. Category B is labelled transmission: both research results and enthusiasm are transmitted to the students. Category C is labelled hybrid as it comprises aspects from both sides, such as emphasis on basic

knowledge, but also the first steps in some kind of research participation. Category D is labelled symbiotic: research and teaching are separable, but strongly related; the process of teaching links student learning with academics' learning. Category E is labelled integrated as it sees research and teaching as inseparable. In D and E an important place is attributed to 'learning' as a mediator of research and teaching, a view that was earlier expressed by Brew & Boud (1995).

From all the different notions these authors bring forward a few things can be observed. We will focus on discipline-based research, thus excluding Griffiths' concept research-informed. Only Neumann (1992) explicitly distinguishes between the individual and the department level. Most authors stick to the individual level, although Robertson's (2007) weak might be seen as relating to the global level, namely to keep research and teaching separate. Griffiths' (2004) second dimension touches this notion as well, as he describes the weak link as the input of research outcomes in the curriculum, whereas the strong link also influences the way of teaching. His dimension captures two aspects, the first being the distinction between students as an audience receiving the outcomes of the research, and students as participants engaging in research, a way in which research greatly influences the way of teaching. This distinction is incorporated by Healey (2005). The other aspect of Griffiths' (2004) second dimension is the basis for a distinction mentioned by all researchers, namely the focus on the research output, recognisable in the tangible nexus and the categories research-led, research-tutored, transmission, and hybrid, versus the focus on the research process, recognisable in the categories research-oriented, research-based, symbiotic, and integrated. This dimension is part of Healey's model as well (2005). Robertson (2007), however, stresses that in symbiotic and integrated the notion that the research process includes a certain epistemological view is important. This aspect is covered by the distinction Neumann (1992) makes in her tangible versus intangible nexus. In her later work (Neumann, 1994) she includes the process skills in the tangible nexus, making it a dimension that is more than just another representative of the outcome-process dimension. Griffiths' (2004) dimension of specific versus diffuse goes slightly unnoticed by the other authors, as most of them focus on specific forms of linking teachers' own research to teaching. However, one could argue that the intangible nexus is diffuse, as it might not refer explicitly to particular research projects but to the broader notion of being a researcher. Robertson (2007) is the only author to pay attention to Griffiths' (2004) third dimension, i.e., the difference between a unidirectional relationship versus a reciprocal one. Her 'weaker half' is focused on the direction

'research towards teaching', while her more 'integrated half' also includes the direction 'teaching towards research' as well. The other authors seem to assume a unidirectional relationship. In sum, we see several dimensions behind the various categories: tangible-intangible, specific-diffuse, unidirectional-reciprocal, output-process, and audience-participants.

It is also important to note that the models are based on different principles. The models presented by Griffiths (2004) and Healey (2005) are theory-based. The others are based on empirical studies: interview studies with administrators (Neumann, 1992) and academics holding different university positions (Robertson, 2007), respectively. Besides, the models not only investigate authors' or academics' preferred linkages, but also include those that they view less favourably. Healey (2005) and Robertson (2007) mention this explicitly. Furthermore, the reciprocal character of the research-teaching nexus is not incorporated into all models, even when this could improve research and especially academics' satisfaction with their work at the university. Jensen (1988) stresses the importance of this factor, because he found that most academics would not like to work at an institution devoted exclusively to research, and even less at institution devoted exclusively to teaching.

3.1.2 Research aim

The present study was an attempt to provide an empirical basis for a categorisation which captures the variety of potentially powerful linkages between research and teaching. We wanted to pay attention both to the categories that might come up and to the dimensions underlying them, taking the academic's perspective as our point of departure. From earlier research (Robertson & Bond, 2001; Rowland, 1996) we know that the research-teaching nexus and its components are understood differently by different academics. A deep understanding of how academics perceive this relationship is therefore required. The differences that arise might be partly caused by disciplinary differences, which are related to differences in epistemology, truth criteria, and culture (Becher, 1989; Donald, 1986; Robertson & Bond, 2005). In this study we focused on one area of scholarship, namely the humanities, containing a variety of disciplines.

A frequently reported problem affecting the realisation of a strong linkage between research and teaching is the presence of limiting pre-conditions, especially the preference given to research over teaching. This comes to light, for

instance, in reward systems and time allocation problems, as research time is frequently subordinated to teaching time (Coate et al., 2001; Colbeck, 1998). To avoid these kinds of problems in our search for qualitatively different but powerful forms of the research-teaching nexus, this study used an unconventional way of questioning, namely concentrating on academics' ideals. Academics' visions, understood as their images of ideal practice, strongly shape their professional lives, and any incongruence between their vision and everyday reality can even cause them to leave their profession (Hammerness, 2003). These images represent what academics try to work towards, in the conviction that they themselves and the students will benefit from them. Academics' purposes are expressed in these visions or images, whose role is that of intuitive guides (Husu & Tirri, 2007). Therefore, ideal images are important mediators between conceptions and daily practice (Feiman-Nemser & Floden, 1986). Furthermore, images are a rich source of information, as they contain a whole set of ideas around a persistent thread, based on personal experience (Johnston, 1992). Concentrating on ideal images therefore has the advantage of avoiding possible constraints, while the ideal images are yet related to academic practice. In short, this study aimed to investigate the variation in ideal images held by academics from the field of the humanities in order to gain an understanding of the different ways in which the research-teaching nexus could be shaped.

3.2 Method

3.2.1 Sample

Data were collected via semi-structured interviews with 30 academics from the Faculty of Humanities of Leiden University. These academics also participated in the metaphor study reported in Chapter 2 (see Section 2.2.1 for sample characteristics). An important condition for selection as a respondent was the requirement to have both research and teaching duties. This meant that language skills teachers were excluded, as they do not have a research role.

3.2.2 Procedure

The academics were interviewed using a mental visualisation assignment as part of a larger interview on the research-teaching nexus. This larger interview consisted of background information (see Chapter 4), a metaphor study into academics' conceptions of knowledge, research, and teaching (see Chapter 2), and the present study (this chapter). The interviews were conducted in Dutch and the visualisation assignment took about 20-30 minutes. All interviews were audio-taped and transcribed verbatim. Respondents were encouraged to describe what

the linkage between research and teaching would look like in the ideal situation, by answering the following basic question: 'Please tell me what the research-teaching nexus would look like in the ideal situation, when you do not have to take into account any practical constraints?' Questions used to facilitate this description and support a detailed blueprint included: 'What is your most important goal?', 'What kind of students do you have?', 'What roles do the various participants have?', and 'What activities are undertaken by your students?'. By means of these questions we wanted to encourage the academics to provide a detailed blueprint of their ideal situation. However, the respondents did not need to answer all the questions one by one; these were mainly used if needed to encourage the respondent to describe the situation in more detail. For example, in answer to the basic question one of the respondents said (as part of a 3300-word description):

> After the students have attained a basic knowledge of the field most of the time needs to go to the exemplary demonstration. This means that students and teachers work together in research. In our discipline we have informers work with somebody who speaks a language relatively unknown. As a group of students, led by the teacher, you try to find the structure of the language. This is even more than just a demonstration of research; it is a form of research cooperation under supervision.

3.2.3 Analysis

The analysis comprised three phases: 1) the development of a code book, 2) applying the code book in a holistic way, and 3) searching for patterns among respondents' answers. In the first phase, the aim of the analysis was to do justice to the variation in ideal images of the research-teaching nexus, so every single idea in each of the ideal images needed to be covered. We therefore used an inductive approach, in which the codes emerged from the transcripts by breaking down each interview into phrases that represented an idea (Strauss & Corbin, 1990). This process was repeated until all diversity seemed to have been captured, i.e., until saturation was reached (Guest, Bunce, & Johnson, 2006). The codes were combined into a number of steps in order to arrive at a code book with several layers. For every code short definitions and demarcation rules were formulated. An example will illustrate this part of the analysis process (see also the code book below): one of the respondents said 'Well, I think that the main goal is that you can use all your knowledge and experience acquired as researcher in educating the students to be able to think critically'. This was coded as *critical thinking*. Together with three other codes it was combined into the general code

academic disposition, which was part of the category *towards teaching* within the theme *orientation*. In the demarcation rule for *academic disposition* all codes that made up this general code were included.

In the second phase all the transcripts were coded, with the complete description of the ideal situation of one individual as a unit of analysis. In this way it was possible to do justice to the holistic character of each description. This phase involved using an independent coder who was not familiar with the data. After independent coding, the interviews were discussed extensively in three consecutive sessions in order to ensure agreement on the interpretation and allotment of every code in the code book.

The third phase of the analysis focused on finding patterns in the codes. In the search for these patterns we followed three routes: 1) an explorative hierarchical cluster analysis (quantitative method), 2) a case-variable matrix (qualitative method), and 3) a comparison of the results of both methods. First, a hierarchical cluster analysis was carried out on all ideal images (at code level) to explore whether there were homogeneous clusters of cases within the data. Average linkage within groups was used to calculate the mean distance between all possible cluster pairs, as this method focuses on homogeneity within clusters, which was the most important feature in clustering. The clustering method selected was DICE (or Czekanowski or Sorensen measure). This measure excludes joint absences and accords a double weight to matches (Everitt, Landau, & Leese, 2001), and therefore is best suited to accommodate the disadvantage of having a large number of codes and substantial differences between the numbers of codes for the different cases, which causes a large amount of joint absences and a small number of matches.

As the hierarchical cluster analysis only takes into account code level and therefore ignores the fact that the codes are nested in a number of layers, i.e., categories and themes, we considered it necessary to conduct a second analysis in order to take this nested coding (especially the categories) into account. Several cross-case matrices were constructed for this purpose (Miles & Huberman, 1994), consisting of rows containing the interviews, i.e., cases, and columns containing the variables at code level, embedded in their categories. Several analyses were conducted, each with one theme as base. Clusters were identified in several steps. First, all cases sharing the same codes in the base theme were put together into a set. Second, the characteristics of each set were defined by their dominant codes.

Third, cases that occurred in a number of sets were granted to the set that best fit the characteristics. Fourth, the final characteristics of each set were decided upon. The results of these different cross-case analyses were compared; using a meta-matrix a final classification of the set, from now on called clusters, was determined. The final step was to compare and integrate the results of the hierarchical cluster analysis and the matrix analyses. The differences between the two results were analysed. For every case that ended up in two different clusters we decided on the basis of the dominant codes in each cluster which would be the most appropriate place. The final clustering was analysed again regarding the occurrence of the codes. A code was seen as a central aspect of a cluster only if it occurred in a majority of the cases.

3.3 Results

3.3.1 Code book

We were able to distinguish essential themes that are important in giving meaning to the research-teaching nexus, namely: orientation, approach, curriculum, and teacher role. Each theme contained two to four categories, and each category was based on two to four codes. In this section we will first provide a general overview of the variation that was mapped. Next we will present the full code book (see Table 3.1) with a short description of each code, as these codes were the level of further analysis.

Regarding the first theme, *orientation*, a distinction needs to be made between an orientation *towards research* or *towards teaching*, in other words: what are the benefits for research and for teaching? Regarding the theme *approach* four different stages could be described, with each subsequent stage also covering the previous. The first stage was *learning about research*. The second stage was starting to learn in a research-like way: *inquiry learning*. The third stage involved incorporating the earlier phases into an environment that completely captured the whole research process: *simulation*. The final stage was to become a member of the research community through *participation*. For the theme *curriculum* two phenomena were important, first the question whether the curriculum was based on *disciplinary research* or the *teacher's own research*, and secondly whether it focussed on *research process* or *research content*. Besides, the stage of the research was also important, was it recent or not. The last theme, *teacher role*, included roles that were inseparable from the dual mode of being both a researcher and a teacher, and roles that qualify as more general teaching roles.

Table 3.1. Code book for characterising research-teaching nexus

Themes	**Categories**	**Codes**	**Definition** This code is allotted if:
Orientation	Towards teaching	Academic disposition	… the teaching is focused on students developing a research or academic disposition.
		Divulge research	… the teaching is focused on students learning what it means to do research, including making them enthusiastic about research.
		Train researcher	… the teaching is focused on students being trained to become researchers.
		Academic knowledge	... the teaching is focused on students being filled with academic knowledge.
	Towards research	Input of students	… the teacher's research profits from the student's input.
		Reflection	… the teacher's research profits from the preparation or the teaching itself because it stimulates reflection and broadens his perspective.
		Broadening research scope	… the teacher's research profits from teaching as it is broadened by the teaching topic being broader than his research topic.
Approach	Learning about research	Literature reading	… the students learn about research by reading research literature.
		Listening to researcher	… the students learn about research by listening to researchers who speak explicitly about their research.
	Inquiry learning	Analysing	… the focus is on the process of analysis.
		Studying	… the focus is on understanding of the content by research assignments.
		Discussing	… the focus is on the discussion between teacher and students.
		Reporting	… the focus is on reporting the research findings, oral or written.
	Simulation	Group work	… the course is planned as a research simulation, the group of students is invited to go through the whole research process during the course.
		Individual work	… the individual student does a research project which takes him/her through the whole research process.
	Participation	Teacher's own research	… students participate in their teacher's research.
		Academic world	… students participate in the academic world by publishing or attending conferences.

Table 3.1 (continued)

Curriculum	Disciplinary research	Current research	… it is about recent research from the field.
		Research content	…it is about the content of the whole disciplinary field that students need to know.
		Research process	… it is about the common research process in the field.
	Own research	Ongoing research	… it is about the teacher's research in progress.
		Research content	… it is about the teacher's research results or themes.
		Research process	… it is about the research process that the teacher went through.
Teacher role	General	Developer	… the teacher designs his own teaching, on the course and the curriculum level.
		Manager	… the teacher manages the classroom process.
		Confidant	… the teacher wants the students to be able to confide in him/her.
	Research-related	Tutor	… the teacher coaches the individual students in their learning/research process.
		Expert	… the teacher operates as expert in the field.
		Guide	… the teacher guides the research process, combining the functions of tutor and expert.
		Motivator	… the teacher fans the students enthusiasm and gets them fascinated.
		Partner	… the teachers strives for an equal relationship with his students.
		Role model	… the teacher shows what it means to be a researcher.

3.3.2 Classification

The initial hierarchical cluster analysis showed five clusters with a meaningful difference. The number of clusters was determined by the requirements that every case had to be included in a cluster and that there should be a reasonable increase in distance. A first division was made between clusters 1-3 and clusters 4-5. The main difference here was found in *approach*: whether students *participated in research* (4-5), or did *inquiry learning* and were *learning about research* (1-3). A second division was made between clusters 1-2 and cluster 3. In cluster 3 the *teacher's own research process* is an important curriculum element, while clusters 1 and 2 tend towards a focus on *content* and *disciplinary research*, respectively. A third division was made between clusters 4 and 5. The main difference between these was in *orientation*: cluster 4 focuses on *towards*

teaching, more specifically *academic disposition* and *train researcher*; cluster 5 on *towards research*, more specifically the *input of students*. The last division was made between cluster 1 and 2. The main difference here was again in *orientation*: the dominant presence of *academic knowledge* in cluster 1, and an absence of *academic knowledge* in cluster 2.

The various matrix analyses each time resulted in 5-6 clusters. The cluster-code matrix, which had been constructed to see whether there were similarities between the clusters in each of the analyses, showed a relatively stable group of 5 clusters. Sometimes one of the five was split up into two clusters. The theme *orientation* was found to be strongly related to specific codes in other categories and thus served as an important distinguishing factor between the clusters. Some respondents had more than one orientation; on the basis of their codes in the other categories they could also be easily placed in any one of these. Only the orientation *towards teaching-academic disposition* needed to be split up into two different groups based on the different teacher role. The clusters were named A-E, matching their counterparts 1-5 in the hierarchical cluster analysis.

Cluster A was clearly different from the others regarding *orientation* and *teacher role*. Central aspects in this cluster were *academic knowledge* and *expert*. The approach included both aspects of *learning about research*. Cluster B was the only one focussing on *divulge research*. The common approach was *inquiry learning*, especially *discussing* and *reporting*. The enthusiasm aspect of the orientation was represented in the teacher role: *motivator*. Cluster C focused strongly on the role of the teacher, namely that of a *role model*. Other elements here are an orientation towards *academic disposition*, and the *teacher's own research process* being used for illustration. Like cluster C, cluster D focused on *academic disposition*, but the teacher's role here was a different one, namely that of *tutor*. *Inquiry learning* was an essential part of this cluster. Cluster E was orientated towards both teaching and research. Training students to become researchers was combined with the *students' input* in the *teacher's own research*. It always involved the *teacher's ongoing research*, with the teacher functioning as a *guide* to the students.

Comparison of the two different clustering methods showed that three of the five clusters were very similar (1/A, 3C, 4/D). Clusters 2/B and 5/E were a little different. The final clusters were established on the basis of the highest degree of homogeneity. They can be summarised as follows in Table 3.2:

Table 3.2. Profiles of the research-teaching nexus

Themes	Profiles				
	Teach research results	Make research known	Show what it means to be a researcher	Help to conduct research	Provide research experience
Orientation	Towards teaching: academic knowledge; Towards research: reflection	Towards teaching: academic disposition & divulge research	Towards teaching: academic disposition	Towards teaching: academic disposition & train researcher	Towards research: input of students; Towards teaching: train researcher
Approach	Learning about research: listening to researcher & literature reading; Inquiry learning: discussing	Inquiry learning: discussing & reporting; Learning about research: literature reading	Learning about research: listening to researcher	Inquiry learning: studying & reporting; Participation: academic world	Participation: teacher's own research
Curriculum	Disciplinary research content	Own research content	Own research process	Own ongoing research	Own ongoing research
Teacher role	Expert	Motivator	Role model	Tutor	Guide

The five profiles of the research-teaching nexus are described in detail below, illustrated by quotes from the interviews (translated from Dutch). The labels refer to the disciplinary backgrounds of the respondents (C means literature & culture, L means linguistics, and H means history & art history). We would like to emphasise that it was not our purpose to assign respondents to specific profiles in order to be able to relate background variables to the different profiles. The profiles should rather be seen as proto-types. Furthermore, we would like to stress that not all codes were included in a profile, as some codes were not distinctive enough to contribute to a definition of the profiles.

1. Teach research results

The first profile focuses on the teaching of research results: academic knowledge is transferred to students by direct communication from the teacher or by reading literature, which leads the teacher to reflect on the discipline. L9 explained: 'The goal is twofold. It is important for the researcher to be able to test his own ideas, including testing them out with his students. Yes, whether he is able to explain it

clearly and simply and whether students can see any simple disadvantages in the theory that he has just thought up. For students it is a way to become informed about the state of play in the research field, so that they are completely up-to-date on the most recent developments in the field.' Furthermore, the students participate in discussions on the topics proposed. This means that the focus is on content and the teacher acts as an expert. As expressed by H6: 'In the ideal situation the students are taught by the expert in the international field, because he has been doing this type of research for years.'

2. Make research known

The second profile focuses on making research known: it is oriented towards divulging research. The crucial nature of this is clarified by L3: 'If you don't bring students into contact with current research and set them up to do research themselves or give them the resources to understand current research, you should not be called a university.' Part of this familiarisation with research is stimulating academic dispositions in students. This goal is reached by ensuring that students discuss and report research. Furthermore, the teacher is able to display his/her enthusiasm by using examples (content) from his/her own research, while focussing on the research process in general. H10 explains: 'To me it is important to use my own research experience in the courses; the way you talk about certain things. It is important to show the students some of that, including what's exciting about doing research.'

3. Show what it means to be a researcher

The third profile focuses on showing what it means to be a researcher. Central to this profile is the attention paid to academic disposition and the research process. H3 is quite clear about this: 'In the end, at university it is all about picking up and imitating a critical attitude from me, learning to look at things critically, questioning things, meta-thinking.' The researcher functions as a role model by relating his/her own experiences and incorporating research practice into his/her teaching, for example: 'the students see me thinking aloud (...) I develop that knowledge at that moment and I show them how I do it' (C8).

4. Help to conduct research

The fourth profile focuses on helping students to conduct research. The teacher is like a tutor to the students and aims at academic disposition and broader research competencies. L7 emphasises: 'You should not just impart knowledge to them, you need to teach them research skills as well, and you do that by making them

do all kinds of things themselves, by making them do research. Actually, in the way it has always been done at university.' The students are challenged by being given small research assignments. Additionally, they are invited to participate in the academic world in some capacity. The teacher uses his/her own ongoing research in teaching. C10 suggests taking them to conferences: 'In the year before the conference I am organising with some colleagues, I run a research seminar for the students to prepare for the conference. The students can join me at the conference if they promise to participate actively in discussions.'

5. Provide research experience

The fifth and last profile focuses on providing students research experience. The teacher's current research plays a central role in his/her teaching, using this ongoing research as a teaching setting in which students are trained to become researchers and the teacher, who is a researcher as well, profits from the work of the students. C7 puts it as follows: 'The ideal is of course that you are able to work with a group of students on the research you are currently occupied with (…) It would be fine if the research group were as diverse as possible.' Furthermore, the teacher is a guide to his/her students, based on his/her expertise in the research topic and coaching competencies. To H9 this means: 'I am aware of the outline of what is to be researched; I also know exactly which questions are at stake. Furthermore I have a fairly precise idea of what materials need to be studied.'

3.4. Conclusion and discussion

3.4.1 Conclusion

The main goal of this study was to capture the variation in ideal images of the research-teaching nexus held by academics in the humanities, in order to gain an understanding of the different ways in which the research-teaching nexus can be shaped. We found that these various ways could be described in several profiles. The essential themes for each profile were orientation, approach, curriculum, and teacher role. For *orientation* the central question was whether a profile is unidirectional (teaching profits from research) or reciprocal. Another important theme was whether the focus should be on knowledge, skills, and/or disposition. In *approach* the question was whether the focus was on learning about research and inquiry learning, or on simulation and participation. For *curriculum* the questions whether disciplinary research or the teacher's own research, and whether the focus should be on research content or research process were important. Each profile had its own distinctive *teacher role*: expert, motivator, role model, tutor, or guide.

Five profiles were found in the data: teach research results, make research known, show what it means to be a researcher, help to conduct research, and provide research experience. We related these profiles to the dimensions discussed earlier. The dimension tangible - intangible nexus (Neumann, 1992) can be recognised in an *orientation towards teaching*, namely *academic disposition*, which is considered intangible, versus other orientations towards teaching, which are considered tangible. Furthermore, the dimension unidirectional – reciprocal (Griffiths, 2004) relies on the theme *orientation*, i.e., taking only the teaching part into account (unidirectional), or including the research part as well (reciprocal). The audience - participants dimension (Healey, 2005) is to be found in the theme *approach*. 'Audience' is linked to *learning about research* and *inquiry learning*, while 'participants' implies *simulation* and *participation*. However, we prefer to use the terms 'learning about research' and 'participation in research' in order to have positive names for both ends of the dimension. The content - process dimension (Healey, 2005) is easily recognisable in the theme *curriculum*, in which the focus can be on either *research content* or *research process*. The diffuse - specific dimension (Griffiths, 2004) is also related to the theme *curriculum*, indicating whether the teacher's ongoing research is at stake (specific), or research in general (diffuse). The first of the five profiles could be considered diffuse, for it does not rely on specific research activities on the part of the teacher, the fourth and fifth profiles could be considered specific as they rely on the teacher's ongoing research. The second and third profiles do rely heavily on teachers' own experiences as a researcher, but are not related to specific research projects. Therefore, it is unclear where to put these profiles on this dimension. For that reason we suggest to split this dimension into a dimension general research - current research, in order to differentiate between research that is currently going on and research in general, and a dimension disciplinary research – teacher's own research, in order to differentiate between research carried out by the teacher and research in the same discipline carried out by other academics. In this way, justice can be done to both differences, that between the first and other profiles and that between the fourth and fifth and the others. So we end up with six dimensions that need to be considered when talking about linking research and teaching: intangible - tangible, disciplinary research - teacher's own research, research in general – current research, research content - research process, learning about research – participation in research, and unidirectional – reciprocal. Table 3.3 shows the positions of all profiles on the dimensions mentioned above.

Table 3.3. Profiles of the research-teaching nexus related to dimensions

Dimensions	Profiles				
	Teach research results	Make research known	Show what it means to be a researcher	Help to conduct research	Provide research experience
Tangible - Intangible	Tangible	Tangible & Intangible	Intangible	Tangible & Intangible	Tangible
Unidirectional - Reciprocal	Reciprocal	Unidirectional	Unidirectional	Unidirectional	Reciprocal
Content - Process	Content	Content	Process	-	-
Learning about research - Participation in research	Learning about	Learning about	Learning about	Learning about & Participation	Participation
Research in general – Current research	General	General	General	Current	Current
Disciplinary research – Teacher's own research	Disciplinary	Teacher's own	Teacher's own	Teacher's own	Teacher's own

The profile *teach research results* is the only one on the disciplinary side of the disciplinary research – own research dimension. This aspect characterises this profile as it is considered of the utmost importance that students learn about the discipline, and more specifically about the results of the research in the field. From this notion most positions on the other dimensions follow. Only the position reciprocal might be surprising, but this might stem from the focus on content which plays an important role in the reflection process: the academic has to rethink the field in preparing his/her teaching. The profile *make research known* combines the focus on research content and general research of the first profile with a focus on both the tangible and intangible aspects characteristic of the fourth profile. It relies heavily on the teacher's own research as an illustration of the research in the field. The profile *show what it means to be a researcher* has its basis in the intangible nexus as perceived by the teacher, and from this the positions on the other dimensions, such as a focus on the research process, follow. The profile *help to conduct research* is the only profile combining learning about research and participation in research. This characterises this profile as both participation, leading to a focus on current and teacher's own research, and learning about, leading to a unidirectional focal point in which the tangible and intangible aspects of the nexus are inextricably combined. The profile *provide research experience* differs from the others by its singular focus on participation.

Students participating in the teacher's research form the heart of this profile from which the other positions originate.

3.4.2 Methodological considerations

The interview method chosen for this research was unconventional. Instead of being asked about real situations the respondents were encouraged to describe their ideal images. A great majority of the respondents showed that they were able to discriminate between the real and the ideal situations, as became evident in the sections of the interviews where they described their real situation. Furthermore, in some cases the respondents explicitly said that they were describing a utopia, and others even asked the interviewer a few times whether it was still appropriate to describe their ideal images, so it was clear that they were describing their ideal. However, a small minority of respondents easily fell back into talking about reality. These academics were then encouraged by the interviewer to distance themselves from daily practice and again reflect on the ideal situation. In the coding we tried to separate the ideal images from the real world, but in a few cases these were closely linked. So we may conclude that most academics were able to describe ideal images and sometimes even felt privileged in not being limited by institutional constraints for once. Therefore, the images evoked came closer to desirable research-teaching nexus than in other types of research.

3.4.3 Implications

In this study we were able to distinguish several ways to arrange the diversity of the research-teaching nexus. All categorisations and dimensions are in their own way useful for academics to help them to rethink their teaching. The advantage of the presented categorisation is that it excludes the non-preferred variants of linking research and teaching. When one searches for powerful forms of the linkage, as suggested by Hattie and Marsh (Hattie & Marsh, 1996), the profiles distinguished in this study might provide an instrument for educational developers and university teachers to determine what they actually have in mind when talking and thinking about strengthening the research-teaching nexus. We would like to stress that although the different profiles might look like developmental phases, this was not the way the majority of the academics talked about them. Depending on personal insight or preferences these profiles and their underlying dimensions could be used in several ways. Academics or departments might want to use the different profiles throughout their various courses, depending on content or level; others might have a strong preference for one

profile because of their teaching conception or the traditions in their discipline. In our opinion it would be desirable to use many different ways of relating research and teaching, as the different profiles have different advantages for students and academics (Elsen et al., 2009). From the perspective of the academic, it is noteworthy that there is not one ideal way of realising the research-teaching nexus. The different profiles could, therefore, be used as a way to stay in touch with academics and to find ways for each of them to relate their research and teaching tasks to each other. Most important, however, is that academics and other stake holders in higher education decide what they want to define as the desirable way(s) of strengthening the link between research and teaching.