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Changes in Perceptions of Research Integration

Mette Bruinsma and Didi M. E. Griffioen

Introduction

Institutional change in higher education affects – and is affected by – a number of groups of stakeholders, such as students, lecturers, future employers of students, supporting staff and managers. Moreover, and following Jenkins and Healey's (2005) work on research integration in universities, this change should take place on different levels: from policymakers' and managers' decisions on the pace of implementing change (Griffioen, Doppenberg, & Oostdam, 2017) to developing practical guidelines for collaborative curriculum designs (Griffioen, 2020). More than other stakeholders, lecturers and students are the embodiment of the integration of research and teaching in higher-education institutions. It is particularly in their teaching and learning interactions within the lecture hall, the classroom or the labs that students' research skills, as well as their attitudes towards research are developed, and that lecturers potentially translate and reshape their own research into curricular content. Students and lecturers share educational experiences, but their perceptions of such experiences might be very dissimilar (Griffioen, 2020). The interaction between lecturers and students is 'two-way traffic': Higher education institutions form a dynamic and hybrid context in which different conceptions of what research entails, why research is important and what the expectations are of the relationship between research, education and future employment mingle. The students' and lecturers' perceptions implicitly and explicitly shape attitudes to organisational change, and are thus interesting starting points to consider such change.

This chapter will connect the thinking of the perceived 'ideal' relationship between research and teaching within the context of higher education. Studying conceptions of research addresses how research is understood from

different perspectives. Brew (2001), for instance, identified four ways of understanding research after interviewing senior academics, mainly indicating differences between disciplinary fields. In her research-as-domino concept, academics aim to add objective blocks of knowledge, while in the research-as-trading approach, new knowledge is seen as being exchanged. In turn, the research-as-layer concept perceives research as internally adding layers of understanding, while a research-as-journey approach perceives research as an individual pathway of the academic. Griffioen, Roosenboom, and De Jong's (2017) study shows that lecturers in research-intensive universities share the same five elements that make them perceive what 'good research' is in terms of lecturers in professional universities: the design of the research, the quality of the final product, the way the research is conducted, the qualities of the researcher and the relevance and origin of the topic. They differ somewhat in their interpretation of the sixth element, where research-intensive lecturers focus on the scientific value of research, and lecturers of professional higher education value its utility. In turn, Åkerlind's (2008) study has shown that academics' perceptions of research are distinguishable on five different elements: who is affected by the research (intentions), the anticipated impact of the research (outcomes), the nature of the object of study (questions), how the research is undertaken (process) and the researchers' feelings about the research (affection).

Additional models have been designed that depict perceptions about connections between research and education, of which Healey's (2005) model is the most prominent. This model of four types of research integration is constructed based on two axes that focus on students as participants versus students as audience and on the research's content in its methods. In turn, Schouteden, Verburgh, and Elen (2014) studied academics' research conceptions in the context of educational settings by letting them draw, resulting in the research-as-steps concept, as qualities of research processes and as qualities of researchers. The particular context of education tuned the research conceptions to the academic or professional focus as well as to the specific level of mastery that the academics expected of the students.

Interestingly, all these mentioned models as such do not call for change; they merely present options for how to perceive research from a certain perspective or how to perceive research as part of educational settings. As Chapter 2 suggested, for actual change to take place, a focus for change is needed to indicate the direction in which to change. Although the mentioned models were merely developed to distinguish important differences, with the insight they

provide in potential focus for change, they are now widely used in masterclasses and workshops worldwide. Correctly used, they can present potential change agents with new options for how to perceive research and research integration. However, for this effect to take place, this perspective needs to be added to each of the models. The discrepancy between what is – respectively according to lecturers and students – versus what should be, formulates potential directions for future organisational change. For change to appear in curricula, modules and lessons, lecturers' and students' ideals for research integration need to change to provide them with a new focus on which to concentrate.

Change is needed. Generally, the support for research integration is increasing, also in applied universities (Griffioen, 2018). This is happening in interactions with changing national and institutional policies (Teichler, 2014). Largely, there seems to be a stronger emphasis on research integration at the institutional and departmental levels (e.g. Durning & Jenkins, 2005; Lucas, 2007), or at the microscale of lessons or modules (e.g. Healey & Jenkins, 2015; Visser-Wijnveen, 2009), but when examining the directions of change close-up, the picture becomes diffuse. Different stakeholders seem to have varying ideas on how research and education should be further integrated, or why. Therefore, it is beneficial to study lecturers' and students' perceptions on how and why research is, or should be, integrated. The collection of views can operate as a large-scale inquiry of the practical operation's current status of integrating research and teaching in higher professional education, as well as its future perspectives of the 'how' and 'why' of research integration.

Lecturers' and students' perceptions can be functional for the organisational change perspective if not only the current but also their ideal notions of research–education connections are considered. As explained in the Introduction, the mechanism for changing research–education connections requires an intended synergy between the two, which one could also call an ideal. Some of the few scholars who considered lecturers' proposed research–education connections are Visser-Wijnveen, Van Driel, Van der Rijst, Verloop, and Visser (2010), who researched lecturers' 'ideal' research–teaching nexus. In that study, participants were asked to describe in detail what they believed the linkage was between research and education. Based on these 'imaginations', the researchers distinguished five profiles of the research–teaching nexus academics held. The preferred profiles were respectively 'teach research results', 'make research known', 'show what it means to be a researcher', 'help to conduct research' and 'provide research experience' (Visser-Wijnveen et al., 2010, p. 208). These findings focused on what the 'ideal' nexus should look like in the

eyes of lecturers, and therefore offers direction for changed research–education connections, other than the aforementioned models, which do not intend to present a 'best way' of connecting research and teaching (see also Elsen, Visser-Wijnveen, Van der Rijst, & Van Driel, 2008). The research Visser-Wijnveen and colleagues undertook is an example of researching ideal conceptions and perceptions, yet it exemplifies the disciplinary focus on research-intensive higher-education institutions.

Few scholars have addressed ideals for research integration. The 'ideal' combined with the perceptions of the current connections between research and education provides direction for change. A more general insight into lecturers' and students' perceptions of research and research–education connections can contextualise their ideal and current perceptions. The analysis of such rich data provides a valuable starting point for exploring institutional change.

Therefore, this chapter presents the findings of lecturers' and students' perceptions of research at both the start and end of the Amsterdam strategic programme. By asking both groups about the importance of research, its function as well as their current and ideal practices, this study yields the particular organisational layers to which lecturers and students connect research. The duality of two groups in a longitudinal perspective provides the opportunity to consider perception differences as well as changes over time. Therefore, next to presenting the Amsterdam project's findings, this chapter also is an example of a light touch, a scientifically sound instrument to monitor change across a higher education organisation.

Perceptions of Research and Teaching versus Perceptions of Research Integration

When addressing perceptions of research integration – the integration of research in educational curricula – it may be an obvious starting point to start with collecting and analysing perceptions of research and perceptions of education. However, the perceptions of research integration are not necessarily the sum of the two other perceptions. As Brew (2012) addresses, discussing research integration has a very specific context:

> The suggestion that teaching and research should be more firmly drawn together should not be seen as an argument for educating all students to become academics, nor is it merely an academic exercise to prop up arguments that

> all academics should engage in research. Rather, it is a response to a number of changes in higher education which have challenged the relationship. These include: the move to a mass higher education system (Elton, 1992; Westergaard, 1991), the amount of time available both for teaching and for research (Hattie & Marsh, 1996), as well as changes in the nature of research and in the nature of teaching in higher education (Rowland, 1996) and changes in the nature of knowledge (Brew, 1999). Also of relevance is a changed policy context.
>
> (Brew, 2012: 101)

Research, teaching and their integration are conceptualised in different ways, but are also likely to be defined differently by various stakeholders, such as lecturers and students. Brew subsequently argues for the need to 'reconceptualise the role of higher education and to renegotiate relationships between teachers and students' (Brew, 2012). These potential differences yield the exercise to think respectively about research, teaching, or research integration while taking the aims, roles and values of higher education in general into consideration. This is in line with Griffioen's call (2020, p. 3): 'When we aim to have students as our partners in how we integrate research into education, a comparison between the perspectives of both groups can provide critical information'. It is especially the value of this comparative exercise that upholds the contribution to the broader scholarly discussion on research integration.

This exercise follows the conception of students as partners, a relevant conception within higher-education studies because of its transformative power (Healey, Flint, & Harrington, 2016). Additional arguments emphasise inclusion and ethics of care as important values of the students-as-partners approach in higher education (e.g. Matthews, Dwyer, Hine, & Turner, 2018). The discussion relates to a gap in knowledge on how lecturers and students share certain perceptions of research within the organisation and within the hybrid space of the higher-education organisation or how these perceptions potentially contradict each other. Ashwin (2014) argues that research into students' experiences of studying in higher education has 'been dominated by studies that focus on teaching and learning, the majority of which tend to separate teaching from learning' (p. 123).

Earlier publications on research integration have not often resulted in measurement instruments comparing lecturer and student perspectives and experiences. Griffioen's (2020) study shows that students and lecturers shared perceptions about the role of research in their related vocational field and about research integration. However, important cognitive and affective differences

were found between students and lecturers regarding students' research practice. The study also suggested that lecturers believe students have more positive views of research's function as a provider of new knowledge for professional action than students in fact have. This led to suggesting 'the importance of lecturers explicitly discussing these differences with students and enhancing attitudes through curriculum design and classroom practice' (p. 10). The data set for this chapter is the related qualitative data in the same study, added with the second qualitative measurement of this longitudinal study. These participants' observations, examples and remarks in the open questions provide an additional perspective on the hiatus between the current status of research in higher vocational education and their 'ideal' scenario.

Therefore, in this chapter, we focus on lecturers' and students' perceptions as a way to include the hybrid and multidimensional nuances, ideas, ideals and attitudes one's experiences shape. The centrality of perceptions in research, rooted in cognitive science and psychology, offers a unique perspective within other social sciences, among which higher education studies. There are many examples of perception studies in this field, reaching from studies on specific educational tools and methods, such as the perceptions of students participating in so-called 'reflective learning experiences' (e.g. Fullana, Pallisera, Colomer, Fernández Peña, & Pérez-Burriel, 2016), on specific formative experiences, such as perceptions on the transition from secondary to higher education (e.g. Noyens, Van Daal, Coertjens, Van Petegem, & Donche, 2020), to studies taking a broader perspective, for instance on the perceived workload of students in higher education (e.g. Kyndt, Dochy, Struyven, & Cascallar, 2011).

Researching Perceptions: The Amsterdam Case

Exploring comments, ideas, doubts and experiences provide insights into how research integration is conceptualised and considered. This chapter particularly focuses on lecturers' and students' change of perceptions of research integration during the Amsterdam strategic programme. The perceptions of 3,459 students and 695 lecturers in two time points provided the possibility to reveal in-depth qualitative data on attitudes and experiences of different stakeholders within the higher-education institution. Such analyses based on rich data sets on perceptions are informative and could even be an impetus for organisational change.

This study reveals rich insights into lecturers' changing perceptions about the role and position of research at an applied university and about potential future directions to develop this role on what this role and its position should be. Additionally, in the second time frame, the lecturers' perceptions are compared to those of students. The chosen emphasis in this project, comparing perceptions of students to the perceptions of lecturers, adds a comparative layer to this research, which reveals different key groups' diverse lines of thought. To demonstrate the central role of the concept of perceptions in change in higher education, this and the following section will explore one case study of such an analysis of perceptions. First, the research objectives and the research design will be explored, followed by a discussion of our experiences with data collection and data analysis in this comparative perception research project.

Research Objectives

In the process of continuously building connections between research and education in an applied university, lecturers and students can have fixed or changing perceptions of research, related to one or more of the multiple organisational layers that the change process affects (see also Chapter 2). Therefore, in this study, we have monitored the changing concept of 'research' as perceived by lecturers and students in a holistic way, providing an opportunity to include definitions of research, teaching and/or research integration in any way the respondents associated with this subject matter on any of the relevant organisational levels of the university.

The in-depth engagement with the answers to open questions provided the opportunity to thoroughly analyse causes, consequences and nuanced changes in lecturers' perceptions over time. Additionally, we included students' perceptions because they are central to the 'learning side' of education. In this, we do not approach lecturers and students as two homogeneous groups: it is important to emphasise the variety within groups of lecturers and groups of students. Thus, comparing can happen between lecturers and students as well as among the groups. This research aims to answer the following research question:

To what extent are shifts in perceptions about research and research integration seen during the organisational change programme?

Following from this research question, the differences and similarities between lecturers' and students' perceptions on the current integration of research and education and the ideal integration of the two is central is an entrance point in exploring past changes as well as potential future pathways.

Research Design

This project is based on a data set consisting of the input from 3,459 students and 695 lecturers from one higher-education institution, the Amsterdam University of Applied Sciences (Amsterdam UAS). Most participants completed a research survey in 2016 or 2019, while a small number of respondents (eighty-six lecturers) completed the survey in both years. Therefore, this study's units of analysis are 'lecturers' and 'students' and it is not possible to distinguish potential changes in individuals' perceptions. All lecturers and students of Amsterdam UAS were invited as respondents to collect as many individual perceptions as possible. The research was not designed to focus on a number of specific disciplines or groups within the organisation, but to provide an overall perspective of the existing perceptions and attitudes at Amsterdam UAS. There was no significant overrepresentation or underrepresentation of specific disciplines. The qualitative data applied in this chapter is a subset of a mixed methods research project focused on the interaction between research integration in education and students' intended research behaviour in vocationally oriented higher education (see also Griffioen, 2019a; Griffioen, 2019b, 2020).

Using the survey allowed investigating the entire organisation. The open-ended questions in the survey provided participants with the opportunity to reflect elaborately on the theme of research in the curriculum in order to indicate their perceptions at the time.

The open-ended questions asked to students and lecturers were:

1. Why is research important or not important for Amsterdam UAS?
2. What role does research have in your studies/in your teaching right now?
3. What role should research ideally have in your studies/in your teaching?

In general, lecturers provided more elaborate answers to the open-ended questions, whereas many students were relatively short in answering these questions.

The qualitative data was analysed in three rounds using Atlas.ti9. First, the researcher and two research assistants immersed themselves in the data through grounded coding (Charmaz, 2006), which resulted in an initial codebook. Second, this codebook was applied to the data in which it was expanded by discussing the coding process. Third, several codes were merged to fit both the lecturers' data of both time points as well as the students' data in the second time point. Finally, this codebook was applied to all data. Five themes emerged from the data, each subsequently consisting of one or more different codes.

Comparisons of lecturers' shifting perceptions through the time of current integration of research in education and their perceptions of the 'ideal' nexus may offer certain directions for institutional change. Supplemented with the data collected from students at one moment in time (2019), the research reveals an even richer picture. Earlier quantitative analysis (see Griffioen, 2020) of this same research project revealed that students and lecturers shared perceptions about the role of research in their field and about research integration in 2015. They also described important cognitive and affective differences between the two groups of stakeholders with regard to research practice. Such findings evoke follow-up questions about the characteristics in the differences within groups of stakeholders. While staying close to specific examples participants of the survey gave, in the next section we address potential future pathways of integrating research in the undergraduate professional curriculum, exploring some small-scale as well as large-scale suggestions lecturers and students offered. To do this, we will first address different perspectives on the current situation.

The Current Status and Perceptions of 'Ideal' Research Integration as a Driver for Institutional Change

The findings showed that lecturers and students perceive research along five themes that emerged from the data and relate to research–education connections: a) research in the curriculum; b) stance to research integration; c) research competencies; d) research and professional practice; and e) roles, tasks and collaborations in research. This section is structured by means of these themes. Two other emergent themes were: f) the purpose of research and g) conditions for including research. When relevant, the content of these two themes is selectively added to the storyline of the first five. In their answers, both lecturers and students reflected on the 'current status' of the integration of education and research. These experiences are explicitly personal and subjective, but collectively, they provide some shared, as well as different, experiences.

Theme 1: Research and Its Place in the Curriculum

Both in 2016 and 2019, many lecturers described the integration of research in the curriculum as 'fragmentary'. The key reflection on research in the curriculum

was that students solely did research concerning their thesis in their final year. Lecturers described their own central research 'task' in thesis supervision. There was a small perceptible shift when comparing both years: compared to 2016, in 2019 more lecturers referred to the design of a research trajectory in the curriculum, and more lecturers addressed the centrality of evidence-based practice in education. In 2019, fewer mentioned the lack of a 'continuous' research line in the curriculum. However, overall, lecturers addressed the thesis as the key research component in the curriculum, with some lecturers, in both years, mentioning the role of research in the curriculum design as a whole and the use of research examples in individual lectures and teaching sessions. Research integration in education depends on lecturers' own perspective, role and expertise with regarding research:

> 'I am both a researcher and a lecturer. The results of my research are translated to the content of the curriculum.'
>
> (Lecturer, 2016)

In both years, some lecturers reflected on their own process of doing PhD research, and explained how this affected their teaching. However, others were more cynical about their own research:

> Unfortunately, research happens in my own time.
>
> (Lecturer, 2019)

This indicates there are certain practicalities, such as time, but also hiring practices, facilities, funding, the presence or absence of supporting staff and the attitude of managers that affect how, and how much, lecturers engage with research. Subsequently, this evidently impacts students' learning experiences.

The students who filled out the survey, in 2019, presented a very diffuse image of research as a part of the curriculum: from students who explained that research was almost non-existent in the curriculum to students addressing research as a component that was intertwined in the entire curriculum. The following quotes demonstrate the scope of students' reflection on the current situation, varying from a strong agreement with the significant role of research to comments expressing no enthusiasm for research in their curriculum:

> We've had a few sessions on 'research', but these classes were not very exciting and interesting. They wouldn't even discuss examples of research. (Student, 2019)

> In every course of the curriculum, research plays a significant role. (Student, 2019)
>
> Sometimes we have to do research, but usually this is only 'desk research'. (Student, 2019)

In their answers, students mentioned 'how much' research was in the curriculum, but in many cases, they connected their answers to their own opinions about research. For instance, the first quote demonstrates that there were 'a few sessions', but noted that these were not interesting. In turn, the final quote reflected on the nature of research in the curriculum as 'only' desk research. This student's remark demonstrates they expected more or other research components in the curriculum, as many other students also illustrated.

Some lecturers reflected on their fear of research taking up too much time that could better be spent otherwise, such as the following lecturers:

> So much of our attention goes to research, causing the development of 'basic knowledge' to suffer. (Lecturer, 2019)
>
> The focus on research and research competencies in our teaching education takes up too much precious time, which is urgently needed for professional ethics or professional knowledge. (Lecturer, 2016)

However, overall, these kinds of comments decreased when comparing the data from 2016 and 2019. In the last year, less than twenty comments appear that specifically mentioned a negative result for education because of too much attention for research, whereas in 2016, there were around fifty comments. The students, surveyed solely in 2019, still provided this relatively higher number of the consequences of 'too much research' in the curriculum:

> Research costs so much time, it would be better to spend that time on practice and theory, to become a better [disciplinary professional] in professional practice. (Student, 2019)

The perspective of research negatively influencing other parts of the curriculum was to some extent shared by lecturers and students, but comparing the lecturers' data through time reveals a small shift in how present this conception is throughout the lecturers.

However, another cluster of comments on research in the curriculum was about how research was imposed on students:

> I find research important, but it needs to be taught from the first year. What the tools are, and how you conduct research. Now you are being thrown into the deep end in the final year. (Student, 2019)

Lecturers recognised how this affected students, and how lecturers had to impose research on students. On the other hand, students experienced this as 'just something we have to do'. Such comments might indicate it would be possible to make improvements in the embeddedness of research in the curriculum. Besides research having too big of a role in the curriculum and being imposed, lecturers and students expressed concerns about the lack of constructing a 'research learning trajectory': research plays a big role in the undergraduate dissertation and final assignments, but in the first two years, research is dispersed throughout the different courses, as the following quotes illustrate:

> To be honest, I do not notice that research plays a role in my current education. It only starts to play a role when you have to write your undergraduate dissertation. (Student, 2019)
>
> Applied research is not stimulated enough during courses. Students only actively work on an applied research question when writing their thesis. (Lecturer, 2016)

Students mentioned this slightly more than lecturers. The 'misfitting' of research in the curriculum was not the only aspect lecturers and students wanted to improve, as will be discussed in later sections.

Theme 2: Advocating or Resisting? The Arguments for and Against Research Integration

The second theme focuses on lecturers' and students' stance towards research, which shows differences between as well as within both groups.

Lecturers that were advocating for research integration recognise and emphasise both the importance of research for the institution as a whole, and more specifically, for students as future professionals. The first was expressed in comments about the 'status' of Amsterdam UAS, and its position in the wider network of knowledge institutions and professional organisations:

> 'Research is essential for [Amsterdam] UAS. The organisation is suited to support innovation in professional practice and to prepare students for an innovative world. By sharing research in education, students will get used to that the world around them changes by means of research and that they could be the source of positive change.
>
> (Lecturer, 2019)

This quote addresses that the matter of status and position of the institution is not necessarily only about status, it also affects the possibilities and futures of all students. A strong institutional appearance and position in a wider network benefit students, and these, for most respondents who were advocating research integration, are the prime reason for research integration. The benefits of research integration lead to better quality education and a better preparation for changes and innovations in the future.

> Reciprocal interdependence of research and education makes sure that teaching material is up-to-date, and it invigorates the quality of research. (Lecturer, 2016)
>
> By doing research, lecturers could be role models for students with regard to 'life-long learning'. (Lecturer, 2019)

As both quotes suggest, bringing research and education together in one organisation and context is perceived as beneficial for the future professionals. When comparing the lecturers' responses from 2016 and 2019, there was a slight shift to more positive comments on the importance of research for students' futures. However, the perception of the irrelevance of research specifically in professional higher education, as well as the lack of time and embeddedness in the curriculum, as conditions for its realisation, prevails throughout these years, sometimes in firm statements:

> We must be careful to avoid research that does not in some ways tie back to our goals as a higher vocational education institute. (Lecturer, 2016)
>
> The unique quality of higher professional education (learning by doing, hands-on, internships, professional attitude) could be undermined by this 'research fetishism'. (Lecturer, 2019)

However, a small number of students were perfectly happy with the amount of research in the curriculum, or would like to see more research, as the following illustrates:

> Research does not play a substantial role in the curriculum, but it is present. For me, this is fine. (Student, 2019)
>
> At the moment, I am satisfied with the role that research plays in my education. (Student, 2019)

These findings demonstrate it is erroneous to address students as a homogeneous group. They have different experiences, different backgrounds and different

ambitions – both personally and professionally. However, despite this diversity, both the 'research-prone' students and the 'research-hesitant' students, address some very useful potential future pathways, which is further discussed in a later section.

Theme 3: Research Competencies: What Does Research in Education Currently Look Like?

The prior sections provided a diffuse image of research integration in the undergraduate curriculum and in the organisation as a whole, which suggests there is still a lot to gain in this matter. Before turning to potential future pathways, first lecturers' and students' perceptions of what research integration truly entails is discussed: What are they talking about when discussing research in their education?

Both in 2016 and 2019, lecturers – more than students – discussed the need for students to develop a critical attitude, skills regarding logical reasoning and evaluating knowledge and facts, and dealing with 'fake news':

> Students learn to find and evaluate scientific evidence, and they learn how to translate this evidence into their own actions. (Lecturer, 2019)

> It helps to develop critical thinking and in developing one's own opinions, and it also generates new knowledge.
>
> (Lecturer, 2016)

With regard to instrumental research skills, lecturers described the skill of doing desk and literature research as an important aspect: coping with and reflecting on different kinds of source material were important in the curriculum, and regarding to lecturers, also in students' future professional practice. As illustrated by:

> Through desk research, students learn to find relevant and reliable sources and they learn to process these sources in their final research projects. This contributes to the development of the student's own visions.
>
> (Lecturer, 2016)

In relation to instrumental skills and research attitudes, there was not a significant shift in lecturers' attitudes between 2016 and 2019: The code 'results', comprising comments on the results of research and the ability to apply knowledge gained through research, was in both years the most found code.

The students who answered the survey in 2019 mainly emphasised the methods of doing research as a specific competency they had to develop to become a professional: some described this as an evidence-based practice. One student stated:

> The capacity to find information, to read it, apply it and explain it is essential for a professional working in [professional field].
>
> (Student, 2019)

Students mentioned less the research attitude, understood as a certain disposition towards research. If mentioned, they often described the competency of solving problems, whereas lecturers often emphasised the competency of critical thinking, logical thinking, evaluating one's own conceptions and dealing with 'fake news'. One exception in a student was:

> We have to learn to base our work on facts and not on assumptions. If we base our work on assumptions, we create products that users do not need or which are not functional.
>
> (Student, 2019)

Besides research methods, students regularly mentioned the role of research in gaining a better understanding and developing new knowledge and techniques, the importance of basing professional action on facts and being able to support one's arguments for specific choices (e.g. medical treatments, lesson designs).

In their reflections on how much attention instrumental research skills need, students provided, yet again, a diffuse view: Some students addressed the time spent on developing such research skills as too much, others as too little. It is unclear from the data whether these differences were based on differences in curricula, expectations and students' ambitions, or on differences in students' prior education. A widely shared student perception was the emphasis on designing research, finding literature and reflecting on research, but generally less on executing research. Many students called or implied these research projects 'superficial', for instance:

> In my current education we mainly conduct literature research, and we learn a little bit about conducting practical research.
>
> (Student, 2019)

However, there were students who described very specific forms of research, for instance, target audience analyses or pupil observations: these are examples of

'research' assignments that were closely connected to professional practice, and students did not always consider them as research. To illustrate:

> Research should be much more important, but it should be fitting as well. Conducting scientific research is not essential for a [professional], but target audience analyses or conducting user tests are.
>
> (Student, 2019)

> Conducting research plays an important role in my development to become a [professional]. Market analyses, target audience analyses, functional analyses and user analyses are important for determining and giving direction to a project. Studies with technical data are essential for finding the best solutions.
>
> (Student, 2019)

These findings indicate a potential hiatus between the richness of what research activities can comprise and the different conceptions of what 'research' is to undergraduate students. To what extent is research recognisable for students when it is intertwined in assignments?

These findings reveal that there is a very broad variety of considerations regarding research, with students recognising or not recognising different elements as research. However, the conception of what research is, is inextricably connected to their normative attitudes regarding research; the scope of the considerations is traceable throughout the analysed data. The same can be expected among lecturers, which asks for a more detailed debate about research activities between lecturers and students to provide increased clarity.

Theme 4: Research and Professional Practice

As discussed throughout this book, research has a different role in higher professional education than in higher academic education. The distinction between both might converge and diverge through time, but is generally widely shared. Considering the context of the Amsterdam case in an applied university, professional practice unsurprisingly played a significant role in both the lecturers' and students' answers when asked about research and education. Lecturers, more than students, considered internal and external partnerships with 'the field'. Many of them specifically mentioned Amsterdam UAS research groups, especially in 2019. Comparing the 2016 and 2019 data, it seems that research groups, in general, take up a more central role in the organisation; however, a lack of contact between the educational 'context' and the research

'context' is a widely shared concern. As the following two quotes address, some lecturers were concerned about researchers' lack of interest to get involved with students:

> Research groups [lectoraten] are aloof from our undergraduate programmes. Students only come into contact with research groups when lecturers actively bring them into contact with each other. (Lecturer, 2019)

> Our research groups do research that is very interesting for our [discipline] lecturers and students. More interaction would be enriching for both. (Lecturer, 2019)

In that same year, there were a few lecturers who already described shifts towards more interaction and exchange between research groups and education within the institution:

> Stronger connections between research groups and lecturers are needed, and these will happen (this is already happening).
>
> (Lecturer, 2019)

Students' perceptions focused mainly on the function of research for their work as future professionals. In this applied university, they were educated to become professionals in often very specific professional contexts. The findings show that whether students were 'research-prone' or 'research-hesitant', they mainly valued research when it was directly connected to this professional practice. As the following two quotes indicate, students referred to their specific future professional context. Both students addressed very practical reasons why they should be learning certain research skills themselves:

> I use research articles on a daily basis, especially during my internship when I have to deal with difficult or rare cases. I am able to find useful information which I can use in practice afterward. I also base all my reports on current research. (Student, 2019)
>
> As a future teacher, I will need to be able to teach my students to research.
>
> (Student, 2019)

These findings show that the perspective of research and professional fields somewhat differed between lecturers and students. Where both perceived the need for research in education that was relevant for students' professional practice, some lecturers in 2019 added the dimension of relevance for their

students' learning being connected to Amsterdam UAS's research groups. Although these last indications of change still are relatively scarce, it is interesting that these remarks about research groups were only found in the 2019 data – not in the 2016 data. This might hint towards shifts within the organisation, or at least some 'best practices'.

Theme 5: Roles, Tasks and Collaboration

The aforementioned research groups play – or would potentially play – an important role in the connection between research and teaching. However, besides these collaborations within the wider organisation, both lecturers and students also reflected on lecturers' and students' collaboration as well as the different roles and tasks both groups have. Lecturers, unsurprisingly, strongly connected their own research activities to the role research had in the curriculum within which they were teaching, just a few students mentioned the importance of lecturers' own research: In these cases, they all argued that discussing lecturers' own research did not happen enough. In 2016, many lecturers reflected on the lack of a research culture in the wider organisation:

> I notice an almost hostile-like attitude against research, and this is fatal for improving the curriculum. Knowledge is important […] yet lecturers should have the time and enthusiasm to develop and keep up their own knowledge.
>
> (Lecturer, 2016)

> Many researchers are not interested in didactics, and 'hard core' lecturers are not interested in the research done at [Amsterdam] UAS. Barely anyone is able to build bridges between the two.
>
> (Lecturer, 2016)

Such quotations sketch an image of an organisation with two faces: educational practice and research practice as two separate activities and communities. The answers from lecturers in 2019 provide a slightly more united perception of research and education, but the changes seem to come slow and still are relatively small. For instance:

> To integrate research and education, you have to communicate it persuasively and in simple terms, otherwise you will lose the support of too many lecturers. Projects will only be successful if most of the lecturers are on board.
>
> (Lecturer, 2019).

> An important task, I think, is to persuade applied educated lecturers that scientific research is important.
>
> (Lecturer, 2019)

In reflections on colleagues and peers, a number of students reflected on the lack of interest in their peers' attitude towards research:

> Motivation is very important in doing research. I am not sure if the average student is that motivated. I am motivated, that's why I would like to do more research.
>
> (Student, 2019)

> Many fellow students do not want to be bothered with conducting research. Indeed, many of my peers often do not see the point of conducting research.
>
> (Student, 2019)

> Many students understand that they need to know how to conduct research. But I am not sure if they also think it is important to do so.
>
> (Student, 2019)

These quotes emphasise the already discussed diffuse image that appears in this research, in which the approach of students, as well as lecturers, as a heterogeneous group, should be central: different students have different ambitions, interests and talents, and these play a role in how they perceive the role of research in their education. The following section addresses such differences, similarities and shifts in more detail.

Future Pathways

In the previous section, we discussed lecturers' and students' perceptions with regard to research integration by distinguishing five themes. In this section, these same five themes will be addressed, but here the potential future pathways as the lecturers and students described them are emphasised. These 'ideal' futures are sometimes broad ideas and other times very specific small changes; however, together they provide a collection of perceptions that could provide directions for organisational change. Furthermore, this research project's broad scope of analysis means that participants were able to address their own key concerns and solutions without a strict 'framework' the researchers provided. As

this section demonstrates, these future pathways are thus very diverse in nature, and consequentially, would need to be translated from a more operational level of organisational change to a tactic or strategic level of change when applied to a particular setting. However, they might be food for thought for institutional policymakers as well as researchers.

Theme 1: Research and Its Place in the Curriculum

The lecturers' and students' perception about research and its ideal place in the curriculum is a notion that was shared widely in the findings, of which differing perceptions emerged. The two most substantial topics emerging were the notions of choice and of integration.

A small number of lecturers as well as students addressed their impression that there should be freedom of choice in the curriculum with regard to research: not only the extent of research in the curriculum, but also the specific 'form' or 'type' of research.

> It should not be dictated by the organisation. I think it is important that students have the freedom to conduct research and are facilitated appropriately.
>
> (Lecturer, 2016)

> It is good to let students experiment with conducting research, but we should not force students to conduct scientific research within the [university]. It should be a choice. Students that have an affinity with conducting scientific research should have the freedom to do so, so that they can prepare themselves for a possible master's degree.
>
> (Lecturer, 2019)

Some lecturers presupposed that by giving students the choice to do research, the students who then make that decision are more motivated for research, which students also mentioned:

> Because not everyone finds conducting research interesting, it would be ideal if there would be more research-oriented elective courses for students that are interested in doing research, next to the regular research-oriented courses.
>
> (Student, 2019)

This can be seen as a logical argument; however, this means that research is only done by the few, and not the many students of every curriculum. A choice to make

research more flexible and optional could be beneficial because it personalises the educational experience and gives students the option to do what they prefer to do, what they are good at, or what they think is best for their future career path. That said, this presupposes that research is not something with which all graduates from higher professional education should be acquainted. Thus, it takes a different perspective on what role the undergraduate degree should take with it. This is one example of how some relatively 'straightforward' suggestions for future change are strongly related to wider visions and strategies on a higher policy level.

Besides the matter of the curriculum's flexibility with regard to research components in the curriculum, many lecturers argued that developing research skills should not – or not only – be addressed in specific research-focused trajectories as part of the curriculum, but rather they should be integrated into the curriculum's regular courses. This means that, for instance, training in research skills is integrated into more 'knowledge-focused' courses. For instance:

> Knowledge in the course that I give is always situational. That is why I am not in favour of separate research-oriented courses. I would like to integrate research more in the curriculum.
>
> (Lecturer, 2016)

> I would like research, practical and applied, to play a role in every course and also in the first few years, so that it builds up towards the final dissertation.
>
> (Lecturer, 2019)

Theme 2: Advocating or Resisting: The Arguments for and against Research Integration

Building on the discussions and ideal images on research and its place and the curriculum, the future scenarios lecturers and students sketched were still very diverse, and both voices advocating and resisting the emphasis on research integration were found in the two groups of stakeholders. Some lecturers envisaged a smaller role:

> I don't want to educate future researchers, I want to educate researching, critical, curious professionals.
>
> (Lecturer, 2016)

Whereas others addressed the need for a larger role:

> Research should be connected to everything we [lecturers] do when teaching.
> (Lecturer, 2019)

When looking at the number of responses, far more respondents envisaged a smaller role than a larger role of research in their ideal future scenarios. This was the same for the 2016 respondents as well as the 2019 respondents, which addresses that change towards a stronger research integration, if decided through a top-down approach, can meet hesitant – or perhaps even resistant – attitudes of stakeholders within the organisation.

Additionally, many students expressed aversion to the role of research in their studies:

> Personally, I don't like doing research, and I think it doesn't add anything to know how to do research as a professional. I have made the switch from academic education to professional education because I disliked research.
> (Student, 2016)

Such findings do not offer specific grounds for change, but they do reveal the 'target audience' of higher professional education: To some, studying at an applied university was a conscious choice not to do research. There are multiple possible perspectives that can be formulated, for instance, the role of information evenings and 'open days': explaining that research is a fundamental part of being a professional. If higher professional education institutions aim to integrate research in education, this message – that research is a prominent component of professionalism – should be more explicitly shared among stakeholders.

Theme 3: Research Competencies

The future perspectives of research competences mainly focus on critical research attitudes. Lecturers in 2016 as well as in 2019 addressed the need to emphasise a critical research attitude as well as some specific instrumental research competences, such as using academic literature. However, the lecturers' perceptions on developing research competences and a critical research attitude were slightly different from the students' perceptions on these themes. Students often mentioned relatively 'small' research competences they wanted to develop.

These competences were more about specific methods of data collection and data analysis, or about a distinctive research activity:

> I want to learn about how to approach my target audience [doelgroep]. (Student, 2019)
>
> I just want to learn where to find research material and how to analyse this. (Student, 2019)
>
> I want to learn how to approach the writing of a research report. (Student, 2019)

These three quotes indicate that students did not interpret research skills and research competences as skills and competences that played a wider role in their development as a professional. Some lecturers also noted this:

> Make the presence as well as access of research clearer.
>
> (Lecturer, 2019)

Thus, to develop research competences, it is first important to establish some common ground in discussing what they comprise, before continuing to discuss what the role of research should be in higher professional education. This could also mean thoroughly discussing what the role of research should be in professional practice and then defining the particular research competences that come with that perspective. Either way, a greater clarity on research competences is requested. The very specific examples students gave about what they wanted to do more in their educational programmes demonstrate there are specific points they would want to start at, which can be added with the lecturers' broader understanding of the future of research found in this study.

Theme 4: Research and Professional Practice

As discussed earlier in this chapter, both lecturers and students placed a strong emphasis on professional practice in their thoughts on research integration in higher professional education. This comes as no surprise, but many respondents seemed to separate research components in the curriculum from professional practice components in the curriculum, such as internships. Problem-based education might be a solution to address the interconnectedness of these two domains, and the suggestion to work on 'actual cases' in the classroom was mentioned often:

> It would be ideal if teams of lecturers would research actual problems from clinical practice. This way, lecturers will learn from each other and be motivated

> to develop themselves. This would also set the tone for others as well as for students.
>
> (Lecturer, 2016)

> For me personally, a little bit less research would be great. I think discussing specific experiences in professional practice of me and others is so much more useful than filling in the umpteenth unimaginative form.
>
> (Student, 2019)

This last quote expresses a very cynical perspective of what research is and how it is something that is completely separate from professional practice. Many student respondents expressed a clear passion for their future professional practice, and some seemed to consider research as standing 'in the way' of their development towards becoming a professional instead of as an integral component of professionalism. An interesting follow-up question would be to consider how this perspective developed over time, but first of all, it is important to note that perceptions of what research truly is might be very different for some students and lecturers. This might also be a chance for advocates of research integration: by making visible that research and professional practice are definitely not mutually exclusive but strongly connected, the aversion against research might slowly change.

Theme 5: Roles, Tasks and Collaboration

The last theme that will be discussed here is the only one in which a clear difference between respondents of 2016 and 2019 can be found. In 2019, far more lecturers addressed their wish to have more time for research as an integral part of their responsibilities than in 2016. Furthermore, they also expressed a need for clearer interweaving of the role of research groups [lectoraten] in educational practice:

> In an ideal situation, researchers could be asked to identify trends and developments and find relevant literature [to curate this] by which lecturers genuinely have input in their teaching programmes.
>
> (Lecturer, 2019)

Lecturers want to 'research together with students' and are searching for ways to collaborate with internal as well as with external partners. Some lecturers described a relatively detailed image of what future roles and collaborations

should look like, but connected this directly to their experienced lack of space and time to work on their own research ideas. The earlier mentioned importance of autonomy and differentiation (making research an optional activity instead of a mandatory one) goes for lecturers' job description as well. Some teams within the organisation reported in the findings that might be considered 'early adapters' of this approach in 2016:

> Within our team, lecturers are stimulated to do research: in time and space. Lecturers who are not interested in research are taken in consideration as well. In my eyes, this is a perfect balance.
>
> (Lecturer, 2016)

Thus, future pathways might be motivated by good practices within the organisation.

Conclusion

It is valuable to collect specific ideas, potential causes for certain perceptions and attitudes and possible 'ways forward'; these offer perspectives on what kinds of changes students and lecturers genuinely need or desire. Listening to the many voices by means of a large-scale, qualitative study, such as conducted in this research project, is not only academically insightful, but also important, systematically gathered information from an organisational change perspective, as here demonstrated. The shared idea of respondents sketching potential future pathways that emerge from the findings is the wish for togetherness. This sense of togetherness can be found in the proposed collaborations between students and lecturers, collaborations between teaching-only staff and researching staff, and collaborations between education and professional practice.

However, combined with this togetherness comes an overall cynicism of the feasibility of developing new ideas and new educational practices, due to the needed conditions:

> That they [the students] will learn that research is something they can do, that it is not out of their reach. That practical research is something different from academic research. That it is possible to practice a lot with the right feedback at the right moment. Let them discover things for themselves, an old-fashioned 'learn-to-learn' situation. But that will ask a lot of time of lecturers, and, sigh, that, will be too expensive.
>
> (Lecturer, 2016)

This cynicism did not change in the short timeframe studied here, although there might be a small shift in the lecturers' conceptions about the shapes research potentially might take in the undergraduate professional curriculum. Thus, this broad-scope research might conclude in a less cynical conclusion: Organisational change with regard to research integration needs time for discussion, time for clarification and time for experience. It needs time over time: It is a marathon, not a sprint.

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