

Cover Page



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## Summary

This dissertation reports on the beliefs and perceptions of Chinese and Dutch university teachers regarding the role of research in university teaching and how these beliefs and perceptions can be explained by their cultural, institutional and individual background characteristics. Different aspects of their beliefs and perceptions were explored via a survey study and an in-depth interview study. For purposes of this research, teachers' beliefs about the role of research in university teaching were defined as what teachers believe that research should ideally be integrated into teaching and thus the ideal role of research in teaching. Teachers' perceptions of the role of research in university teaching were defined as how teachers perceive the actual integration of research into their current teaching practices and thus the actual role of research in teaching.

### *General introduction*

In answering the call in international literature to engage as many students in research as possible, various programmes and projects have blossomed for different types of higher education across the globe. It can be assumed that the idea of more engagement of undergraduate students in research will soon spread to Asian countries as well, including China. This means that university teachers from both the East and the West will be facing a similar challenge of embedding research in the higher education of students and have to contemplate the role of research in their own ongoing teaching activities. The attempts of university teachers to do this, so far, have been greatly hindered by a number of factors including the organization and management of research and teaching, the existing beliefs and practices of teachers regarding research and teaching, diversity of student populations, widely differing educational traditions and social-cultural norms — particularly in Asian and other non-Western countries. Greater insight into these barriers and just how teachers can deal with them is thus needed to promote a stronger link between research and teaching in higher education.

In the second part of this chapter, the role of research in teaching is defined on the basis of what has been reported in the existing literature on the research-teaching nexus, undergraduate research and inquiry-based learning. In doing this, the role of research in higher education teaching was defined as the goals and approaches for the integration of research into teaching, which can vary from partial integration (i.e., little student involvement in parts of the research process) to complete integration (i.e., extensive student involvement in a complete research project). A brief review was provided regarding the research literature concerned

## Summary

with the relationship between research and teaching (i.e., the correlations between the two but also the integration of the two), the Eastern and Western educational traditions, the increasing Western influence on Asian higher education, the relevance of teacher beliefs about teaching and the relevance of the institutional context for understanding the successful or less successful integration of research into higher education.

The final section of Chapter 1 presents an outline of the survey and interview studies composing this dissertation. The survey study (reported across Chapters 2-4) was designed gain a general overview of the beliefs regarding the role research should play in their teaching and their perceptions of the role research actually plays in their teaching of Chinese and Dutch university teachers. The contributing factors to those beliefs and perceptions were investigated: Chapter 2 on the cultural factors, Chapter 3 on the institutional factors and Chapter 4 on individual factors. The interview study (Chapter 5) was designed to describe a concrete picture of the actual practices of Chinese and Dutch university teachers in relation to the role of research in teaching, for which an example of complete integration of research in teaching was chosen, namely the supervision of the master's thesis. This is because the supervision of the master's thesis can serve as natural locales of a tight blending of research activities, teaching activities and student learning.

### *The survey study*

The core of the questionnaire administered in the survey study consisted of seven scales addressing the goals of integrating research into teaching. In doing this, both teachers' beliefs about the ideal role of research in teaching and teachers' perceptions of the actual role of research in their own teaching were inquired about. The seven scales were, thus: 1) developing a creative disposition; 2) developing a critical disposition; 3) fostering student research interest; 4) enhancing research skills; 5) prompting student reflection on research; 6) familiarising students with current research; and 7) encouraging student participation in research. The same questions were posed with regard to the teachers' ideal and actual teaching situations.

The questionnaire also included items addressing the individual backgrounds of the teachers (like gender, age, educational background, institutional background, years of research experience, years of teaching experience and time spent doing research) and items addressing the institutional backgrounds of the teachers (i.e., research support and research culture). Yet another section of the questionnaire addressed the teachers' beliefs about teaching in general. The two scales for this section were: teaching as information transmission/teacher-focused and teaching as conceptual change/student-focused.

*Cultural factors*

In **Chapter 2**, the beliefs about the ideal role of research in teaching versus perceptions of the actual role of research in teaching are compared for Chinese ( $n = 152$ ) and Dutch ( $n = 132$ ) university teachers. The focus of this chapter is on the influence of a cultural related factor (i.e. teacher beliefs about teaching). A number of relevant individual factors are also examined: years of research experience, years of teaching experience, educational background, study abroad experience and the type of course being taught. The countries of China and the Netherlands were compared because of their distinctive teaching philosophies related to their different cultural histories. Specific research questions addressed in Chapter 2 are:

- What are Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching?
- What are Chinese and Dutch university teachers' perceptions of the actual role of research in their teaching practice?
- How do Chinese and Dutch university teachers' beliefs about the ideal role of research in teaching correspond to their beliefs about teaching in general?
- How do Chinese and Dutch university teachers' beliefs about and perceptions of the role of research in their teaching relate to their backgrounds?

It appeared that the Chinese and Dutch teachers both highly valued the idea of including research in their teaching, but also both reported significantly lower scores for the actual incorporation of research into their teaching practices. Both groups viewed the development of a creative and critical disposition on the part of students as most important and student participation in research as least important goal of integrating research into their teaching.

However, the Dutch teachers attributed a significantly more important role to research in teaching than the Chinese teachers for both the ideal and actual teaching situations. This difference was still found in a sample of Chinese and Dutch teachers with similar educational backgrounds (Master's), teaching non-research focused courses.

It was also found that the more years of research experience teachers had the more strongly they valued a role research should play in teaching, particularly so for the Dutch teachers. The years of teaching experience did not have any observable influence in this regard.

With regard to teacher beliefs about teaching in general, both the Chinese and Dutch teachers were found to show a preference for the goal of teaching to be related to students' conceptual development rather than information transmission. The Dutch teachers were more strongly inclined to view the goal of teaching more a conceptual development of students than the Chinese teachers. The Dutch

## Summary

teachers also disagreed more strongly with a goal of teaching to be transmitting knowledge to students than the Chinese teachers.

Finally, this chapter reported on how teacher beliefs about teaching in general influenced the way teachers valued the role of research in teaching. The more strongly teachers viewed the goal of teaching to be the conceptual development of students, the more highly they valued a role of research should be in their teaching. This trend was found for both the Chinese and Dutch teachers, but stronger tendency for the Chinese teachers. Interestingly, a more knowledge transmission orientation to teaching did not prevent the teachers to highly value the role of research in teaching.

### *Institutional factors*

**Chapter 3** reports on the beliefs versus perceptions of the Dutch university teachers ( $n = 132$ ) with respect to the role of research in teaching. It addresses how the institutional background (i.e., research-intensive versus teaching-intensive institutions, research support and research culture) relates to the beliefs and perceptions of the teachers with regard to the role of research in university teaching. And finally, three individual factors are considered as well: educational background, years of research experience and time spent doing research. A comparison of teachers at Dutch research universities (RU) and universities of applied sciences (UAS) was opted for because these institutions could be assumed to differ sufficiently from each other — given the basically binary Dutch higher education system. The following research questions are addressed in Chapter 3.

- What do teachers at research universities and universities of applied sciences believe about the ideal role of research in university teaching?
- How do teachers at research universities and universities of applied sciences perceive the actual role of research in their teaching practice?
- How do the perceptions of university teachers regarding the actual role of research in teaching relate to their institutional and individual backgrounds?

The similarities and differences between the Dutch and Chinese teachers in Chapter 2 were also found in the comparison of the RU and the UAS teachers. The teachers at the RU and the UAS were found to resemble each other in several aspects. First, both groups highly valued a role of research in university teaching in principle (i.e., under ideal circumstances), and reported a low level of the actual integration of research into their current teaching. Second, both groups considered the development of a creative disposition and critical disposition on the part of students to be the most important goals of integrating research into teaching. Third, both groups believed and perceived student participation in research to be the least important goal of integrating research into teaching.

Despite these major similarities, the RU teachers reported significantly higher scores on their perceptions of the actual role of research in teaching than the UAS teachers. The gap between the RU teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their current teaching was also therefore significantly smaller than that for the UAS teachers.

To explain the observed differences between the two groups of teachers, the relevance of their individual and institutional backgrounds were investigated. In addition to more research experience, as already noted in Chapter 2, a higher educational background (PhD versus Master's) and more work time spent doing research were associated with more positive perceptions of the actual incorporation of research into their teaching. These three factors were all characteristics of the RU teachers. Although the two groups of teachers showed similar perceptions of institutional research support, the RU teachers perceived a stronger research culture than the UAS teachers. Taken together with the finding that the RU teachers had more positive perceptions of the integration of research into their actual teaching than the UAS teachers, these findings indicate that institutional characteristics play a critical role in the actual integration of research into university teaching. This conclusion is further confirmed by the finding that both research support and research culture correlated with the UAS teachers' perceptions of just how well they could integrate research into their actual teaching — the greater the perceived research support and more positive the perceived research culture, the more successful they were at integrating research into their teaching practices.

### *Individual factors*

**Chapter 4** focuses on the relevance of individual factors for the teachers' beliefs about and perceptions of integrating research into teaching. Individual factors considered are the time spent doing research, research experience, learner type and experience of study abroad. In addition, this chapter also reports on a specific institutional background factor (i.e., research intensive versus non-research intensive institutions) and the teachers' self-reported constraining factors in particular. The Chinese subset of the survey data ( $n = 152$ ) was explored in order to fill the gap in the existing literature, in which the integration of research into teaching in an Asian higher educational context was still underexplored. Another aim was to determine if the Asian educational context (i.e., different educational system, educational traditions and educational aims) mediated the adoption of the largely Western idea of integrating research into higher education teaching. The following two research questions were addressed in Chapter 4.

- How do teachers' beliefs about the ideal role of research in teaching relate to their perceptions of the actual role of research in their teaching practice?

## Summary

- How do teacher background variables relate to their perceptions of the actual role of research in their teaching practice?

As already reported in Chapter 2, a significant gap was detected between the Chinese teachers' beliefs about the ideal role of research in teaching and their perceptions of the actual role of research in their own teaching practices.

To understand better this gap experienced by the Chinese teachers, similar to findings reported in Chapter 3, it was found the teachers who perceived greater actual integration of research into their ongoing teaching practice to come more frequently from research-intensive universities, to have relatively more years of research experience and to spend more of their work time doing research.

Two other background factors were also explored in this chapter. The type of learner being taught by the Chinese teachers (i.e., language versus non-language majors) and teacher experience with studying abroad did not relate to their perceptions of how they had managed to integrate research into their actual teaching.

Noticeable in this chapter is that the Chinese teachers themselves mentioned a couple of additional factors as contributors to the observed ideal-actual gap. Among these were institutional factors such as lack of time, heavy teaching loads and fixed curricula. Lack of student motivation and insufficient student English proficiency were also mentioned. And lack of teacher motivation together with a low status for language instruction within the institution were mentioned as well.

### *The interview study: Master's thesis supervision*

The results of the survey study provided a general overview of what teachers think about the role of research in university teaching. The results of the interview study presented in **Chapter 5** provide a more qualitative, detailed picture of the actual role of research in university teaching. The context of master's thesis supervision was chosen for the interview study for the following reasons. First, the master's thesis programmes and supervision were comparatively more established than other research programmes and supervision (e.g., undergraduate research projects, research method courses) in most of the participating institutions. Second, master's thesis supervision can entail a wide variety of goals and alternative approaches to the integration of research into teaching. And third, the context of master's thesis supervision with its focus on research could limit — in the context of this study — the influence of various constraints on the integration of research into actual teaching practice. A total of ten Chinese and ten Dutch supervising teachers from the language and culture departments of research intensive universities were interviewed. The following research questions were addressed.

- What learning outcomes do Chinese and Dutch supervising teachers want their master's students to achieve through a master's thesis?
- How do Chinese and Dutch supervising teachers support their master's students to achieve these learning outcomes?

With regard to the learning outcomes which the supervisors wanted their master's students to achieve, five core categories emerged from the data: research competencies, general competencies, value of student research, student well-being and preparation for a future career. The Chinese and Dutch supervisors highly resembled each other with regard to which learning outcomes they considered most important: Both considered the development of research competencies on the part of students to be most important for a master's thesis, although the Chinese supervisors focused on stimulating a critical disposition and academic writing as part of this, while the Dutch supervisors focused on stimulating a critical disposition, academic writing, as well as independence in doing research and student interests in research. The Chinese supervisors also aimed to develop the general competencies of students and particularly their language abilities, to prepare them for their future profession and to encourage publication as way to demonstrate the quality of the student research. In contrast, the Dutch supervisors talked more often about student contribution to the knowledge base and assuring student well-being. The Chinese and Dutch supervisors differed most strongly with regard to an intention to prepare students for a future career. The Dutch supervisors only mentioned the relevance of the master's thesis for the student's further personal and professional development and some even explicitly stated that preparation for a future career was *not* the aim of a master's thesis, while all ten Chinese supervisors showed considerable concern to prepare students for a future career.

With regard to the second research question, pertaining to the support provided by supervisors, two major categories emerged from the interview data: tangible and intangible support. Tangible support refers to supervising which deals directly with content and to supervising activities which can be observed. Six subcategories of tangible support could be further distinguished and appeared to range from teacher-focused to student-focused activities (i.e., providing teacher resources, lecture and tell, teacher modelling, discussion, posing questions and giving student tasks). Intangible support involved supervision not directly concerned with explicit content or activities. Four subcategories of intangible support emerged from the data: adaptive supervision; assessment and control; emotional support; and teacher dedication.

The interview results showed the Chinese and Dutch supervisors to both use a variety of support types. They both mentioned supplying or referring students to study resources and giving students tasks to complete as the most frequent type

## Summary

of tangible support provided and adaptive supervision as the most frequently provided type of intangible support.

Clear differences also manifested themselves in the support practices of the Chinese versus Dutch supervisors. The two groups differed on the extent of using the different types of support, the ways in which they combined the different types of support and — most importantly — the way in which specific types of support were used by them. For the two types of intangible support (i.e., assessment and control, emotional support), the Chinese supervisors reported high use of explicit assessment and control while the Dutch supervisors reported higher use of implicit control and an emphasis on emotional support. For tangible support, the Chinese and Dutch supervisors differed most strongly on the use of questions. The Dutch supervisors deliberately avoided directly giving answers to students' questions and opted to pose a series of nested questions to gradually build the students' understanding instead; the Dutch supervisors also reported frequently asking students to justify their ideas and explain how they planned to put them into practice. The Chinese supervisors, except for one, did not pose as many questions as the Dutch supervisors and reported sometimes doing this ahead of time as a prescription to prepare students for the task of completing a master's thesis.

### *General conclusions and discussion*

In **Chapter 6**, the results of the survey and interview studies are integrated to draw some general conclusions about the incorporation of research into teaching in Chinese and Dutch higher education. After a brief overview of the design of the different studies, the main findings of the survey research and the interview research are summarized with respect to the similarities and differences between the Chinese and Dutch university teachers with regard to their beliefs about the ideal integration of research into higher education teaching and their perceptions of the actual integration of research into such teaching.

The Chinese and Dutch teachers in studies of this dissertation were found to be more alike than different. Both groups highly valued a role research should play in the teaching of higher education students. Both groups showed a major gap between the ideal versus actual role of research in their teaching. And both groups were more inclined to approach teaching as conceptual change and student focused rather than as strictly knowledge transfer and teacher focused. Similar contributing and constraining factors were also found to explain the ideal-actual gap for the two groups. The factors pertained to the institutional backgrounds of the teachers (i.e., research- versus teaching-oriented institutions) and the individual backgrounds of the teachers (e.g., their educational backgrounds, research experience).

The Chinese and Dutch teachers further resembled each other with regard to what they considered core learning outcomes for the supervision of a master's thesis (i.e., the mastery of such research competencies as academic writing skills,

understanding the entire research process, development of a critical disposition and independent research). The two groups of teachers also both combined tangible support (i.e., teacher resources, lecture and tell, teacher modelling, discussion, posing questions and assignment of student tasks) with intangible support (i.e., adaptive supervision, assessment and control, emotional support and teacher dedication). A range of teacher-focused support to student-focused support was also found to characterize the tangible support provided by both the Chinese and Dutch supervisors.

Despite these widespread similarities, remarkable differences were also found between the Chinese and Dutch university teachers. On average, the Dutch teachers in the survey were found to be more positive about the actual integration of research into their own teaching than the Chinese teachers (Chapter 2). The Dutch teachers were also more strongly inclined to adopt a conceptual change/student-focused approach to teaching than the Chinese teachers, and such an orientation was found to be strongly positively associated with the teachers' perceptions of the actual role of research in their own teaching (Chapter 2). There were also clear differences between the Chinese and Dutch teachers with regard to the ultimate learning outcomes intended for their students: preparation for a future career (China), student well-being (the Netherlands) and knowledge contribution (the Netherlands). The Chinese and Dutch supervisors differed most on specific types of support (Chinese: assessment and control; Dutch: emotional support and the posing of questions).

Particularly the similarities between the Chinese and Dutch teachers can be understood in relation to the growing influence of Western higher education on Asian higher education. Many constraining factors were also found to explain the ideal-actual gap observed for the integration of research into higher education by both the Chinese and Dutch teachers. Among the constraining factors were cultural, institutional and individual background characteristics of the teachers. Though both groups experienced a similar gap, Chinese and Dutch teachers faced different constraints. A lack of supportive research climate was the main constraining factor for the UAS teachers in the Netherlands, while Chinese teachers faced a mismatch between what research-based teaching can presumably achieve and the aims of maximizing student language proficiency in current Chinese language education.

The strengths and limitations of the research reported on this dissertation are considered in closing. Three major recommendations are then made on the basis of this information. First, future research into the relationship between research and teaching should use instruments, as how it was done in the present studies, which allow exploration of both beliefs and actual practices but independent of each other and therefore for comparison purposes. Second, managers, policy makers and university teachers need to be made aware of the major gap which exists between what teachers believe about the integration of research into teaching and their actual practices with regard to this. Institutions

## Summary

need to identify and address the cultural, institutional and individual background factors contributing to and constraining the integration of research into teaching at their institution. The different stakeholders in the integration of research into higher education teaching should be encouraged to enter into a dialogue with each other to address the ideal-actual gap and thus the factors constraining the integration of research into higher education teaching. Finally, it is recommended that the similarities and differences found between the Chinese and Dutch supervisors of master's theses be taken into consideration by supervisors to help them with the education of international students coming from different cultural backgrounds and Western supervisors of Chinese students in particular. Supervisors need not, by definition, adapt their actual supervision to the specific cultural backgrounds of their students, but knowledge of these general similarities and differences can certainly help them to identify student strengths and difficulties, clarify latent expectations, and to promote maximal student learning in the end.