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Integrating research into language teaching: Beliefs and perceptions of university teachers

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ABSTRACT

Internationally, universities and policy-makers are calling for stronger integration of research into teaching. However, it is unclear how to implement this in practice in different disciplinary areas and contexts. This study contributes to this understanding with a focus on language teaching in the Chinese context. We surveyed 152 university teachers regarding their beliefs about and their perceived actual integration of research in their teaching practice. The teachers highly valued integration of research in teaching in an ideal situation but perceived low integration of research into their actual teaching practice. This gap was smaller for teachers from research-intensive universities and for those who had more research experience and spent more than 25% of their work time on research. Other reasons for this gap included fixed curricula, heavy teaching tasks, lack of student motivation and difficulties reconciling integration of research into teaching with the institutional aim of improving students' language proficiency.

Introduction

In response to contemporary challenges such as the increasing complexity and constantly changing knowledge of the twenty-first century society, various disciplines of higher education have increased emphasis on bringing research and teaching more firmly together to prepare students to deal with the super-complexity in the current knowledge society (Barnett, 2000; Brew, 2010; Pan, Cotton, & Murray, 2014). However, it is not clear how this should be done. Studies that investigate bringing research and teaching together have emphasised different aspects. Some studies focus on the relationship between research productivity (i.e. publication counts) and teaching effectiveness (i.e. student evaluations) (Hattie & Marsh, 1996); others explore teachers' and students' beliefs to determine whether a connection between research and teaching should ideally exist (Deem & Lucas, 2007; Nassaji, 2012; Neumann, 1992; Robertson & Blackler, 2006). Some recent studies investigate this topic in a context in which research activities are integrated into teaching practice for the benefit of student learning (e.g. Verburgh, Schouteden, & Elen, 2013; Vereijken, van der Rijst, de Beaufort, van Driel, &

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Dekker, 2016). In line with this approach, we are interested in how language education teachers perceive the benefit of integrating research components into teaching, such as having students read research literature, learn about research methods or design small research projects.

Healey (2005) distinguishes four ways to integrate research into university teaching: research-led (research content and students as audience), research-tutored (research content and students as participants), research-based (research processes and students as participants) and research-oriented (research processes and students as audience) methods. University programmes that aim to engage undergraduate students in research activities have implemented all these methods (e.g. Boyer Commission, 1998 in the United States; Brew, 2010 in Australia; Healey, Jordan, Pell, & Short, 2010 in the United Kingdom; Vereijken et al., 2016 in the Netherlands), thus creating a strong movement to actively engage students with research in their discipline. In line with this movement, language teachers have been increasingly asked to engage in reflective practices and research-based teaching (see also Farrell, 2016).

In the case of teaching English as a foreign language (EFL) in countries such as China, an important goal is to develop students' English language abilities and thereby provide a workforce capable of internationalising their country's economy (see Jin & Cortazzi, 2002). This goal could potentially conflict with the goal of greater research integration into teaching, which is to involve students in critical inquiry and thereby prepare them to function in a complex and constantly changing world (Brew, 2010). However, in comparison with the volume of empirical work conducted to shed light on how universities aim to integrate research into teaching generally, limited research in this area focuses on language teaching (see also Borg, 2007), and the available research implies that the extent to which research can be integrated into teaching relates to whether institutions are research-intensive (Hu, van der Rijst, van Veen, & Verloop, 2015).

Furthermore, university language teachers face barriers that stem from other factors, such as the lack of systematic research support (Bai, Millwater, & Hudson, 2012; Xu, 2014), the issue of separate funding and assessment for research and teaching activities (Brew, 2010) and existing beliefs about research and teaching (Borg, 2009; Hu, van der Rijst, van Veen, & Verloop, 2014). Moreover, language teaching departments are traditionally more teaching-focused than research-focused, which means that the pedagogical and professional benefits of research are unclear for most language teachers (see also Bai et al., 2012).

Teachers' beliefs could influence their perceptions and subsequently their teaching behaviours (Pajares, 1992); thus, how university language teachers value this incorporation can influence the strength of research integration into their current teaching practice. As Pajares (1992) cautions, the concepts of beliefs and perceptions are complex and should be carefully operationalised. In this study, 'teachers' beliefs about research integration into teaching' refer to how teachers believe that research should ideally be integrated into teaching, whereas 'teachers' perceptions of research integration into teaching' refer to how teachers perceive research is actually integrated into their current teaching practice. Research shows that teachers can improve their practice when they realise the gap between their intended outcomes and those actually attained, in our case, the gap between ideal and actual integration (Costa & Garmston, 2002). Cognitive dissonance deriving from such realisation may act as a catalyst for change (Opfer &

Pedder, 2011). Therefore, to strengthen the integration of research into language teaching, research insights into both the ideal and the actual integration of research into language teaching are necessary.

Research questions

Higher education EFL teachers in China face major social and economic barriers to incorporating research into teaching. On the one hand, the goal of most English language teaching is to maximise student language abilities, thereby ensuring their employability and helping stimulate China's economic development. On the other hand, higher education teachers' overall performance is assessed according to their research performance rather than how they have incorporated research into their actual teaching practices.

Against this background, we surveyed EFL teachers from Chinese universities to investigate two main research questions:

- To what extent do teachers' beliefs about the ideal integration of research in teaching relate to their perceptions of how research is actually integrated into their current teaching practices?
- To what extent do teachers' background characteristics relate to their perceptions of how research is actually integrated into their current teaching practices?

Method

Procedure and participants

We distributed a printed questionnaire to university teachers who taught English as a foreign language in a metropolitan city of Southwest China at four meetings. To maximise response rates, the teachers also received links to an online version of the questionnaire, though we gathered most of the data from the paper-and-pencil format. We took care explicitly to ensure voluntary participation and anonymity, and our research procedures were executed in accordance with the ethical rules as described in 'The Netherlands Code of Conduct for Academic Practice'.

We received 152 valid responses (39% response rate). Of the teachers who responded, 54 were from research-intensive universities, and 37 were from non-research-intensive universities; for the remaining 61 teachers, this information was not available. The majority held a master's degree (79%), could spend 5–20% of their work time doing research (63%) Teaching experience and research experience were more evenly distributed. Detailed information on the background characteristics of the respondents can be found in Table 1.

Questionnaire

We adapted our questionnaire from a previously validated questionnaire developed to survey student perceptions of the research elements of the university learning environment (van der Rijst, Visser-Wijnveen, Verloop, & van Driel, 2013; Visser-Wijnveen, van der Rijst, & van Driel,

Table 1. Overview of teacher background characteristics ($n = 152$).

Background characteristic		Number of respondents
Educational background	Bachelor's	24
	Master's	117
	Doctorate	7
Institutional background	Research intensive university	54
	Non-research intensive university	37
	Missing	61
Research experience (years)	Less than 3	41
	Between 3 and 10	75
	More than 10	31
Teaching experience (years)	Less than 5	33
	Between 5 and 10	33
	Between 10 and 15	40
	More than 15	43
Time spent doing research[a]	Less than 1%	14
(percentage of total work time)	5 20%	87
	At least 25%	38

[a]We asked teachers to fill in the percentage of work time devoted to research and then categorised their answers into these three categories.

2016). The core section of the teacher questionnaire encompassed seven scales addressing the ideal and actual integration of research in teaching. We operationalised 'integration of research in teaching' as the goals that teachers aim to reach by integrating different components of the general research process into teaching – for example, by having students read and criticise research literature or carry out small research projects.

We formulated the scale items as statements rated along a 5-point Likert scale ranging from 1 = 'almost never' to 5 = 'almost always'. We adapted five of the seven scales (18 items) from the student questionnaire that van der Rijst et al. (2013) and Visser-Wijnveen et al. (2016) developed. Because the original questionnaire was designed for students, we rephrased the items to apply to teachers. We then added two more scales: creative disposition and research skills (total of six items). Studies of student learning through research frequently mention the information these two scales provide as important (e.g. Healey et al., 2010; Hunter, Laursen, & Seymour, 2007). In this study, we operationalised creative disposition as an inclination to create new ideas, processes and products and critical disposition as a critical stance towards one's own work and the work of others. The final seven scales for the core of the teacher questionnaire were thus as follows: (1) developing creative disposition, (2) developing critical disposition, (3) fostering student research interests, (4) enhancing research skills, (5) prompting student reflection on research, (6) familiarising students with current research and (7) encouraging student participation in research. Participants rated the same items for their ideal and actual teaching situations. Table 2 provides an overview of the scales and their measurement reliabilities (for the complete items of this core section of the questionnaire, see Hu et al., 2015).

The questionnaire also included items regarding teachers' demographic and background characteristics: gender, age, institutional background, years of teaching experience, years of research experience and time spent doing research. In addition, it included an open-ended question asking teachers to give specific reasons for any discrepancies they perceived between their beliefs and perceptions regarding the integration of research in university teaching.

Table 2. Seven scales and reliability of their measurement for teacher beliefs and perceptions regarding the integration of research in teaching.

Scale	α (Beliefs)	α (Perceptions)	Sample item
			Ideally in my teaching, I would… Or In my **actual** teaching practice, I…
Creative disposition	.85	.85	Foster students' sense of innovation.
Critical disposition	.83	.83	Stimulate students to not be easily satisfied with an explanation.
Student research interests	.76	.77	Encourage students' interest in research.
Research skills	.81	.81	Increase students' ability to conduct research.
Reflection on research	.80	.85	Stimulate students to learn about research findings.
Current research in the domain	.84	.85	Make links to current research practices.
Students as participants	.78	.85	Ask students to make a contribution to research.

Data analysis

We applied nonparametric tests to analyse our data because most of the questionnaire scales did not meet the assumptions of normality and homogeneity of variance. To answer our first research question, determining the relationship between teachers' beliefs about the ideal integration of research in teaching and their perceptions of the actual integration of research in teaching, we applied Wilcoxon signed-rank tests. To answer the second research question, determining how teachers' background characteristics relate to their perceptions of the integration of research in their actual teaching, we applied Kruskal–Wallis tests. When we analysed institutional background, we excluded the 61 respondents who did not identify the type of university for which they worked.

Finally, to explore the explanations the teachers themselves provided for the discrepancies detected between the ideal and actual integration of research in teaching, we analysed their responses to the open-ended question. Only 30 teachers (20% of the respondents) replied to this open-ended item: 11 from research-intensive universities, 11 from non-research-intensive universities and 8 from unidentified universities. We identified the reasons, assigned them descriptive codes and then organised them into analytical categories. We ultimately identified three core categories of explanation for the data, pertaining to the institution, the students and the teachers themselves.

Results

Integration of research in teaching

When we analysed teachers' beliefs about the ideal integration of research in teaching in relation to their perceptions of how research is actually integrated into their current teaching practices, we detected major discrepancies. Table 3 displays the median scores and Wilcoxon signed-rank test results.

We observed significant gaps between the teachers' beliefs about ideal integration of research in teaching and their perceptions of their actual integration for all seven scales, with large effect sizes in all cases ($r > .50$). This finding shows that even if teachers

Table 3. Comparison of university teachers' beliefs about and perceptions of the integration of research in teaching (Wilcoxon signed-rank test).

| Scale | n | Median | | Z | r |
		Ideal/beliefs	Actual/perceptions		
Creative disposition	112	4.33	3.33	−8.24***	.55
Critical disposition	110	4.13	3.00	−8.79***	.59
Student research interest	112	4.00	3.00	−8.26***	.55
Research skills	112	4.00	2.67	−8.44***	.56
Current research in the domain	111	4.00	2.67	−8.10***	.54
Reflection on research	112	3.75	2.50	−8.85***	.59
Students as participants	109	3.75	2.50	−8.46***	.57

***$p < .001$.

strongly believe that research should play an important role in teaching, they are not necessarily able to integrate research into their own teaching practices.

Inspection of the median scale scores showed that the teachers ranked the seven aspects of the integration of research in teaching differently for both ideal and actual teaching situations: The development of students' creative dispositions ranked highest, and encouragement of student participation in research and student reflection on research ranked lowest. This pattern of findings suggests that teachers consider fostering students' creativity as most important, but encouraging student participation in research and encouraging reflection on research as less important.

Relationship between teacher background characteristics and teacher perceptions

We further explored how several background characteristics of the teachers relate to their perceptions of actually integrating research into their teaching. Using Kruskal–Wallis tests, we observed three patterns of associations (see Table 4).

First, teachers' institutional background appeared to matter more than their other background characteristics. Teachers from research-intensive universities had significantly higher scores about their actual integration of research into their teaching practices teachers from non-research-intensive universities. Second, the amount of research experience and time spent doing research mattered most for teachers' perceptions of three aspects of this integration: developing research skills, encouraging student reflection on research and encouraging student participation in research. Teachers with

Table 4. Relationships between background characteristics of teachers and their perceptions of the integration of research into actual teaching (Kruskal–Wallis tests)

Scale	Institutional background[a]	Research experience [b]	Time spent doing research [c]
Creative disposition	+	ns	ns
Critical disposition	+	ns	ns
Student research interest	+	ns	ns
Research skills	+	+	++
Current research in the domain	ns	ns	ns
Reflection on research	ns	++	++
Students as participants	+	+	+

Note. [a]Mean ranks: non–research-intensive universities and research-intensive universities; [b]Mean ranks: less than 3 years, 3–10 years and more than 10 years; [c]Mean ranks: 0%, 5–20% and 25%; ns = $p > .05$. + = $p < .05$. ++ = $p < .01$.

more than 10 years of research experience scored significantly higher on these three scales than those with 10 or fewer years of experience. Teachers who spent 25% of their work time on research were similarly more positive about these three aspects than those who spent 5–20% of their work time on research and those who were currently not involved in research.

Teacher explanations for the gap

Participants mentioned three general sets of reasons for these discrepancies: structural aspects of the institutions, students' motivation and abilities and teachers' research training. Most often, they mentioned structural aspects of the institution as a source of difficulty. One aspect was lack of time – in other words, being too busy with teaching tasks to even think about ways to incorporate research into teaching. This finding corresponded with the correlation analysis that shows that teachers who spent 25% of their work time on research felt more positive about integrating research into their teaching. Another aspect was a rather fixed curriculum that allowed little or no room for teachers to incorporate elements of research into their teaching. A third institutional aspect involved difficulties reconciling the integration of research into teaching with the institution's aim of improving students' language proficiency. A few respondents also mentioned large class sizes and a lack of support for student research.

Eleven teachers mentioned a lack of student motivation to be involved in research activities, indicating they were mostly interested in passing the language exams and mastering the practical skills of fluent speaking, listening, reading and writing. Five of the teachers mentioned weak language skills, which appeared to be particularly problematic at non-research-intensive universities.

The third set of reasons involved the teachers themselves. They mentioned not being motivated to incorporate research into their teaching. Some teachers reported that college English is not considered as important as other core courses in the bachelors' programme. Three teachers also mentioned that they seldom had the time or opportunities for research training, which implies that they lack sufficient research experience and knowledge to include research in their teaching.

Conclusions and discussion

We detected a significant gap between EFL teachers' beliefs about the ideal and their perceptions of the actual integration of research in teaching. Teachers who perceived greater capacity to integrate research into their actual teaching practice tend to come from research-intensive universities, have more research experience and spend more time doing research. Furthermore, teachers mentioned some factors that contribute to this gap: institutional factors (lack of time, heavy teaching tasks and fixed curricula), lack of student motivation and insufficient English proficiency, lack of teacher motivation and low status of language teaching within the institution.

Highly valued but seldom done: integration of research into language teaching

The finding that the teachers in our study highly valued incorporating research into English language teaching is surprising considering that, despite a strong movement to involve students in research in general (e.g. Barnett, 2000; Brew, 2010; Healey et al., 2010; Pan et al., 2014), little is known about how it could work for language teaching. The few relevant studies available also suggest several constraints and a large gap between what teachers believe about how research should be integrated and how they actually integrate research into language teaching practice (Borg, 2007; Hu et al., 2015; Nassaji, 2012). Moreover, the language departments in previous studies were at more teaching-intensive institutions (Bai et al., 2012), and teaching EFL to students in China has been overwhelmingly concentrated on the development of language proficiency, which many assume cannot be achieved by incorporating research into teaching practice. The fact that the teachers still value the incorporation of research into teaching is encouraging.

This ideal–actual gap can be explained by a perceived mismatch between what research-based teaching can achieve and institutional aims of attaining maximum language proficiency. The teachers in our study believe that integrating research into teaching can be used to promote students' creative disposition, but current approaches to language education in China require them to focus on promoting English language proficiency. They also believe that students tend to enter such courses with the main aim of improving their language abilities. These social-cultural and economic conditions can create tensions for language teachers who want to meet their students' broader needs. The teachers in our study mention a fixed curriculum, lack of student motivation and low level of student language proficiency as reasons for the discrepancies between what they would like to do and what they have managed to do to integrate research into teaching. It is possible that this perceived mismatch is discipline-specific, but due to a lack of evidence, this notion remains open for discussion.

How teacher performance is assessed may also indirectly contribute to the ideal–actual gap we observed. Integrating research into teaching can be challenging because of the disparate organisation and management of the research and teaching domains (Brew, 2010). University language teachers clearly must have a teaching focus in their work, but their administrations assess their performance, and particularly promotion possibilities, by considering their research performance (see also Bai et al., 2012; Xu, 2014).

The intensity of research at the teacher's institution was also relevant to the ideal–actual gap. Teachers from research-intensive universities perceived the integration of research into their own teaching more positively than teachers from non-research-intensive universities. They had been engaged in research for a much longer period of time, had worked in an established research culture and typically received more research support from their university (Hu et al., 2015).

The reasons for the gap can also stem from individual teachers' research training and experience. We found more research experience and more time spent on research during work to be associated with more positive perceptions of the teachers' integration of research into their teaching. The qualitative responses further confirmed this finding, in that the teachers explicitly mentioned a lack of research experience and lack of time as obstacles. This observation is in line with findings pertaining to teachers from some

Western higher education institutions, namely, that research experience and time for research affect teachers' perceptions of competence to incorporate research into their teaching (Griffioen, de Jong, & Jak, 2013; Hu et al., 2014). However, our findings are preliminary, and further studies are needed to provide in-depth understanding of the causes of the gap. Readers are encouraged to interpret the ideal-actual gap in relation to other influencing factors which we were not able to cover in this study. Generalisability of our findings may also be limited due to the relatively small sample regarding teachers' explanations for the gap. Findings reported in this study were based on the self-reported data, future research need to use other types of data, for example, classroom observation, to see how teachers actually integrate research into teaching practice. Similar research on language teachers in other contexts would be relevant for the development of a comparable evidence base regarding the integration of research into language teaching.

In closing, our findings show that language teachers highly value the idea of integrating research into teaching but perceive a major gap when actually integrating research into their own teaching. We identified several constraints that contribute to this gap. In addition to constraints reported in literature (e.g. Brew, 2010; Griffioen et al., 2013; Hu et al., 2015), such as teachers' institutional background, research experience and time allowed for doing research, we found that language teachers in the Chinese context faced barriers such as fixed curricula and difficulties reconciling integration of research into teaching with the institutional aim of improving students' language proficiency.

Using relevant research in teaching for EFL may look different than in the natural sciences or any other discipline. It is possible, for example, that the current language education curriculum could be more flexible, giving teachers room to decide what and how to teach. This idea could also apply to other disciplines that face similar mismatches between their current discipline-specific goals and the goals of research integration into teaching. Perhaps different types of courses could be distinguished in the future, such that research could be integrated to a greater extent depending on educational aims, content, teaching level and level of student proficiency, among other things.

Disclosure statement

Funding

Notes on contributors

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