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# Application of research-informed teaching in the taughtpostgraduate education of maritime law

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## ABSTRACT

Despite numerous studies of the research-teaching nexus, applying research-informed teaching (RiT) to taught-postgraduate education has been largely overlooked. This knowledge gap is particularly significant in the maritime law discipline given the fast-growing business of international shipping and logistics. This paper aims to examine the impact of applying RiT in the taught-postgraduate education of maritime law. The research employed a multiple-method case study with the maritime law discipline at a university in Hong Kong where research-teaching linkages were introduced. The results indicate that the application of RiT had a positive impact on students' learning. Through the learning process, students' perceptions and attitudes were revealed to have changed towards favouring RiT, and were found not sensitive to their programmes and backgrounds. The findings assert that RiT should be promoted for taught-postgraduate education of maritime law and integrated into the learning programme systematically.

#### **KEYWORDS**

Research-teaching nexus; research-informed teaching; maritime law; taughtpostgraduate; non-law students

# Introduction

Non-law students tend to find law subjects boring and difficult, and are often not sure of what or how to study (Allen, 2005). Maritime law is a very distinct body of law that deals with issues related to shipping and maritime commerce. Since it is a very specialised area of law, the difficulties involved in both learning and teaching maritime law are observed by a law professor (Galligan, 2011, p. 584):

Teaching maritime law is not merely teaching admiralty, but it is teaching many different types of law – it is teaching a legal microcosm that involves and integrates many bodies of law into one course.

The literature on the teaching of law (e.g. Allen, 2005; Ewang, 2008) suggests a range of different approaches to enhancing the students' learning, and so far no ideal approach can be found, especially for teaching law subjects to non-law students. Despite this lack of literature, it should not be assumed that law students in a law-degree programme and non-law students studying law in a business-related programme have an identical approach to learning (Richardson, 2009).

One particular university in Hong Kong provides a very specialised taught-postgraduate programme for the shipping and logistics industry in which maritime law subjects are offered. This programme is provided to non-law students, who are required to learn 'Shipping Law' (compulsory subject which covers more general knowledge about logistics and shipping) and 'Law and Practice in Marine Insurance' (core subject which is more focused on topics relevant to shipping and maritime practice). The learning

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outcomes in these two modules are similar, and include: (1) understanding and applying carriage of goods law (for Module 'Shipping Law') and insurance law (for Module 'Law and Practice in Marine Insurance'); (2) analysing legal cases and interpreting legislations and legal documents; and (3) developing the ability to solve real legal issues and conducting legal research. The conventional teaching method that places the students simply in the position of passive recipients of knowledge may be able to help achieve the first two outcomes, but would find it difficult, if not impossible, to help achieve the third. This situation therefore called for the use of innovative methods of enhancing those students' learning in maritime law. One such innovative method is research-informed teaching (RiT) (e.g. Healey, 2005; Lindsay, Breen, & Jenkins, 2002).

There have been a wealth of studies (e.g. Elton, 2001; Hattie & Marsh, 1996; Healey, Jordan, Pell, & Short, 2010; Jenkins, 2004) on the research-teaching nexus. It is mostly agreed that RiT forms a bridge between teaching and discipline-based research and that teaching-research link is central to higher education (Jenkins, Healey, & Zetter, 2007). Pan, Cotton, and Murray (2014), based on the frameworks developed by Griffiths (2004) and Healey (2005), elaborated that the RiT approach can take any of the following research-teaching nexus:

- Research-led: teaching that is based on the research findings of others;
- · Research-oriented: teaching students about research methods and how to do research;
- Research-based: students learning through research that includes inquiry-based or problem-based learning;
- Research-tutored: active discussion of research findings and methods with students;
- Research-informed: teaching students using pedagogic research.

Dexter and Seden (2012) summarised 10 key values of advocating a strong research-teaching nexus. Although some such values are still supported with insufficient empirical evidence, research (e.g. Gresty, Pan, Heffernan, & Edwards-Jones, 2013; Healey, 2005) shows that RiT recognises the importance of the reciprocal relationship between research and teaching in enhancing student learning experience.

To integrate research into teaching has been experimented in a number of law schools, especially in the UK (Doherty & Dillon, 2012; Jenkins et al., 2007); however, very little research has focused on empirical study of law education on non-law taught-postgraduate students. 'Research' in this study denotes the integration of research and knowledge about various aspects of academic study into the teaching of that area for achieving intended learning outcomes. Accordingly, this paper aims to examine what impact applying RiT has on the taught-postgraduate education of maritime law at one case study university. This university's Strategic Plan 2012/13-2017/18 promotes students' active participation in research during their learning, which provides a relevant and effective context for the present study.

# **Research methodology**

This research was guided by the case study principle, which helped to obtain an in-depth and analytical account of the unit of analysis (Yin, 2009). It used the maritime law discipline at a selected university as a case of proxy for those with similar characteristics. The research employed multiple methods including: a desk study of the research-teaching nexus in the case discipline, supported by a literature review; and two questionnaire surveys, conducted at the start and end of one semester with the gap of period being 14 weeks. Between the two surveys, two research workshops were organised; these workshops were designed to have RiT activities built in. These RiT-embedded workshops were expected to inform and influence the students' understanding and attitudes towards RiT, which were measured through the questionnaire surveys. This research design enabled the achievement of a discipline-specific and comprehensive insight into the issue of concern.

The two questionnaires contained: (1) a set of five-point Likert scale type of questions that aimed to measure student understanding and perceptions of the research-teaching relationship; and (2) a number of open-ended questions that aimed to explore the understanding and perceptions. The 56 students registered with the two modules in three classes were invited to participate in the workshops

and surveys. After a detailed illustration of the concept of RiT and research-teaching nexus, the questionnaire survey forms were distributed in class, and the students were given about 15 min to complete the questionnaire. The results of the two surveys allowed effective comparison before and after RiT was applied.

The two workshops were: a legal case discussion for which a group of students were required to select a reported court case and discuss it with all other students; and a research topic presentation for which the group of students studied a particular maritime law topic and give it a detailed PowerPoint presentation. For the latter, the varied research topics were chosen by students – those, for example, 'identification of the carrier under the sea carriage contract', or 'bill of lading issued under the charter-party', are the issues they not only would like to conduct more self-learning and research, but also want to gain differing views from their peer students. When designing the workshops, three basic elements were taken into account: (1) the research exercise should be relevant to the course; (2) students involved should have ample time to do research; and (3) students should be given appropriate instructions on how to find resources and should be taught basic research methods (Healey et al., 2012; Zamorski, 2002). Meanwhile, the development of the workshops was based upon the idea that they in the form of group projects can be 'an effective means of research training and of encouraging a discovery approach to learning' (Marshall, 2009, p. 151). The two research workshops were conducted in three classes, between the initial and final questionnaire surveys.

The quantitative data included the features of the survey participants, measurements (using Likert scales) of students' experience with the research-teaching activities and their perceptions and attitudes. These data were analysed using the descriptive and correlational techniques provided in IBM SPSS Software. The qualitative data included provided examples of students' experience with the research-teaching activities, reasons for their evaluation, and perceived/achieved benefits and per-ceived/encountered disadvantages of applying RiT. These data were handled following the thematic analysis approach. The results of the surveys and workshops were cross-discussed along with the secondary data from subject syllabus and university documents.

# **Results and analysis**

# The first survey

In total, 45 students participated in this survey, yielding an 80% response rate. Out of these 45 students, 73% (33) were on the full-time model and 27% (12) were part-time, with 84% (38) claiming no previous research experience (Table 1). The claimed previous research experience varied but were centred on small-scaled projects, undergraduate final-year dissertations, and group exercises and presentations.

# Students' previous experience with RiT

The students' previous experience with the research-teaching linkages was measured using a fivepoint Likert scale (defined in Table 2). There was generally a low level of utilisation of all five researchteaching nexuses, experienced 'once or twice' only, albeit considerable standard deviations (see Table 2). Comparatively, the students' experience with RiT was mostly with research-tutored learning (2.4), followed by research-based (2.24), research-oriented (2.13), research-led (2.09), and finally researchinformed (1.91).

Also, all responses regarding the five research-teaching nexuses were fairly strongly positively correlated with each other (Spearman's *rho* ranged from 0.6 to 0.8, p < 0.01; Table 3). These results suggest

Programme	Research experience (yes)	Research experience (no)	Total
Full-time	6	27	33 (73%)
Part-time	1	11	12 (27%)
Total	7 (16%)	38 (84%)	45

 Table 1. Details of participants in the first questionnaire survey.

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R-T linkage	Research-led learning	Research-oriented learning	Research-based learning	Research- tutored learning	Research- informed learning
Mean	2.09	2.13	2.24	2.40	1.91
SD	1.184	1.079	1.190	1.232	1.203
Minimum	1	1	1	1	1
Maximum	5	5	5	5	5
Median	2	2	2	2	1

Table 2. Students' previous experience with research-teaching linkages.

Note: 1 for 'never heard', 2 for 'once or twice', 3 for 'some courses', 4 for 'many courses', 5 for 'most courses'.

Table 3. Correlation between students' experience with research-teaching linkages.

Factor	Research- led	Research- oriented	Research- based	Research- tutored	Research- informed	Programme (full- or part-time)	Research experience (yes or no)
Research-led	1.000						
Research-oriented	.609**	1.000					
Research-based	.782**	.654**	1.000				
Research-tutored	.623**	.759**	.738**	1.000			
Research-informed	.559**	.574**	.681**	.680**	1.000		
Programme	410***	410**	491**	503**	431**	1.000	
Research experience	152	239	339*	259	333*	.120	1.000

\*\*Significant at the 0.01 level (two-tailed).

\*Significant at the 0.05 level (two-tailed).

that the students' experiences with the research-teaching nexus were statistically consistently low. Furthermore, the programme of the students (full- or part-time) was moderately negatively correlated with the responses (Spearman's *rho* ranged from -0.4 to -0.5, p < 0.01), which suggests that part-time students had a lower level of frequency of applying the research-teaching nexuses in their previous learning.

The students were further asked to provide examples of RiT in their learning to the point of the first survey. On 'research-led', a few students identified that their teachers used the reported legal cases to help explain issues. On 'research-oriented', several examples were provided: (1) introducing how to make good use of a database; (2) advising on how to do group projects; and (3) carrying out a case study. On 'research-based', five students identified assignments that included the research component; two students believed that Q&A in class was also a good example. On 'research-tutored', seven students suggested class discussion and tutorials. On 'research-informed', the provided examples included class presentations and lecturers' explaining case judgements. Some of these provided examples actually did not fall in their reported nexus, which suggests a still lack of understanding by the students of the research-teaching activities after being given a detailed explanation of RiT and those teaching-research links.

# Students' evaluation of RiT applications and future use

In total, 45 students evaluated the effectiveness of linking research and teaching in their programme. Over 44% (20) considered the research-teaching links in their learning to be 'effective'; 11% (5) considered 'very effective'; 40% (18) 'not sure'; 4% (2) considered 'not very effective'; and none regarded the links as 'very ineffective'. Over half of those students (23) provided specific reasons to their evaluation. Those students (56%; 25) who considered the research-teaching links to be 'effective' or 'very effective' believed that: (1) the links helped them to find methods of solving the problems, better understand legal theory, and increased their knowledge of maritime law; (2) they were taught research skills and how to carry out research; and (3) they could become better informed of academic development in the area. In comparison, those students who were 'not sure' about the effectiveness of linking research and teaching commented that: (1) the programme they were attending was a taught model, and research should thus not be an essential part; (2) they did not have much experience in this kind of learning; and (3) they could not distinguish between the different kinds of research, as they did not have much experience with research. Over half (58%; 25) of the 45 students expressed their willingness to experience more applications of research-teaching linkages, but 18 (40%) were 'not sure', and one declined any more research-teaching linkage in their future learning.

The students' evaluation of the research-teaching linkages in their programme was observed to be weakly positively correlated with their research experience (Spearman's *rho* of 0.333, p < 0.05; Table 4). These results suggest that students with previous research experience evaluated the research-teaching linkages more effective. Also, the students' evaluation of future applications of research-teaching linkages was observed to be weakly positively correlated with their programmes (Spearman's *rho* of 0.314, p < 0.05). These results suggest that full-time students would like to experience more applications of research-teaching linkages in the future than part-time students would do. The students' evaluation of the current research-teaching linkages was observed consistent with the students' evaluation of future applications (Spearman's *rho* of 0.329, p < 0.05), suggesting that the students considering RiT more effective intended to embrace more such linkages in their future learning.

The students were further asked to identify the benefits from and disadvantages of linking research and teaching. Nearly, two-thirds (62%; 28) of the 45 responding students identified benefits, and about half (53%; 24) pinpointed disadvantages. The identified benefits included: (1) linking research and teaching could strengthen students interest in the subject and encourage them to take the initiative to learn; (2) students could gain a better understanding of both theory and legal cases; (3) students could gain a deeper understanding of particular aspects of the subject; and (4) students could follow the latest trends in academic development. In comparison, the pinpointed disadvantages included: (1) research activities were time-consuming and students felt overloaded, particularly for part-time students who might not have enough time for research; (2) research activities made them feel bored; and (3) it was hard for non-law students to understand and carry out research on legal issues.

## Research workshops

The two research workshops were conducted between the first and final questionnaire surveys. The workshops were supervised by an academic specialised in maritime law who was also the leading researcher of this study.

The first workshop aimed to analyse and present a legal case; each group had one week to study the case and was required to lead the discussion in class. The *second* workshop aimed to encourage students to explore a particular topic on maritime law to gain a deeper and broader understanding, which was a more challenging step following the first workshop. The students were allowed one month for preparation. The students were given 20–30 min for the group presentation in both workshops. The tasks specified for both workshops required significant library research and analysis of information obtained from multiple sources. Supporting the workshops, the leading academic also taught the students on the relevant research approaches and methods, and how to undertake the search and inquiry such as locating primary and secondary sources of information.

Factor	Programme (full- or part-time)	Research experience (yes or no)	Effectiveness (1–5)	Future use (yes, no and not sure)				
Programme	1.000							
Research experience	.120	1.000						
Effectiveness	.261	.333*	1.000					
Future use	.314*	.112	.329*	1.000				

Table 4. Correlation between students' evaluation of research-teaching linkages.

<sup>\*</sup>Significant at the 0.05 level (two-tailed).

# The final survey

At the end of the same semester, 53 students in total participated in the final questionnaire survey, yielding a 95% response rate, in which 74% (39) were on the full-time programme and 26% (14) were part-time, with 87% (46) claiming no research experience prior to their learning of the two modules (Table 5). This profile was consistent with that in the first survey.

# Students' attitudes to RiT activities

The students' attitudes to the RiT activities were elicited through the use of a five-point Likert scale against four statements (see Table 6). The students' attitudes to all five types of research-teaching linkages were measured by the median of 4 for 'agree' as well as by the means all around 4 for 'agree'. These results indicate that the students considered that the application of the research-teaching activities helped them explore the course in greater depth and width, increase their interest in the course, and improve their learning efficiency. The mean values of the students' attitudes to the research-based (ranging 3.9–4.2), research-oriented (ranging 3.9–4.1) and research-led (ranging 3.9–4.0) activities were slightly higher than those to the research-tutored (ranging 3.7–3.9) and research-informed (ranging 3.7–3.8) activities (Table 6). These results suggest that the students benefited more from 'research-led activities' and 'research-based activities', for example, the effectiveness of students' discussions.

Table 5. Details of participants in the final questionnaire survey.

Programme	Research experience (yes)	Research experience (no)	Total
Full-time	7	32	39
Part-time	0	14	14
Total	7	46	53

## Table 6. Students' attitudes to research-teaching linking activities.

Statements	Research-led		Research- oriented		Researc	Research-based		Research- tutored		Research- informed	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
They have helped me explore the course/topic in depth (with a deeper understanding)	3.98	.971	4.09	.741	4.00	.741	3.81	.761	3.75	.796	
They have helped me explore the course/topic in width (with a broader understanding)	4.02	.796	4.04	.706	4.15	.724	3.74	.763	3.73	.777	
They have increased my interest and motivation in the course/topic	3.92	.829	3.89	.751	3.92	.763	3.72	.769	3.78	.808	
They have helped me improve the efficiency of my learning	4.00	.784	3.92	.675	3.90	.721	3.85	.718	3.76	.681	

Note: Means were calculated based on the five-point Likert scale, from 1 for 'strongly disagree', 2 for 'disagree', 3 for 'neutral', 4 for 'agree', to 5 for 'strongly agree'.

The measurements of the students' attitudes to the statements about research-teaching linking activities were also analysed in relation to the programme (full-time or part-time) and research background (yes or no) of the students. No statistically significant (p < 0.05) correlation coefficient Spearman's *rho* value was observed, which suggests that the measured attitudes in the final survey were not sensitive to the programmes or students' research backgrounds.

# Students' attitudes to RiT as a whole

The students' attitudes to the RiT approach as a whole were measured by the median value of 4 for 'agree', as well as by the mean value which were all close to 4 for 'agree'. This result indicates that the students considered the research-informed learning and teaching as a whole as enjoyable, preferable to the conventional way of learning, and in favour of solving real-life legal issues (Table 7).

The measurements of the students' attitudes to the statements about the RiT approach as a whole were also analysed in relation to the programme (full-time or part-time) and research backgrounds (yes or no) of the students. Through the one-way ANOVA analysis, no statistically significant (p < 0.05) *F* value was observed, which suggests that the measured attitudes in the final survey were not sensitive to the programmes or research backgrounds of the students. These results are in disagreement with the findings from the first survey, which can be explained by the research-informed process of action learning in the course that was used for study. A further interpretation is that the students had obtained knowledge of the research-teaching linkages and the relevant benefits through their engagement with the RiT activities.

# Benefits of experiencing RiT in maritime law education

Twelve (23%) of the 53 responding students provided their perceived benefits from applying RiT. The provided benefits included: (1) what students were taught in class was reinforced by carrying out research themselves; (2) students were provided with the chance to learn more and gain new knowledge; (3) students' learning efficiency was improved; and (4) students learnt the methods that are helpful in resolving legal issues.

# Difficulties/disadvantages with RiT and suggestions for enhancement

Ten (19%) of the 53 responding students provided their perceived difficulties with or 'disadvantages' of applying RiT. The difficulties and 'disadvantages' included: (1) a lack of background knowledge; (2) too much research material to be digested; and (3) time efficiency and management. These difficulties and 'disadvantages' appeared to be more applicable to those part-time students with little previous research experience.

Six of the 53 responding students provide suggestion for enhancing student learning experience by integrating research into teaching. Those 'suggestions' were actually comments. One student considered that the RiT activities might be too demanding for students. However, the other five respondents believed that the RiT approach is a good complement to their conventional lecture-based learning and should be integrated into their learning programme.

Statements	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)	Mean	SD
l enjoy this kind of learning method	1.9	0	15.1	67.9	13.2	3.92	.682
I prefer to learn in this way rather than the conventional way	1.9	1.9	15.1	64.2	15.1	3.90	.748
They help me apply knowledge to solve real-life legal issues	1.9	0	18.9	58.5	18.9	3.94	.752

Table 7. Students' attitudes to research-informed learning and teaching as a whole.

Note: Means were calculated based on the scale defined in Table 6.

# Discussion

The first important finding of this paper is that the application of RiT had a positive impact on students' learning, which was reflected in the process of learning. When RiT was introduced, the students had conservative attitudes towards the utilisation of the RiT approach, with 40% of the participating students indicating that they were unsure as to whether or not they would benefit from the application of research-teaching linkages. However, at the later stage, the students highly valued the experience of conducting the research-teaching activities. The RiT approach was considered by the students to have created an opportunity for them to learn in a more meaningful and constructive way, as commented by the students, for example,

We can have a deeper understanding of the [legal] cases rather than just [being] taught by others ...

... [It can] strengthen what I have learnt in class ...

This finding is significant, as taught-postgraduate students seem to be a neglected group in the debate on the effects of implementing RiT in students' learning (Lindsay et al., 2002). In the taught-postgraduate programmes, students are often positioned as the audience, and teaching is closely associated with traditional lecture-based pedagogies; as a result, students either lack interest in undertaking their own research, or are given limited opportunities to participate in research projects. This finding encourages us to rethink the role of research in taught-postgraduate education.

Another useful finding is that the learning outcomes, especially the third learning outcome, for the two maritime law modules have been effectively achieved. The students recognised that, with the implementation of RiT, they better understood the course, and that the research-teaching activities helped them to explore the course in greater depth and width. The students actually worked with research in ways that have the power to support their 'intellectual development' (Malcolm, 2014). They were not only taught how to carry out legal research by employing some basic research skills such as locating research resources, but their interest in learning these two modules was also strengthened. In addition, the results show that through having an active involvement in research, the students learned to work together better as a team and to include artistry in their work. Nevertheless, at the early stages of applying the RiT approach, those students who were full-time and/or claimed prior research experience evaluated the research-teaching linkages more effective than those part-time with no prior research experience. Given such varied knowledge backgrounds and programmes, the question arises as to how to better design research activities in a way to accommodate the varying interests of students, and thus increase the positive impacts on students' learning for achieving the learning outcomes. This is important, as considered by Healey (2005) that poorly designed research exercises would provide little benefit to students.

A further significant finding is that the students' attitudes to RiT after their use of the approach were not sensitive to their different study programmes or research backgrounds. At the early stages of adopting RiT, the full-time students aspired to apply the research-teaching activities to a greater extent than the part-time students did. This difference was believed to be attributed to the perception of most part-time students that research was simply a time-consuming process and that the programme they participated in should focus on teaching. However, at the later stages, the measured students' attitudes to RiT were not sensitive to either the programme or the research background of the students. These students' changing attitudes towards favoured RiT were considered to be due to that the students had gained knowledge of the research-teaching linkages and obtained relevant benefits through their engagement with the RiT activities along the process of learning. Previous research has rarely explored the different impacts of implementing the RiT approach on full-time and part-time students in a comparative manner. The finding on students' changing attitudes towards RiT approach on full-time and part-time students in previous research (e.g. Pan et al., 2014) that the application of RiT should be integrated into the entire learning programme systematically in order to address the progressive nature of learning.

# Conclusions

This paper has examined the impact of applying RiT in the taught-postgraduate education of maritime law. The paper concludes that the application of RiT can have a positive impact on students' learning. It also concludes that the application of RiT should be integrated into the entire learning programme systematically to address the progressive nature of learning. This conclusion is supported by the measured students' attitudes that changed towards in favour of RiT along with the process of learning. Such change was found not to be sensitive to students' programmes and backgrounds. The findings provide useful evidence and enable meaningful reflections on the maritime law education currently offered to non-law students at taught-postgraduate level. The findings also provide fertile grounds for future research to address the issue as to how to better design research activities for non-law students learning law subjects. However, the limitation of this study should be considered relating the studied specific target group, i.e. a limited sample size of participants in the taught-postgraduate education of maritime law in Hong Kong.

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# **Disclosure statement**

No potential conflict of interest was reported by the authors.

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# References

- Allen, V. (December, 2005). A reflection on delivering legal education to business students. Paper presented at the annual conference of the Society for Research into Higher Education, University of Edinburgh.
- Dexter, B., & Seden, R. (2012). It's really making a difference: How small-scale research projects can enhance teaching and learning. *Innovations in Education and Teaching International, 49*, 83–93.
- Doherty, M., & Dillon, M. (Eds.). (2012). *IMPACT: Linking teaching and research*. Retrieved from Lancashire Law School, at http://www.uclan.ac.uk/research/explore/groups/assets/impact\_pedagogic\_uclan.pdf

Elton, L. (2001). Research and teaching: What are the real relationships? *Teaching in Higher Education*, *6*, 43–56.

Ewang, F. (2008). Teaching law to accounting and business students: A cumulative dual model. *Journal of University Teaching & Learning Practice*, *5*, 15–38.

Galligan Jr., T. C. (2011). Teaching admiralty. Saint Louis University Law Journal, 55, 579–587.

Gresty, K., Pan, W., Heffernan, T., & Edwards-Jones, A. (2013). Research-informed teaching from a risk perspective. *Teaching in Higher Education*, 18, 570–585.

- Griffiths, R. (2004). Knowledge production and the research-teaching nexus: The case of the built environment discipline. *Studies in Higher Education, 29*, 709–726.
- Hattie, J., & Marsh, H. W. (1996). The relationship between research and teaching: A meta-analysis. *Review of Educational Research*, *66*, 507–542.
- Healey, M. (2005). Linking research and teaching to benefit student learning. *Journal of Geography in Higher Education*, 29, 183–201.

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- Healey, M., Jordan, F., Pell, B., & Short, C. (2010). The research-teaching nexus: A case study of students' awareness, experience and perceptions of research. *Innovations in Education and Teaching International*, 47, 235–246.
- Healey, M., Lannin, L., Derounian, J., Stibbe, A., Bray, S., Deane, J., ... Simmons, C. (2012). *Rethinking final year projects and dissertation: Final report*. New York, NY: HE Academy.
- Jenkins, A. (2004). A guide to the research evidence on teaching-research relations. New York, NY: HEA.
- Jenkins, A., Healey, M., & Zetter, R. (2007). Linking teaching and research in disciplines and departments. New York, NY: HEA.
- Lindsay, R., Breen, R., & Jenkins, A. (2002). Academic research and teaching quality: The views of undergraduate and postgraduate students. *Studies in Higher Education*, *27*, 309–327.
- Malcolm, M. (2014). A critical evaluation of recent progress in understanding the role of the research-teaching link in higher education. *Higher Education*, 67, 289–301.
- Marshall, S. (2009). Supervising projects and dissertations. In H. Fry, S. Ketteridge, & S. Marshall (Eds.), Handbook for teaching and learning in higher education (pp. 150–165). Abingdon: Routledge.
- Pan, W., Cotton, D., & Murray, P. (2014). Linking research and teaching: Context, conflict and complementarity. Innovations in Education and Teaching International, 51, 3–14.
- Richardson, K. (2009). Teaching law to non-law students: The use of problem solving models in legal teaching. Studies in Learning, Evaluation Innovation and Development, 6, 29–41.
- Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Thousand Oaks, CA: Sage.
- Zamorski, B. (2002). Research-led teaching and learning in higher education: A case. Teaching in Higher Education, 7, 411–427.