การรับรู้เกี่ยวกับความเชื่อมโยงการสอนและการทำวิจัย: กรณีศึกษานิสิตเอกภาษาอังกฤษ มหาวิทยาลัยนเรศวร

Perceptions of the Teaching-research Nexus: A Case Study of English Major Students at Naresuan University

Received : 2022-08-26 Revised : 2022-11-29 Accepted : 2023-05-09

ผู้วิจัย อภิชัย รุ่งเรือง[1]
ยุทธศักดิ์ ชื่นใจชน[2]
พยุง ซีดาร์[3]
ยางฮอง มู[4]

Apichai Rungruang[1]
rapichai2002@yahoo.com
Yutthasak Chuenchaichon[2]
Payung Cedar[3]
Yanhong Mu[4]

บทคัดย่อ

การศึกษานี้มุ่งศึกษาการรับรู้ความสัมพันธ์ของการวิจัยและการสอนในชั้นเรียนจากนิสิตเอกภาษาอังกฤษ โดยใช้กรอบทฤษฎีของ Healey (2005) การเก็บข้อมูลใช้แบบทดสอบ Student Perception of Research Integration Questionnaire (SPRIQ) เพื่อให้ได้ข้อมูลเชิงปริมาณและการสัมภาษณ์ เพื่อให้ได้ข้อมูลเชิงคุณภาพ โดยเก็บข้อมูลจากนิสิตเอกภาษาอังกฤษชั้นปีที่สี่จำนวน 32 คน ผลการศึกษาพบว่า research integration, quality, beliefs ล้วนมีค่าสหสัมพันธ์ต่อกันในระดับดีถึงดีมาก ($r = 0.6\text{-}0.7$; $p<0.05$) จากการสัมภาษณ์ นิสิตให้ความสนใจต่อการทำงานวิจัยที่ได้รับมอบหมาย (research integration: current research) แต่ขาดความมั่นใจในการนำผลงานไปตีพิมพ์ในวารสารวิชาการ (research integration: participation) นิสิตมีความพึงพอใจต่อผู้สอนในรายวิชาแต่ยังมีความต้องการให้ผู้สอนได้มีการใช้ตัวอย่างบทความวิจัยประกอบการสอนมากกว่านี้ (quality) นิสิตเชื่อว่าการได้มีโอกาสทำงานวิจัยอย่างแท้จริงช่วยให้เข้าใจการทำงานวิจัยได้ดีขึ้นและจะได้นำไปใช้ในการพัฒนาทางวิชาชีพในอนาคต (beliefs)

คำสำคัญ: นิสิตเอกภาษาอังกฤษ การทำวิจัย การรับรู้

[1] Assistant Professor Dr., Department of English, Faculty of Humanities, Naresuan University
[1] ผู้ช่วยศาสตาจารย์ ดร. ภาควิชาภาษาอังกฤษ มหาวิทยาลัยนเรศวร
[2] Assistant Professor Dr., Department of English, Faculty of Humanities, Naresuan University
[2] ผู้ช่วยศาสตาจารย์ ดร. ภาควิชาภาษาอังกฤษ มหาวิทยาลัยนเรศวร
[3] Associate Professor Dr., Department of English, Faculty of Humanities, Naresuan University
[3] รองศาสตาจารย์ ดร. ภาควิชาภาษาอังกฤษ มหาวิทยาลัยนเรศวร
[4] Instructor, Naresuan University International College (NUIC), Naresuan University
[4] อาจารย์ วิทยาลัยนานาชาติ มหาวิทยาลัยนเรศวร

Abstract

This study aimed to investigate the perceptions of the interrelationship between research study and teaching from English major students based on Healey's (2005) framework. Student Perception of Research Integration Questionnaire (SPRIQ)" and interview were employed to gain quantitative and qualitative datasets from 32 English major students. The findings revealed that research integration, quality, and beliefs had a good and very good correlation among one another ($r = 0.6\text{-}0.7$; $p<0.05$). In the interview session, students paid much attention to their own research projects, but they did not have a high self-confidence to have their work published in academic journals. Even though they were very satisfied with the instructor, they preferred to have more examples of research articles in the class. Finally, they believed that having a chance to conduct their own research studies helped them to understand how to do research, and it would be beneficial for their future career advancement.

Keywords: English major students, research, perception.

Introduction

Research is one of the key elements in university rankings. Many well-known university ranking systems, namely Quacquarelli Symonds (QS) "World University Ranking", Times Higher Education World University Ranking, Academic Ranking of World Universities, and so on, always consider research outputs as a part of their university ranking criteria. Forbes, an American business magazine, claims that what the most successful universities must do to appear regularly in the top rankings is to disseminate large volumes of research outcomes to the public, recruit the best possible students, and maintain a research-informed teaching agenda (Forbes ASIA 2013). Not surprisingly, in 2009, Ministry of Education in Thailand announced nine Thai universities as national research universities to be a trailblazer to others and to make Thai universities to the world class universities at the same time (Teachareon & Jen-Aksorn, 2010). The significance of research is also passed on to the courses/subjects in university curriculum. That is, a number of undergraduate majors provide courses for either research methodology or independent studies (IS), which students can apply how to conduct a research study from the research methodology course into practice. In English and English education majors, besides a research methodology course and an IS, undergraduate students are required to take a research report writing course as a part of course curriculum. In this course, the fourth-year students are required to conduct a research project and write a research report; the quality of their work should be able to be published in academic journals. Thus, this study examined the perceptions of the interrelationship between research study and teaching from English based on research-teaching nexus of Healey (2005).

Research objectives

1. To explore student perception of research integration in a university course.
2. To investigate the relationship among research integration, quality of the course, and beliefs about research integration.

Research questions

1. To what extent do students perceive themselves in research integration in a university course?
2. What is the relationship among research integration, quality of the course, and beliefs about research integration?

Theoretical framework and Literature Review

Theoretical Framework

The linkage between research and teaching is viewed as an essential part of the institution (Elen & Verburgh, 2008). According to Neumann (1992), within universities, there are three ways of connection of research and teaching, namely global connection, tangible connection, and intangible connection. Regarding global connection, it is the connection at the departmental level relating to the research programs of the department. In terms of tangible connection, it is the linkage at the student level. That is, the obvious forms of research and teaching integration and explicit teaching of research skills and methodology are included. The intangible connection is also the linkage at the student level, but the research and teaching integration is in indirect forms, for example, creating research environment, promoting an innovative atmosphere, or encouraging the research disposition development of students. In this present study, the emphasis was put on the tangible connection. It drew mainly on tangible connection and followed Healey (2005) who adapted the four modes of the research-teaching nexus as shown in Figure 1 below.

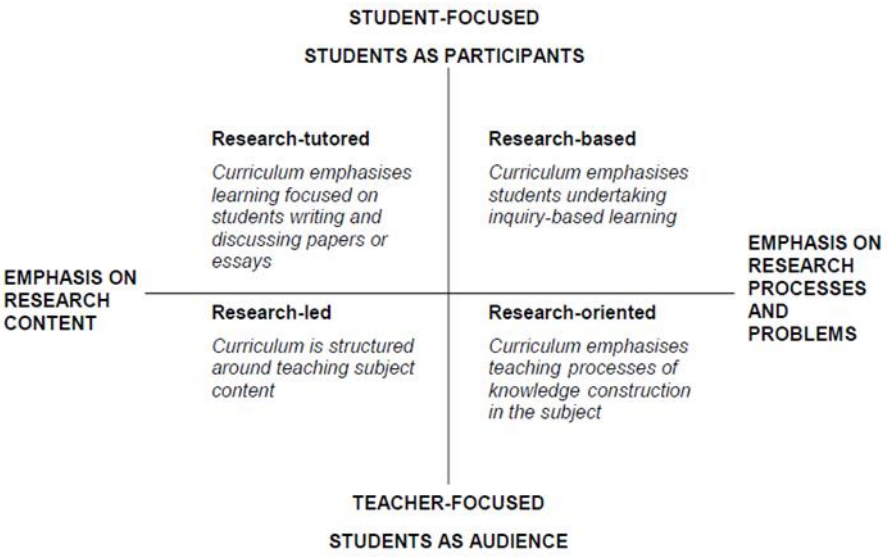

Figure 1: Curriculum design and the research-teaching nexus adapted from Healey (2005, p.13)

According to Healey (2005), this model distinguishes two dimensions of curriculum associated with research and teaching, focusing on research content or research process and problems and focusing on students as participants or audience. Four main ways of integrating research and teaching in the curriculum include 1) research-led teaching, 2) research-oriented teaching, 3) research-based teaching, and 4) research-tutored teaching. Healey (2005) describes that, in research-led teaching, the curriculum is structured by emphasizing the research product or outcomes. Students do not engage in research activities, but they learn about research findings. In research-oriented teaching, students do not play active role in inquiry, but they learn about research processes. The curriculum focuses teaching processes of knowledge construction in the subject. In research-based teaching, students have an active role in participating in research and in inquiry. The focus is on the research processes and problems. In research-tutored teaching, students also play an important role in writing, analyzing, and discussing outcomes of research (e.g., papers or essays). A small group discussion is employed so that students learn to discuss about research findings with a teacher.

Previous Studies

There are many previous studies on students' perceptions of research integration that have been conducted within institutions (e.g., Buckley, 2011; Neumann, 1994; Robertson & Blackler, 2006; Sargent, Wermers, Russo, & Valdes, 2020; Visser-Wijnveen, van der Rijst, & van Driel, 2016). For example, Robertson and Blackler (2006) explored students' experiences of learning in a research environment with 34 students across levels in a New Zealand university. The emphasis was put on the understandings of students concerning the purpose of education and their

experiences of research. It was found that the relationship with research of students varied in terms of spatial and temporal dimension related to how their knowledge is conceived and explored. Interestingly, perceived benefits included the increase of motivation and interest due to the enthusiasm and credibility of the teacher. This result was also found in the study conducted by Jenkins, Blackman, Lindsay, and Paton-Saltzberg (1998). The study also pointed out the policy suggestions regarding how staff research could be effectively managed to be beneficial to students. Verburgh and Elen (2011) also investigated the integration of research into teaching. The focus was on the link between the research integration and the research's appreciation in the learning environment. The findings revealed that research integration showed a positive effect on research's appreciation within the learning environment.

Benefits of university student research environments and experiences are found in Russell, Hanconk, and McCullough (2007)'s work. They carried out a study with approximately 4,500 undergraduates and 3,600 faculty members. The findings revealed that undergraduate students in science, technology, engineering, or mathematics (STEM) had more interest in their future careers and higher educational level. Thus, research experiences in their study time not only broader their perspectives, but also help them to make future decisions.

Recently, Visser-Wijnveen et al. (2016) studied a questionnaire to capture students' perceptions of research integration in their programs. Student Perception of Research Integration Questionnaire (SPRIQ) was employed since it included all important aspects of students' perceptions and the integration of teaching and research and could elicit students' perceptions regarding research integration in their programs. Visser-Wijnveen et al. (2016) described the content of the SPRIQ in that it covered three main focuses, namely 1) research integration (e.g., reflection, participation, current research, and motivation), 2) quality of the course, and 3) beliefs about research integration. The study concluded that SPRIQ could reflect the perceptions of students about research integration in their programs, and it could provide feedback to teachers and program managers so that they could make the connections of research, teaching, and students' learning.

The studies presented thus far provide evidence that students' perceptions of research integration are very significant to pave the way for a clear understanding in research teaching and learning. Surprisingly, no study by Thai scholars exists, particularly in the undergraduate level. As a result, this study will fill a research gap and reflects how Thai undergraduate university students perceive research learning and teaching.

Research Methodology

Participants

Thirty-two fourth year English education major students participated in the study. They took a Research for Learning Development course (366409) in semester 1/2021 and were taking a Research Report Writing course (205426) in semester 2/2021. Thus, most of them had a solid background in research.

Research instruments

To collect the data, the study employed two research instruments as follows.

1. Questionnaire

The questionnaire based on a 5-point Likert scale covers three major criteria (Research integration, quality, and beliefs). The research integration has four sub-scales with five questions each part. The quality and beliefs consist of ten questions (five each). The total number of question items is 30. The students were asked to answer the questionnaire through Google Forms. Below is a structure of the questionnaire.

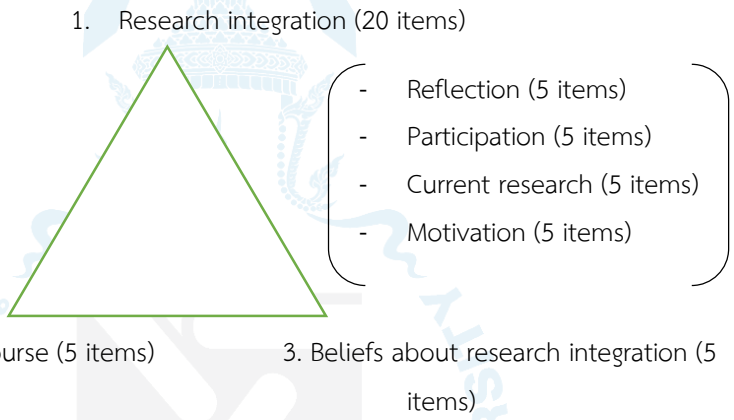

Figure 2: Structure of questionnaire

Definition of the terms

1. Research integration

1.1 Reflection cope with items focusing on attention being paid to the research process leading to research results.

1.2 Participation includes items on the involvement of students in and their contribution to scientific research.

1.3 Current research is a combination of items concentrating on getting to know the current research from the class lectures and in general.

1.4 Motivation consists of items concerning an increase in student's enthusiasm and interest for the domain.

2. Quality deals with items related to elements deemed important for good quality teaching.

3. Beliefs covers students' beliefs about the importance of research integration for their learning.

2. Interview

This study employed semi-structured, in-depth interviews two students (one male; one female). The interview questions were based on the findings from the questionnaire to elicit in-depth information regarding perceptions on research and teaching. Some of them are as follows.

- Do you think whether your final project in the course help your career advance in the future? (beliefs)
- What could be added in the course to make the teaching better? (quality)
- What makes your research findings trustworthy? (reflection)
- After you pass this course and you come across a study that is related to your study, would you like to read it? (motivation)

The researchers spent 20-25 minutes online interviewing both participants in a different period of time. All interview sessions were tape-recorded and transcribed to substantiate the findings from the questionnaire. The information from the interview draws a more complete picture than a standalone quantitative data from the questionnaire.

Data Analysis

The findings from questionnaire were interpreted based on the scale the 5-point scale, its mean range, and verbal interpretation below.

Scale	Mean Range	Verbal Interpretation
5	4.51-5.00	Strongly agree
4	3.51- 4.50	Agree
3	2.51-3.50	Moderately agree
2	1.51-2.50	Slightly agree
1	1.00-1.51	Disagree

The study also paid attention to the relationship among different criteria to see whether one connected to another. Thus, Pearson correlation coefficient was employed based on the following scale and interpretation.

Scale of correlation coefficient	Interpretation
0.00-0.10	No correlation
0.10-0.39	weak correlation
0.40-0.69	moderate correlation
0.70-0.89	strong correlation

0.90-1.00 very strong correlation

In terms of interview, interview tape-recording was transcribed by the researchers. Content analysis was employed to identify and interpret meanings from the two interviewees.

Research Findings

Table 1: Mean ($\bar{x}$) scores from three major criteria

	Mean ($\bar{x}$) scores	S.D.	Interpretation
1. Research Integration			
1.1 Current research	4.19	0.50	agree
1.2 Participation	3.59	0.63	agree
1.3 Motivation	4.07	0.56	agree
1.4 Reflection	4.25	0.48	agree
2. Quality	4.40	0.55	agree
3. Beliefs	4.23	0.50	agree

According to Table 1, the criteria on quality, reflection, and beliefs have the most three highest mean scores, 4.40, 4.25, and 4.23, respectively. The lowest one is participation ($\bar{x}$ =3.59). The statistic findings show that most of them have a positive attitude to the selected criteria. In standard deviation, the range scores are between 0.48 and 0.63. Therefore, most students shared their common opinions in each category.

Current research	Participation	Motivation	Reflection	Quality	Belief
Current research 1	0.66*	0.73*	0.74*	0.70*	0.71*
Participation	1	0.65	0.59*	0.66*	0.65*
Motivation		1	0.73*	0.65*	0.70*

Reflection	1	0.57*	0.76*
Quality		1	0.71*
Belief			1

p<0.05

In Pearson correlation coefficient findings to investigate the relationship in the selected criteria, all criteria show a positive correlation among one another with a statistically significant difference at level .05 ($p<0.05$). To be more precise, the direction of correlation is positive or goes in the same direction with a fairly strong correlation ($r > .50$). That is, if the students' opinions on current research is high, their opinion on participation or other criteria will be high as well. Even though those selected criteria have the same positive direction, the difference is the level of the strength of the linear relationship between each pair. In other words, the data findings show that current research has a highest relationship with all criteria ($r \geq .7$) except participation ($r = .66$). In contrast, the participation has the lowest relation with others ($r = .59$-$.66$).

In the interview session to gain a qualitative dataset, the two interviewees shared similar ideas to go through a lot of things related to their current research as a part of course requirement. That is, one found it to be very difficult to search for an appropriate topic; the other felt less pressure as in:

(S1). *It took me and my partner awhile to come up with a good topic since English is a very broad area. We truly had no idea where to get started.*

(S2). *It didn't take me much time for my group since my topic was related to psychology. I consulted my friend whose major was psychology at Thammasat University. She gave me a lot of ideas and related work to help me out.*

In terms of motivation criterion, one student had a mixed opinion between the motivation and belief criterion. That is, one posited that conducting a research study was so useful since s/he could use this knowledge in the future. To have a career progress, teachers are supposed to conduct research studies as a part of career advance requirements no matter what level they are teaching. So, having research knowledge and skill is an advantage. Their motivation reflects their beliefs what they would get from the course. The other student claimed that s/he did not have anything to motivate her to do the research study except the deadline. When the deadline was getting close, she felt it was the time to do the work seriously. Nonetheless, both were eager

to read the articles that were related to their topic since they would like to know what others did and what the difference between others and their own studies.

The reflection criterion was asked whether their study filled the research gap or not and how they knew it. They claimed that it was very important to find the gap and filled it by their studies. They could not ignore the gap. Thus, they went through previous studies a lot to ensure that there was a gap for them.

(S1). *Our group paid attention to the gap and use the search engines to find related studies to find the gap. I think it makes my study worthy too.*

In terms of participation criterion, both did not think they would like their work to be published on any academic journals since other studies from other groups could be better from his. In addition, they wanted to complete the course requirement rather than having a publication.

In terms of quality, the male student preferred to have the lecturer provide more examples to related topic of the week. Thus, they would see a clearer picture on a specific area. The other student was very satisfied with the current teaching style. Thus, s/he did not have any suggestions to better the teaching.

Both students strongly believed that conducting a research study in this course truly helped them in a career future. They realized that when they become English teacher, to move up to the next step or get promoted in their career, a research study was what they have to do and it should be applicable, beneficial to others and students, and better their teaching.

Conclusion and Discussion

In the mean scores, most students share the same level of opinion, namely 'agree', in all three major criteria— research integration, quality, and beliefs. The difference is the 'participation' as a sub-scale of research integration shows the lowest mean scores (below 4.00). The others score above 4.00. In terms of correlation among these criteria, the Pearson correlation in the 'current research' as a sub-scale of research integrations is rather highly connected to other five parts. The r values are above 0.7 except when it is connected to 'participation'. The reason behind this high number comes from the students paid very much attention to their own final project to complete the course requirements. In the Research Report Writing course, they were assigned to conduct a research project as a major source of writing. Therefore, in the first two weeks their first assignment was to look for research topics before submitting the topics to the instructor. Besides, within a month the students had to search for related studies and submitted

the second assignment as a work reference. In the second assignment, they needed to find related previous studies to their topics; it took them a great deal of time to find previous studies which not only connected to the students' topics but provided research instruments to them as well. To be more precise, in this course, students were not allowed to create their own instruments due to time constraint and the course requirement for a few reasons. For one thing, creating research instruments is very time-consuming because the instruments should be checked by experts to establish research validity and should be tried out to ensure that the reliability is there. For another reason, the course subject is a writing course rather than a research course. The balance should weigh much into the writing. Thus, to make things practical students adopted instruments from previous studies to their own studies. The quantitative findings in the current research were compatible with those in the interview session. That is, paying much attention to their own research studies to meet the course requirement becomes their top priority.

As mentioned in Healey's (2005) dimension 'students as participants versus audience', participation belong to student focused/ students as participants (see Figure 1). The participation covers what they would contribute to the field. The mean score in the subscale 'participation' is the lowest when compared to the others (x=3.59). Since doing a research study is a new thing in students' lives, they might feel more comfortable with class lectures and other types of assignments such as classroom presentation, role play, etc. In contrast, conducting a research study is a completely new thing. The students, as inexperienced researchers, had low self-confidence and might think their work was not good enough to make contributions to the fields. This seems to be in the line with the interview session when both students claimed that they did not think their research studies were good enough to be published in any academic journals. In fact, both studies are going to appear in a research journal in June 2022. The low self-confidence to have their studies published was supported by the criterion of 'reflection' in that they took research gaps into consideration seriously and went through a number of previous studies to guarantee that their studies were on track. They understood what brought reliable findings and how to make a connection between their studies and the previous ones. Apparently, this did not motivate them to go beyond the course requirements. This reflects the teacher-focused/students as audience based on Healey (2005) which covers current research and reflection. The findings show that the mean scores much weigh into the teacher-focused/students as audience rather than the counterpart when the quality of teaching is taken into account. The mean score of quality is the highest (4.40), which mirror the importance of good quality teaching. Again, the qualitative dataset is corresponsive to the quantitative dataset. However, the interview session goes beyond the mean score in the sense that students suggested that the instructor should have provided more examples to promote a better understanding in particular topics. They also believed that if the instructor had experience to do research, it would be an advantage to the students since the instructor could deliver enough information and help the students to do the

research. This is compatible with Russell, Hanconk, and McCullough (2007)'s claim in that the instructors who are able to combine enthusiasm with interpersonal, organizational, and research skills play a tremendous role to students' outcomes. Finally, conducting a study by themselves paves a way for their future career promotion and advancement.

Final thoughts

We found that some questions in the questionnaire should be modified to make them clearer to understand. In the interview session, the interviewer should not be an instructor who taught the students since the students would feel uncomfortable to express their opinions freely. In other words, the interviewee should be somebody else who is trained to do the interview session. In addition, the number of interviewees should be more than two students. Finally, having two or more different groups of students from different backgrounds could provide a better understanding whether the backgrounds play a role to the perceptions of research and teaching.

References

Buckley, C. A. (2011). Student and staff perceptions of the research-teaching nexus. *Innovations in Education and Teaching International, 48*, 313–322.

Elen, J., & Verburgh, A. (2008). *Bologna in European research universities: Implications for bachelor and master programs.* Antwerpen: Garant.

FORBES ASIA (2013). University rankings: How important are they? Retrieved April, 2022, from https://www.forbes.com/sites/evacairns/2013/10/17/university-rankings-how-important-are-they-an-interview-with-nello-angerilli-avp-university-of-waterloo-canada/?sh=73ae77367d3c

Healey, M. (2005). Linking research and teaching: Exploring disciplinary spaces and the role of inquiry-based learning. In R. Barnett (Ed.), *Reshaping the university: New relationships between research, scholarship, and teaching* (pp. 67–78). London: McGraw Hill/Open University Press.

Jenkins, A., Blackman, T., Lindsay, R., & Paton-Saltzberg, R. (1998). Teaching and research: Student perspectives and policy implications. *Studies in Higher Education*, *23*, 127–141.

Neumann, R. (1992). Perceptions of the teaching-research nexus: A framework for analysis. *Higher Education, 23*, 159–171.

Neumann, R. (1994). The teaching-research nexus: Applying a framework to university students' learning experiences. *European Journal of Education, 29*, 323–338.

Robertson, J., & Blackler, G. (2006). Students' experiences in learning in a research environment. *Higher Education Research and Development, 25*, 215–229.

Russell, S.H; Hanconk, M.P., & McCullough, J. (2007). Benefits of undergraduate research experiences. *Science, 316* (5824), 548-549.

Sargent, J., Wermers, A., Russo, L., & Valdes, K. (2020). Master's and doctoral occupational therapy Students' perceptions of research integration in their programs. *The Open Journal of Occupational Therapy, 8*(1), 1-10. https://doi.org/10.15453/2168-6408.1614

Teachareon, S & Jen-Aksorn. 2010. Research university: from western approach to Thailand national research university. *Journal of Education Administration, Silapakorn University*, *1*(1), 230-240.

Verburgh, A. L., & Elen, J. (2011). The role of experienced research integration into teaching upon students' appreciation of research aspects in the learning environment. *International Journal of University Teaching and Faculty Development, 1*(4), 1–14.

Visser-Wijnveen, G. J., van der Rijst, R. M., & van Driel, J. H. (2016). A questionnaire to capture students' perceptions of research integration in their courses. *High Educ, 71*, 473–488.