

Integrating research into teaching: Needs assessment for staff development

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Background. The scholarship of teaching involves the integration of research into teaching activities, critical reflection of practice, and communication, and dissemination of the practice of one's subject. However, it is not clear what the needs of academics in the Faculty of Community and Health Sciences at the University of the Western Cape, Bellville, South Africa, are with regard to integrating research into their teaching practices.

Objective. To present the findings of the views, perceptions and experiences of academics in the abovementioned faculty regarding their understanding and integration of research into their teaching activities.

Methods. The study followed a cross-sectional research design. Data were collected by means of an electronic questionnaire to explore the academics' views and perceptions with regard to the integration of research into their teaching and related experiences. Data were analysed using the first two phases of the Appreciative Inquiry process as a guideline.

Results. It was evident that participants had a clear understanding of research. The majority understood that the scholarship of teaching involved both the lecturer and the learner and, most importantly, the conducting of research to share it with others.

Conclusion. Findings from the needs assessment can be used as a guideline to assist in strategies for staff development. Academics need to give equal attention to both teaching and research. The scholarship of teaching facilitates this through the integration of research into teaching.

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It is important that academics have a common definition of the scholarship of teaching.^[1] For academics in the Faculty of Community and Health Sciences (FCHS) at the University of the Western Cape (UWC), Bellville, South Africa, to have a scholarly approach to teaching could mean that they are familiar with the latest evidence relating to their subject, being informed by current ideas for teaching that subject, evaluating and reflecting on their teaching practices, sharing characteristics of excellent and scholarly teaching, and communicating, disseminating and investigating their teaching practices. At UWC, the scholarship of teaching has become a priority as part of the Institutional Operational Plan 2010 - 2014 for the professional development of the teaching community.^[2] The department, discipline and level of study are important factors in linking research and teaching.^[3]

Educators' teaching should also be informed by the purpose that the university has identified for itself.^[4] In this way, teaching will be driving the purpose in the manner that it has been conceptualised and organised. In line with the developments at UWC, the FCHS has highlighted the following goal as part of its teaching and learning plan for 2010 - 2014: 'To provide opportunities for an excellent teaching and learning experience that is contextually responsive to the challenges of globalization and a society in transition, and which enhances students' capacity as change agents.'^[2] To achieve this goal, teaching must be evidence based.

The scholarship of teaching is one way to facilitate the process of integrating research into teaching activities. Scholarship is a synonym

for research and identifies it as the scholarship of discovery, where new knowledge is added through the process of inquiry and investigation.^[5] Various authors have defined the scholarship of teaching.^[6-8] The definitions include the scholarship of teaching as ongoing learning about tutoring and the demonstration of such knowledge; publications, and ultimately engagement with existing knowledge on teaching; self-reflection on teaching in one's discipline; and publicly sharing ideas about teaching within the discipline. Similarly, Healey^[1] stated that 'the scholarship of teaching involves engagement with research into teaching, critical reflection of practice, and communication and dissemination about the practice of one's subject'. It is therefore evident that in the scholarship of teaching there should be definite evidence of research. However, according to Boyer's expanded definition of scholarship as cited by Glassick,^[9] it should include research and the scholarship of integration, application and teaching. According to some of the literature, broader definitions of scholarship have emerged where authors maintain that 'Creative teaching with effectiveness that is rigorously substantiated, educational leadership with results that are demonstrated and broadly felt, and educational methods that advance learners' knowledge are consistent with the definition of scholarship.'^[10]

Higher education (HE) faces demands for increased public accountability and the benefits of strengthening the link between research and teaching. These institutions are expected to provide future students with an excellent teaching and learning experience, informed by up-to-date research. Every student should study in an environment that is informed by research, scholarship and up-to-date practice and knowledge. Both undergraduate

and postgraduate programmes should develop generic skills for effective engagement in society and the workplace.^[11] The scholarship of teaching through research has the potential to contribute abundantly to the field of HE.^[12]

Even though there is considerable emphasis on enhancing the links between teaching and research, the challenge of how to better integrate these two activities remains. There is still work to be done to ensure that academics within HE institutions believe that the scholarship of teaching is valued as much as other research activities.^[13] Contemporary university systems increasingly show evidence of having entrenched the separation of research and teaching in their committee structures, development of research centres, selection and promotion criteria, funding and workload models. This has contributed to the paradoxical position that, while promoting research-led teaching, universities view these two activities as separate and bound. This disruption of a relationship between research and teaching challenges the traditional model of universities where academic staff are both teachers and researchers.

It is not clear whether academics at FCHS integrate research into their teaching practices. Therefore, a needs assessment was done to assist in developing strategies and educational programmes to facilitate such a process.^[14] The first two phases of the Appreciative Inquiry (AI) approach were used as a guideline to assess the needs of academics with regard to integrating research into their teaching practices.^[15] AI is a strength-based change process based on the premise that academics are change agents who possess knowledge and experience that can make a difference. The process of AI is based on asking the right questions, focuses on building relationships on strengths rather than weaknesses, and is iterative.^[16] The AI process has five phases: (i) defining the need for an intervention (establishing the focus and scope of the inquiry); (ii) discovering what is good and has worked (appreciating what it is and how it can be used); (iii) dreaming what might be; (iv) designing what should be; and (v) creating what will be.^[17]

This article forms part of a larger study that incorporated all the phases of the AI approach, but attempts to present the findings of an initial needs assessment exercise with academics to better understand their views, perceptions and experiences on research, scholarship of teaching, methods, and activities to integrate research into their teaching practices. Findings from the first two phases of the AI model, i.e. defining the need for an intervention and discovering what has been successful, will be presented to inform the Faculty about the development of strategies to assist academics on integrating research into their teaching practices.

Methods

Research design

A cross-sectional study design was used to investigate and describe the participants' views on research, scholarship of teaching, methods, and activities to integrate research into their teaching practices.

Data collection

A questionnaire and letter on the purpose of the study were circulated electronically to all participants. The questionnaire (Appendix 1) consisted of two sections. Section one entailed the demographic information of the participants and section two consisted of seven open-ended questions that allowed the participants to share their views, perceptions and experiences on defining research, activities to integrate research into teaching,

understanding of the scholarship of teaching, and methods to promote and develop the scholarship of teaching in the teaching modules.

Data analysis

Data were analysed thematically using a qualitative approach and according to the definition of research and the scholarship of teaching, including activities to promote and develop the scholarship of teaching in the teaching modules. Three researchers independently identified the key concepts from the participants' feedback on the seven open-ended questions. Consensus was reached among the three researchers regarding the key concepts. Participants' perceptions and experiences were described and supported by their statements. This process of data analysis highlighted the views, perceptions and experiences of the participants in integrating research into their teaching activities.

Ethical approval was obtained from the Research Ethics Committee at UWC (Reg. No. 11/3/14).

Results

The findings of section one of the questionnaire are presented to provide a demographic overview of the participants (Table 1). The findings of section two are presented according to the first two phases of the AI framework, i.e. the defining and discovery phases.

Section one: Sociodemographic information of the participants

Of the 10 departments in the Faculty, only six responded, i.e. Sport, Recreation and Exercise Science, Occupational Therapy, Physiotherapy, Social Work, School of Natural Medicine and the Interdisciplinary Teaching and Learning Unit, yielding a 60% response rate in terms of departmental representation. The four departments that did not respond were Dietetics, Nursing, Psychology and School of Public Health, the main reason being prior engagements on participation dates. Of all the possible respondents ($N=95$), only 21 (22%) responded. Of these, the majority were female (76%) and their academic status was at a lecturer level (76%) and beyond. The majority (67%) were primarily involved in undergraduate teaching and the

Table 1. Sociodemographic information ($N=21$)

Variable	<i>n</i> (%)
Gender	
Male	5 (24)
Female	16 (76)
Academic status	
Associate Lecturer	3 (14)
Lecturer	16 (76)
Senior Lecturer	1 (5)
Associate Professor	1 (5)
Lecturers	
Undergraduates	14 (67)
Postgraduates	3 (14)
Both	3 (14)
Other (no indication)	1 (5)
Publications	
None	13 (62)
Peer reviewed, accredited	8 (38)

class sizes ranged from 15 to 150 students. All the respondents had decision-making capacity in their own modules. Only about one-third (38%) had published academic articles previously; one of them had published half of the papers. The majority (62%) had not published previously.

Section two: Defining phase

Participants' understanding of research and the scholarship of teaching

All the participants, except one, understood research as a process with specific steps to be followed. One participant stated:

'Research is an investigating process into a specific topic of interest or need in your field of speciality in order to gain a better understanding of a specific aspect and to create knowledge through your findings.'

Furthermore, all the respondents defined research to be organised and systematic and that the process should have a specific outcome or purpose. Another respondent stated:

'It is a scientific enquiry conducted in an area of interest to the researcher with the purpose of contributing to a body of knowledge.'

It was therefore evident that the majority of the respondents understood that research involved systematically setting realistic goals to achieve specific outcomes.

The respondents experienced defining the scholarship of teaching as challenging. The majority experienced it as assisting them in increasing their expertise as a teacher. One participant stated:

'It will assist a person in reflecting and improving on the teaching strategies ...'

Most reflected on how important it was to understand the scholarship of teaching, as it could assist them in understanding the learning needs of their students. Another stated:

'... assist us to better our own teaching practices to help students learn better.'

Respondents felt that it was important to turn their teaching activities into research projects that could be shared with other colleagues:

'Writing up your teaching practices and using the data to conduct scientific enquiry contributing to a body of knowledge on teaching and learning in Higher Education.'

Less than half of the respondents indicated that they had little or no understanding of the term. One of them stated:

'I don't know.'

From the findings it was evident that most of the participants understood that the scholarship of teaching involved both the lecturer and the learner and should include a research component that could eventually be disseminated to others.

Section two: Discovery phase

Methods of improving and promoting student awareness regarding the integration of research in the teaching modules

All the participants gave examples of learning activities they had used to improve students' awareness regarding the integration of research in their teaching modules. The various learning activities were research based and/or research led. They used learning activities, such as assignments, where students were expected to do research on the literature on a specific topic taught in class and apply research methods to answer a question. Case studies were used where students had to link their case with their fieldwork to present their findings. From the findings, on an ongoing basis, the participants linked the content taught in class with current evidence in the literature. Participants also indicated that they included relevant articles in their course and highlighted that the academic level of the students influenced the degree to which research was incorporated in their teaching module. One participant who taught second-year students, said:

'My focus is more on the basic skills needed for research. I therefore try to include a lot of literature review and understanding how to read research journals.'

A participant who taught postgraduate students referred them back to the latest evidence and gaps in knowledge that could be addressed.

Some of the participants still experienced research and teaching activities as separate entities because they did not plan their teaching modules with the specific purpose of integrating research into their teaching activities.

One participant stated:

'... this is a process in the making, being that these initiatives are being coordinated throughout the department as a fairly new concept. This is brought upon by the attendance of teaching and learning workshops and research workshops.'

Table 2. Activities to integrate research into teaching

Level of student	Learning activity	Objective	Method	Level of research
Undergraduate	Assignments	Enable awareness of research by searching the literature and using research methods	Students must research content for their assignment Include data collection methods, e.g. surveys or interviews to answer a question	Research based Research tutored
	Case studies	Link cases in clinical settings to a research question	Students recruit participants relevant to the topic, interview them, analyse the information and present their findings	Research based
	Evidence-based teaching	Ensure that all information provided is evidence based	Link content taught to students and current evidence in the literature, including relevant articles in the course reader	Research led
Postgraduate	Articles in assessment	Integrate articles as a method to find answers	Examination questions are supported by articles that students need to discuss critically	Research led
	Situational analysis	Determine the population need according to the student and support it with literature	Students relate to current situations in the country and find relevant literature that addresses the issues, e.g. policy analysis	Research based

Methods and activities used by participants to improve and promote the scholarship of teaching in their teaching modules

From the findings, the majority of participants could indicate how they had attempted to promote and develop the scholarship of teaching in their teaching modules. They used different methods, e.g. peer review, course evaluation by students, attending workshops for personal development and understanding, reflecting on their own teaching strategies and methods, a variety of teaching activities to enhance students' learning experiences, implementation of evidence-based practice, and publications (Table 2).

Only a few participants indicated that they did not know and were unsure how to improve and promote the scholarship of teaching in their modules. However, they did observe the potential for including it in their teaching activities. The few participants who held senior positions and had more experience in teaching students, especially on a postgraduate level, were more specific in how to promote the scholarship of teaching in their modules. One participant stated:

'... allowing students to provide input on a question and then analysing the responses or by analysing a policy document.'

Discussion

The objective of the study was to understand academics' views, perceptions and experiences of research, scholarship of teaching, methods, and activities to integrate research into their teaching activities. The findings revealed that the academics had a clear understanding of research and did attempt to engage students in the process of research. Research is defined as 'a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding.'^[18] It improves teaching because researchers use personal experiences rather than second-hand knowledge.^[19,20]

However, the majority of academics in FCHS could not reach consensus regarding the definition of the scholarship of teaching, the concept being unfamiliar to many academics at universities.^[21] The scholarship of teaching goes beyond scholarly teaching and is driven by a desire to understand *how* students learn effectively and *how* teaching influences this process.^[22] The concept is therefore student focused and has two main components: (i) the use of creativity to develop original materials; and (ii) a systematic evaluation of one's teaching practices. Academics experience a different relationship between research and teaching. Although the integration of research and teaching has been identified as key in enhancing, developing and informing one's teaching practices, this approach is difficult to achieve when the two activities have for some time been seen to be at odds with each other.^[23] Therefore, the integration of these two activities must be more public and transparent for evaluation by peers.^[8]

It was also evident that the academics were at different levels regarding the extent to which they had adopted a scholarly approach to teaching. From the literature it is suggested that staff from the same or different disciplines should engage in dialogue to promote the sharing and dissemination of good teaching practices so that they may learn from one another and consequently change their teaching practices.^[23] The first two phases of the AI framework allowed the researchers the opportunity to practise how to use a framework to share experiences and ideas about their teaching and encourage one another to use the information shared to improve their teaching.

However, there are many more ways of linking research and teaching than students who learn about subject knowledge through lectures. Academics

may model research-based approaches in the manner they teach by adopting an inquiry-based learning approach.^[1,19] However, discussion of research-led education and the scholarship of teaching is complicated by different terms being used in the literature and in practice to refer to the same idea, e.g. research led, research based, research informed. From the literature^[25] it is suggested that a distinction may be made between the following:

- Research-led teaching, where students learn about research findings, the curriculum content is dominated by staff research interests, and information transmission is the main teaching mode.
- Research-orientated teaching, where students learn about research processes, the curriculum equally emphasises the processes by which knowledge is produced as learning that has been achieved, and staff try to engender a research ethos through their teaching.
- Research-based teaching, where students learn as researchers, the curriculum is largely designed around inquiry-based activities, and the division of roles between teacher and student is minimised.

Limitations

A limitation is that only six out of 10 departments at FCHS participated in this survey and, of all possible respondents, the response rate was only 22%. Furthermore, there were only a few male participants, the reason being that 80% of the staff at FCHS are female.

Implications for further research

Programmes implemented based on this needs analysis will be evaluated to determine their effectiveness. As this was the first phase of a larger study, the information identified will be used to develop and implement an intervention where academics are provided with methods of teaching that are research based.

Implications for education

Principles to enable transfer of research knowledge into teaching have been proposed in literature:^[25,26]

- Academics need to be active in research so that their teaching is research informed. Good research is necessary for good teaching.
- Academics need to consider effective teaching methods such as student-focused teaching and the stimulation of students' critical thinking by providing them with research training and knowledge. An increase in student engagement could facilitate a deeper understanding through inquiry-led learning.
- Academic departments need to appropriately balance the research and teaching workload of academics so that experienced research-active staff are engaged in teaching across all levels. Formal processes to stimulate research-informed teaching must be considered.
- At a broader level, the university should create an academic community of practice where academic departments, disciplines and the university network of professionals interact through face-to-face settings to disseminate research knowledge to a wider community.

Conclusion

Following the defining and discovery phases of the AI process, this study has focused on academics' understanding of the integration of research into their teaching practices and their successes. It was evident that the majority of the academics considered teaching and research as separate entities. It

is anticipated that the implementation of the next phases of the AI process should illuminate the way forward to assist academics with the practice of the scholarship of teaching. For teaching and research to receive equal attention, the scholarship of teaching could facilitate the integration of research into teaching activities.

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Appendix 1. Questionnaire

Gender

- Male
 Female

Academic status

- Assistant Lecturer
 Lecturer
 Senior Lecturer
 Associate Professor
 Professor

Level of teaching

- Undergraduate
 Postgraduate
 Both undergraduate and postgraduate

What is the size of your classes?

In the last three years, how many articles have you published in

- Peer-reviewed journals
 Peer-reviewed, accredited journals

What is your definition of research?

Do you participate in the decisions about what you teach (modules)?

- Yes
 No

Share how you improve student awareness regarding research in the courses that you teach

Share what activities you include in your programme that are designed to engage students in a variety of research-based activities

Share your ideas on how you think your teaching strategies can relate to research

What is your understanding of the scholarship of teaching and learning?

How could you promote and develop the scholarship of teaching and learning in the modules that you teach?