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## Teaching in Higher Education

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713447786>

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Online Publication Date: 01 December 2008

**To cite this Article** Åkerlind, Gerlese S.(2008)'A phenomenographic approach to developing academics' understanding of the nature of teaching and learning',Teaching in Higher Education,13:6,633 — 644

**To link to this Article:** DOI: 10.1080/13562510802452350

**URL:** <http://dx.doi.org/10.1080/13562510802452350>

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## A phenomenographic approach to developing academics' understanding of the nature of teaching and learning

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Phenomenography is best known as an empirical research approach for investigating variation in conceptions of different educational phenomena – including learning, teaching and particular disciplinary concepts such as price in economics and motion in physics. It is less well-known for its theoretical basis, in terms of its epistemological and ontological claims (Marton and Booth 1997), and the variation theory of learning that has developed out of phenomenographic research and theory (Marton and Tsui 2004). This paper discusses what 'conception' and 'conceptual development' mean from a phenomenographic perspective and how phenomenography and variation theory can be combined with empirical research on academics' conceptions of teaching to inform the design of a postgraduate course for academics, aimed at the development of academics' understanding of the nature of teaching and learning.

**Keywords:** phenomenography; variation theory; conceptions of teaching; academic development; teaching development

### Introduction

Over the last decade, there has been an increasing number of researchers suggesting that the most effective way of approaching teaching development for academics is to focus on developing their conceptual understanding of the nature of teaching and learning, as opposed to the more traditional focus on developing their teaching methods and skills (Åkerlind 2003, 2004; Gibbs 1995; Kember 1997; Martin and Ramsden 1992; Prosser and Trigwell 1997; Trigwell and Prosser 1996; Wood 2000). This is not to deny the value of developing teaching methods and skills, but to argue that they should not be addressed in isolation from the ways of thinking about teaching and learning that underlie them.

This argument arises from the outcomes of a body of research investigating university teachers' conceptions of and approaches to teaching and learning (Åkerlind 2004; Åkerlind and Jenkins 1998; Dall'Alba 1991; Gow and Kember 1993; Kember 1997; Martin and Balla 1991; Martin and Ramsden 1992; Murray and MacDonald 1997; Pratt 1998; Prosser and Trigwell 1999, chap. 7; Samuelowicz and Bain 1992, 2001; Van Driel et al., 1997; Wood 2000). These studies consistently distinguish between a teacher-centred and a student-centred understanding or 'conception' of teaching. With a teacher-centred understanding, academics' attention is focused on what they, as the *teacher*, are doing in any teaching–learning situation; what is happening for the students is taken-for-granted and not explicitly attended to. Conversely, with a student-centred understanding, academics'

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attention is focused on what the *students* are experiencing in any teaching–learning situation and the potential impact of teachers’ actions upon student experience.

A student-centred understanding of teaching is consistently (though not uniformly – see Pratt 1998) regarded as more sophisticated than a teacher-centred understanding. The argument for this greater sophistication varies between studies, depending on the epistemological assumptions underlying the research, as will be elaborated later in this paper. However, at this point, I will summarise the phenomenographic argument, as phenomenographic studies form a primary contributor to this body of research and this paper takes a phenomenographic perspective overall. The phenomenographic argument is that a student-centred understanding is more sophisticated because it is more complex, incorporating but going beyond a teacher-centred understanding. That is, a student-centred understanding shows a focus on what is happening for *both* teachers and students in a teaching–learning situation. In contrast, a teacher-centred understanding shows a focus only on what is happening for teachers, with students’ reactions taken-for-granted (Åkerlind 2004; Dall’Alba 1991; Martin and Balla 1991; Martin and Ramsden 1992; Prosser and Trigwell 1999, chap. 7; Wood 2000).

This provides a *logical* argument for why a student-centred understanding of teaching is more likely to lead to better learning on the part of students, because teachers are taking their students’ role in learning into account in designing and monitoring teaching–learning situations. In addition, *empirical* studies of the relationship between teachers’ conceptions of teaching and students’ approaches to learning indicate that a student-centred understanding of teaching is more likely to lead to better learning outcomes for students, in that a student-centred understanding amongst university teachers has been associated with a deep approach to learning amongst their students (Kember and Gow 1994; Prosser and Trigwell 1999, chap. 7). Conversely, a teacher-centred understanding amongst teachers is associated with a surface approach to learning amongst their students and a surface approach to learning is associated with less meaningful understanding of course material than a deep approach (Prosser and Trigwell 1999).

### Where to from here?

Having decided that helping to change academics’ conceptions of teaching is the direction in which one wants to proceed as an academic developer, one then finds that there is very little available in the literature in the form of practical guidance or examples for how to go about it. Gibbs (1995) suggests using action research projects, and Jenkins and colleagues (2003) suggest the potential of research-led teaching, as one starting point in working with individual academics; Prosser and Trigwell (Prosser and Trigwell 1997; Trigwell 1995) present two examples of teaching development workshops; Ho (2000) provides a model of a more extended academic development programme for university teachers; and Wood (2000) presents a model for working with teacher trainees. However, such examples are thin on the ground.

Furthermore, each example is premised on a particular epistemological perspective. For example, Ho takes a cognitive constructivist perspective to her programme design, while Wood takes a phenomenographic constitutionalist perspective (elaborated further below). From a *phenomenographic perspective*, different conceptions of teaching are seen as representing different breadths of awareness of the phenomenon of teaching, constituted as an experiential relationship between the teacher and the phenomenon. From a *cognitivist perspective*, different conceptions are seen as reflecting different beliefs about teaching

associated with different mental representations of the phenomenon, constructed on the basis of individuals' experience.

The most conspicuous difference in assumptions about the nature of conceptions arising from these different epistemological stances lies in the relationships posited between the different conceptual categories (Åkerlind, 2003). From a phenomenographic perspective, different conceptions are seen as structurally related in a hierarchy of inclusiveness (e.g. Åkerlind 2004; Dall'Alba 1991; Martin and Balla 1991; Prosser and Trigwell 1999; Wood 2000), while from a more cognitive perspective different conceptions are positioned as independent, even if they can be ordered in a continuum of development or sophistication (e.g. Kember 1997; Samuelowicz and Bain 1992).

Thus, suggestions for how to develop academics' conceptions of teaching cannot really be understood in isolation from one's epistemological stance as to what a conception is and how conceptual development occurs. Yet there is very little acknowledgement in the literature that different studies of conceptions of teaching often refer to very different epistemological entities when using the term, conception.

This paper will use the epistemological assumptions of phenomenography to extend both the theoretical and practical literature on teaching development, envisaged as a process of facilitating conceptual development amongst university teachers. The paper will describe a postgraduate course aimed at optimising development in university teachers' conceptual understanding of the nature of teaching and learning. Award-bearing programmes in university teaching and learning aimed at academics as the participating 'students', such as the postgraduate course described here, have become common in the UK and Australia over the last decade. As accredited university courses, these programmes are necessarily based on a theoretically informed design. Yet articulations in the literature of the educational theory underlying the design of such courses are few (but see Booth and Anderberg 2005; Dall'Alba 2005). In this way, this paper also contributes to that developing literature.

### **A phenomenographic perspective on the nature of conceptions of teaching**

As argued above, the course design described later in this paper cannot be fully understood without an understanding of the assumptions about the nature of a conception and conceptual development underlying the design. Consequently, a brief overview of phenomenography and variation theory is presented first.

Phenomenography argues that individuals experience the world differently because experience is always partial. At any one point in time and context, people discern and experience different aspects of any phenomenon to different degrees. Thus, different ways of experiencing a phenomenon may be understood in terms of which aspects of the phenomenon are discerned, and *not* discerned, in people's awareness of it. Awareness of an aspect is indicated by the perception of the *potential for variation* in that aspect; lack of awareness is indicated by an implicit, taken-for-granted assumption of uniformity in that aspect of the phenomenon (Marton and Booth 1997).

At the same time, each way of experiencing may be understood as part of a larger whole, the *collective sum* of ways of experiencing. It is assumed that different ways of experiencing a phenomenon would typically be structurally related, in a part-whole relationship, through shared discernment of some of the same aspects of the phenomenon. Thus, during phenomenographic data analysis, the different ways of experiencing that emerge are not constituted independently, but in relation to each other. These different ways of experiencing are commonly ordered in terms of inclusivity of awareness, where more inclusive ways also

represent more complex ways of experiencing the phenomenon, indicated by an *increasing breadth of awareness* of different aspects of the phenomenon. In other words, an increasing number of aspects of the phenomenon are discerned as potentially varying, and thus problematised rather than taken-for-granted when thinking about the phenomenon.

Thus, from a phenomenographic perspective, conceptions of teaching may be categorised according to the awareness shown of key aspects or features of the phenomenon of teaching, (where awareness of an aspect is indicated by the perception of the potential for variation in that aspect). For example, a student-centred understanding of teaching is marked by awareness of the potential for variation in different students' responses to the same teaching situation, including different interpretations of the same spoken words or written text. In contrast, a teacher-centred understanding of teaching implicitly assumes a uniform response on the part of students except in aberrant circumstances. Failures in student learning are attributed to lack of ability, lack of motivation, lack of attention, etc. There is no awareness of the potential for variation in what students learn as being a normal consequence of the learning process itself.

### **A phenomenographic perspective on developing conceptions**

As will be argued later in the paper, the opportunity to contrast different ways of understanding what is ostensibly the same phenomenon – in this case, the phenomenon of conceptual development – helps to highlight key features of the phenomenon. Consequently, in order to further clarify readers' understanding of phenomenographic epistemology, this section contrasts a phenomenographic perspective on conceptual development with a cognitive perspective.

Associated with the different assumptions about the nature of conceptions outlined above are different implications for how to facilitate conceptual development amongst teachers (or students). In particular, where different views of teaching and learning are regarded as independent, even if they can be ordered on a continuum of desirability or development (cognitive perspective), this implies taking a conceptual *change* approach to conceptual development. By contrast, where different conceptions are seen as logically related in a nested hierarchy of inclusiveness (phenomenographic perspective), this implies taking a conceptual *expansion* approach to conceptual development.

A conceptual *change* approach to conceptual development is based on a view of learning as involving the replacement of one system of beliefs or concepts with another. Strike and Posner's (1985, 1992) model for conceptual change will be used to illustrate, as it is a well-established model that is still influential today. (My aim here is not to provide a comprehensive description of models of conceptual change, but merely to provide a point of comparison with phenomenography to help highlight its distinguishing features.) Strike and Posner's model derives from research in the history and philosophy of science, investigating factors underlying major conceptual paradigm shifts in scientific understanding. Their approach is consistent with a cognitivist and constructivist approach, based on a view of conceptions as playing an organising role in cognition and perception. The focus is on rational beliefs and encouraging conceptual change through facilitating individuals' ability to reject, on some logical basis, existing erroneous conceptions in favour of new, more accurate conceptions.

Strike and Posner (1985) outline four conditions required for conceptual change:

1. dissatisfaction with the existing conception;
2. some understanding of the new conception;

3. that the new conception should appear initially plausible; and
4. that the new conception should appear more powerful (p. 216).

They emphasise the value of strategies such as the use of anomalies, analogies and exemplars in facilitating conceptual change. Although they have since criticised (1992) their early work for being overly focused on rational beliefs and on conceptions that are clearly articulated, the basic epistemological assumptions underlying their model of conceptual change remain the same.

This model may be contrasted with a phenomenographic, or what I have termed a conceptual *expansion*, approach to conceptual development (Marton and Booth 1997; Marton and Trigwell 2000; Marton and Tsui 2004; Prosser and Trigwell 1997; Runesson and Marton 2000). From a phenomenographic perspective, less sophisticated conceptions are regarded not so much as wrong, but as *incomplete*, lacking awareness of key aspects of the phenomenon that are focal in more sophisticated conceptions.

On this basis, conceptual development is not seen as requiring the rejection of an existing conception of a phenomenon, but the expansion of individuals' awareness of the phenomenon to include discernment of additional aspects of the phenomenon not currently discerned. This has led to the variation theory of learning, based on the argument that attempts to facilitate conceptual development should focus on optimising opportunities for individuals to experience variation in aspects, or features, of the phenomenon that they currently take for granted (Marton and Tsui 2004). This process can be facilitated in a developmental situation by introducing variation in the phenomenon into the situation, drawing attention to different aspects of the phenomenon by varying some aspects whilst keeping others invariant.

This approach can probably best be clarified through a concrete example. Building on the example of teacher and student-centred conceptions of teaching presented earlier, from a phenomenographic perspective someone experiencing a teacher-centred awareness of teaching is regarded as not being fully aware of the potential role of students in the teaching/learning process. That is, they experience the role of students in a taken-for-granted, unproblematised way. From this perspective, variations in what the teacher does are seen as having a direct and obvious relationship to students' learning; the idea that there might be variation in the response of similar students to the same teaching situation is not part of a teacher-centred awareness of teaching (although it is part of a student-centred awareness of teaching). In other words, from a teacher-centred perspective, the potential variation in this aspect of the teaching/learning phenomenon is not experienced, but from a student-centred perspective it is. Consequently, to extend an individual's understanding of teaching from teacher-centred to student-centred (i.e. for conceptual development or expansion to occur) opportunities for the teacher to experience variation between similar students in their response to ostensibly the same teaching situation need to be introduced.

Marton and Tsui (2004) recommend:

1. *Contrast* – in order to experience a phenomenon, such as learning, we must experience something else to compare it with, such as teaching (e.g. my description of a phenomenographic perspective on conceptual change is better understood in contrast with another perspective, such as Strike and Posner's, than if described in isolation). What the phenomenon is contrasted with draws attention to certain aspects of the phenomenon more than others, so the choice of comparator is important.

2. *Generalisation* – in order to fully understand a phenomenon, we must experience varying instances of the same phenomenon, such as different conceptions of teaching. Combined with contrast, this allows us to separate the essential features of the phenomenon from irrelevant features. Furthermore, until one has noticed that there are various ways of understanding a phenomenon, one cannot see one's own way of understanding as being only one way, rather than *the* way.
3. *Separation* – in order to experience particular features of a phenomenon, such as the role of teachers versus the role of students in learning, and to be able to separate these features from other features of the phenomenon, we need to experience these features varying while other features remain invariant.
4. *Fusion* – in order to take all of the essential features of a phenomenon into account at the same time, they must be experienced as varying simultaneously, in relation to each other. So, an experience of separation needs to be followed by an experience of fusion. For example, the role of supply and demand in the concept of price in economics can be understood either as independent features of price (which indicates that variation in each of the two features is experienced separately) or as interactive features of price, (which indicates that variation in each of the two features is experienced simultaneously) (Marton and Pong 2005).

These strategies reflect the phenomenographic emphasis on part–whole relationships. *Contrast* encourages the discernment of the whole from its context and, thus, discernment of the way in which the whole relates to its context. This may be seen as a way of comparing one whole (the phenomenon) with other wholes (related phenomena). *Generalisation* also involves the comparison of wholes (one way of seeing the phenomenon) with other wholes (other ways of seeing the phenomenon), but focused at the level of the phenomenon. At the same time, each way of experiencing a phenomenon represents part of a larger whole, that is, the collective sum of ways of experiencing. *Separation* involves a comparison of parts (certain features of the phenomenon) with other parts (other features of the phenomenon), while *fusion* enables the discernment of the part–whole structure of a phenomenon, that is, the relationship of parts (different features of the phenomenon) to the whole phenomenon.

### Using phenomenography and variation theory in course design

Phenomenography is most effectively used to inform teaching design decisions when it is implemented in two stages:

1. phenomenographic investigation of variation in students' understandings (or conceptions) of a key concept to be learned. This involves the identification of key features of the concepts that students discern or do not discern in their understanding of it; and
2. use of the principles of variation theory to design a teaching programme that maximises students' opportunities for discerning the full range of key features of the concept identified in the previous investigation(s).

As described in the introduction to this paper, previous phenomenographic investigations have highlighted that the most critical aspect of variation in academics' understanding of university teaching (with academics the 'students' in this case) lies in the distinction between teacher-centred and student-centred ways of understanding the phenomenon. This has clarified that a key feature of teaching that may or may not be discerned by

teachers is the potential for variation in student experience of the same teaching and learning situation.

In the design of the course, I use contrast and generalisation, combined with separation and fusion as complementary strategies to encourage expanding awareness of the nature of teaching, with a particular focus on providing opportunities for participants to notice the potential for variation in student response to teaching.

### ***Examples of contrast and generalisation***

Course participants are asked to contrast their views of teaching with their views of learning, and to compare their own views with those of their peers and with those expressed in the literature. This is intended to draw their attention to different ways of understanding teaching, and the distinction between teaching and learning. This is attempted in multiple ways, through class presentations, exercises and discussions, reading of the literature and course assessment. My approach to providing opportunities for contrast and generalisation may be illustrated through the course assessment, which I outline below.

#### **Summary of assessment Entry 1**

Select a particular teaching situation that you are currently (or have recently been) involved in. With that situation in mind, please address the following questions:

1. What are your goals as a teacher? What are your goals for students' learning?
2. What do you actually *do* when you teach? What do you expect your students to do, as learners?
3. Why do you do things *that way* (that is, rather than some other way)? Why do you want students to do things that way?
4. How does what you do as a teacher reflect your goals for students' learning? (Please include *concrete examples* of how you think your goals are reflected in your teaching practice.)

The entry encourages *contrast* between the phenomenon of teaching and the phenomenon of learning, creating opportunities for participants to notice for themselves that learning is not a taken-for-granted outcome of teaching. Participants' description of their entries are then shared in class, creating an opportunity to notice variation in views of teaching (and learning) amongst colleagues, as an instance of *generalisation*. (Participants are asked to focus on a particular teaching situation in the entry, on the phenomenographic assumption that conceptions of teaching will be influenced by context.)

#### **Summary of assessment Entry 2**

For this entry, you are asked to provide a reflective narrative on different approaches to teaching and learning, based on interviews that you conduct with three of your *students* and three of your teaching *colleagues*. Ideally, the students and colleagues you



interview should be selected because they are teaching and learning in the same situation, or as similar a situation as possible.

**For students**, your interview questions should proceed along the following lines:

1. What sort of things do you do when learning (in the specified situation)? What are you trying to achieve?

2. Can you give me a concrete example of something you do?

*Follow-up questions:*

– Why do you do that?

– What are you hoping to achieve?

– Why do you do it that way?

– Could you have done it another way? How would that have been better or worse?

3. Can you give me another example?

**For colleagues**, the interview questions should be similar, but ask about teaching rather than learning.

**How to analyse the interviews:**

*Compare and contrast* each set of three interviews, looking for similarities and differences in how students learn and how colleagues teach in the specified situation.

*Relate* these different views and approaches to the literature on student learning that you have been reading in this course. *Critique* these different views and approaches in terms of the likely implications for students' learning outcomes.

Again, the entry encourages *contrast* by comparing the phenomenon of teaching with that of learning, in the focus on interviewing students *and* fellow teachers about what they do when learning and teaching, respectively. Participants are also asked to look separately at the implications for learning outcomes of students' approaches to learning and teachers' approaches to teaching, respectively. There are further opportunities for *generalisation* with respect to teaching, through explicit comparison of similarities and differences between colleagues' approaches to teaching. (There are also opportunities for generalisation of learning, but I will stay focused on the phenomenon of teaching in this article.)

### Summary of assessment Entry 3

This entry is designed to build on your previous two entries. The aim is to reflect further on your own approach to teaching, in the light of:

- what you wrote in Entry 1;
- the interviews you conducted with teaching colleagues for Entry 2; and
- recent readings on teachers' conceptions of and approaches to teaching and development as a teacher.

Summarise your Entry 1 as a brief description, in the same way that you summarised your notes on interviews with colleagues. Treat it in the third person, and summarise your entry as if it had been written by someone else. Add this summary to the three

summaries of interviews with your colleagues (from Entry 2) and reconsider the similarities and differences in the light of:

- the additional description you have added (i.e. the description of your own practice); and
- the additional reading you have done since Entry 2 on the different understandings of teaching and learning amongst *teachers*.

This entry places further emphasis on opportunities for *generalisation* in two ways: an explicit positioning of individuals' own understanding of teaching with respect to their fellow teachers' understandings; and with respect to the understandings that emerge in the literature on conceptions of teaching described earlier. There is also a *contrast* between considering colleagues' conceptions of teaching in the light of literature on students' learning (Entry 2) and then from a different perspective, that is, in the light of literature on teachers' teaching (Entry 3).

### ***Examples of separation and fusion***

The description of course elements has so far focused on the use of contrast and generalisation, rather than separation and fusion, to encourage conceptual development amongst academics in the course. While opportunities for separation of different features of teaching are likely to arise spontaneously with opportunities for generalisation, in that the different conceptions likely to be found amongst 3–4 teachers will be marked by awareness of different aspects of teaching, this does not provide an opportunity for *deliberate* variation of some aspects of teaching whilst holding other aspects invariant, which is the ideal form of separation. I introduced more deliberate opportunities for separation through class presentations, discussions and exercises. To illustrate, I will present three examples of in-class exercises/discussion triggers.

Based on the literature on conceptions of teaching, the most critical aspect of teaching that teachers need to discern in order to be able to experience a student-centred understanding of teaching is the potential for variation in student experience of the same teaching situation. Based on variation theory, participants have the greatest chance of discerning this aspect of teaching (i.e. how students experience it) if it is varied while other aspects of teaching remain invariant. One way in which I attempt to achieve this is through a discussion exercise in which participants are presented with extended quotes from interviews with two students describing what their lecturer does in lectures (taken from Prosser and Trigwell 1999, 60–63). Student A describes the lectures as focusing on theory, with the lecturer writing notes on the board for students to copy down. Student B describes the lectures as involving buzz sessions, with the lecturer spending a lot of time getting students to think about things and discuss why things happen. However, both students were attending the same series of lectures presented by the same lecturer. In this way, I attempt to present an example of teaching in which the teacher, and thus all aspects of what s/he is doing as a teacher, is invariant, while students' perception of the teaching varies.

In another example, I present the different responses of two students to the same two-sentence lecture extract, based on student recall of what they were thinking during that section of the lecture (from Marton and Booth 1997, 163). Here, not only is the teacher and their set of lectures held invariant, but also the specific teaching event, while students' response to the event varies.

Taking a somewhat different tack, in a third example, I present extended quotes from interviews with two teachers describing their reasons for introducing the same teaching strategy into lectures, that is, the introduction of problems for students to undertake during lectures (from McKenzie 2003, chap. 7). In this case, the teaching strategy is being held constant, but the teachers' intentions in implementing the strategy vary. One teacher, representing a teacher-centred perspective, decided to implement the strategy because 'it is just something that I could try' 'that I heard from (the education development unit)'. The teacher knew that the strategy was working because 'it gives them (students) a break and that must be good'. The other teacher, representing a student-centred perspective, decided to implement the strategy 'so if I lectured on something, then they (students) could understand it by trying to do the problem'. S/he knew it was working 'from students' feedback', they 'call me over, ask me questions about it'.

This focus on holding the teaching strategy invariant while highlighting variation in teachers' ways of thinking about the strategy comes out of recent research into academics' ways of understanding development as a teacher (Åkerlind 2003, 2007; McKenzie 2003). This research indicates that discernment of the need to develop a good repertoire of teaching methods and strategies as part of developing as a teacher, *without* an accompanying discernment of the need to focus on the implications of these strategies for student learning, is associated with a teacher-centred conception of teaching.

These three examples have focused on separation. A clear opportunity for fusion is presented at the end of the course through the final assessment entry. In this entry, participants are asked to rewrite their first entry, presenting their current ways of thinking about their goals for teaching and learning, how these goals are enacted in practice and why they do things that way. In this way, the final entry provides an opportunity for participants to bring together the disparate components of their learning during the course into a holistic learning outcome, in terms of a revised approach to teaching. At the same time, the entry also provides me with feedback on the success of the course in encouraging conceptual expansion, in particular through a comparison of the first and final assessment entries for each participant.

#### **Summary of assessment Entry 4 (final)**

A comparison of Entry 1 and 4 should show me what you have gained from this course. I will be looking for demonstration of your ability to:

- clearly articulate your own view of good teaching and learning in your field/teaching situation;
- compare and contrast your views with other ways of viewing teaching and learning amongst students, colleagues and the educational literature to which you have been introduced;
- reflect on and critique your own teaching; and
- express a complex understanding of the nature of university teaching and learning.

The kinds of conceptual development that I see as an outcome of the course rarely involve a holistic shift from teacher to student-centred perspectives on teaching and learning. After all, most teachers are capable of a range of approaches, depending on the setting. So, they

may be more student focused in postgraduate courses than undergraduate courses, or in later year undergraduate than first-year courses, or in tutorial than lecture settings, etc. (This is in line with phenomenographic epistemology, which posits human awareness as context sensitive.) A common development as an outcome of the course is an increase in the number of settings in which a student-centred perspective is experienced as appropriate. This reflects an expanded awareness, or problematising, of the role of students in their own learning across different educational settings.

What about when participants are already student-centred across a broad range of settings when they start the course? After all, you don't need to complete a postgraduate course to be able to envisage learning from the students' perspective. The most common outcome here is an increase in the complexity of the focus on students. For instance, a shift from a focus on the need to engage students in an active way in their learning to also being actively aware that this may not be enough to ensure the desired learning outcomes and that students may perceive opportunities for active learning differently. This reflects an expanded awareness of the role of students in their own learning within the same educational settings, often leading to an explicit focus on better monitoring of students' response to teaching.

## Conclusion

Postgraduate courses and other developmental programmes for university teachers frequently aim for conceptual development in academics' understanding of the nature of teaching and learning. However, epistemological assumptions as to the nature of a 'conception of teaching' and what 'conceptual development' means are rarely articulated. This paper problematises the idea of what conceptual development for university teachers can mean, and articulates a phenomenographic epistemology on conceptual development, illustrating the practical implications of this epistemology for the design of a postgraduate course in university teaching and learning. In the process, it articulates the theory underlying phenomenographic research in a way not previously done and contributes to the regrettably small number of papers articulating the implications of educational theory for the design of teaching development programmes. More such articulations are needed.

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