Aligning your philosophical ideals with your teaching and their learning.

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This session encourages you to take an introspective look at how well your beliefs about teaching and learning align with your classroom practices. This alignment is especially important to every first year tertiary educator, as it is in this first year that we challenge our students to value the philosophical underpinnings of our different subjects and it is here in this first year that we demonstrate to them how these underpinnings support our teaching ideals.

At global, national, and/or state levels educators are constantly challenged to improve the provision and delivery of teacher education (Parliament of Australia, 2005: Krause & Coates, 2008: Kuh, Cruce, Shoup, Kinzie & Gonyea, 2008). One way to address this challenge is to consider Bruner's premise that, "Teaching specific topics or skills without making clear their context in the broader fundamental structure of a field of knowledge is uneconomical" (1960, p. 31). By linking this work with first year of higher education research, which demonstrates that the first-year is a critical time to discourage the adoption of superficial approaches to learning and a prime time to encourage learners to engage with their discipline (Kift & Field, 2009), it becomes clear that improved teacher education will come from situating or contextualising fundamental teaching and discipline principles within the first-year of higher education curriculum. In 2011, higher education institutions need a clear focus on first year curriculum design and pedagogy, and on using sustainable measures to improve initial and ongoing student engagement, as advocated by Kift (2008) and Krause, Hartley, James and McInnis (2005). As educators, our challenge is to consider the social and cultural community of practice in which the teaching and the learning is embedded and to ensure that the first year curricula is delivered within rich learning environments (Yorke, 2006).

At La Trobe University direct research on how we address the needs of first-year students began with the project 'Connecting with education: The first year experience' (Masters, 2008). This work (see Donnison, Edwards, Itter, Martin and Yager, 2009), documents the systematic development of units specifically designed to overcome fragmentation of the curriculum and acknowledges the importance we at La Trobe place on engaging first-year university learners within 'activities and conditions likely to generate high quality learning', as discussed by the Australian Council for Educational Research [ACER] (2008, p. 1). Our work situates the learners by engaging and supporting them as they develop their student identity and includes opportunity for them to directly address beliefs about effective teaching and learning. Experiential learning opportunities enable them to confront how personal and colleagues' beliefs and attitudes align/or not with accepted teaching and learning styles. We realise that in expecting that our students are ready to engage in discussions that explore pedagogical approaches with philosophical underpinnings it is imperative that we are ready to articulate our own alignment of identity. We must lead by example and be explicit in demonstrations of our beliefs, and how these beliefs impact on our teaching.

Challenge 1 Alignment

1. Begin creation of a concept map by writing in the centre of a blank page a short description of your personal philosophy of teaching/learning.

For example: My personal philosophy centres around one key principle: that learning involves both thought and action in context. I therefore subscribe to learning theories that promote contextual/situated, negotiated building of knowledge, where beliefs and understandings are reinforced as vital to learner engagement and knowledge construction.

Added discussion: This personal philosophy and how it impacts on my teaching and curriculum design is frequently and openly discussed with approximately 270 first-year preservice teachers each year.

Challenge 2 Linking Philosophy and Content with Pedagogy

- 2. Select just one element that you consistently use in a subject that you teach 'x' (for my example this is how and why I use IWBs, you might use a set text or computer program etc.). Address the three following points each under a different heading on your concept map:
 - a. Why and how do you use 'x'?
 - b. To what extent is how you use 'x' reflective of your philosophical position, for example how does the content surrounding 'x' support your position?
 - c. Do you expect your students might perceive this differently?

Now link each of these to your philosophical statement.

For example: *a. Why:* Research reveals that universities are grappling with the transformations required "to cope with the challenges and opportunities posed by information and communication technologies [ICT]" (Breen, Lindsay, Jenkins, & Smith, 2001, p. 95) and that IWBs are just one aspect of this challenge. As discussed in Campbell and Martin (2010, p. 69), 'IWBs ... are large touch-sensitive boards connected to a digital projector and to a computer'. The increase in access to IWBs in schools creates the expectation that future teachers will be well versed in providing an efficient, effective and seamless integration of IWB technology into lessons across the curriculum.

b. How: In semester one the first-year pre-service teachers are introduced to IWB technology in ICT. In semester two, in Mathematics Education [EDU1WM], they further develop their understandings when as a part of class presentations they action the technology within carefully planned contexts and connect this actioning with pedagogical discussions.

Added discussion: According to Brady and Kennedy (2010, p. 54) 'the way students learn is as important as what they learn ... learnings are multiple, however singly focused the intention' (2010, p. 150). This wider focus must be kept in mind when arranging content, particularly important in first-year tertiary education when we are establishing foundations and leading by example. When integrating IWB technology into my classes I realised a need to address: how I would use the boards for mathematics education; how the learning involved would be sequenced; and what I needed to consider in terms of the foci of the board? I knew that IWBs require a fair investment of time and a fair degree of training and independent exploration. In the mathematics education classes at La Trobe, where each first-year preservice teacher conducts an individual 15-minute presentation, pre-service teachers are supported pre-presentation through clear direction and free time with the IWBs. Depending on their topic, they then use the IWB to connect with Government curriculum documentation and or mathematically based web sites, access research data, flip charts, power point presentations and a variety of other web addresses. They also use IWBs to demonstrate how mathematical problems are solved and to provide examples of common misconceptions etc.

As we use the IWBs we discuss the faster pace they offer in numeracy lessons. We discuss how as users we can quickly flip between screens as we demonstrate different aspects of the one algorithm. We also discuss the impact this quicker pace can have on both learners and teachers. In terms of it limiting a learner's opportunity to respond to questions, or their ability to discuss uncertainty and requiring a teacher to have sharp questioning skills to elicit understandings. In addition, by using the IWB, particularly in a whole class situation, the teacher's position is in charge of the learning. This positioning impacts on the learning environment through unspoken demonstrations of ownership. It separates learning from the actions in which it is embedded. We also discuss how these issues change when the IWB is used with small groups of students. Small collaborative groups offer a greater scope for the negotiation of meaning. Learning is slowed as every student has the chance to contribute and often the students themselves can be in charge of operating the board. While a small group scenario fits better with social learning there are still pedagogical implications, i.e. how proficient the student/s are in operating the IWB will impact on how engaging the tasks are.

c. This discursive approach reflects my philosophical values, for as the class uses the IWB discussions centre on how the interactive nature of the board engages peers, and the value of this engagement to the learners and to the teacher. In EDU1WM classes we engage in contextualised discussions that directly link the pedagogical approaches that support IWB with different styles of teaching and learning. Dialogue covers not just the spectrum of ways an IWB can be used in a mathematics class but also how to integrate IWB technology into teaching across the curriculum. I am confident that these discussions provide connections between the way we teach, what we believe, and what we value as educators.

Challenge 3 Using, defending and reflecting

- 3. Using responses to the previous two challenges, add depth and breadth to your concept map by:
 - *a.* Defending pedagogical teaching and learning implications when using 'x'.
 - b. Reflecting on the reason for using 'x', the way your students use 'x', what they learn in terms of is it just that they learn to use 'x' or are they also connecting how they use 'x' to broader learning-based issues.

For example: *a*. Pre-service teachers are directly challenged by peers and/or by myself during classes to include IWB activities in classes and to articulate what they consider to be the value of IWBs to their teaching style. They do this to contextualise the value of building class and or small group discussions around the activities on the IWB. They also discuss the relevance of the information and the reasoning behind presenting it in this way.

b. A key aim is to have pre-service teachers not only display technical competence with the IWBs and demonstrate ways to creatively capture the attention and imagination of class members but also to have them trial different questioning techniques throughout their presentations. Pre-service teachers often become particularly involved in discussing how beneficial the IWBs are in constructing and deconstructing mathematical equations and how this process can assist in negotiating understandings. This dual reflecting and defending focus enables consideration of how the learning is integrated into a subject, how it is sequenced, what the benefits are, and what if any are the hidden messages associated with the work.

Challenge 4 Expectations, Outcomes and Evaluation

4. To what extent does 'x' promote resourcefulness and agency? How could it/they be developed to do so?

In designing lessons around the IWBs first-year pre-service teachers have contextualised opportunity to consider Glover & Miller's (2001) three levels of whiteboard use. That:

- Teachers are able to draw upon a variety of ICT-based resources without disruption or loss of pace.
- Teachers can extend learning, using more engaging materials to explain concepts.
- Teachers can create new learning styles stimulated by interaction with IWB.

Because these issues are considered during specific teaching episodes pre-service teachers are well positioned to discuss not only the value of the resource/s to the learners but also the pedagogical implications associated with how the resources are employed. While not all of the first year pre-service teachers are educationally ready for the depth of some pedagogically focussed discussions they are aware that there is more to IWBs than whether or not the IWB is connected to a computer and ready to use.

Conclusion

Take time to consider your concept map. This map now provides the beginning of a diagrammatic account of your philosophical position and how well you demonstrate this to your students. The map demonstrates a relationship between theory and practice and begins a demonstration of how well you embed content knowledge into your practice. By turning thought into action we demonstrate skills that are often difficult to describe. By engaging in dialogue about our action we explore the learning through reflection-in-action (Smyth, 1987). It is my belief that the approach discussed here not only assists students to make sense of the practice they are involved in but it also enhances my professionalism.

Nuts and Bolts session outline

Presenter introduction + whole group discussion - Challenge 1. (5 minutes):

- Discuss the issue and have each participant write a sentence that demonstrates their beliefs about teaching and learning.
- Share this work.

Presenter - Challenge 2. (5 minutes):

- Outline why it is important to be clear in your philosophical positioning and how / if you clearly demonstrate this belief to your learners.
- Link philosophy and content with pedagogy.

Presenter + whole group discussion - Challenge 3. (5 mins):

• Consider the potential value of developing alignment within your own teaching in terms of enhancing the experience and success of first year students.

Presenter + whole group discussion – Challenge 4. (5 mins):

Draw together participants ideas – does being true to yourself assist in your teaching and encourage learning.

Presenter Conclusion (10 mins):

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