

## CERTIFICATION AS A SOTL PROCESS: SOME STEPS ALONG THE WAY

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### Biographical Note

Marian McCarthy was seconded full time from her post as lecturer in the Education Department, University College Cork (UCC) to work in Ionad Bairre, the Teaching and Learning Centre in UCC, which she co-founded in 2006. Marian has been teaching since 1977, having worked at second level for many years. She is coordinator of the Certificate, Diploma and Masters in Teaching and Learning in Higher Education. Marian's doctoral research is in the area of Teaching for Understanding and of approaches that facilitate the development of a Scholarship of Teaching and Learning within the university. She is particularly interested in the synergies between the work of Project Zero at the Harvard Graduate School of Education, with its focus on the student-centred approach of Multiple Intelligences and Teaching for Understanding, and those of the Carnegie Foundation for the Advancement of Teaching, with its focus on teaching as an integral part of scholarship and research. She welcomes feedback on this paper: [mmccarthy@education.ucc.ie](mailto:mmccarthy@education.ucc.ie).



### KEYWORDS

Scholarship of teaching and learning (SoTL); teaching for understanding (TfU); research, reflection, certification.

### ABSTRACT

Certificated Courses in Teaching and Learning in Higher Education at University College Cork (UCC), Ireland, provide opportunities for faculty to develop a culture of Scholarship of Teaching and Learning (SoTL). The Teaching and Learning Centre runs a Certificate, Diploma and Master's Programme which is grounded in a SoTL philosophy. Central to finding SoTL pathways here is the development of a Teaching for Understanding pedagogy and the use of Course Portfolio models to document, peer-review and assess learning. To date, 200 faculty have successfully completed one or more of these courses. The paper examines the Teaching for Understanding (TfU) framework as a useful pedagogical and disciplinary lens, designed to make teaching and student learning visible. It provides evidence from the Course Portfolio work of UCC faculty, across a range of disciplines, to support the claim that TfU facilitates a SoTL process.

### INTRODUCTION:

Much has been written on the meaning and complexities of SoTL since Boyer (1990) first introduced the term. I have also tried to clarify my own understanding of the SoTL concept (McCarthy, 2008a), particularly in the North American context. Here, I adopt the SoTL definition of McKinney and Jarvis (2009), who summarise it as *"the systematic reflection or study of teaching and learning made public"*. They suggest that the most important function of SoTL is to *"improve teaching and enhance student learning"*. In highlighting the multiple levels and forms of SoTL work, they indicate that one of these relates to transforming teaching and learning at the classroom level, where a SoTL approach *"can be used to help with course design or redesign as well as to develop from the process of course design or redesign"*. For my purposes, entering at the course design level is a useful starting point for staff who conduct research on their teaching and student learning for the first time. Most have responsibility for the teaching of at least part of a module; as such, in reflecting on their teaching, they can critique and redesign it at the planning stage and develop their teaching to focus on student learning from the start. Entering at the level of course design resonates with the TfU model (Wiske, 1998; Blythe, 1998; Hetland, 2002), which reviews teaching and learning at the creative level of its

planning, and with the Course Portfolio (Bernstein *et al*, 2006; Hutchings, 1998; Shulman, 1999) process, which also initiates reflection at the design stage of the course selected for reflection. These models also align with and support the professional development foci of SoTL with its orientation to ongoing inquiry and documentation.

### INTRODUCING TEACHING FOR UNDERSTANDING (TFU)

The TfU model emanates from the work of the *Project Zero Classroom* at the Harvard Graduate School of Education, directed by Gardner (1999), Perkins (1998) and others during a collaborative project between researchers and teachers in the 1990s.<sup>1</sup> TfU focuses on a performance view of understanding, whereby students come to understanding by doing, by active learning, rather than through the traditional, representational view of the transmission model. TfU is particularly useful in the context of university teaching and learning, since it provides a disciplinary as well as a pedagogic framework, which lecturers can use to critique and develop their teaching and enhance student learning. The Disciplinary Framework, which developed in tandem with the pedagogic one, focuses on four dimensions of understanding, which researchers and teachers at Harvard found were common across all disciplines, namely those of Knowledge, Methods, Purposes and Forms. These dimensions keep university teachers focused on questions that they would ask as experts in the field:

- What questions do experts ask? (**Knowledge**);
- How do experts find out? (**Methods**);
- Why do experts do what they do and how do they use what they know? (**Purposes**);
- How do experts communicate? What are the tools of the discipline? (**Forms**).

I have found that inviting colleagues on the certificated courses to identify first with these disciplinary ways of thinking and researching to be the most productive way of encouraging them to think about their teaching and student learning. It is a constructivist way of engaging them, of starting where they are and with their strengths. The challenge then is to get them to translate the above into what Shulman (1987) calls “*pedagogical content knowledge*” and to move from what Boyer (1990) named “*the scholarship of discovery*”, (*research in the traditional sense*) to “*the scholarship of teaching and learning*”, where lecturers make explicit and public their teaching on all its levels from conception of ideas to transformation of student learning.

The TfU research project also identified four pedagogic elements that define good teaching and promote student learning: namely **Generative Topics, Understanding Goals, Performances of Understanding and Ongoing Assessment**. The key questions that lecturers might ask themselves in this context are:

- What is to be taught? (Generative Topics: rich themes, topics or burning questions, the big ideas of the field that provide enough depth and variety of perspective to help students develop significant understandings).
- What do I want my students to understand about this generative topic? (Understanding Goals: the explicit statements or questions, the target attainments or outcomes envisaged, that are made public and visible to students and actively used in instruction).
- What might students do to develop and demonstrate their understanding?

<sup>1</sup> For a summary see McCarthy 2008b.

(Performances of Understanding: activities that demonstrate and advance students’ understanding, by requiring them to use what they know in new ways, in the light of the goals defined).

- How will I know what my students understand? (Ongoing Assessment: the process of continuous, cumulative feedback which students receive about their performances, so that they know how they are progressing to the goals).

Ultimately, the dual focus of the TfU process, providing disciplinary and pedagogical lenses, opens a gateway to SoTL, since it scaffolds the teacher’s reflection about the discipline and the teaching of it; these are two completely distinct functions, the latter of which is seldom given parity in the research stakes. What is key in embedding SoTL as part of third- level culture is the development of a community of practice among staff. My contention is that TfU facilitates this process, since it provides teachers in further and higher education with a grammar to revisit their disciplines and their teaching of them so that they can share their thinking and begin to speak the language of student learning.

### TFU AS A SoTL PROCESS – WHAT’S THE EVIDENCE?

As part of the final reflective entry of their course portfolios, participants are asked to respond to some key questions including the following:

1. What have you learned as a researcher of teaching and learning from documenting this course?
2. How has the TfU framework helped you to critique the course?
3. What picture of student understanding emerges from your course?
4. What have you learned about SoTL and how does that impact on your teaching of this course?

I have conducted a thematic analysis of the responses to these questions over the past three years. The current proceedings permit only a brief overview of emerging themes to elucidate TfU and SoTL perspectives. For this reason, I will let the following excerpts speak for themselves, selecting some to represent each of the four colleges at UCC, and then draw out some key points in a summative commentary on each:

*“In the TfU framework... the conscious goal of the teacher is to stimulate deep learning and to consider how best to present surface material so as to facilitate that deep learning. This requires us to think about the teaching process in a different way – as a whole, rather than the sum of its parts; and to think not only about the subject as a whole, but also about the subject and the teaching of it as one whole. Rather than ‘covering’ all the topics in the subject in preparation for the exam, the focus is on integrating the teaching/learning process with ‘uncovering’ the subject so that the particular is seen as a component of the whole. Since teaching for deep understanding entails the teachers themselves examining their subjects for deep understanding, the teaching process must be one of continual inquiry and revision by the teacher, as well as by students.”* (Lecturer A, College of Business and Law).

Several themes emerge above: TfU is seen as a reflective lens, allowing the lecturer to stand back and relate the part to the whole; it is cast as an ongoing process of inquiry and revision that mirrors

the learning of the students and puts the teacher in the role of learner. Another theme points to the dynamic, relational nature of the elements of TfU, which highlight the coherent nature of teaching, of the part in relation to the whole. A third theme portrays TfU as a way of facilitating the movement from surface to deep learning, from 'coverage' to 'integration'. The following quotation reiterates this theme and identifies a fourth: that of teaching students how to learn:

*"We need to provide our students with a deep foundation in the core topics and methodologies of their engineering field (the "generative topics") so that they can continue to learn and adapt throughout a career span of 40 years or more. On the other hand, we also have to provide enough specific or current knowledge so that our graduates can "hit the ground running" and be of immediate value to their prospective employers. In a world where scientific and engineering knowledge doubles every ten years (National Academy of Engineering, 2005), the TfU framework offers a new methodology for developing understanding-focused courses, in this rapidly changing environment."* (Lecturer B: College of Science and Engineering).

Another theme relates to the disciplinary as well as the pedagogic nature of TfU, and the power of the former to analyse teaching, providing a language with which to examine practice:

*"I feel that the Dimensions of Understanding were especially helpful in that they allowed me to systematically analyse what I was teaching and why I was teaching it. It also helped me to begin to develop a vocabulary to express what I am doing and this has allowed me to engage in meaningful conversations with colleagues. Upon studying and implementing the Dimensions of Understanding in my course design, I realised I had been paying far too much attention to the Content (Knowledge) Dimension, and had neglected to consider the role of the other dimensions."* (Lecturer C: College of Arts, Celtic Studies and Social Sciences).

A sixth theme relates to the TfU process as a method of inquiry, which gets at the 'gaps' in our teaching:

*"The application of a framework in analysing the course has brought to light 'gaps' in the delivery of the course. ... one of the most striking omissions is that of 'self' assessment. ... I have not explicitly focused enough on the students' own abilities to monitor and judge their performance. Clearly some self assessment takes place in group and class discussion, and indeed the students are asked to 'self assess' their own perception at the very outset of the course. However, to explicitly engage students in an ongoing process of reflecting on and monitoring their progress would surely deepen their understanding of the issues and move them closer to the Understanding Goals (UGs) for the course."* (Lecturer D: College of Medicine and Health).

These themes are reiterated throughout the portfolios. The one that makes the direct link to SoTL for most participants is that of TfU as a reflective lens which invites a questioning and accountability about teaching and student learning. This idea is again well captured in the following extract:

*"The crucial starting point is a reflection on the origins of our own understandings in order to foster a greater awareness of balanced routes to academic understanding for our students. .... the TfU process attempts to instil within educators a commitment to reflective practice; to reveal the need to critically look back before trying to move forward."* (Lecturer E: College of Science and Engineering).

The SoTL message is also identified in the theme of the teacher as learner:

*"When I began the certificate in teaching and learning, I will be honest and state that I had not thought a great deal about the link between teaching and student learning. I guess the traditional approach often believed is that lecturers teach and that it is up to the students whether or not they want to learn. Little thought is put into the scholarship of teaching and learning, that is approaching teaching and learning from the perspective with which one would approach research or publishing."* (Lecturer F: College of Arts, Celtic Studies and Social Sciences).

This message is reiterated in the following quotation where SoTL is seen as a way of transforming teaching and as a method of ongoing investigation into student learning (with TfU as one way of scaffolding that investigation):

*"One aspect that I started to see was my teaching from a student's perspective ... Being a student (on this course) learning about teaching methods, I had different kinds of experiences... During my lectures, I now involve my students more, before I tell them something, I ask them to think about it, I also give them more formal and informal feedback ... by becoming a scholar of teaching ... I learned to critique my course, which will certainly help me to improve my teaching in the future."* (Lecturer G: College of Science and Engineering).

Finally, a key theme is the recognition of a SoTL approach as transformational, as turning teaching into learning:

*"SoTL provides the connection between the academic and the student. It demands the inclusion of research knowledge into teaching, as well as research into practice of that same teaching. It invites teachers to influence their students to become inquisitive and embark on a voyage of discovery, fostering a cycle of research, teaching and learning."* (Lecturer D: College of Medicine and Health).

## CONCLUSION

The final speaker above encapsulates the heart of the SoTL message: through documenting our teaching we come upon student learning and become focused on facilitating their journey. My claim at the November 2009 conference was that TfU enables a SoTL process for a number of reasons: In Wiske's words, *"it serves not only to orchestrate teaching subject matter to students in classrooms but to provide a structure for guiding professional development"* (1998, p. 85). It puts the focus squarely on student learning in its endorsement of understanding as creative performance – the latter has to be owned by the learner, based on his/her experience as part of the intellectual work in hand. TfU makes connections with the everyday world of the student, endorsing the scholarship of integration.

It also provides a grammar and language of practice that allows a SoTL community to grow. Finally, TfU is a method of inquiry, facilitating research into teaching and learning; again, Martha Stone Wiske and the research team who worked on this project over a six year period capture this aspect as follows:

*“The TfU framework that emerged ... is not a set of predetermined scenarios or a recipe for successful practice. It cannot be transmitted and implemented in a direct, linear way. Just as the educators who developed this framework had to create intellectually stimulating and personally engaging dialogue and relationships to foster their own understanding of these ideas, so will others who wish to understand TfU. They will have to conduct open-ended enquiry to construct their own understanding of this framework in relation to their personal practice and context” (1998, p. 84).*

The mission of the certificated programme in Teaching and Learning in Higher Education at UCC, therefore, is to make this journey possible.

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