Our regression model showed us that the significant predictors of success could be divided into two groups: mathematical background (LC level, LC points and diagnostic test results); and measures of student engagement (number of assignments submitted and number of visits to the MSC). Since attendance at the MSC is purely voluntary, the number of visits can be thought of as a measure of a student’s engagement and effort. Unlike studies carried out by Symonds (2008) and Kirby and McElroy (2003), our model did not include lecture and tutorial attendance as significant predictors of final grade. This does not mean that attendance at lectures or tutorials is unimportant. Recall from Table 1 that these variables are highly correlated with the number of assignments submitted and the number of visits to the MSC, and this may be the reason why the final model did not include them. It may be that the experience of attending a lecture or tutorial is a passive one for some students. The lecture group is very large and this makes it difficult for lecturers to foster active learning. On the other hand, working on an assignment or visiting the MSC requires the student to take responsibility for their own learning. This act of taking personal responsibility is vital in our opinion.

Our study leads us to believe that in order to identify at-risk students we need to look not only at the students’ past mathematical achievement but also at their level of engagement with the subject. The results also suggest that supports that foster active rather than passive learning are beneficial. We plan to carry out a further analysis of our data to refine our model and we are in the process of interviewing students in an effort to ascertain which supports help them the most.

REFERENCES


FORGING RESEARCH-TEACHING LINKAGES THROUGH ACTION RESEARCH: AN EXAMPLE OF FACILITATING THE DEVELOPMENT OF COMPETENCY IN CRITICAL REFLECTION

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Biographical Note

Catherine Lowry-O’Neill graduated with a BA and a DPhil from the University of Ulster at Coleraine (UUC). She lectured in French in UUC, the University of Limerick, and the University of Leeds before arriving in Waterford Institute of Technology (WIT) in 1997. Catherine was invited to join the team in the School of Education and Professional Development in 2005 and has subsequently graduated with an MA in Management in Education. She currently lectures on the MA in Learning and Teaching and her research interests include emotional intelligence and reflective practice.

KEYWORDS

Reflection; action research; integrative reflection; template.

ABSTRACT

Action research is an approach to enquiry that forges linkages between research and teaching, with each potentially informing the other in a responsive and creative cycle. This paper provides an overview of a pedagogic action research project which was undertaken in order to respond directly to learning needs expressed by a group of second year students on a Masters programme in Learning and Teaching.

An espoused aim of the MA programme is to facilitate the enhancement of the students’ competency in reflective practice. This paper outlines the process that took place when learners openly communicated some difficulties they had in this regard, in particular when faced with the challenge of writing their reflections in a manner that consistently demonstrated a capacity to be critical. It adumbrates the two specific actions that were taken within the context of the living theories approach to action research – the use of Socratic questioning and the development of a new approach to reflective writing – with a focus on the latter.

The living theories approach to action research begins with the question, “How do I improve my practice?” (Whitehead, 1989) and involves the practitioner seeking out ways in which to influence her own learning and that of others. By interacting with the students in a collaborative process, there is a possibility of creating new knowledge individually and collectively (Whitehead and McNiff, 2006). The outcomes of the project, including the effect of the pedagogic initiatives on student learning, and the development of a new framework for reflective writing - the ‘Integrative Reflection Template’ – are also presented, with the on - going nature of the process of enquiry made explicit.

INTRODUCTION

Reflection is undoubtedly a complex process (Dewey, 1933; Boud, 1985; Cowan, 1998). It requires, for instance, mental effort, critical self-analysis, and openness to the idea that one’s perceptions may be flawed or distorted. Nonetheless, its potential benefits in terms of nurturing the development of professionalism and expertise (Schon, 1984) has meant that the competency has become increasingly integrated into curricula in disciplines such as nurse education, business studies, and teacher education. Still, given the complexity of the approach, it is unsurprising that students may experience genuine challenge in developing their competencies in this regard.
This paper outlines an action research project that was undertaken with a group of fourteen students on The Reflective Practitioner 2 module of the MA in Learning and Teaching (MALIT) programme at Waterford Institute of Technology (WIT). These learners explained that they were committed to reflecting on their practice, and were convinced of the value of doing so, but that they had difficulty writing at the critical level as conceptualised by Hatton and Smith (2005). My suggestion to deal with this issue constructively and co-operatively using action research, and thereby forging links between research, teaching and learning was welcomed by the students. Ethical concerns such as open communication around the purpose and form of the research, informed consent, and respect for confidentiality were addressed with the group.

The paper is structured in line with the Living Theories approach to action research (Whitehead, 1989; McNiff, 2007) which involves engagement in a series of five processes.

1. I identify a concern when some of my educational values are denied in my practice
   A reflexive approach to learning on the part of both learner and teacher is listed as one of the seven tenets of student-centred learning (Lea et al, 2003). Since I espouse a student-centred approach, the lacuna expressed by the students as mentioned above instantly became an issue of concern for me to which I wished to respond. This responsiveness is in line with the concept of critically responsive teaching, “teaching which is guided by a strongly felt rationale but which in its methods and forms responds creatively to the needs and concerns raised by students” (Brookfield, 1990, p. 23). The impetus for this study thus emerged organically from the students who, by clearly voicing their concerns and needs, required me to explore the methods and forms I would choose in order to respond effectively. This led me to begin an enquiry around the question: “How do I improve how I facilitate students as they develop their competence in critical reflection and writing?”

2. I imagine a solution to that concern
   The task of imagining a solution to the issue of facilitating students in their competency in critical reflection led to the assessment that there were two core aspects to the issue: that of encouraging a honing of the skills of critical thinking; and that of fostering development of other competencies associated with critical reflection (Hatton and Smith, 1995; Brookfield, 1995). I decided, therefore, to use a two-pronged approach, each of which used questions as the central stimulus: the first involved the integration of Socratic Questioning Prompts (Paul, 1990) into classroom activity; the second envisaged the drawing up of a draft template specifically designed to encourage students to develop the discipline of reflecting on their experience and writing about it in a critical manner.

3. I act in the direction of the imagined solution
   The first action - the integration of Socratic Questioning Prompts into the classroom - was carried out by initially providing the students with a list of prompts such as:
   - What is your main point?
   - What are you assuming?
   - What are you implying by that? (Paul, 1990).
   An analysis of the questions by the group as a whole was followed by pair work, in which students took turns to pose and respond to questions from the list. This question/answer session took place on two occasions.

   The second action - the drawing up of a draft template - involved the introduction of a template which contained a series of questions, such as:
   - What assumptions can I identify?
   - How does theory inform my view?
   - Can I imagine the situation from another perspective?

   The template was conceived as a guide for students to use when writing in their journal. Subsequently, they brought their comments back to the group, allowing me to rework the template in light of their feedback and my own reflections. The template was also used as the basis of a classroom activity on one occasion.

   I myself engaged in a thorough re-evaluation of the existing models of reflection and committed myself to regular use of the template as it moved through various drafts until it developed into the Integrative Reflection Template (IRT). Also, for the duration of the project, I engaged in discussion and was regularly challenged by a critical friend.

4. I evaluate the outcome of the solution
   In evaluating the outcome of the solution, I centred my attention on the response of the student group. Their views in relation to the Socratic Questioning Prompts were sought by verbal exchange, both individually and as a group. The students were particularly enthusiastic, making comments such as: ‘I found myself thinking deeper’; ‘It was very effective’; ‘It helped me ask more probing questions’. All students indicated that they had found the prompts helpful.

   The comments on the template were sought in written form through questionnaires which were completed by ten students out of fourteen. Many offered invaluable critical comments as to how the template could be improved in its structure and form and particularly emphasised the need for an accompanying guide. There were significantly more comments on how helpful it was, for example, in providing a structure and facilitating an understanding of the link between theory and practice. One student definitively felt that s/he had developed the capacity to write at the critical level: ‘It pushes you to think deeply, critically reflect. You cannot answer the question using a surface approach – you have to delve’.

   I also took notes of my observation of students as they engaged in the activities described, remarking how they developed confidence and competence. My examination of these various sources of information, explored through my own reflections and discussions with my critical friend, led me to conclude that the solution had impacted positively on the group. There were, nonetheless, limitations: other actions may have been chosen that might have had more impact; I had the privileged position of working with a small group of articulate, relatively confident and communicative post-graduate students; and there was no gathering of examples of reflective writing before and after the interventions, constraining me to rely heavily on the students’ accounts of their experience. However, there was a 100% pass rate for the module.

5. I modify my practice, plans, and ideas in light of the evaluation
   Modification of my practice in terms of my teaching of this module includes:
   - Commitment to discussion with students on critical thinking and critical reflection at the beginning of the module;
   - Early gathering of an example of students’ reflective writing in order to
monitor development;
  • Early introduction to Socratic Questioning Prompts;
  • Presentation of the Integrative Reflection Template as a possible tool for critical reflection.

Modification of my plans includes:
  • The development of the requested accompanying guide to the IRT;
  • Seeking out a broader community of practitioners interested in reflective practice and/or action research.

Modification of my ideas in light of the evaluation includes:
  • A clearer awareness of how many assumptions I can still hold, and of the vital need for critical reflection on my own part;
  • A stronger realisation of the vital need for some form of triangulation in examining phenomena (provided for in this case by student feedback, my own reflections and observations, and the input of my critical friend);
  • A deeper appreciation for the non-analytical aspects of reflection.

CONCLUSION
This study indicates that the choice to be a critically responsive teacher, and use action research as an approach to address the needs and concerns of students, in this case allowed for their apprehensions in relation to critical reflection to be addressed to their expressed satisfaction; it also allowed them to successfully complete the module. At a more conceptual level, this approach can be seen to forge the links between research, teaching and learning. By closely involving students in the research process, the links between the three activities become clearer, and exciting possibilities for enhanced learning - and even creative output, as exemplified in the Integrative Reflection Template - emerge.

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Figure 1: The Bookmark (front and back)

REFERENCES


EXPLORING AN UNDERGRADUATE PUBLIC HEALTH LEARNING ENVIRONMENT THROUGH THE TEACHING FOR UNDERSTANDING (TFU) FRAMEWORK

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Biographical Note
Fiona qualified in medicine at Saint George’s Hospital Medical School, London, and completed postgraduate training in hospital medicine and general practice in the United Kingdom. In 1995 she obtained a Master’s degree in Health Services Management from the London School of Hygiene and Tropical Medicine. She has worked in developing and transitional countries including Peru, Angola and Macedonia, in her clinical capacity as well as in health service development, health promotion and research. Fiona is currently a lecturer in the Department of Epidemiology and Public Health in University College Cork (UCC), and works in General Practice in Cork City. She is director of the new undergraduate degree in Public Health and Health Promotion in UCC, involved in the programme’s development as well as teaching. Her current research interests include population health and undergraduate education and learning in Public Health.

KEYWORDS
TFU; public health; learning.

ABSTRACT
Background: The BSc Public Health and Health Promotion at University College Cork (UCC) aims to produce graduates who are passionate about their discipline. Teachers need to communicate this ‘passion’ to students, but it can be difficult to know whether this has been achieved. The TFU framework makes such an outcome explicit, through demonstrating student understanding and identifying students’ active engagement in learning.

Aim: To examine the learning environment of a first year undergraduate module in public health

Method: The TFU framework provided four dimensions for analysing module EH1005: Population Health:
1. Generative Topic
2. Understanding Goals
3. Performances of Understanding
4. Ongoing Assessment.

Results: The identifiable Generative Topic of EH1005 is “the wider determinants of health”. Five Understanding Goals clarify what students need to understand from the module: (1) factors determining health (2) health issues in the public domain (3) poverty as a health determinant (4) major population health issues and (5) the role of health interventions. Although Ongoing Assessment was mainly ‘teacher led’, it comprised different formats including informal class and group discussion, as well as formal oral and written assignments. Students could therefore Perform their Understanding across different contexts. The results of the Ongoing Assessments showed that most students reached the Understanding Goals for the module.

Conclusion: Applying the TFU framework to articulate the Generative Topic for EH1005, as well as identifying clear Understanding Goals, provides a means of making explicit what students need to understand in order to recognise what factors determine the health of populations. The different formats for Ongoing Assessment and contexts for Performing Understanding, show that EH1005