



## Leading practitioners stepwise through the murky waters of reflective practice

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In this paper, a case study methodology and an intervention, a Three-Step Reflective Framework and template, used as part of a qualitative research design is described. Seven participants, Masters of Education students, were asked to use a teaching and learning innovation, when preparing their electronic portfolios; a Three-Step Reflective Framework and template which was designed specifically for a multimedia design subject. The purpose of the intervention was to support the reflective writing of the participants when they prepared evidence for inclusion in an electronic portfolio. Initial findings indicate that participants found the intervention useful for guiding their reflective writing which was predominantly at three levels of reflection – Descriptive, Explanatory and Supported, and that the framework supported their reflective practice.

Keywords: e-portfolio, reflection, reflective practice, reflective framework

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### Introduction

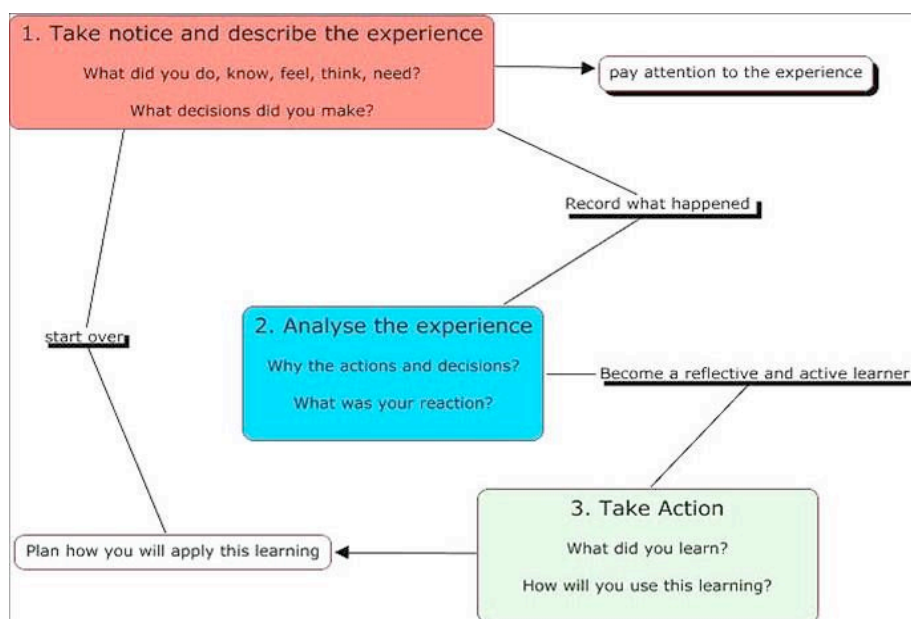
The study was conducted in 2007 to 2008 as part of the requirements for a Doctorate in Education, University of Wollongong, and the findings are currently being written up for the thesis. The aim of this qualitative research study was to investigate how an intervention, a Three-Step Reflective Framework and template might be used to help professionals develop skills of reflection, and also to help them create evidence which was suitable for inclusion in an electronic portfolio. The research questions and sub-questions are:

1. What type of reflective strategies support practitioners when they develop and present an electronic portfolio?
2. What sort of approaches do participants take when writing reflectively? Approaches to reflective writing is defined as both the nature of the reflection (*how* participants reflected) and the professional focus (*what* was written).
  - a. How does scaffolding provided by a facilitator assist reflection on professional practice?
  - b. What was the impact of engaging in reflective writing from a professional perspective?

Seven students enrolled in a multimedia design course in a Masters of Education programme at the University of Wollongong participated in the research. They included teachers, learning designers and information communication technology facilitators. The subject was ideal for the research because the lecturer was very interested in trialling a strategy to encourage reflective writing. In previous classes the lecturer had found it quite difficult to get students to practise reflection (Subject Lecturer interview, 2007). The Three-Step Reflective Framework and template provided structure for participants to support their reflective writing (Subject Lecturer interview, 2007), and as such was expected to improve the way in which participants reflected (Sung, Chang, Yu, & Chang, 2009; Jindal-Snape & Holmes, 2009; Husu, Toom & Patrikainen, 2008; Moon, 2004; Kilbane & Milman, 2003; Hatton & Smith, 1995). For the course assessment, participants had to design and create three learning objects relevant to their area of practice. They were required to write reflectively about the process over the course of the design and development of the learning objects. They did this in the form of four Written Reflection assignments, and these were included in an electronic portfolio along with the three multimedia Learning Objects they created, and the Supporting Statements which accompanied each object.

## Methodology

A qualitative research method was chosen as a way of investigating and interpreting the actions of subjects in a specific context (Mertens, 1998). Case study research was a fitting vehicle for exploration of the research questions, the focus of which aligned with processes within a specific subject of study. This approach has been recommended by Mertens (1998), as ideal for case study research. In other words, the focus of the case study research was the use of an intervention, the Three-Step Reflective Framework, designed to guide reflective writing. The participants who were affected by the intervention were able to use the strategy during their study of a post-graduate subject where reflective practice was endorsed. Therefore, in this research, an intervention, as opposed to a phenomenon was studied. The research study followed an approach supported by Yin (2009) as it was a description of an intervention, and the “real-life context” where it was used (p. 15). Also the research participants along with the subject lecturer represented a specific and unique group with clear parameters, that is, a bounded system (Stake, 2003). The Three-Step Reflective Framework and template was developed by the researcher to guide students’ writing in the four Written Reflection assignments, and as such became an intervention in a case study research design. Participants were asked to use the framework and template when preparing their Written Reflection assignments but this was not compulsory. Each of the four assignments was submitted by participants to the subject lecturer at staggered intervals and feedback was provided along with a grade for their reflective writing. The Three-Step Reflective Framework is based on frameworks developed by a number of researchers (McCollum, 2002, Rodgers, 2002, Hatton & Smith, 1995, Sparks-Langer, Simmons, Pasch & Colton, 1990, Kolb, 1984) and is designed to promote and guide reflection-on-action (Schon, 1983) through the use of directed questions and prompts arranged in three sequential steps. The Three-Step Reflective Framework is illustrated in Figure 1. The template which accompanies this framework contains prompting questions and also tips for writing reflectively and is illustrated in Figure 2 further on.



**Figure 1: Diagrammatic representation on the three-step reflective framework**

### Approach to data collection

Qualitative data was collected in the form of assignments and interviews, and descriptive data from surveys was also gathered to help build individual cases about the participants. This all helped to contribute to learning about the case and to find out how the intervention (Three-Step Reflective Framework) introduced to the participants contributed to reflective writing and practice. The majority of participants took part in a workshop about reflective writing at the start of the research. The survey was administered at that time, and over a period of 16 weeks, each of their four Written Reflection assignments, along with feedback on them provided by the subject lecturer was collected by the researcher. Interviews with each participant including the subject lecturer were conducted at the end of the research period. The practical way in which data was collected using the interventions is shown in Figure 2 which provides a snapshot of the type of prompting questions used in the reflective framework

template, and gives an indication of the way in which participants were guided to write, and the type of writing the researcher expected to collect.

**Step 1: Take notice & describe the experience - description of evidence**

1.1. **What do you do, know, feel, think, need?**  
Draw your attention to your recent activities, and record a basic description.

1.2 **What decisions did you make?**  
What steps or actions did you take, and decisions did you make to get to your current level of ability/knowledge?

**Prompts:**

- Comment on what you have been doing, feeling, thinking, etc...
- Comment on what you know, need, etc...
- Consider how this topic relates to your professional career.
- Comment on whether what you already know helped you.
- Comment on initial reactions, ideas from your reading, researching, teaching experiences or simulations, etc...
- Indicate what helped you to progress.

**Tips:** Use a variety of methods e.g. descriptive text, audio, pictures, bullet points, diagrams etc.

Figure 2: A section of the three-step reflective framework template showing Step One.

### Taxonomies used for analysis

As part of thematic and interpretative methods of qualitative analysis, several taxonomies were developed to use with the data to search for themes and patterns. As part of the analysis, the researcher wished to establish the levels and type of reflection (Descriptive, Explanatory, Supported, Contextual, Critical) exhibited by participants in their writing, as this would indicate the approaches they were taking for reflective writing. Also the researcher sought evidence for the effectiveness of the intervention (Three-Step Reflective Framework) as a method of scaffolding facilitated reflection on practice. Lastly, answers were sought to ascertain if reflective writing had any impact on reflective practice, that is, the professional perspective of the process. The five levels of reflection taxonomy used to examine the participants' reflective writing are depicted in Figure 3, and the findings ascertained during this process are the focus of this paper.

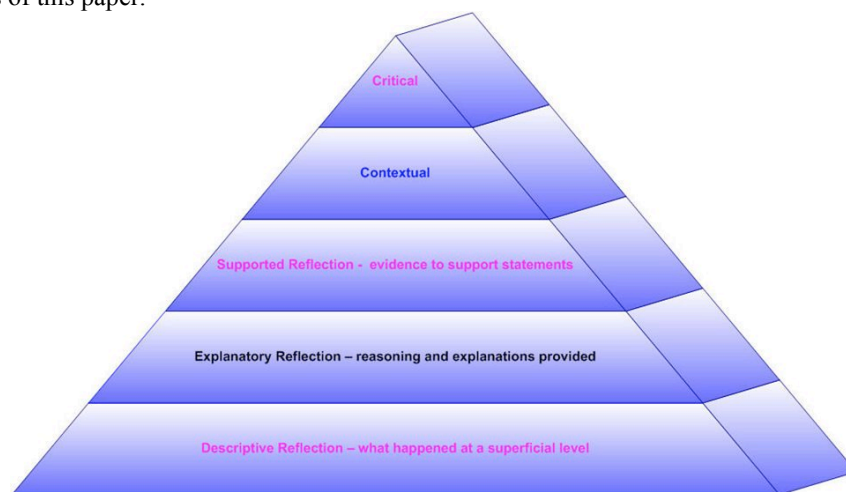


Figure 3: Five levels of reflection taxonomy used to investigate reflective writing in participants' written assignments

### Analysis

Findings have been obtained using both descriptive analytical techniques, to find out *how* participants wrote, that is, at which level of reflection and how frequently, as well as thematic and interpretative analysis to find out *what* they wrote, that is, to investigate the patterns and themes which emerged.

Additionally, interpretation of the patterns revealed in the data was undertaken using methods of tabulation and constant comparative analysis with multiple sets of data. For example, the frequency at which each participant wrote at each level of reflection was compared across four Written Reflection assignments as well as across the whole group. Also whether participants wrote at a particular level of reflection at each step of the Reflective Framework was examined.

## Results and discussion

Initial results are arranged under the main research question and only some of the approaches which participants took when writing reflectively will be explained. In the first instance the nature of their reflection, that is, how they wrote is outlined. Participants wrote primarily at Descriptive and Explanatory levels of reflection and this was in very general terms about their practice and about the design process. Few provided evidence of other perspectives (Supported reflection) or that they were engaging in Critical reflection and none demonstrated Contextual reflection (Figure 3). The following examples demonstrate some of the differences in participants' writing at three levels of reflection: Descriptive, Explanatory and Supported. Three sub-categories from the taxonomy are included, e.g. Noticing, Personal and Evidence mentioned and these were used to identify more in-depth analysis and information about the focus of their writing.

The greatest challenge in creating this learning object was in using more than one software such as PowerPoint presentation and Macromedia Flash Player, and the second challenge was in writing sentences with simple words to help students and public audience understanding the main concept of the learning object. (*Descriptive/Noticing.*) (Participant G, Written Reflection 4.)

I've learnt quite a bit about the technical aspects of putting web pages together (using Dreamweaver etc), but know I'm lacking on how to use interactivity in a purposeful and meaningful way (*Explanatory/personal*). (Participant D, Written Reflection 1.)

This is mainly because it is focussing on an area of knowledge and understanding that the learners will have minimal prior knowledge of and it will be more difficult for learners to form direct associations. (Colvin Clark, R. and Mayer R.E 2001) (*Supported/Evidence mentioned*). (Participant C, Written Reflection 2.)

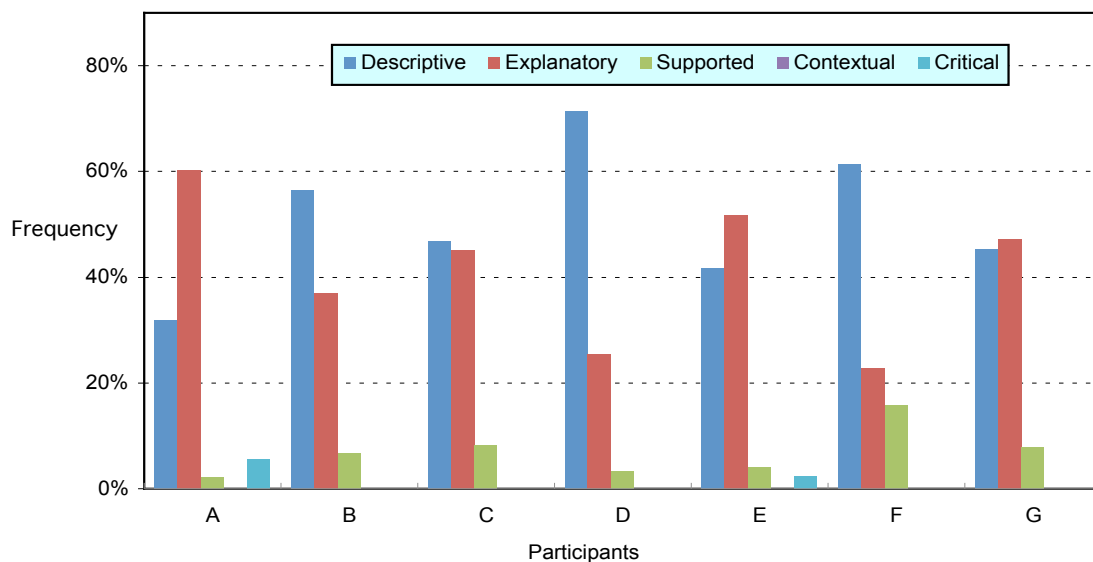


Figure 4: Frequency of reflective writing at five levels of reflection (n=7)

Participants were found to write more descriptively at Step One of the framework, as expected, however, they did not demonstrate more Explanatory reflection at Step Two or use Critical reflection in Step Three as hoped. Overall, participants said in interviews that they found the Three-step Reflective Framework useful in guiding their writing. From analysis of participants' writing, the framework appears to have encouraged professional learning and supported reflective practice, and was a vehicle for helping participants develop written reflective evidence which was integrated in an electronic portfolio.

## Summary

In brief, the Three-Step reflective Framework and template was used in a multimedia design subject at postgraduate level to guide students to write reflectively about their design processes and professional practice. Initial findings demonstrate that participants wrote at particular levels of reflection and found the framework useful. However the full implications of the findings from the research are yet to be ascertained and will be reported in the researcher's Doctorate thesis in 2010.

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