

## MAKING CONNECTIONS FOR MINDFUL INQUIRY: USING REFLECTIVE JOURNALS TO SCAFFOLD AN AUTOBIOGRAPHICAL APPROACH TO LEARNING IN ECONOMICS

Contributor: Daniel Blackshields, Department of Economics, University College Cork

### Biographical Note

Daniel Blackshields has been a lecturer at the Department of Economics in University College Cork since 1999. In 2009 he received an MA in Teaching and Learning in Higher Education for his thesis on the use of the Sherlock Holmes narratives as a teaching tool in Economics. He was nominated for a NAIRTL National Excellence in Teaching Award in 2009 and he is a member of the NAIRTL supported Irish Integrative Learning Project.



### KEYWORDS

Intentional learning; integrative learning; transfer learning; self-authorship; reflection; reflective writing; Teaching for Understanding.

### ABSTRACT

This research develops a narrative of incidents of intentional learning by students studying undergraduate economics as represented in their written reflective journals. The deliberate integration of learner reflection, reflective practice and reflective writing into the pedagogy may facilitate transfer learning (Sousa, 2006). Transfer has been identified as an important factor for how the brain learns. The more connections that learners can make in their learning the more likely it is that the sense and meaning of learning will be appreciated and the more likely it is that new learning will be retained (Sousa, 2006). By supporting an autobiographical approach to learning in economics wherein learners individualise learning, connecting their experiences (past and present, academic and non-academic) a pedagogy that advances self-authorship on the part of the learner is encouraged and facilitated. Self-authorship is a central goal of higher education (Baxter Magolda and King, 2004). Students find associative learning in a manner that supports full transfer quite difficult. It is thus important for educators to bridge students' learning from one learning situation to another (Blanchette and Dunbar, 2002). Reflective journaling is introduced as a performance of understanding to scaffold this learning. Student reflective journaling can establish the sense of new learning for them, connect this learning to their existing learning networks and find the meaning in this learning for them. This research describes the design, enactment and results of the development of reflective journaling as an assessment strategy in an undergraduate Bachelor of Arts module in economics in University College, Cork.

### INTRODUCTION

This research reports on an assessment strategy designed to scaffold mindful inquiry by students through an autobiographical reflection on their problem-solving processes with economics. Integrative learning is at the heart of this assessment strategy as students are encouraged and enabled to draw together their past, present and future experiences and connect their identity with their learning.

### THE IMPORTANCE OF STUDENT SELF-AUTHORSHIP

Foreshadowing constructivist thought Magritte said of *La Condition Humaine* (Figure 1) that we "see [the world] outside ourselves, yet all we have of it is a representation inside ourselves" (cited in Gablik, 2003, p. 87).

**Figure 1: *La Condition Humaine***

[Source <http://www.stanford.edu/dept/DLCL/research/workgroups/aesthetics.html>].



Contemplation of this work drew me gradually from situating learning in authority to recognising **deep learning** as situated in the **experience** of the **learner**. I came to recognise that educators must be aware of this, and develop strategies that enable learners to become “critically aware of [their] ... own composing of reality” (Parks, 2000, p. 6, cited in Baxter Magolda, 2004a, p. xviii).

Kegan (2004) calls the composition of one’s own world **Self-authorship**, defined as “internally co-ordinating beliefs, values and interpersonal loyalties” (cited in Baxter Magolda, 2004a, p. xviii). Baxter Magolda (2000b, p. 6)<sup>1</sup> argues that this is a central goal of higher education to enable **effective citizenship**. Self-authorship requires a capacity for intentional learning wherein learners are self-aware and purposeful about *their* learning (Huber and Hutchings, 2005, p. 8). Such learning is integrative in nature with learners making meaningful connections between seemingly disparate information, drawing on a variety of expertise and experience to derive considered judgments and transferring learning between experiences (Baxter Magolda, 2004b, p. 5).

Educators have a crucial role in fostering intentional learning – the habits and habitats of integrative learning (Hutchings, 2005) - through pedagogical design. The *Teaching for Understanding Framework (TfU)* is a pedagogical tool enabling educators design pedagogies to help learners to develop “*deep and flexible practice*” (McCarthy 2008, p. 102; Blythe *et al*, 1998). TfU has a performance perspective of understanding. A key component of this is *ongoing assessment* (Hetland, 1997, p. 24). One form of such assessment is *reflection* by learners on their learning (*ibid*, p. 77). Reflection can scaffold intentional learning by *individualising* learning engendering an *autobiographical approach* to learning (Moon, 1999a, 1999b, 2007). Researchers focusing on the functioning of the brain, have identified such associative learning as fundamental to the development of the brain’s learning capacity (Jensen, 2000; Sousa, 2006). Frank (2007) argues for the importance of transferring learning of economics taught in the classroom to students’ lives.

<sup>1</sup> Effective citizenship is defined as coherent and ethical action for one’s own good and the good of society. In turn this requires cognitive maturity where citizens have the ability to interpret phenomena in their specific contexts, evaluate actions and make choices accordingly. Such ability requires an integrated identity and internal belief system guiding one’s choices and this requires a capacity for mutuality and mature interdependence (Baxter *et al*, 2004).

Blanchette and Dunbar (2002) suggest that students find associative learning difficult. Hence an educator’s role is to bridge students’ learning from one situation to another. Writing is one such bridge. Writing about one’s reflections allows one to capture experiences, thoughts, ideas and feelings allowing learners to “...*process and understand better what they know, don’t know, want to know – and how it all relates to them*” (Fulwiler, 1987, p. 13, cited in Brewer and Jozefowicz, 2006, p. 203). One form of reflective writing is the reflective journal: a reflective inventory of learning experiences. Therefore, as an assessment strategy, reflective writing may support students’ journeys to self-authorship.

### SCAFFOLDING STUDENT REFLECTION

In this research I documented incidents and impact of intentional learning reportedly experienced by students in an undergraduate economics course: *EC2107: Reasoning and Persuasion in Economics* in 2007/2008 at University College Cork. The through line of EC2107 is for students to reason effectively with economics in their public and private lives.

Students developed a reflective journal at three critical junctures throughout the course: twice after submitting assessment for their course portfolio, and once at the end of the course. Prompts were used to scaffold students’ writing directing them to reflect on their **metacognitive competencies** (Van Sickle, 1992) and to think about their learning through engagement with their portfolio assessment (see appendix 1).<sup>2</sup> This, I hoped, gave students a sense of **ownership** over their learning. The journal entries were assessed through a marking rubric I designed in terms of levels of reflective writing (Hatton and Smith, 1995) and the principles of integrative learning (Huber and Hutchings, 2004; Hutchings, 2005) (Appendix 2).

### EMERGING JOURNEYS OF SELF-AUTHORSHIP

**Figure 2: *La Tentative de l’Impossible*** [Source: [jigart.blogspot.com/2009/12/1926-1930-surrea](http://jigart.blogspot.com/2009/12/1926-1930-surrea)]

Considering the emergent findings of this research I am reminded of Magritte’s *La Tentative de*



*l’Impossible* (Figure 2). If we construct our representations of the world then we are, in a sense, artists developing our own learning. In this work, Magritte realised that the artist, through his art, brings the model to life through his powers of imagination. The model’s form is emergent from the artist’s imagination. If reflection is a means of transforming learning, and as learners begin to appreciate the role of their identity for one’s learning, then perhaps learners are an embodiment of Magritte’s artist, their identities emerging from their reflective imagination. However, learners

<sup>2</sup> For more on the importance of metacognition for deep learning see (Flavell, 1971; Chi *et al*, 1989; Van Sickle, 1992; Chi *et al*, 1994; Nickerson, 1994; Davidson and Sternberg, 1998; Otero, 1998 and Van Lehn, 1998).

are both artist and model, with our identities and learning evolving through time. From the incidents of intentional learning many students seem to be on the journey to self-authorship. As with *La Tentative de l'Impossible*, this transformation is emerging, not yet complete.

Some students reported a growing confidence in asserting their own values and sense of identity distinct from that of peers and authority figures:

*"...I feel I have more control, in the things I do or say or think. I seldom, yet, still occasionally get the urge to set my mind, maintaining unchangeable thoughts and feelings. This has improved greatly. I am now able to unlock these thought processes which thinking back may have been blurred and thus jeopardised my decision making at times. Although despite that, I still trust my instincts and have my own, independent point of view..." (RJ1FBAJ10).*

Some students might be said to be at the crossroads on their journey recognising the fallibility and contextual nature of the knowledge of others but not necessarily the fallibility of their own knowledge claims:

*"...I often tend to believe that just because someone might be better qualified than me in a certain area then they must be right. For example if I read something that I believe not to be true, I tend not to question it with the belief that, the author must know more than me. The same is true concerning lecturers, should a lecturer say something in class that I don't agree with, again I don't question it, even though he/she may be wrong.... I will no longer take the opinion of someone better qualified as myself at face value as it is possible that they could too be wrong and ask more questions" (RJ1MBAJ9).*

Other students did recognise a more maturing relationship with the claims of others, while recognising the fallibility of their own claims:

*"It is impossible to look at an argument as a blank canvas. When it comes to an argument, the way in which we are persuaded comes down to our background, our morals, our beliefs and our religion...often I would find it extremely difficult to accept the view points of others when I feel strongly about a subject. I do think there is room for improvement, when it comes to me being more open to others, and also to allow myself to engage differently with others who disagree with me or have conflicting opinions to my own" (RJ1FBAJ1).*

Some students explored the impact of other learning experiences on their knowledge claims with economics:

*"I am also studying psychology and this too gives many opportunities to develop analytical and critical skills. Whilst the subject matter is different, where in economics facts and figures serve as a framework for thinking, in psychology one is presented with scenarios and behaviours. I believe there is great similarity in how one approaches the process of gaining understanding and insight, I*

*am beginning to see a pattern and framework for thinking...the application of the techniques learned in both economics and psychology will enable me to be a good critical thinker" (RJ1FBAM6).*

*"...I found being interested in economics and music and having witnessed first hand the increase in concert prices over the past years a huge advantage in dealing with the article. My interests in economics helped in analysing these aspects of the article and being able to pinpoint areas Mr. Sabbagh failed to address such as the theory of supply and demand. Surprisingly I found my interest in music even more helpful as I was able to analyse the article as a sceptic of ticket touting from a fan of music's point of view, but understood their existence from an economist's perspective" (RJ1MBAS8).*

In some cases, students' reflections on their performances seemed to prompt the urge to accept responsibility for their beliefs and for crafting their identities:

*"The first thing that came to mind... was self-belief – that is what I would change. I would believe in myself more. In an odd way, I wish I knew then what I know now. I suppose it ultimately comes down to confidence in my ability to be objective. I initially felt rather uninformed, inexperienced or even overwhelmed, however, looking back, this was not entirely the case. I had a pool of information, whether from my seminars, previous experiences etc, I just was not aware of this at the time" (RJ1FBAJ3).*

Some students reported that it was the nature of the reflective journal that enabled them to explore their own learning:

*"Self-reflection has changed my opinion on my thinking process. The more I use it, the more I became aware of not only how much more I need to improve it, but it can also reassure me as to my strong points also" (RJ1MBAJ4).*

## CONCLUSION

By fostering and enabling reflexivity in their economics learning students understand more about themselves, their knowledge(s), their identities, their values, their relationships with others and, ultimately, the basis for their knowledge claims. Recognition of their role and responsibility for their own learning emerges and this is a transformative experience. Students develop a deeper understanding of economics as *"the ordinary business of life"* (Marshall, 1920, Book 1.I.1). Furthermore such incidents of deep learning may not 'merely' help students to understand problem-solving with economics, but rather help them to place economics education in the context of their overall development, and this I believe is the essence of self-authorship.

## REFERENCES

- Baxter Magolda, M.B. (2004a). "Preface", in *Learning Partnerships: Theory and Models of Practice to Educate for Self-Authorship*, eds M.B. Baxter Magolda and P.M. King Serling. Virginia: Stylus Publishing LLC. pp. xvii-xxvi.
- Baxter Magolda, M.B. (2004b). "Self-authorship as the Common Goal of 21<sup>st</sup> Century Education" in *Learning Partnerships: Theory and Models of Practice to Educate for Self-authorship*, eds M.B. Baxter Magolda and P.M. King. Serling, Virginia: Stylus Publishing LLC. pp. 1-36.
- Blanchette, I., and Dunbar, K. (2002). "Representational Change and Analogy: How Analogical

- Inferences Alter Target Representations", *Journal of Experimental Psychology: Learning, Memory, and Cognition*, vol. 28, pp. 672-685.
- Brewer, S. and Jozefowicz, J. (2006). "Making Economic Principles Personal: Student Journals and Reflection Papers", *Journal of Economic Education*, vol. 37, no. 2, pp. 202-16.
- Blythe, T. et al (1998). *The Teaching for Understanding Guide*. San Francisco: Jossey-Bass.
- Chi, M.T.H., De Leeuw, N., Chiu, M.H. and La Vancher, C. (1994). "Eliciting Self-Explanations Improves Understanding", *Cognitive Science*, vol. 18, pp. 439-477.
- Chi, M.T.H., Bassok, M., Lewis, R., Reiman, P., and Glaser, R. (1989). "Self-Explanations: How Students Study and Use Examples in Learning to Solve Problems", *Cognitive Science*, vol. 13, pp. 145-182.
- Davidson, J.E. and Sternberg, R. (1998). "Smart Problem Solving: How Metacognition Helps", in *Metacognition In Educational Theory and Practice*, eds D. Hacker, J. Dunlosky and A. Graesser, Mahwah New Jersey: Lawrence Erlbaum Associates. pp. 47-68.
- Flavell, J.H. (1971). "First Discussant's Comments: What is Memory Development the Development of?", *Human Development* vol. 14, no. 4, pp. 272-8.
- Frank, R. (2007). *The Economic Naturalist: Why Economics Explains Almost Everything*. London: Virgin Books.
- Fulwiler, T. (1987). *The Journal Book*. Portsmouth, NH: Boynton/Cook.
- Gablik, S. (2003). *Magritte*. London: Thames and Hudson.
- Hatton, N., and Smith, D. (1995). "Reflection in Teacher Education – Towards Definition and Implementation", *Teaching and Teacher Education*, vol. 11, no. 1, pp. 33-49.
- Hetland, I. (1997). "Teaching for Understanding", in *The Project Zero Classroom: New Approaches to Thinking and Understanding*, eds S. Veenema, L. Hetland and K. Chalfen. Harvard: Project Zero Harvard University. pp. 11-60.
- Higgs, B., Ryan, T., and Kilcommins, S. (2009). "Making Connections: The Irish Integrative Project", in *Teaching and Learning in Higher Education: Challenging Assumptions: Proceedings of the National Academy for the Integration of Research, Teaching and Learning Second Annual Conference*, eds J. Murphy and B. Higgs. Cork: NAIRTL. pp. 177-183.
- Huber, M.T., and Hutchings, P. (2004). *Integrative Learning: Mapping the Terrain*. Washington, D.C.: Association of American Colleges and Universities.
- Hutchings, P. (2005). "Building Habits – and Habitats – of Integrative Learning". *Plenary Address: Network Conference on Integrative Learning*. The Association of American Colleges and Universities Denver, Colorado 20<sup>th</sup>-22<sup>nd</sup> October 2005. Denver, Colorado.
- Jensen, E. (2000). *Brain-Based Learning: The New Science of Teaching and Training*, San Diego: Corwin Press.
- Kegan, R. (1994). *In Over our Heads: The Mental Demands of Modern Life*. Cambridge: Harvard University Press.
- Magritte, R. (1928). *La Tentative de l'Impossible* [online]. Available from: [jigiart.blogspot.com/2009/12/1926-1930-surrea](http://jigiart.blogspot.com/2009/12/1926-1930-surrea) [accessed 18 February 2010].
- Magritte, R. (1933). *La Condition Humaine* [online]. Available from: [www.stanford.edu/.../workgroups/aesthetics.html](http://www.stanford.edu/.../workgroups/aesthetics.html) [accessed 18 February 2010].
- Marshall, A. (1920). *Principles of Economics* 8<sup>th</sup> ed. [online]. London: Macmillan. Available from: <http://www.econlib.org/library/marshall/marP.html> [accessed 4 August 2009].
- McCarthy, M. (2008). *The Scholarship of Teaching and Learning in Higher Education: An Overview*. Course Document, Masters in Teaching and Learning in Higher Education, Ionad Bairre: The Teaching and Learning Centre, University College Cork.

- Moon, J. (1999a). *Reflection in Learning and professional Development*. London: Kogan Page.
- Moon, J. (1999b). *Learning Journals: A Handbook for Academics, Students and Professional Development*. London: Kogan Page.
- Moon, J. (2007). "Getting the Measure of Reflection: Considering Matters of Definition and Depth". *Journal of Radiotherapy in Practice*, vol. 6, no. 4, pp. 191-200.
- Nickerson, R. (1994). "The Teaching of Thinking and Problem-Solving", in *Thinking and Problem-solving*, ed. R. Sternberg. San Diego: Academic Press. pp. 409-449.
- Otero, J. (1998). "Influence of Knowledge Activation and Context on Comprehension Monitoring of Science Texts", in *Metacognition in Educational Theory and Practice*, eds D. Hacker, J. Dunlosky and A. Graesser. New Jersey: Lawrence Erlbaum Associates. pp. 145-164.
- Sousa, D.A. (2006). *How the Brain Learns*. California: Corwin Press.
- Van Lehn, K. (1998). "Analogy Events: How Examples are Used During Problem-solving", *Cognitive Science*, vol. 22, no. 3, pp. 347-388.
- Van Sickle, R. (1992). "Learning to Reason with Economics", *Journal of Economic Education*, vol. 33, no. 4, pp. 377-86.

## APPENDIX 1: THE REFLECTIVE PROMPTS USED IN THE RESEARCH

### Reflective Prompts for Reflective Journal Entry 1

When considering these self-reflective questions, think of your work in terms of your assignment. The aim of this specific reflective exercise is to get you to consider how you approached the assignment on critical thinking as a critical thinker and what you have learned about yourself as a critical thinker coming from this assignment. This reflection aims to make you aware of the importance of metacognition in your approach to problem-solving.

1. Describe your process of addressing the problem set for you in assignment 1 (not your ideal image, but what you actually did).
2. Based on the above, how strong do you think your process for addressing the assignment was? Make sure that you can justify your assertion to yourself with evidence.
3. In light of your work on the assignment, in terms of being a critical thinker what do you think are your current strong points? (The aim here is to get to you to reflect on those elements of being a critical thinker that you can identify, have confidence in and ensure that you maintain and develop them). Make sure you provide evidence.
4. In terms of being a critical thinker what do you think are your weak points? (The aim here is to get to you to reflect on those elements of being a critical thinker that you can acknowledge might need development. This in turn will give you something concrete to aim for in terms of planning for such improvement). Make sure that you provide evidence.
5. In light of your reflection, in terms of your approach to your assignment and your self-assessed critical thinking skills coming from the assignment: What would you do differently if you had to complete this assignment again and why would you do this differently? What will you do to develop your strong points and work on your weak points and why do you think that this strategy will benefit you.

### Reflective Prompts for Reflective Journal Entry 2

1. What do you think is the most important part of the scientific problem-solving process? Why?
2. Do you recognise any aspects of the scientific problem-solving process in your own

problem-solving (academic or non-academic)?

3. In light of the idea of thinking about your thinking, what have you learned about your own problem-solving process from our work in the Sherlock Holmes workshop and assignment in terms of the way that you might now tackle the Robin Hood Business consultancy workshop that we explored before Christmas.
4. In terms of your development as an expert problem-solver in Economics, what do you think you are most likely to take with you from this workshop and assignment to your work in Economics? Why do you think this?

### **Reflective Prompts for Reflective Journal Entry 3**

This is the last official reflective journal of the academic year. I would like you to consider the year that you have just participated in - in terms of your preconceptions, perceptions, ideas and opinions about being an expert thinker in economics process. Be honest with yourself in your exploration as not only will this help you but it will help me to develop and deliver this course in the years ahead – you are the experts.

1. You have completed an academic year in a module entitled: Reasoning and Persuasion in Economics. In your opinion what have been the key aspects of learning to reason in economics (Van Sickle's types of knowledge – see attached) that you will bring with you from this module and why?
2. In terms of your development as an expert thinker in economics what do you think was the most successful aspect of the course for you and why do you think this? Please give evidence.
3. In terms of your development as an expert thinker what do you think was the least successful aspect of the course for you and why do you think this? Please give evidence.
4. Now that you have the experience that you have do you think that students of economics should be exposed to this type of module and why to you think as you do?
5. If you were to deliver a course on expert thinking in economics, given your experiences in this course, what one change would you make and why would you make this change?

**The marking rubric for the reflective journals is available from the author:  
d.blackshields@ucc.ie.**