

Interdisciplinary Curriculum Development: the redesign of an Economics module

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Introduction

This paper elucidates proposals for the redesign of a compulsory Certificate-level module within the BA Accounting and Finance degree, “Economics for Accountants”. Several issues raised by the teaching team and students initiated the redesign. The primary concern was the 100% exam assessment strategy in which half of the marks are allocated to multiple choice questions (MCQs) and the other half to essays. A review of exam scripts showed that performance in the essay section was very poor and many students were able to pass just by their performance in the MCQ section. A comparison with similar modules revealed this was the only one with a 100% exam assessment strategy.¹

From an educational standpoint, this asymmetric performance raised the concern that the module may have been encouraging surface learning, limiting opportunities for providing formal feedback and/or not adequately supporting the development of students’ economic literacy and communication skills. To address these issues, the teaching team successfully applied for a modification to the assessment strategy so as to include a coursework element as well as an exam.

My personal concern was that the design of the module did not emphasise the relevance of Economics to Accounting students. This may demotivate students and discourage deep learning, especially as the module is taught in the first semester when the students have not yet had a sound introduction to their specialist degree subjects.

Lecturers face many pedagogic challenges when teaching in such contexts, with pressures to make their teaching relevant as well as find an appropriate balance

¹ Cowan *et al.* (2004) Inglis and Dall’Alba (1998) argue that it is acceptable practice to inform curriculum design by practice elsewhere.

between practice and theory (Ottewill and Macfarlane, 2003; Cavigila Harris, 2001). Although Economics has been defined as ‘the root discipline of Accounting’ and its significance acknowledged, its relevance is not generally appreciated by students.² Half (51%) of the students surveyed for this study claimed they would not have studied Economics if they did not have to do so.

Given these concerns and challenges, the redesign is focused on the following aims:

- (i) To clarify and make explicit the module’s relevance to students’ academic, personal and professional lives in terms of competences, bearing in mind the degree’s aims and specifications and the goals of Economics education.
- (ii) To construct appropriate methods of formative and summative assessment that can foster deep learning and demonstrate the quality of learning.
- (iii) To identify appropriate subject matter and methods of delivering teaching and facilitating student learning that will support the learning needs of Certificate-level students and emphasise relevant applications of Economics.

Approach to Curriculum Development

Since teaching is undertaken by a cross-campus team and the demand for Economics teaching on the Accounting degree is a derived demand, it was decided to adopt a consultative and participatory approach that included the views of students, the Accounting subject leader and other lecturers.³ Lecturers were consulted via email and informal discussions. A desk study of competency frameworks in Accounting and Economics as well as the CIHE (2005) employability profiles based on QAA benchmark statements were reviewed to develop competences. Student input on the competences and other issues was collected by a questionnaire survey (see findings in Appendix 3).

² The American Accounting Association (1986) defines Economics as the root discipline of Accounting and argues that a study of micro and macroeconomics will provide a base for systematic professional insights into means of improving the economic efficiency and effectiveness of organisations. The International Federation of Accountants(IFAC) in its International Education Standard IES 2, Sec 19 and 25 states that Economics is a component of the organisational and business knowledge in which professional accountants operate. YET only the Chartered Institute of Management Accountants offers Economics in its syllabus.

³ Barnett (1994) argues that a curriculum is the current outcome of a negotiation of interests. p. 66. The role of stakeholders is key and those involved in the teaching and learning should contribute to its development to encourage ownership and harmonisation. In particular, Johnston et al. (2001) note that the demand for undergraduate economic education is largely a derived demand driven by courses such as Accounting, marketing and management and argue that the student body need to be listened to for views on both course content and method of delivery.

Conceptually, the project is guided by two frameworks. Hartman and Warren's (1994) curriculum design framework was considered relevant for this project because it embraces all elements relating to teaching, learning, knowledge and context, and also highlights the crucial role of context by focusing on student intake characteristics and the factors that determine the type of graduate a department wishes to produce. All other aspects of a curriculum then flow from the contextual factors.

The analysis of contextual factors which follows led to a choice of the competence-based approach, a variant of the systems approach, as a starting point for curriculum design. To inform decisions about educational goals, this approach draws from socially critical perspectives in its relevance to the real world and life, and from the academic discipline perspective because of the focus on economic literacy. Appendix I illustrates the concept and its link to learning and assessment.

The Accounting department's clear vocational orientation provides the proximate setting for curriculum development.⁴ While a vocational orientation may indicate preoccupation with the production of graduates to meet the needs of the labour market, the mission of the University also includes equipping students to achieve their potential and in their personal lives and in society. Increasingly, the aim of vocational and indeed Accounting education is to enable students to acquire the competences needed in their future professions (which may not necessarily be in Accounting) and in society as a whole' (Biemans *et al.*, 2004; Boyce *et al.* 2001; Boyce, 2004).

Competence-based education has gained popularity as a means of improving education, particularly as priorities in higher education have become more closely aligned to government policy. This is reflected in the impact of the widening participation and lifelong learning agenda which sees education being used to drive economic competitiveness and prepare citizens for living in complex contemporary societies. Naturally, these factors have led to a larger and increasingly diverse student body. At the Certificate level, such diversity poses challenges to lecturers who not only have to teach what represents knowledge in their disciplines but also have to assist students to make the transition to academic life and prepare them to deal with academic tasks (Warren, 2002; Rust, 2002).

The Accounting degree provides an interdisciplinary setting for the teaching of Economics. Korey (2002) argues that in such circumstances, course planning needs to begin by establishing a productive point of intersection between the disciplines. In this project, the intersection between Economics and Accounting is developed in

⁴ The Course Handbook for the BA Accounting and Finance degree states that the orientation of the Accounting department is 'vocational' with the expressed purpose of 'preparing students for employment, primarily in the Accounting profession'. Within the department, curricula are designed 'with the needs of the employers and professional bodies very much in mind'.p.4.

terms of what students can do and how the subjects interact to develop students' capabilities. Within the Accounting degree, the Economics module is designated to develop "Attribute 3" of the University's Undergraduate Scheme; this attribute relates to developing graduates who are creative and ethical.⁵ Appropriate module specific competences, that also take account of the purpose of Economics education, capture how this attribute is addressed. The purpose of economic education is to get students 'to think like economists'. This includes developing problem solving, decision making and creative skills (Siegfried *et al.*, 1991). For introductory modules, Economics educators propose that economic literacy is the appropriate goal (Becker, 2000; Salemi, 2005; Hansen, 2001; Hansen *et al.*, 2002).

Based on the intersection between the two disciplines, two competence sets were identified - economic literacy and broad business awareness.⁶ Economic literacy is essentially the ability to apply basic economic concepts to make decisions in professional and personal life as well as to interpret economic news and policies (Salemi, 2005).⁷ A focus on economic literacy indicates that what is considered knowledge in Economics encompasses knowing what and knowing how – *savoir* and *savoir faire*. Broad business awareness 'relates to the context in which accountants perform their services. They must be conversant with the overall realities of the business environment' (AICPA, 1999; CIHE, 2005). This combination ensures that the curriculum is not totally dominated by the needs of the profession, as advised by Klink and Boon (2002).

The competences provided a frame for organising and aligning the elements of the curriculum using Moon's (2005) course development model. They were taken as the structuring factors in Moon's model. This is a dynamic model that incorporates level descriptors in defining the learning outcomes and advocates for linking assessment criteria with either the assessment task or learning outcomes.

Module redesign

Based on the competences, the intended learning outcomes were rewritten at the Certificate level to clarify them, and also indicate the assessment criteria (see

⁵ This is important for Accounting students as Boyce *et al.* (2001) quote research which found that Accounting students are least likely to believe that an important goal of Accounting education is to increase self directed learning, to develop clear thinking capability or develop creative capacities.

⁶ Competences are used extensively in Accounting frameworks. Palmer *et al.* (2004) provides an overview of 8 competency frameworks in Accounting. In Economics, they are less used. Hansen (2001) introduced a set of 'proficiencies' in 1986 to represent what student can do with their Economics training to 'provide good value to prospective employers, society and themselves' p. 231.

⁷ These basic economic concepts can be compared to threshold concepts that lead to a transformed way of understanding or viewing something that may represent how people 'think' in a particular discipline. Meyer and Land (2005). They contribute to developing and integrating a learners' identity in knowledge, self and action domains.

Appendix 2). The alignment of the learning outcomes with the assessment task was tested by asking the question 'how would this be assessed?' at the end of the learning outcome statement (Jackson et al., 2003). Learning outcomes are representations of learning that set out what a student needs to achieve in order to pass a course (Moon, 2005). The revised outcomes represent the learning students will need to demonstrate, such as knowledge-building with words and concepts and problem-solving. These learning goals underpin the pedagogical approach adopted because they inform assessment design and choice of teaching and learning methods.

Educators agree that assessment of students plays a pivotal role in the process for learning and teaching because it drives students' learning and can dictate their understanding of curricula (Ramsden 1992; Brown *et al.*, 1997; Gibbs and Simpson 2004). This dominant role of assessment in student learning is due to the capacity of the information acquired, processed and transmitted by assessment activity to influence student behaviour. Walstad (2001a) notes that assessment activities that include grading and feedback, provide information for purposes that range from how a student develops competence in Economics to the quality of teaching.

Given its powerful role, assessment should be designed to encompass the learning goals represented in the learning outcomes if it is to promote deep learning. The team has changed the assessment strategy to 40% coursework and 60% exam. The most important advantage for learning is that this creates an opportunity to provide formal feedback during the course. In deciding on the specific tasks, criteria to be borne in mind from Biggs (1999) are that the assessment task needs to evaluate students' performance at the task as well as indicate students' understanding and construction of knowledge. Class size is also an important consideration as there are only 4 lecturers on the team for a large class.

The relative merits of various assessment methods in Economics have been considered by Walstad (2001), Simpson and Carroll (2001) and Hansen (2001), who identify case studies, review papers, position papers and research reports as useful for linking parts of the curriculum together rather than encouraging students to focus on isolated parts. Ramsden (1992) argues that this is desirable to encourage deep learning. In spite of their heavy resource requirements, case studies in particular have many advantages. Primarily, they act as a pedagogic tool to expose students to a range of scenarios they are likely to encounter in personal, professional and other roles; moreover, mini case studies can also be used in workshops (Volpe 2002; Hansen 2001). Exams may comprise essays or both essays and multiple choice questions. Buckles and Siegfried (2006) and Walstsd (2006) show that both can be used to promote deep learning in Economics, when properly constructed. To help students make the transition to academic life, assessments tasks will be supported by workshop sessions in which students are given an opportunity to engage with and explore assessment criteria as suggested by Rust (2002).

The team has decided that formative assessment will include a diagnostic element, given the diverse and ever changing background of Certificate-level students. Pre- and post-session questionnaires (a revised version of the one piloted in this study) will be administered to students to collect data on their conceptions of Economics, understanding of basic Economics concepts, prior learning of Economics, mathematical ability and language skills as well as part-time work. This will help determine how students have changed in terms of their knowledge and epistemological beliefs, and give a better understanding of how these factors and prior learning impact on learning outcomes. This will also provide information to help evaluate learning and teaching on the module.

This approach to curriculum development forces the lecturer to clarify her role in the learning process, because it seeks to promote a level of student autonomy. The teacher's perspective is largely one of apprenticeship and is consistent with Biggs' notion that learners construct their own learning through relevant learning activities. This emphasises the role of the teacher in creating learning environments that support the achievement of desired learning outcomes.⁸

Active engagement in the 'application of Economics' is seen as an effective way of accomplishing the type of learning that Economics education seeks to achieve and of fostering a deep approach to learning (Volpe 2002; Fels 1998). McAlpine (2004) argues that having opportunities to practise plays a pivotal role in a pedagogy that focuses on active learning, application of knowledge and problem solving. The module's combination of 1.5 hour lecture and 1.5 hour workshop will be used to set up and structure such opportunities in the workshops. The main aim of lectures will be to introduce threshold concepts and highlight connections with Accounting and real life, using examples.⁹

Since the assessment will be designed to incorporate a range of learning goals, the workshops will also mirror this approach and include strategies that help students to learn and apply Economics, involving rehearsal, reflection and conceptual schemas. They will include reflective exercises from the HE Academy sponsored project (FDTL 5) on threshold concepts, problem sets and developing schema using concept mapping. In writing workshops sessions, students will analyse the written work of others. From the questionnaire survey conducted, for this study, among

⁸ Pratt and Collins (2000) implement a teaching perspectives inventory that identifies 5 different orientations to knowledge, learning and the roles of an educator. With apprenticeship, effective teaching is planned and conducted from the 'learner's point of view'. This approach is useful for Level 1 Economics courses to transport learners from simpler ways of thinking to more sophisticated forms. The other perspectives are transmission, developmental, nurturing and social reform.

⁹ In particular, the first teaching session will be dedicated to engaging and inspiring students by discussing the purpose of the module, the student-tutor roles and the interface between Economics and Accounting in terms of roles of accountants, common subject matter and skills and knowledge development

Accounting undergraduates, on the importance of Economics skills to them (see Appendix 3), decision-making, system and problem analysis and solving were ranked highly. It was surprising to see that ability to understand economic ideas in the news or use economics concepts to describe costs and benefits were not considered as important as these are key aspects of economic literacy. Hence, students will benefit from the use of news clips in case studies and analysing problems using economic costs and benefits.

In the pedagogical approach advocated here, the role of content is to support and not lead the learning objectives. A review of QAA benchmark statements for both disciplines reveals parallels in the nature of the subject matter, knowledge and skills. In the survey, students identified Finance and Management Accounting as the areas of their degree in which they had found Economics most useful. Hence topics such as national income equilibrium will be dropped and coverage of national income accounting limited in favour of exchange rates, financial institutions and interest rates. Market structures will be taught to in order to address the implications of competitive and non-competitive industries for consumers and businesses. Content will be organised around the following themes: the internal business environment; the market system; businesses in industry; the macroeconomic framework; the national and international economy and problem-solving and decision-making techniques.

Conclusion

A competence-based approach to redesign involves reorganising and reframing the existing module as well as improving educational processes by focusing on knowledge application, rather than just knowledge acquisition, by emphasising opportunities to practise, formative assessment and feedback, to improve learning as well as teaching.

Identifying competences can be a time-consuming and difficult exercise because of variations in domain specifications across and within disciplines, as well as the range of other frameworks to be consulted. There is no absolute definition of competence and the concept 'lies in the eye of the beholder'. Boritz and Carnaghan (2003) identify six dimensions along which the term "competences" varies in Accounting. Nevertheless, competences embrace the interest of a range of stakeholders as well as epistemological beliefs. Successful implementation of the module will depend heavily on lecturers' input in the curriculum redesign. It focuses on 'evidence of learning' so may be quite resource intensive for large classes. Significantly, it will involve reorientating the teaching so as to foreground the connections between Economics and Accounting, and to maintain focus on the competences that the module is seeking to develop, rather than on subject matter.

In an interdisciplinary context this approach serves to give greater weight to students' learning needs as opposed to lecturer's teaching interests and objectives. It also provides students with information about what they can expect to learn and develops a common understanding between student and lecturers about the skills, knowledge and abilities they are expected to master as a result of their learning experiences. Since the objective of Accounting education is the holistic training of graduates, a competence approach to Certificate Level Economics can contribute to the intellectual development of an Accounting student and graduate, regardless of what career path he or she chooses.

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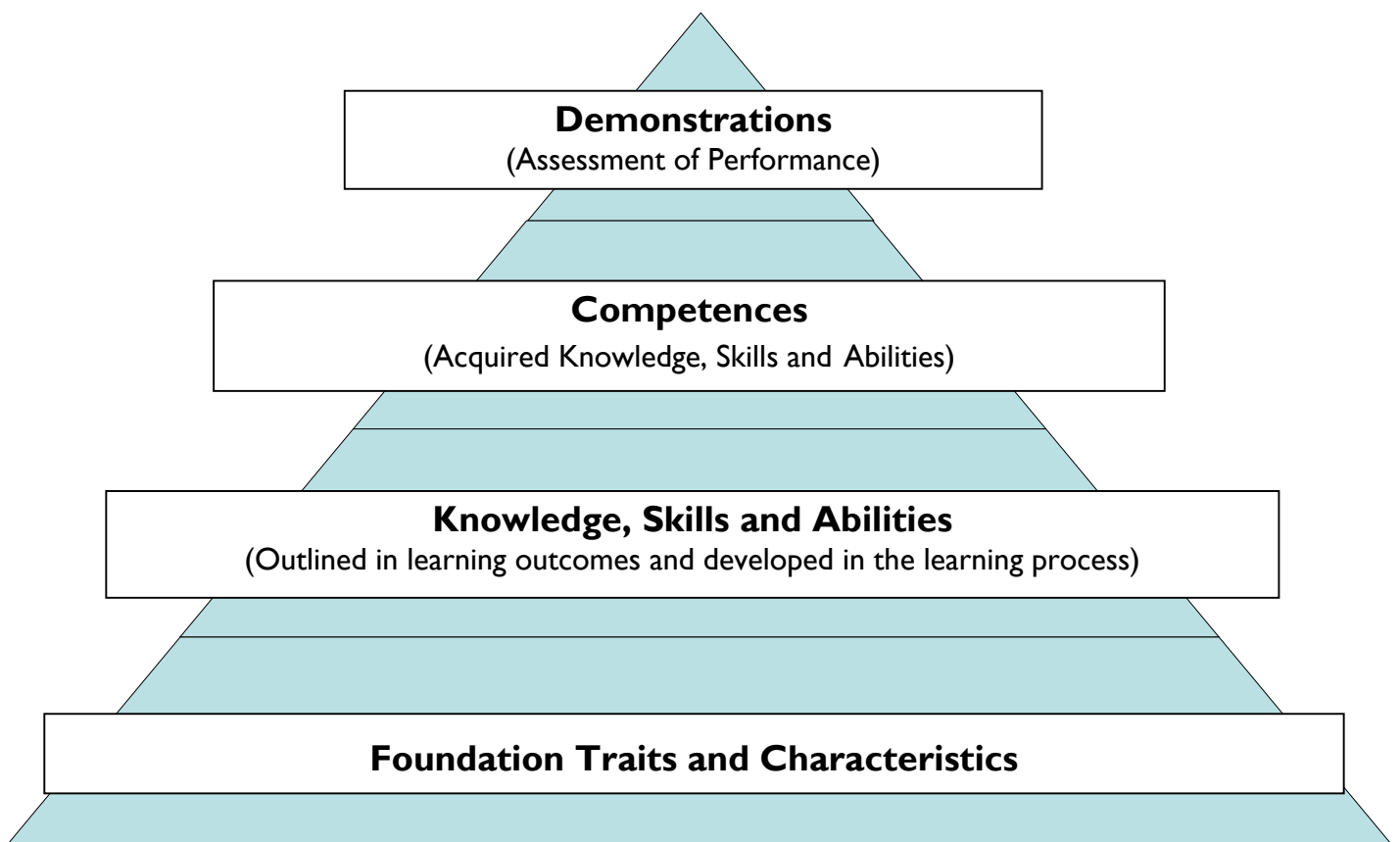
Biographical note

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The Concept of Competence

Alverno College defines competence as ‘ a characteristic of an individual rather than a skill or enumeration of skills’.(Toohey 1999). A competent student demonstrates and is committed to using certain abilities. In such a holistic definition, competences indicate attributes embedded in an individual and include knowledge, skills and attitudes. This figure illustrates a holistic definition of competences. Traits and characteristics provide the foundation for learning. Knowledge, skills and abilities are developed through learning experiences. Competences are the results of learning experiences. Competences are assessed when demonstrated. Holistic definitions of competence are compatible with a cognitive view of learning:- Adapted from NPEC (2000 p.8)



COMPARISON OF OLD AND NEW LEARNING OUTCOMES

Old learning outcomes	Redesigned outcomes indicating assessment criteria
<ol style="list-style-type: none"> 1. Appreciate the context in which business takes place (A3) 2. Understand the principles which underpin economies (A3) 3. Understand the principles which underpin the behaviour of economic agents (A3) 4. Appreciate distinctive schools of Economics thinking (A3) 5. Appreciate the link between theoretical principles and economic policy (A3) 6. Construct economic arguments through the retrieval of information and data. (A3) 	<p>LO1: demonstrate knowledge of core threshold concepts and basic economic principles and their objectives by identifying these concepts and principles and using them appropriately to describe and explain situations, solve problems and explain how and why that concept is suitable.</p> <p>LO2: demonstrate knowledge of identify economic factors that determine the internal and external environment of businesses by identifying these factors, explaining how the strategies and performance of businesses organisations may be affected by these factors.</p> <p>LO3: identify and link the steps in thinking through an economic problem and in explaining the effects of a change in economic conditions or a policy application.</p> <p>LO4: Apply economic concepts and techniques to solve problems, make decisions, recommend solutions and support arguments and viewpoints.</p> <p>LO5: demonstrate the ability to carry out self directed study by determining, locating, extracting and using necessary economic and other information from a range of sources.</p> <p>LO6: Be able to communicate economic ideas, concepts and information by using means of communication and language appropriate to the audience and the problems at issue.</p>

Ranking of Economics specific skills by Level 2 and Level 3 Accounting graduates

Q5. Below are some skills. Please indicate your views.

<i>An Accounting graduate should be able to:</i>	Overall ranking
a) Identify and analyse the key features of complex systems	3
b) Develop simple but relevant representations of real life systems and problems	2
c) Use relevant information and concepts to make sound arguments.	4
d) Collect, analyse and present economic information in writing,	5
e) Determine what key factors to use in making decisions and identify the factors that can limit decision-making.	1
f) Use economic concepts to describe costs and benefits	6
g) Recognise economic principles and ideas when used in articles in newspapers and magazines.	8
h) Draw and explain graphs and diagrams	7

* Results from Level 1 and Level 2 students were used because economic literacy relates to the ability to continue using knowledge and skills after studying Economics. These skills were adapted from the QAA Economics benchmark statement.