

“Beyond the boundaries: the unexplored territory of postgraduate distance education for multi-national professionals in project management”

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Abstract

This paper examines a current research study into the development of a pedagogical framework for distance education (DE) in postgraduate project management studies at an Australian university. As part of its strategy to deliver ‘transnational’ education, the University of Southern Queensland (USQ) offers a postgraduate DE program in project management to large cohorts including international students. Project management is representative of many professional disciplines in that it requires development of technical, strategic, organisational and leadership competencies, but strategies to foster these professional competencies in a DE environment require investigation.

Conceptual models by Goodyear (1999), Nunes and McPherson (2003) and Engstrom’s (2000) Activity Theory are being used for analysis of USQ as a case study to identify disturbances and contradictions in relation to project management education, postgraduate students’ educational needs, competency-based standards for management education and development of professional competencies, facilitating the development of a new theoretical framework and guidelines for a more effective program.

Key words

Project management, distance education, postgraduate education, professional education, theoretical framework, activity theory

INTRODUCTION

Often referred to as an ‘accidental profession’, project management has yet to create a theoretical framework that can be used for professional education and development. The purpose of this paper is to provide a brief literature review of conceptual analytical frameworks and to examine the major issues surrounding a research study being carried out by the author as part of doctoral studies to develop a theoretical framework for project management distance education at postgraduate level for multi-national students, and to suggest a way forward to complete the study. The setting of the research case study is a regional dual-mode university where technological developments and an increasing focus on multi-national markets are challenging its historical practices. Conflicts have arisen in the use of distance education for a vocationally-oriented profession and the study’s objectives are to:

- integrate existing pedagogical frameworks and Activity Theory to undertake an holistic investigation of the selected case study environment, and
- formulate a theoretical framework as a guide to the development of an effective learning environment for postgraduate project management distance education.

The role of theory

The primary focus of the study is the development of a theoretical framework to guide improvements to the distance education program. This is consistent with Sommerlad's (2003, p. 151) view that many research studies into post-compulsory education have employed 'simple frameworks, uninformed by educational research' and a 'continuing preoccupation with the individual learner' (p. 153) rather than the broader learning environment. Socially-situated theories of learning suggest that 'what one learns and how it is learned cannot be separated out from the groups one belongs to, nor from the wider location in the social structure' and that a 'theory of pedagogy, as distinct from a theory of learning, must encompass all the complex factors that influence the process of teaching and learning' (Sommerlad 2003, p. 157).

Building theories and models is not only 'respectable but extremely useful, perhaps even indispensable, in pursuing research on teaching' (Snow 1973, p. 77). Snow (1973, p. 90) suggests that models or frameworks should be developed through:

- a process of enrichment through which overly simple models are used as starting points to evolve into richer models,
- well-developed logical structures from other fields are chosen as the starting point, and
- a process of looping between model modifications and data and between model assumptions and deductions.

A theory may be defined as a 'symbolic construction designed to bring generalisable facts (or laws) into systematic connection' and it consists of a set of units (facts, concepts, variables) and a system of relationships among the

units (Snow 1973, p. 78). Most theory-building research is commenced with a preliminary conceptual framework to guide the research, based on a framework derived from previous research (Sowden & Keeves 1990). In this study, an adaptation of Goodyear's (1999) pedagogical model for open and distance education by Nunes and McPherson (2003) as illustrated in figure 1 has been adopted as a preliminary analytical framework and comprises:

- the pedagogical framework (consisting of philosophy, pedagogy, strategy and tactics),
- the educational setting (consisting of environment, tasks and student activities which lead to learning outcomes) and
- the organisational context.

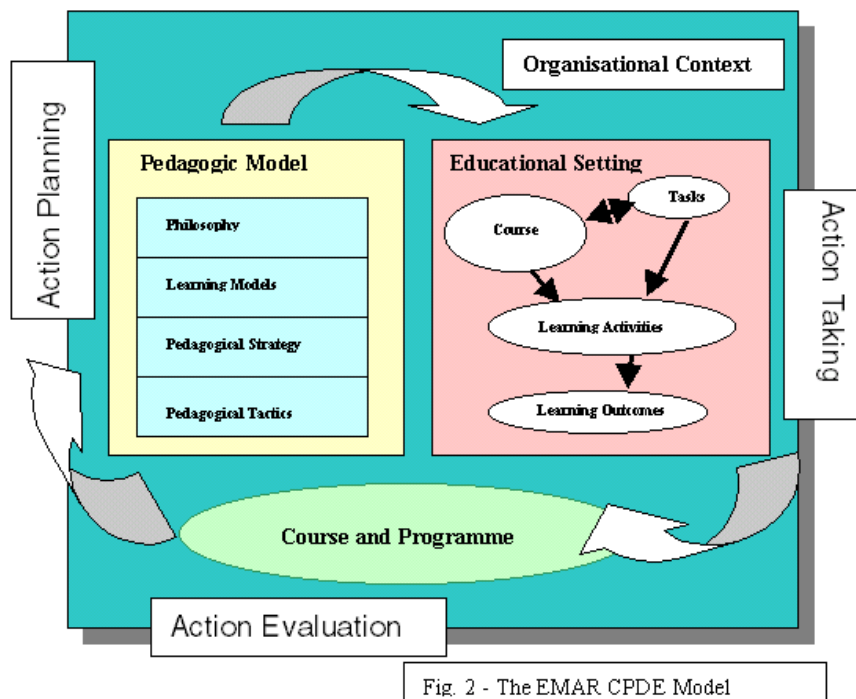


Fig. 2 - The EMAR CPDE Model

Figure 1: The Continuing Professional Distance Education model (Source: Goodyear 1999; Nunes & McPherson 2003)

Engestrom's 'activity theory' (1987) is used as a conceptual tool for studying developmental processes, and the basic unit of analysis is the 'activity', defined as something we are doing directed at an object (a plan or an idea) that can be transformed into an outcome (Jonassen 1994). The basis for choosing the

activity as the basic unit of analysis is that it includes the context for human interaction and, as most actions take place in a context and within a community, these need to be included in any analysis (Kuutti 1996). The 'structure of human activity' as indicated in figure 2 is a generic model of activity theory and will be used in this study to understand the interplay between academic staff, support staff and learners. Jonassen and Rohrer-Murphy (Jonassen 1994, p. 70) suggest a six-stage process for the use of activity theory as a framework for determining the components of the activity system ...':

- Clarify the purpose of the activity system
- Analyse the activity system
- Analyse the activity structure
- Analyse tools and mediators
- Analyse the context, and
- Analyse the activity system dynamics.

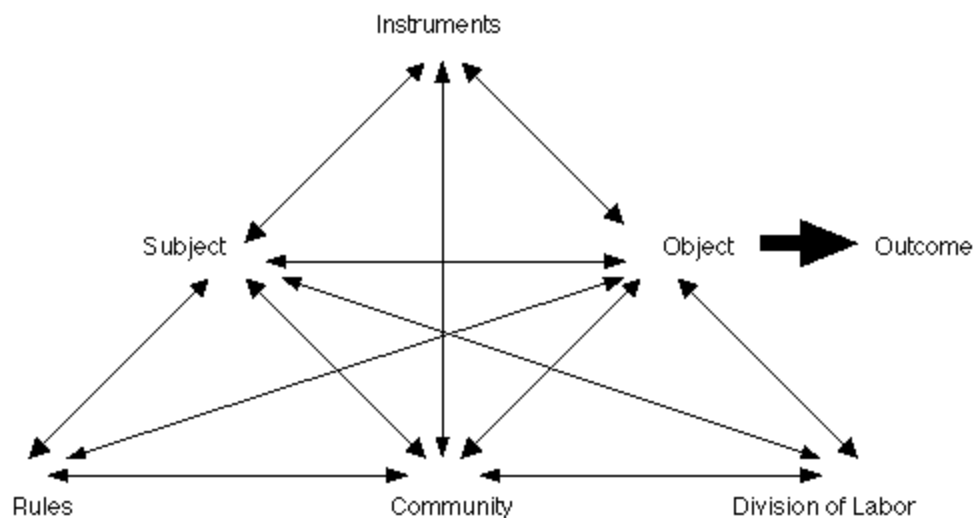


Figure 2: Components of an activity system

Characteristics and circumstances of the learner

In the USQ case study, student attributes are extremely diverse as over fifty percent of students are located offshore requiring consideration of the impact of differing nationalities, languages, cultures, ethnic groups, educational

backgrounds, age, learning styles and student perceptions of 'normal' academic behaviour.

Farivarsadri (2001) asserts that professional education's purpose 'goes much beyond the mere transformation of knowledge; it aims at implementing changes in the patterns of behaviour of a social group in the desired direction' (p. 2). He suggests that a university architectural education 'is different from training that is only giving knowledge and skills necessary to serve a profession' and that 'a holistic university education aims at addressing the whole person, developing the personalities of students in different dimensions, making them know how to acquire knowledge, to communicate, to be aware of his own values, and those of the other's as well' (p. 2). Figure 3 illustrates the interaction between the three major 'players' in the learning setting under study identified as:

- the individual learner (IL),
- the Learning Institution (LI) and
- the Learning Facilitator (LF).

It also identifies the relationships between them and the settings where those relationships interact. This is similar to Garrison's model for the Community of Inquiry (2003), but with different constructs:

- IL-LI - Individual Learner (IL) and the Learning Institution (LI) interact in the 'learning support setting' from enrolment through to graduation and beyond – the importance of the learner support setting becomes more critical in distance education (DE) mode and even more so for transnational education (TE).
- LI-LF - Learning Institution (LI) and Learning Facilitator (LF) interact in the 'pedagogical setting' of the framework where curriculum and academic processes and resources are determined – this is important in the context of DE as curriculum design, pre-production, availability and distribution of materials involve a much wider range of internal stakeholders than in face-to-face learning, and has implications for the 'learning setting' between LF/IL.
- LF-IL - Learning Facilitator (LF) and Individual Learner (IL) interact in the 'learning setting' – this is a heavily-researched area with numerous

frameworks for the wide range of concepts and theories that have been developed and espoused, although the role of a 'Learning Facilitator' is not well defined to date.

- The intersection of these three settings creates the broader 'learning experience' examined by Goodyear (1999) in his work on pedagogical frameworks

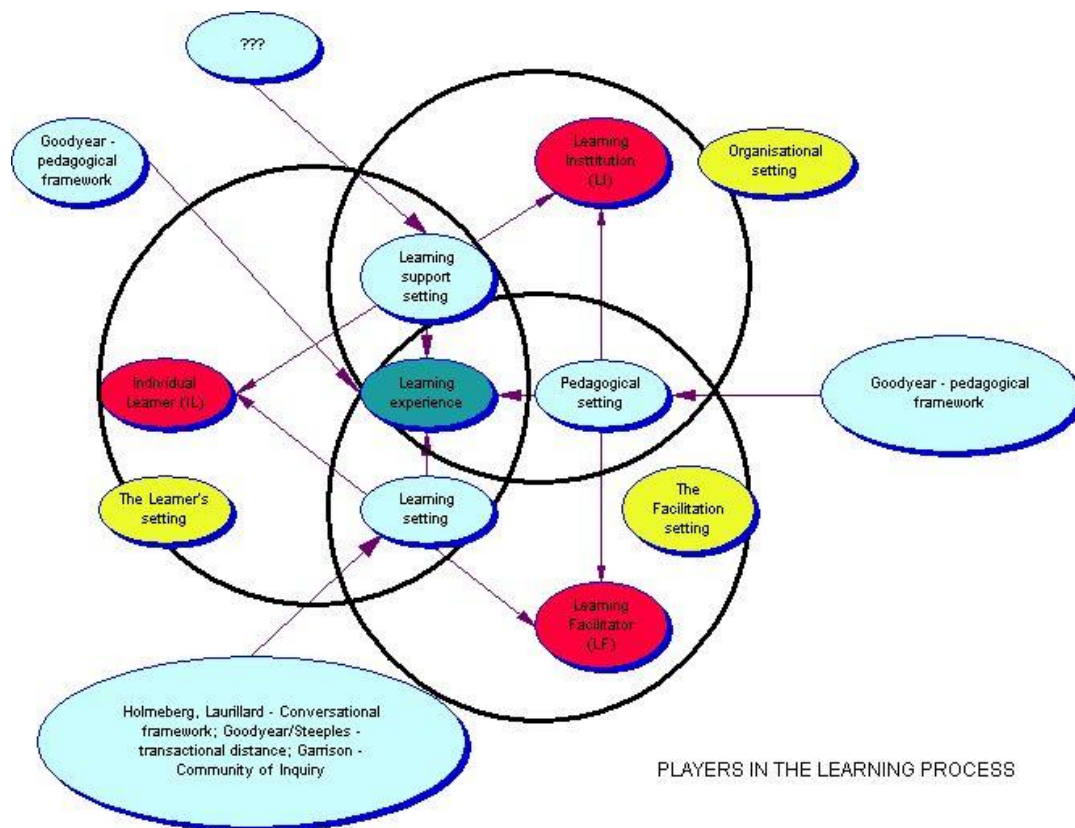


Figure 3: Players in the learning process

The student's learning journey

Figure 4 illustrates the journey of the Independent Learner (IL) from novice to expert comprising the dual pathways of professional journey and academic journey. The IL brings to the learning journey a range of existing attributes and leaves with a new set of attributes as a result of his/her learning experiences. The IL hopes to attain the:

- vocational characteristics of a practitioner in the discipline of PM,
- academic characteristics of a competent learner (lifelong, independent, autonomous, etc), and
- broader attributes of a graduate in the profession.

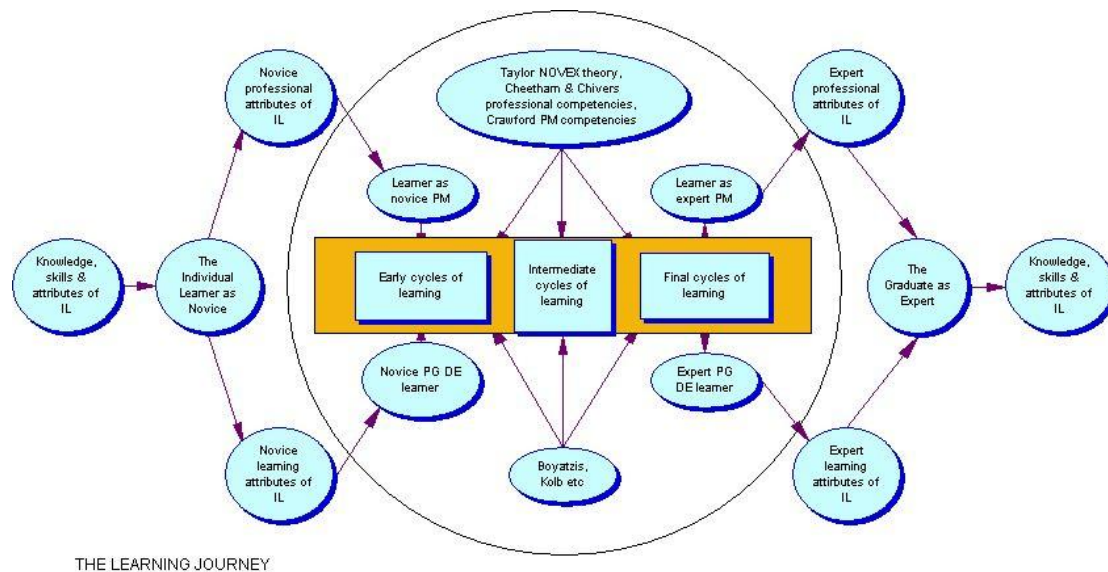


Figure 4: Journey of the Independent Learner from novice to expert

Research has provided a number of conceptual frameworks relating to the journey from novice to ‘expert learner’ including:

- Pedagogical frameworks (Goodyear 1999; Moore & Anderson 2003);
- Conversational framework (Holmeberg 1993, 1995; Holmeberg & Ortner 1991);
- Conversational framework (Laurillard 1993, 1996, 2002; Laurillard & Margetson 1997);
- Transactional distance (Moore & Anderson 2003);
- Community of inquiry – (Garrison, D. A. & Anderson 2003; Garrison, D. R. 1994, 1999); and
- Reflective inquiry (Garrison, D. A. & Anderson 2003).

The novice to ‘expert professional’ pathway considers the attributes of an expert professional for the exiting graduate. The respective stages of learning reflect

the need for gaining content knowledge, assimilation and construction of discipline knowledge, and development of skills through application of discipline knowledge requiring an understanding of the appropriate characteristics of a professional project manager. Existing professional competency frameworks include:

- Novice to expert: Dimensions of processing model (Taylor 1994)
- Model of professional competence (Cheetham & Chivers 1996)
- Integrated model of project management competence (Crawford 1997, 2000a, 2002b).

Goodyear’s pedagogic framework (1999) has been used to model the research setting illustrated in figure 4 which places learning constructs in a sequential fashion and locates the respective elements within his framework.

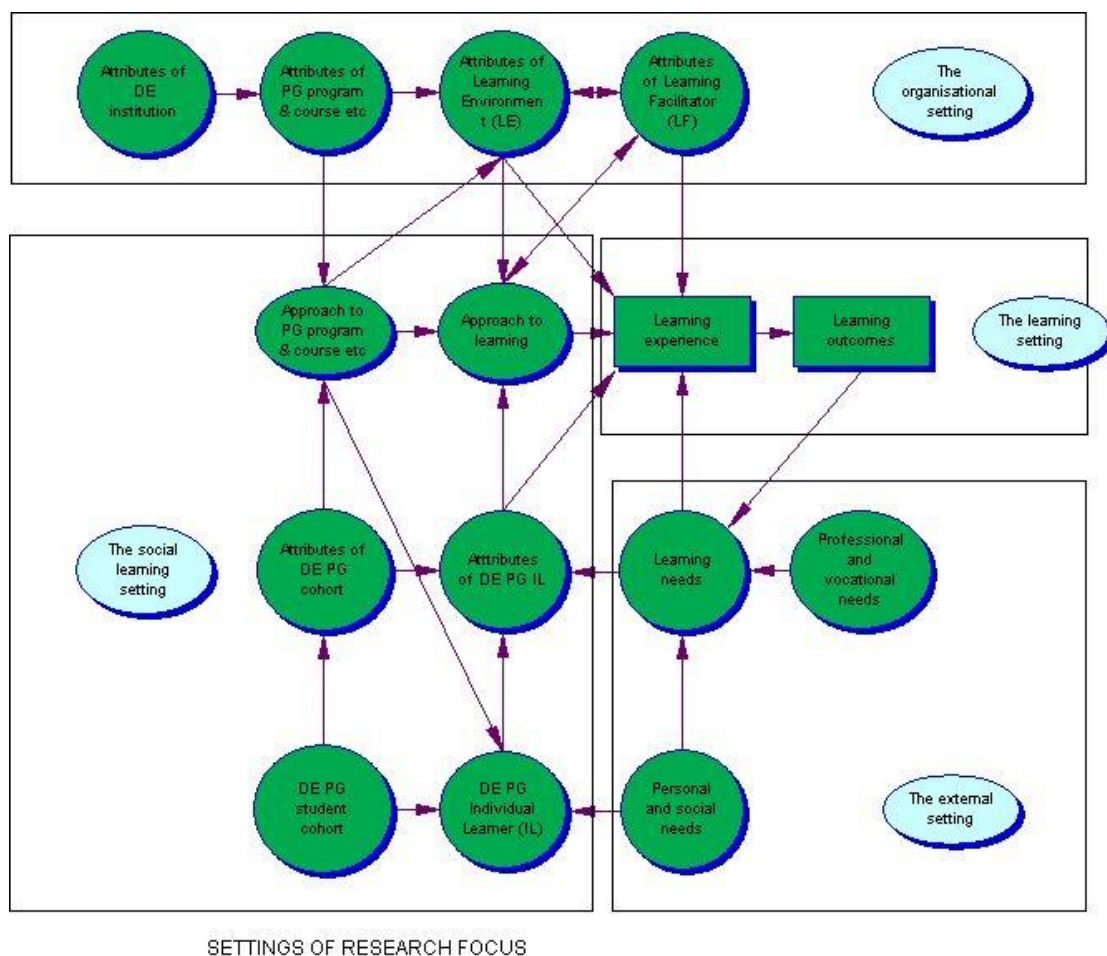


Figure 4: Settings of research focus

(Source: adapted from Goodyear (1999))

Contextual issues that influence project management education

Dinham and Stritter (1986) suggest the following framework for research into professional education where there is a need to develop theory:

- What are the attributes of students that will result in better-prepared professionals?
- What are the aspects of professional education for students to master?
- What are the characteristics of effective practical instruction?
- What are the optimal characteristics and locations of sites in which practical learning takes place?
- What are the most efficient and effective methods of evaluating a learner's practical performance?
- What is the most effective approach for assessing clinical instruction for improvement?

Project management education has parallels with that of other professions such as engineering, surveying and architecture, in that project management effectiveness requires development of a range of practical vocationally-oriented competencies. It has been argued that, as an 'emerging profession', project management lacks both a framework for practice and a framework for education (Jaafari 1997). The nature of project management employment and practice requires project managers to operate from remote locations placing distance education in a favourable position to provide a flexible learning environment. Winters (2000, p. 51) maintains that learning must be made 'accessible at any time and from any place' to overcome the problems of 'full-time careers, family obligations, and community requirements'.

A focus on professional competencies is strongly entrenched in the project management profession through the certification model used by the professional body in Australia, and Crawford (1997; 2000a; 2000b; 2002a)

proposes a conceptual model for project management competence as illustrated in figure 5.

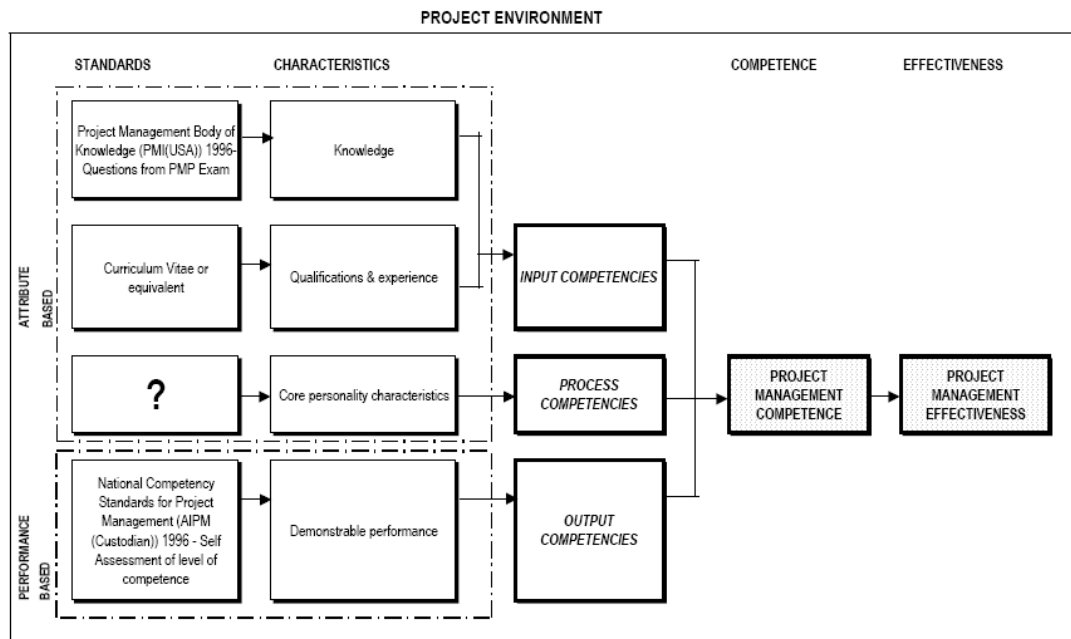


Figure 5: An integrated model of project management competence (Source: Crawford (2000a))

However, contemporary learning (including vocational learning) 'places more emphasis on the complete transformation of individuals' (Chappell 2004, p. 5). Although there is little research into the suitability of distance education to develop what is commonly called 'capability' (Barrie et al. 1996), a wide range of competencies is considered in research into professional competencies defined by Cheetham and Chivers (1996) in figure 6 as comprising:

- Functional competence,
- Personal or behavioural competence,
- Knowledge/cognitive competence, and
- Values/ethical competence?

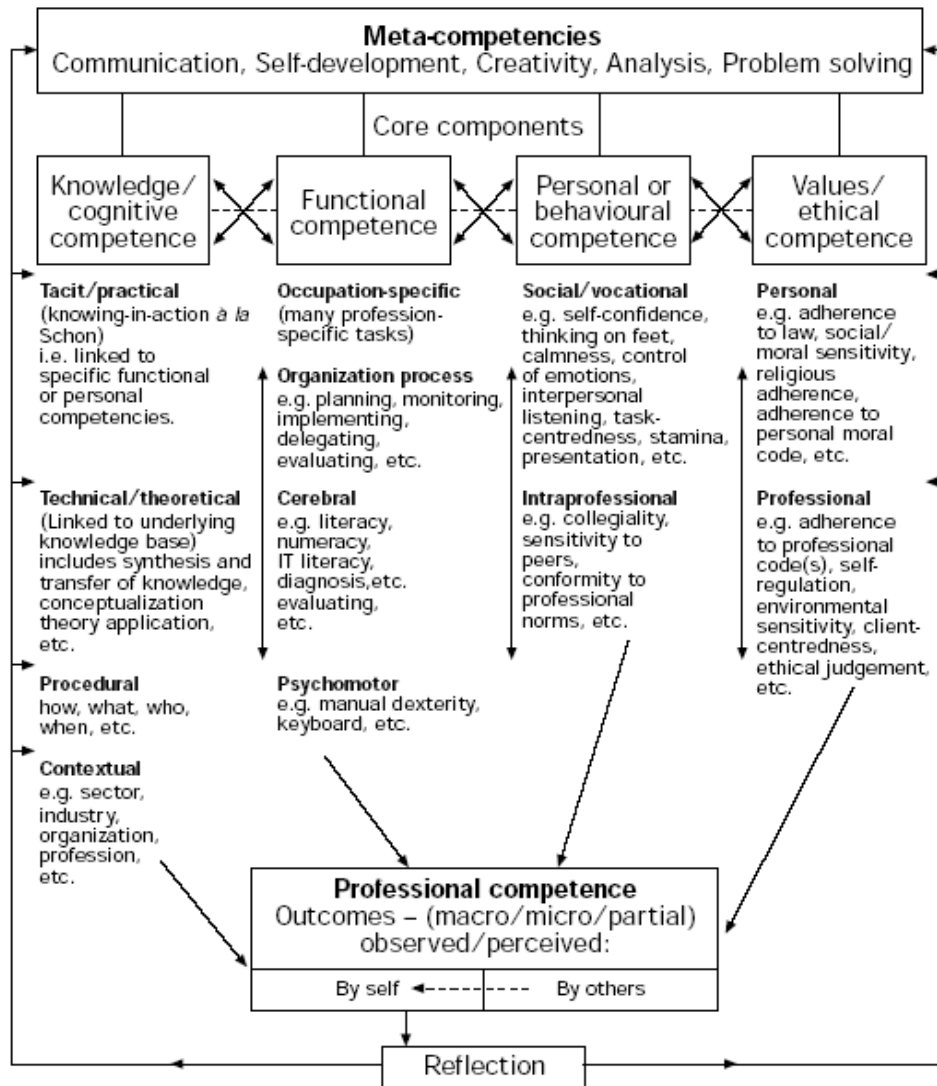


Figure 6: Provisional model of professional competence (Source: Cheetham & Chivers (1996, p. 27))

At postgraduate level, it becomes increasingly important for mature-age and experienced students to situate their learning within their personal and professional circumstances. Many educators regard the workplace as ‘the most ‘authentic’, relevant and ‘situated’ site for vocational learning’ (Chappell 2004, p. 7) but this is difficult to incorporate into models of distance learning.

Turner et al. (2000) observe that most project personnel hold a qualification or first degree in an area other than project management thus project management education is commonly approached as postgraduate study. Formal project management education is relatively new to the higher education

sector and is generally aimed at mature-age professionals who are advanced in their chosen careers (Turner & Huemann 2000) and should 'aim to develop implicit knowledge, skills and behaviours through Kolb's learning cycle' (Turner & Huemann 2001). The most common type of formal project management education is at Master's level in an on-campus part-time mode, and is offered through the faculties of engineering, architecture or construction, consistent with the origins of the discipline (Australian Institute of Project Management 2002) whereas the project management program in the USQ case study is provided through a faculty of business in distance education mode. Johnson and Thomas (2004, p. 312) add that '...conceptions of educational effectiveness in the field of postgraduate education...need to be broadened from student attainment to include individual capabilities, individual performance at work, organisational change and capacities generally in the body of development professionals' and that '...opportunities to apply learning are particularly important' (2004, p. 308).

Pedagogic themes in project management education

Interviews carried out by the author with project management educators (Todhunter 2003) have identified the following themes relating to postgraduate education in project management:

- The need for incorporation of *autonomous learning processes* including:
 - reflective and self-referential learning skills
 - deep learning
 - the academic role to be one of facilitation
 - mapping to an overall competency framework
 - incorporating a range of assessment techniques including self-assessment and peer-assessment
 - high levels of communication among educators and students
- the need for *personal transformation* outcomes to include:
 - changing mindset and perspective
 - generating new visions
 - changing the platform of thinking
 - development of personal competencies and soft competencies

- becoming a lifelong learner
- challenging and addressing prejudices
- qualifications, recognition and status
- the need for *professional transformation* outcomes to include:
 - development of professional competencies
 - becoming self reflective with regard to ongoing professional development
 - involvement in the definition and development of the profession
 - providing a positive influence on changing the professional culture
 - establishment of professional standards and best practice

These conclusions are consistent with the views of Jarvis et al. (1998, p. 77) who suggest a focus on such concepts as 'self-determination, self-actualisation or self-transformation as the underlying concepts of all education for adults'.

Guiding principles and practices of distance education

Jarvis et al. provide a view of the major principles that underpin good practice in distance education as:

- The organisation and administration of the system;
- The educational relationships between teachers and learners; and
- The kinds of learning materials and modes of delivery most appropriate to meeting distance students' learning needs (Jarvis, Holford & Griffin 1998, p. 107).

Although distance education has a long history, it is suggested that there is still a 'relative paucity of true, original research dedicated to explaining or predicting phenomena related to distance learning' (Phipps & Merisotis 1999, p. 2). Little research was published until the 1960s and scholars have called for a consistent, conceptual framework for research in distance education as a basis for a 'unifying' theory (Berge 2001; Mclsaac & Gunawardena 1996). Conceptual models provide a valuable starting point around which the initial research

stages can commence, but the risk is that ‘they simplify complex processes and relationships’ (Goodyear 1999, p. 4).

The organisational setting should provide flexibility in the provision of access to the learning experience, resources and communication with academic staff and other students. Distance education should be viewed holistically from the perspectives of the three primary stakeholders – faculty, students and administrators as the barriers and issues perceived by these three groups are significantly different (Berge 2001). Traditional institutional forms of learning ‘are no longer adequate and cannot keep up with the contemporary demand for learning’ (Chappell 2004, p. 5), and distance education methods and systems are converging with those of face-to-face teaching under the influence of new electronic educational technologies (King 1999; Moran & Myringer 1999, p. 57; Trindade, Carmo & Bidarra 2001, p. 3). Moran and Myringer suggest that the focus today is on flexibility, student-centredness, networked learning, quality and efficiency, and the term ‘distance education’ may become obsolete as distance education ‘merges into the so-called mainstream of educational systems’ (Ljosa 1993, p. 37) or be displaced by ‘flexible learning’ (Moran & Myringer 1999, p. 59).

USQ describes itself as ‘transnational’ and has ‘embraced the need for change implicit in an educational environment that is highly competitive, and dominated by the evolution of global communications technologies’ and states an intention to ‘remain fast, flexible and fluid in meeting the needs of learners throughout Australia and internationally’ (University of Southern Queensland 2005). The British Open University and similar models of distance education have removed many of the constraints on entry and study, but ‘open learning’ is not automatically synonymous with distance learning and is a relative concept (Morgan 1990; Paul 1993, p. 115). Holmberg stresses that ‘distance education can in no way be regarded as a subset of open learning’ (1993, p. 331) which is the term often used to differentiate distance education programs provided by single mode universities such as the British Open University and those provided by dual-mode universities such as USQ where both distance education and on-campus programs are delivered. Gibson (1998) suggests that distance

education in the 21st century should mean education anytime, anywhere, for anyone, but that this should happen in an educational paradigm of 'education for each' with a focus on the educational needs and objectives of each student, requiring an almost infinitely flexible model of learning. Although there has been an increasing focus on graduate attributes in the higher education sector, there is often no differentiation between desirable graduate attributes for undergraduate and postgraduate students, whose profiles are significantly different.

The attributes of open and distance education may not align with the needs of vocationally-oriented professional education, and must be explored more fully as in many cases, 'open' learning only offers quite limited dimensions of openness (Paul 1993). In such environments, it is essential to maximise learner-content, learner-instructor and learner-learner interaction (Jarvis, Holford & Griffin 1998) and to consider a wider range of learning environments, including the workplace. Distance education at USQ has evolved through four generations (Taylor & Swannell 2001):

- Correspondence model using print technology
- Multimedia model using print, audio and video technologies
- Tele-learning model using telecommunications technologies, and
- Flexible learning model using online delivery via the Internet.

Bonk and Kim (2004) suggest that online collaboration, case learning and problem-based learning will be the preferred online instructional methods in coming decades, and a variation of the fourth generation of distance education is now under way at USQ whereby distance, on-campus and online modes have begun to merge through the use of CD-ROMs for delivery of interactive multimedia-enhanced materials with common access for all modes to online discussion boards and electronic submission of assessment. The issues relating to the use of interactive multimedia (IMM) require consideration as to how they impact, positively or negatively, on multinational students, and research by Sankey (2005) suggests that international students find the multi-

modal nature of IMM of benefit in terms of both learning and development of language skills.

Activity Theory (AT) Analysis

Activity Theory (AT) requires multiple perspectives and as suggested by Jonassen (1999), analysis of an activity system (AS) must start at the highest level of outcomes with the key participant/s in the position of 'subject'. In this study, the two key perspectives to be adopted are those of the student and USQ and preliminary conceptual systems are illustrated in figures 7 and 8. These models will be continually developed and refined as data collection and analysis proceeds.

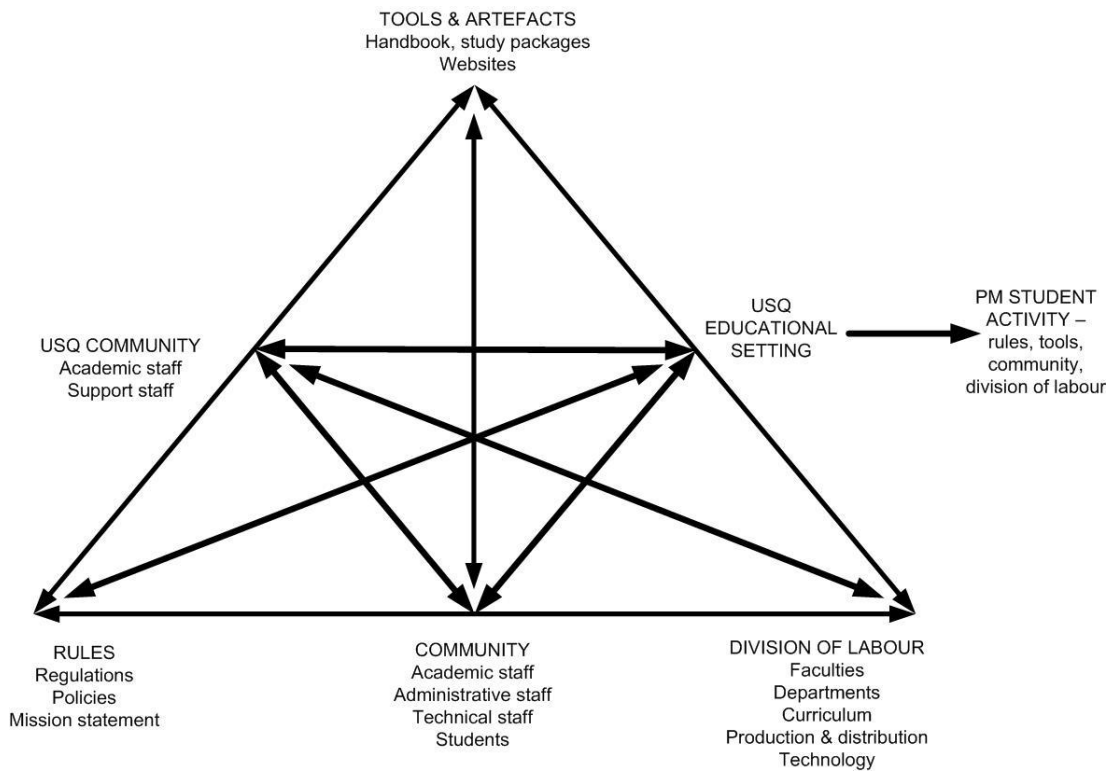


Figure 7: Activity System of the USQ Learning Institution (LI)
(Source: adapted from Engestrom, Y 1987)

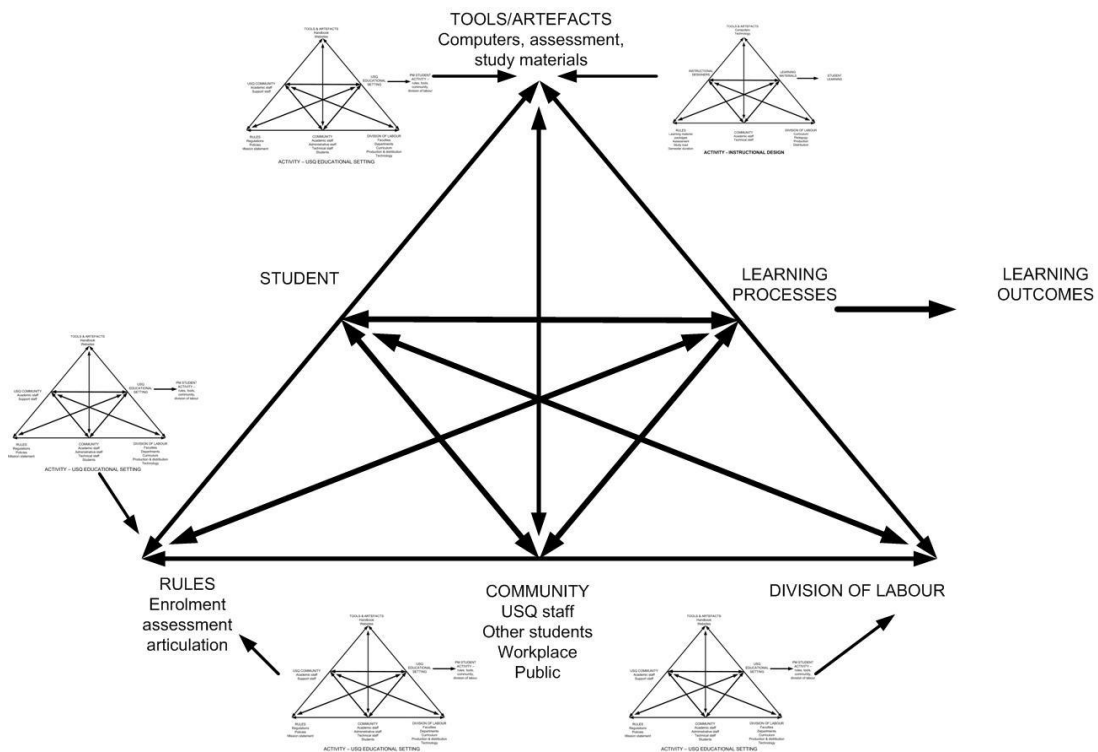


Figure 8: Activity system of the Individual Learner (IL) illustrating how the USQ activity system is a potential source of systemic tensions and disturbances (Source: adapted from Engestrom, Y 1987))

Table 1 suggests how the focus of the Learning Institution may be at odds with the focus of the Individual Learners, leading to system tensions and disturbances in the activity systems.

Table 1: Locus of possible systemic tensions and disturbances

Tensions / disturbances	Learning Institution focus	Individual Learner focus
Flexibility - overall	Organisational need for efficiency and convenience	Student desire for maximum flexibility
Flexibility - entry	Entry prerequisites	Flexible / open entry
Flexibility - timing	Trimester structure Fixed start date Fixed finish date Due dates for assessment Examination timetables	Open access Flexible start dates Flexible finish dates Flexible assessment
Flexibility - duration	Organisational convenience	Flexible duration Self paced learning
Flexibility - assessment	Uniformity Authenticity Knowledge focus Collaboration / group assessment	Personalised assessment Consistency Practical focus Competency-based focus of professional bodies
Communication	Efficiency and cost effectiveness	Access to staff
Technology	Effective use Cost efficiency	Cost Access to staff Access to other students Bandwidth restrictions Software compatibility
Focus of studies	Pedagogical focus Theoretical focus Knowledge development	Professional recognition Practical focus Skills development

		Competencies
Pedagogy	Rigid structured study materials Structured study experience Text focus of materials Volume of reading Hybrid CD Focus on courses – not programs	Flexible approach Use of public domain materials Value of IMM materials
Culture	Homogenous approach to learning Mastery of English language Sourcing international students	Individual learning Culturally relevant Language proficiency
Facilitation of learning	Large number of students in a cohort (one to many)	Personal guidance (one to one)

CONCLUSION

This paper has provided a literature review and examined the issues impacting on a research study to define a theoretical framework and develop guidelines for a learning environment suitable for postgraduate distance education in project management. This study requires consideration of the specific needs of mature-age learners, the higher-order competencies to be achieved as part of professional education, and pedagogical issues relating to multi-national students as they represent over fifty percent of the student cohorts. It has examined how to analyse the organisational context, the pedagogical setting and the learning environment by using a range of preliminary conceptual frameworks and Activity Theory and how to provide a way forward for a case study of a regional dual-mode university.

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