

WORK READY

E-PORTFOLIOS TO SUPPORT PROFESSIONAL PLACEMENTS

The climate for learning and teaching in higher education is changing in the current digital age. *Work ready: E-portfolios to support professional placements* is a comprehensive exploration of this changing environment.

The book promotes the use of on-line tools to support professional placement experiences for undergraduate students in Australia. It provides an appreciation of how digital tools, especially electronic portfolios, can improve placement experiences. It identifies and describes the main challenges and opportunities academics, students and industry face when implementing and engaging in placements on a daily basis. It showcases six case studies from a range of disciplines describing the ways in which lessons learned about the use of on-line learning platforms in one discipline can transfer to others. It reviews Web 2.0 technologies as alternative ways of delivering e-portfolios tools so that students can enrich their professional placement experiences through improved recording and reflection. Further innovative strategies are proposed, which may be implemented to sustain undergraduate students' on-line learning experiences during their placements.

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Catharine Simmons • Anthony Williams • William Sher • Tracy Levett-Jones (Eds)

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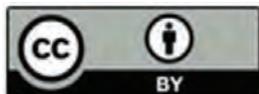
**E-portfolios to Support
Professional Placements**

**A focus on Nursing and Construction
Management degrees in Australia**

Catharine Simmons • Anthony Williams • William Sher • Tracy Levett-Jones (Eds)

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PREFACE

This book is for academics in construction management and nursing as well as teachers, students, clinical coordinators, construction industry professionals, nursing staff, IT professionals and all those with a strong interest in undergraduate students' work placements and on-line platforms that support these experiences. Its themes and exemplars will also be of interest to the wider academic community.

The rationale for this book is to establish the potential for the use of electronic (e) portfolio systems to support undergraduate nursing and construction management students' engagement in work placements in Australia. It further considers whether such a portfolio could transcend disciplinary boundaries and provide the core for students' meaningful documentation of their work placement experiences.

Construction management and nursing are disciplines that involve large numbers of students in placement experiences throughout their degree and rely on them gaining a positive workplace learning experience. Indeed, these seemingly opposed disciplines were found to have much in common. This similarity provides an environment where a shared portfolio comprising a core set of requirements could be supplemented with those that are discipline specific. This book therefore illustrates the common ground that many academic disciplines share. The authors' intentions are that readers will find the placement e-portfolio examples provided in the book to be of interest and relevant to their discipline.

The publication originated from a two year study conducted during 2010 to early 2012 by The University of Newcastle, Australia. The study was supported by the former Australian Learning and Teaching Council (ALTC), now operating as the Office for Learning and Teaching (OLT) within the Department of Education and Employment and Work Relations (DEEWR) within the Australian Government. The study, entitled 'Facilitating work integrated learning through skills-enabled e-portfolios in the construction and nursing disciplines', investigated issues and opportunities for using e-portfolios for work placement experiences in these disciplines. Some of the work conducted for this study is documented in this book, most notably the competency framework in Chapter Two. The framework includes an

alignment of professional attributes resulting from a review of accreditation competencies between the disciplines.

Six case studies form a major part of this book. Academic experts were invited to contribute an exemplar of their use of an e-portfolio platform to support placement. As such, these case studies are not just from the nursing and construction management disciplines - they draw from a variety of areas including medicine and health and are from various Australian universities. The case studies showcase how e-portfolios could be used to document and enhance placement experiences and the related issues that arise from using these platforms. All the case studies consider the following headings: context of the project, placement as a means to enhance learning, e-portfolio solutions for placement issues and project evaluation.

This book does not aim to re-invent e-portfolio systems or document how to build an e-portfolio platform. Instead, it recognises and builds upon the investments many Australian universities have already committed to e-portfolios and the way these can be used to support and improve placement experiences for students in the nursing and construction management disciplines. It sheds light on the limitations and opportunities of using e-portfolios for placement for both students and academics. It further evaluates other Web 2.0 technologies which could be used as complementary systems, or as standalone tools, to make improvements in documenting placement experiences. This timely publication presents new and exciting on-line opportunities for placement in higher education to produce future work ready professionals in the nursing and construction management disciplines and related professions.

As an extension of this book, the editors have provided an eBook version and two on-line modules which may be used as Continuing Professional Development for academics. These modules contain activities and examples, which have been developed from some of the exemplars in the chapters. Note that these modules are included in the eBook version only. The CPD modules will be useful for those interested in implementing or refining an e-portfolio to support students' work placements. The first module covers the design of skills descriptors students develop in the workplace and identifies the types of evidence students might provide to support claims that they have attained these skills. The second module considers the procedural and structural support networks needed to implement a successful placement program.

To view modules go to <http://www.newcastle.edu.au/workready-eportfolios>

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The editors sincerely thank all of the contributors and authors to this book for their insightful case studies and exemplars of practice. Without their original participation in the project entitled ‘Facilitating work integrated learning through skills-enabled e-portfolios in the nursing and construction disciplines’, this publication would not have come to fruition. Furthermore, we would like to thank the Office for Learning and Teaching (formerly the ALTC) for their support, both financially and intellectually. Without their support this book would not have been developed. The team is also grateful to Margaret McMillan and Andrew Baldwin for the constructive feedback on the prior research project. Finally we would like to acknowledge and thank all those who have supported the preparation of this book, namely: Dr Michael Askew, Kathleen Phelps, Dr Louise Askew and Thushara Dibley.

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ACRONYMS

ACT	Australian Capital Territory
ADL	Advanced Distributed Learning
AIB	Australian Institute of Building
AIBS	Australian Institute of Building Surveyors
AIQS	Australian Institute of Quantity Surveyors
ALTC	Australian Learning and Teaching Council
ANCI	Australian Nurses Council Incorporated
ANMAC	Australian Nursing and Midwifery Accreditation Council
ANMC	Australian Nursing and Midwifery Council
ANRAC	Australasian Nurse Registering Authorities Conference
AROUSAL	A Real Organisational Unit Simulated As Life
BCM	Bachelor of Construction Management
BECTA	British Educational Communications and Technology Agency
BN	Bachelor of Nursing
CALT	Centre for Advanced Learning and Teaching
CCARDS	Contextual, Capability driven, Action-based learning, Relationship collaboration, Development, Student-centred
CIOB	Chartered Institute of Building
CPD	Continual Professional Development
CUCRH	Combined University Centre for Rural Health
DEEWR	Department of Education, Employment and Workplace Relations
ECU	Edith Cowan University
EOI	Expressions of Interest
FHS	Faculty of Health Science
GA	Graduate Attributes
IBMS	Institute of Biomedical Sciences
IPSSOs	iPortfolio Student Support Officers
ISO	International Organization for Standardization
JISC	Joint Information Systems Committee

JMP	Joint Medical Program
L&T	Learning and Teaching
MO	Medical Officer
MyLO	My Learning On-line
NMBA	Nurses and Midwives Board of Australia
NMBWA	Nurses and Midwives Board of Western Australia
NURAPID	Newcastle University Recording Achievement for Professional and Individual Development
OBSC	Objective Structured Clinical Examinations
OLT	Office for Learning and Teaching
PACE	Personal Development, Achievements, Career Development and Evidence
PEP	Professional Experience Placement
PERL	The Perl Programming Language
PP	PebblePad
RAPID	Recording Achievement for Professional and Individual Development
RMIT	Royal Melbourne Institute of Technology
RN	Registered Nurse
SCORM	Sharable Content Object Reference Model
SNM	School of Nursing and Midwifery
SoM	School of Medicine
SoP	School of Pharmacy
SPEED	Survey, Plan, Execute, Evaluate, Document
STAR	Situation, Task, Action and Results
TEQSA	Tertiary Education Quality and Standards Agency
UoN	The University of Newcastle
UTAS	University of Tasmania
WA	Western Australia
WIL	Work Integrated Learning

CHAPTER ONE

Introduction: a professional journey

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Introduction

Why do we focus on nursing and construction management degrees in this publication? This is a reasonable question, considering the two professions are unrelated except that their practitioners are expected to be university graduates. Nonetheless, there are similarities between these disciplines. For instance, both nursing and construction management in Australia are subject to the rigorous accreditation requirements of their professional bodies which require a prescriptive profile of student attributes. These accreditation structures differ in that nursing has a single board whereas construction has a large number of national and international bodies to respond to, each body with different accreditation requirements and processes. Another significant parallel is the requirement for students to undertake a prescriptive work placement experience as a core component of their degree which is called 'clinical placement' in nursing, and 'industrial placement' in construction. Another similarity is that they enrol large cohorts and require suitable placement opportunities to be available for all students. For these placement activities to be managed, monitored and assessed imposes significant pressure on universities to organise the programs as well as for industry/hospital systems to facilitate opportunities. An important consideration is that these large scale placement experiences have the potential to impact on the overall outlook of graduates.



Students are required to complete their placements in these disciplines as a form of Work Integrated Learning (WIL). Placement experiences in nursing and construction are consistent with many other forms of WIL experiences offered by other professional degree programs and are mandatory for these students (e.g. engineering, radiography, and teaching). All students in these programs must not only participate in a placement, they need to demonstrate during this experience the ability to meet all of the skill and accreditation requirements of their respective degrees. Moreover, this specialist placement environment requires streamlined management and documentation to facilitate quality WIL experiences. It is in this context that electronic (e) portfolio platforms can provide the means to support, manage and enhance students' placement experiences through the on-line documentation and providing additional facilitation of the experience.

Generally, an e-portfolio is 'a purposeful collection of artefact's including demonstrations, resources and accomplishments that represent an individual, group or institution. The platforms can illustrate students' efforts, progress, reflections and achievement' (Ivanova, 2008 p.1). E-portfolio platforms can be a facilitating medium for pre and post placement organisation and, furthermore, can be used to support student's reflection and demonstrate their competency achievements during placement. Overall, the advantage of using these platforms for placement include facilitating deeper learning experiences, as students are able to appreciate the inter-relationships between the theoretical knowledge provided at university and their practical work-related experiences. This applied learning between the work place and university course work can be demonstrated through uploading on-line evidence and reflecting (ie. using blogs) on placement experiences within these platforms.

Rationale

This publication arose from a recent two year study conducted by The University of Newcastle which was supported by the Australian Learning and Teaching Council (ALTC) discipline grant from 2010-2012. The ALTC is now operating under the Department of Education, Employment and Workplace Relations (DEEWR) as the Office for Learning and Teaching (OLT). The two year study firstly involved the development of a competency framework to support the competencies gained on placement and, secondly, a review of how e-portfolios could support students attaining these competencies to



ultimately aid their meta-cognitive links between theory and practice. The methods used included a qualitative review of Universities' current placement and e-portfolio practices through focus groups and interviews with staff and students Australia wide. The research participants were most supportive of the study's objective and their input and feedback highlighted the importance of placement experiences for students and, furthermore, how e-portfolios could provide a mechanism to support student learning, especially to aid student reflections on their professional placement experiences (see Williams et al., 2012).

The focal point of this publication is to provide exemplars of practice that arose from the above mentioned study. Firstly, it showcases the competency framework, which was the result of a review of the professional competencies in nursing and construction that demonstrate placement capabilities. This firstly, includes a discussion about similar WIL initiatives that are currently being implemented in higher education. Secondly, it provides case study exemplars of using e-portfolios to facilitate WIL and placement programs from varying disciplines.

Work placement and work integrated learning in higher education

WIL is a term used in academia and industry to describe educational activities that integrate theoretical learning with its application in a workplace, profession, career or in future employment (Billett, 2001; Patrick et al., 2009). WIL experiences are expanding in recognition among Australian universities and are increasingly being used in a broad range of undergraduate programs. WIL experiences can be off or on campus and either real or simulated, depending on the discipline area, but must involve clearly stated outcomes and assessment strategies and are consistent with quality teaching and learning practices (Billett, 2001). WIL has been recently promoted in Higher Education to encourage opportunities for students to apply the conceptual knowledge they gain from their formal education to the 'real world' of practice in industry. As such, WIL encounters and opportunities are extremely important learning experiences for undergraduate students.

The higher education system for the construction and nursing disciplines, in particular, promotes varied WIL opportunities within their curricula, such as field trips to construction sites and simulating patient care with mannequins. In addition to these experiences, it is mandated by accreditation bodies for



students to engage in periods of professional work placement during their undergraduate studies. A recent research report investigating construction education has shown that when students start employment they frequently find it difficult to relate theory to practice. However once they have been exposed to WIL experiences, such as a placement in the workplace, or an on-site visit, students tend to modify their views and make these theoretical connections more explicitly (Williams, Sher, & Simmons, 2009).

The principal method of developing and demonstrating nursing and construction competencies is through professional placement experiences. However, there are current issues which exist in implementing placement in these disciplines. The predominant issue which emerged from the 'Facilitating WIL' study was how to provide meaningful experiences for students when there are large numbers of students requiring and engaging in placement. As flagged above, facilitating large scale placement activities provides little time and resources for staff to interact with students and assist them in reflecting and validating their experiences pre and post placement. Indeed, facilitating placement activities places a huge imposition on the resources of disciplines in universities if these activities are to be a productive and meaningful experience for students.

As stated, both the construction management and nursing curricula are compliance and accreditation driven; therefore, it is vital that workplace requirements are integrated with the curricula. The main bodies that accredit construction (Australian Institute of Building, AIB; Australian Institute of Building Surveyors, AIBS; and the Australian Institute of Quantity Surveyors, AIQS) require students to engage in approximately 16 weeks of industrial placement during their degree (AIB AIBS AIQS, 2008). In comparison, in the nursing disciplines, the Australian Nursing and Midwifery Council (ANMC) require a minimum of 23 clinical placement weeks (ANMC, 2005). The evaluation of this experience in nursing is most often conducted by self-assessment, predominately through individual portfolios. As confirmed by Levett-Jones et al. (2006) portfolios are one of the primary methods used to assess the competence of individual nursing students. On the other hand, in construction management, placement assessment is embedded in the professional development practices prescribed by the professional bodies.

At the moment there are no quality control mechanisms in place for WIL in construction management as prescribed by the accrediting bodies for this



discipline. As such, individual universities interpret, administer and monitor WIL requirements in accordance with their own policies and apply accrediting bodies' industry placement requirements in different ways (Williams et al., 2009). Research on construction education in Australia found that those responsible for managing construction programs at universities expressed reservations about industrial experience and WIL (Williams et al., 2009). These reservations centred on the availability of placement opportunities for students during volatile economic times, the resource implications of administering WIL and students being 'poached' by industry (Williams et al., 2009). On the one hand, some academics would argue that, given the choice, students opt out of industrial placement if these were not a required component of their degree program (Williams et al., 2009). On the other hand, this same study identified that construction management students greatly valued WIL. Indeed, the experience and importance of teamwork and collaborative learning whilst on placement emerged as the main drivers of effective learning for students.

Recent studies of WIL in engineering have highlighted other concerns about the lack of linkages between programs, industry experiences and assessment during placement. Richardson et al. (2009, p.338) state that 'the underpinning cause for inadequate WIL assessment is a lack of understanding of the nature of learning in the work place' due to the ad hoc nature of learning in these contexts (such as learning 'informally'). Similarly, Hu, Abadeer and Yusman (2009) identified a lack of understanding in this area particularly where generic skills were required to be gained from engineering industry placements. Hu et al. (2009) reviewed current industry placements identifying the most important generic skills that need to be developed during WIL. Hu et al. (2009, p.22) concluded that there is still significant work to be done in this area, with the researchers stating that 'stakeholders need to also understand which aspects of the work experience program contribute to the effectiveness of the program in developing students' generic skills'.

A series of questions for future investigation of this issue were raised, namely:

- What general transferable work skills and attributes are developed in work experience?
- What aspects of the workplace and the program support the development of these skills and attributes?

- What learning experiences and processes in the workplace lead to the development of these [generic] skills and attributes?

(Hu et al., 2009, p. 22)

These questions developed to improve engineering placements were shared by research findings in the construction management disciplines (see Sher & Sherratt, 2010). Construction also has a need to document these generic skills in the work place and make explicit the learning experiences which enhance them.

Similarly, in regards to nursing, some of the WIL issues identified relate to how students make the necessary links between theory and practice when on placement. Researchers sometimes assert that, despite the efforts of nursing theorists, educationalists and practitioners, the theory/practice gap continues to defy resolution (Rolfe, 1998).

Within the nursing discipline, clinical placement provides a necessary forum for students to demonstrate competence in nursing practice. Much of this practice involves the interaction with clients/patients. Here, a confidentiality issue could arise which complicates the availability of some tangible forms of evidence, such a video recording a clinical episode of care. The outcomes of client/patient care may also remain off limits in some areas of practice, such as mental health. Attempts to address these issues include strategies such as simulation, use of reflective journals as well as clinical portfolios with the use of pseudonyms to protect patient identity. The use of simulation to create clinical situations has increased in recent years, thereby providing nurses with increased opportunities to practice patient care in a safe environment.

Reflective journals and clinical portfolios are often used to document the competence of students and as evidence of them meeting their own defined competencies. Fereday and Muir-Cochrane (2006) supported the process of using portfolios for self-assessment of competence; however, authors of a UK study questioned their value, suggesting that self-reported competence that used objective structured clinical examinations (OSCEs) demonstrated minimal correlation to skills gained during practice (Lauder et al., 2008). The subjective evaluation of journals and portfolios by teaching staff also remains a concern for validity of placement learning (Tilley, 2008).

This discussion on assessment of placement issues calls for improved means by which skills and experiences gained by students during placements are defined, assessed and supported.

Using e-portfolios to demonstrate skills gained on placement

A means to document the skills developed or demonstrated whilst on placement is through the use of e-portfolio platforms. As such, universities are increasingly looking to e-portfolios to support placement practices. As defined above, an e-portfolio is 'a purposeful collection of artefact's including demonstrations, resources and accomplishments that represent an individual, group, or institution' (Ivanova, 2008, p. 1). Overall, e-portfolios' can offer a space to 'review, reflect, collaborate and share' what a student has achieved (Ivanova, 2008, p. 1). Additional technologies can be included and used to demonstrate student achievements within platforms such as social networks and other Web 2.0 technologies.

Himpsl and Baumgartner (2010, p. 2) define two major types of e-portfolios: a 'working portfolio' and 'presentation portfolio'. The former involves learners showing their development of learning via milestones through 'collecting' evidence and reflecting. The latter involves the presentation of the milestones achieved which are available for viewers to provide assessment and feedback.

Assessment portfolios are also defined as skills-enabled e-portfolio platforms which can contain lists of 'competencies' to be met within a program, course or degree. These are evidence based records of achievements where practical experiences may be documented and assessed in relation to competencies. There are multiple ways the documented competencies can be viewed and assessed by students and academics. One such view is the 'assessor view', with a range of skill options where staff can create a WIL 'shopping trolley' of competencies for assessment (Barrett, 2004). In addition, within the 'competencies' section of an e-portfolio students can create tags/links to uploaded artefacts such as a document/video/audio of practical experiences or a blog reflection on an experience to show that they have achieved the relevant WIL competency (Barrett, 2004).

Importantly, undergraduate students on placement need to be able to see the links between the world of work and their university learning to experience WIL. These rewarding learning connections can be achieved through reflection within the platform via different evidence of competencies and on-line mediums, such as blogs. From a functional perspective, the e-portfolio allows for summative assessment that is conducive for WIL. For instance there are a range of e-portfolio tools which facilitate and support reflection and which have the capacity to 'close the gap' between theory and practice. Some



examples include ‘action plans, journals, blogs and reflective activities that provide prompts when uploading achievements to specific activities’ (Andre, 2010, p.4). Similarly, e-portfolios can provide a section where examiners and/or peers can comment on these entries. This information can be made public by students for professionals to see the work they have achieved through reflections (Andre, 2010). Over time, e-portfolios can display students’ progression and attainment of goals during their undergraduate years, this can be used as a professional document in their future careers (Andre, 2010). There are further potential opportunities for developing e-portfolios with the use of Web 2.0. These Web 2.0 opportunities are discussed further in Chapter Ten. Hence, through supporting reflection, the e-portfolio can be seen as providing an opportunity to assist students in meaningful reflection experiences, which allow the alignment of university knowledge with workplace experiences.

This brief review of e-portfolios in relation to documenting WIL provides an overview of the potential benefits of these tools to promote and assess deeper integrated learning experiences for nursing and construction management students engaged in practical experiences. Some universities in Australia (for example QUT, UTS, Curtin University) have implemented university wide platforms. Some of these Universities have implemented e-portfolios just for WIL experiences and others have university wide platforms encompassing assessment in whole programs.

Chapter outlines

The rest of this publication provides solutions for WIL issues and e-portfolio opportunities highlighted from the brief literature review above. Chapter Two reviews how WIL is currently being implemented within the two disciplines. A WIL competency framework is then showcased to show how WIL activities and attributes can be aligned and documented to enable students to link the theoretical concepts learned at university with real-world practices. This framework provides a comparative examination of the attributes of the two disciplines. The competency alignment allows academics in these disciplines, and related disciplines, to contextualise the attributes required for WIL and work out the consequent support needed for students in documenting their attainment of these competencies. This is done predominantly through reflection on placement, which is discussed in Chapter Three.

Chapter Three showcases an e-portfolio called NURAPID (Newcastle University Recording Achievement for Professional and Individual Development) and its effective use for reflecting on WIL experiences. The chapter highlights and concludes the shortcomings of using on-line platforms for documenting WIL through this NURAPID project which was implemented before its time, in 2004.

Chapters Four through to Nine are case studies from experts in the fields of placement and the use of e-portfolios. These case studies demonstrate innovative WIL or e-portfolio use at their respective institutions. The exemplars further provide examples of how the issues raised in the previous sections can be potentially resolved through the use of e-portfolios.

In Chapter Ten, Web 2.0 tools capabilities and related functionality issues are discussed and evaluated to showcase how students' placement needs can further be supported by Web 2.0, in addition to or in conjunction with e-portfolios. This chapter concludes with examples of how Web 2.0 can support competencies and highlight the best collection of tools which can facilitate placement and reflection on experiences.

The book concludes with proposals for future e-portfolio and Web 2.0 uses for students' work integrated learning. This chapter includes suggestions for future improvements, such as increased engagement with academics in implementing e-portfolios for WIL and innovative ideas to achieve the desired outcomes of a cross-disciplinary e-portfolio platform and/or Web 2.0 tools for work integrated learning. It proposes a central body to undertake a platform for the disciplines. This 'central body' could be an individual university, a Government body such as the Tertiary Education Quality and Standards Agency (TEQSA), the industry professional bodies for nursing and construction or indeed a partnership of all of these. As such, this concluding chapter suggests a way of transcending disciplinary boundaries.

Overall, e-portfolio platforms and Web 2.0 tools are showcased throughout the chapters as being most advantageous for documenting the predominantly undetected 'soft skills', which are mostly demonstrated by students during placement. The concluding chapter suggests that through the adoption and adaption of on-line technologies to support and document all competencies demonstrated during placement, student needs are greatly enhanced, not only in the nursing and construction management disciplines but all disciplines that incorporate placement opportunities. This specialist compendium on using

e-portfolios to support professional placements will thus benefit academics and industry experts working in these fields.

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