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Outcomes-based planning, graduated descriptors and quality indicators for pharmacy experiential placements

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The University of Queensland
The University of Sydney
The University of Western Australia
University of Canberra
University of South Australia
University of Tasmania

Other groups involved

- State/Territory Pharmacy Boards (New South Wales, Queensland, Victoria, South Australia, Western Australia, Tasmania, Australian Capital Territory)
- National Australian Pharmacy Students' Association: stakeholder consultations
- Pharmacy Guild of Australia (national, WA, NSW, Queensland, SA, Tasmania, Victoria, ACT): stakeholder consultations, APSA workshops
- Pharmaceutical Society of Australia (national, WA, SA, NSW, Queensland, Victoria, Tasmania)
- Society of Hospital Pharmacists of Australia (national, WA, SA, NSW, Queensland, Tasmania, Victoria, ACT)
- Australian Pharmacy Council
- Australasian Pharmaceutical Science Association

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Executive summary

The mid-2008–2010 project *Outcomes-based planning, graduated descriptors and quality indicators for pharmacy experiential placements*, funded through Priority Projects grants, comprised three component areas with the aim of improving curriculum planning processes and assessment for placements. The component areas of the current project arose from the 2008 Experiential Placements in Pharmacy Discipline Based Initiative recommendations. There are three component aspects in the current project.

1. Develop an online repository of quality learning and assessment tasks, professional learning processes and sustainable infrastructure.
2. Collaboratively develop and trial competency graduated descriptors for self-assessment and feedback.
3. Establish experiential placement quality indicators.

Investigative approaches included:

- establishing of the online repository and collaborative professional learning workshops process to develop quality learning and assessment tasks
- conducting initial workshops and iterative development of the workshop materials through stakeholder consultations in regard to the graduated descriptors tool, followed by trialling and finalisation of the tool
- developing and administering a quality indicators 'gap' survey involving various stakeholder groups and health professions.

Deliverables are as follows:

- collaborative development of seventeen learning and assessment tasks using a specially-devised educational template, with publication occurring within an online central repository website
- sustainable infrastructure established, with project materials available on a website and with links established with a national professional body conference for ongoing development of materials
- consultative development and publication of a competency graduated descriptors tool for self-assessment and feedback in relation to early and late placement students
- development and trialling of the competency graduated descriptors tool within two large university pharmacy contexts, with generally positive response and with the amended materials disseminated online
- development of a quality indicators framework through stakeholder survey processes involving gap analysis, with indications provided concerning various stakeholder responsibilities and pre-placement, during placement and post-placement aspects
- fifteen conference presentations including workshops and posters and seven refereed papers published (or in press), with four additional papers undergoing review or finalisation.

Outcomes and impacts of the online repository tasks and professional learning processes, competency graduated descriptors materials and trialling and quality indicators work include:

- a refocus within experiential placements programs on competencies as explicit outcomes
- more collaborative and cross-institutional curriculum approaches involving academics in gaining broader perspectives and in designing and using new materials and ideas within their own pharmacy programs.



1. Project overview

This section introduces the three project components and provides details regarding the background, Australian Learning and Teaching Council context, project team, aims and dissemination and evaluation processes.

Background

Universities have a significant role in ensuring students have the knowledge, professional attributes and practical skills for their profession, with experiential placements a requirement of many accreditation bodies. Through experiential placements, students go beyond the knowledge and teaching offered by university academics and become immersed in clinical/work settings under the supervision of current professional practitioners. Experiential placement purposes include the acquisition of professional knowledge, skills and attitudes; the practical application and development of classroom learning and theory in work settings; clarifying and determining career directions; utilising generic skills developed at university; establishing workforce contacts; and becoming 'work literate', including nurturing professional identity (Waters 2001; Orrell 2004). Therefore, student experiential placements play a significant role in the development of future members of professions.

The *Outcomes-based planning, graduated descriptors and quality indicators for pharmacy experiential placements* project was established within the context of a 2008 *Experiential Placements in Pharmacy* project funded through the Australian Learning and Teaching Council (formerly Carrick Institute) Discipline-based Initiative (DBI) scheme. Through consultation with over 250 university academics, preceptors (i.e. placement supervisors), students and professional organisation and registration representatives, the 2007 project mapped the learning and assessment approaches used across pharmacy experiential placement programs in Australian universities. Three recommendations were made regarding improved curriculum planning, increased focus on competencies and establishing graduated descriptors and, in addition, identifying quality indicators for successful placements.

The follow-up Priority Projects grant work from mid-2008 to 2010 has been focused on curriculum renewal and improving assessment. The overall project has involved the establishment of an online repository of quality learning and assessment activities and processes for collaborative work, development of a competency graduated descriptors tool for self-assessment and feedback, and producing a framework of experiential placement quality indicators.

The project has been undertaken within the context of an overall ageing general population requiring increased health services, an ageing pharmacy workforce, and a changing national health situation. National boards have been established in ten health professions and significant reform is underway. Increasingly, pharmacists' work focuses on disease prevention and new patterns of health services, involving them in areas traditionally associated with other health professions. Service areas such as prescribing, health vaccinations, health promotion, screening and early detection of disease and medication management are current and future trends that are affecting the pharmacist role (PSA 2010).

Over the past decade, more pharmacy schools have been established, with 16 schools now operational within Australia (and two additional schools planned). Graduate numbers have risen from 338 in 1985 to 1427 in 2007 (PSA 2010). Contrary to concerns in recent years, oversupply rather than undersupply has become a reality (PSA 2010). During the past decade, there have been



changing patterns of student engagement and an increased diversity of student entry cohorts. Greater emphasis is being placed on student-focused learning approaches, active learning and using more varied assessment tasks (Coaldrake & Stedman 1999). These changes are consistent with the widening role of pharmacists in terms of primary health care aspects, health promotion and interdisciplinary roles in which highly developed communication skills and interrelationships are essential (PSA 2010).

During the recent years of expanding pharmacy student numbers, however, there have been difficulties in providing sufficient experiential placements. Preceptors who are newcomers to the clinical education role require better support and clarity. Students have also required more explicit outcomes and constructive feedback about the stages of skill progression and their strengths and weaknesses, with preceptors needing additional support in providing specific feedback to students. Other improvement areas identified have focused on being more explicit about the outcomes of experiential placements, providing curriculum planning continuity throughout the university to workplace interface, and outlining detailed descriptors concerning the stages of skills progression (Owen & Stupans 2007).

ALTC priority projects

The 2008–2010 project was funded through the Australian Learning and Teaching Council Priority Projects Program. The pharmacy experiential placements project is particularly focused on Priority Projects priorities related to:

- curriculum renewal
- academic standards, assessment practices and reporting.

The project aligns to the ALTC mission and objectives of supporting strategic change in curriculum planning and values of inclusiveness and collaboration. This is followed through using an educational template and collaboratively developing experiential learning activities tasks and graduated descriptors for experiential placements. All aspects occur at a national level and build on current practices across Australian pharmacy schools. They also include some involvement from other disciplines.

Secondly, using collaborative work and values related to diversity and through engaging a range of academic and industry stakeholders, improvements in teaching and learning are highlighted. This project establishes mechanisms to disseminate and embed the quality curriculum planning approaches practices in a sustainable manner through links with the Australasian Pharmaceutical Science Association.

Thirdly, the central repository learning tasks, graduated descriptors of student competence and quality indicators pharmacy materials arising from this research have been developed by stakeholders using collaborative processes. The purposes have been about improving student outcomes from pharmacy experiential placements. Consistent with ALTC dissemination policies and in the spirit of building a shared understanding of practice, educational institutions and professional bodies and other interested parties and disciplines have been invited to access all materials from the three projects through the website created as part of the project. The Creative Commons concept is applicable with free availability and resource sharing occurring via the website.



Project team and reference group

The project team collaboration involved the University of South Australia, The University of Sydney and The University of Queensland. Representatives from other university pharmacy schools participated in the reference group. The University of South Australia was the lead institution for the overall project, for the competency developmental graduated descriptors and for the quality indicators aspects. The University of Sydney took responsibility for developing a website and the central online repository of learning and assessment tasks.

Professor Ieva Stupans from the University of South Australia was the project director from mid-2008 to mid-2010 (and is a continuing project team member from mid-2010 upon commencing as Professor of Pharmacy, University of New England). Dr Susanne Owen from the University of South Australia was the ongoing senior research fellow/project manager, also undertaking the project leadership role from mid-2010.

Associate Professor Greg Ryan, Director of the Pharmacy Education Unit in the Faculty of Pharmacy at The University of Sydney had responsibility for the online curriculum repository and website, together with Mr Jim Woulfe, Educational Designer.

Ms Leigh McKauge, lecturer and placements pharmacist from the School of Pharmacy at The University of Queensland, was also part of the project team.

The project built on the DBI work undertaken in 2007 by Ieva Stupans and Susanne Owen in the initial experiential placements scoping project. The 2007 project focused on mapping of pharmacy placements across Australian universities, examining handbooks outlining teaching and learning practices and identifying experiential placement issues.

The project team held meetings and/or teleconferences about four times yearly, supported by regular phone and email contact. Regular email and some face-to-face meetings occurred with reference group members. Members also participated in preparatory work and led workshop groups at the annual Australasian Pharmaceutical Science Association (ASPA) conference.

Reference group members and their institutions/organisations are as follows:

Dr Geoff March	University of South Australia
Mr Rob Parisotto	Australian Pharmacy Council
Dr Lisa Pont	The University of Sydney
Dr Ines Krass	The University of Sydney
Professor Jo Brien	The University of Sydney/St Vincent Hospital
Associate Professor Kay Stewart	Monash University

Project aims

The purposes of the project are curriculum renewal in experiential placements in pharmacy and provision of models that are also relevant to other university programs and professions. Specifically the project addressed the three key recommendations of the ALTC-funded Stage 1 DBI Investigation in relation to work-based learning. These recommendations included using a comprehensive planning model for learning within outcomes-based education, developing graduated descriptors related to competencies to provide feedback for students at early and late placement phases and further developing quality indicators.



There were three key project outcomes outlined in the initial application. These outcomes and relevant deliverables may be summarised as follows:

1. Improved planning of pharmacy experiential placement learning through the establishment of a national central online repository of collaboratively developed learning and assessment tasks using an educational template and planning model incorporating learning outcomes, criteria for assessment and evaluation processes. (Deliverables: online repository, website; collaborative professional learning workshops; online feedback tool; sustainable structures for website and workshops; associated conference papers and journal publications.)
2. Improved feedback and support for students and preceptors through collaborative development of standardised graduated developmental descriptors related to competencies. Competency graduated descriptors are applicable to university students at the novice and advanced beginner levels using descriptors such as time taken to undertake tasks, rule bound versus flexible application to unique situations, and degree of patient focus. (Deliverables: competency graduated descriptors tool; training materials; trialling; associated conference papers and journal publications.)
3. Greater collaboration between professional organisations, academics, students and other stakeholders and potential for improved pharmacy experiential placements through further developing quality indicators for pre-placement, during placement and post-placement phases. (Deliverables: quality indicators framework; associated conference papers and journal publications.)

Investigative approaches and outcomes

Sections 2 and 3 of the report outline the various investigative methods and details of the key outcomes and deliverables, with stakeholders involved throughout the process and through dissemination within workshops, conference presentations and publications.

Dissemination

Dissemination is not only about information provision but also engagement of people to take action to 'embed the innovation in the new context' (Southwell et al. 2005).

In this project a range of information provision and engagement strategies were used, including information provision through conference presentations and publications. Active engagement in the decision-making also occurred, including through state, territory and national consultations; targeted workshop presentations and national events; and collaborative workshop groups to develop learning and assessment tasks for the online repository.



Table 1 indicates the various dissemination activities used in the project.

Activity	Details	Process
Publications/refereed papers	4 published refereed papers in the <i>Journal of Pharmacy Practice and Research</i> ; <i>Asia Pacific Journal of Cooperative Education</i> ; 2010 Conference Proceedings for the Research and Development in Higher Education conference; Conference Proceedings for the Australian Collaborative Education Network 2010 conference. Additionally, 2 papers are under review, 3 papers are in press and 1 paper is being finalised prior to journal submission	Information provision within pharmacy, health, educational, technological journals: Australian, international
Conference/poster presentations (national, international)	ANZAME, 2010; HERDSA, 2010; ACEN, 2010; ASCILITE, 2009; Pharmacy Education Symposium, 2009 (Italy); ALTC Assessment Forum, 2009; 3 rd International Pedagogical Research in Higher Education Conference, 2010 (Liverpool, UK)	Information provision and discussion
Invited group presentations/discussions	National registration executive committee, national professional body (Pharmaceutical Society of Australia), NAPSA student leaders, APSA 2008/2009; ANZAME workshop, 2010; Speech Pathology Australia education forum, 2009	Information provision/engagement and discussion and decision-making-
State and national consultations with all stakeholder groups	35 groups, 12 individual sessions	Active engagement in discussion regarding graduated descriptors tool development
Workshop materials development sessions	4 sessions to develop learning and assessment tasks for online repository publication (APSA 2008/2009 + project team/reference group/invited others	Active engagement in materials development
Website bookmark	Bookmark to promote website	Information provision

Table 1: Dissemination processes



Project evaluation

Summative evaluation for the project focused on gathering information and making judgements about outcomes taking into consideration the contexts and possible impact on student learning. This evaluation was realised through examining whether the deliverables were achieved. Reports of interviews of project team, reference group and workshop participants were also written by the evaluator for the project in regard to the project's effectiveness. Formative evaluation and information-gathering throughout the project included examining workshop/consultation attendance records and considering diversity of persons and stakeholder groups and institutions represented and examining records about website products and contributions. Interim interviews with the project team and reference group members were conducted by the external evaluator. Collation of workshop feedback was another aspect relevant to formative evaluation.



2. The investigative approach

This section provides introductory information about the investigative approaches used for the three project components. See sections 4, 5 and 6 of the report for further details of each of the three project components.

Overall investigative approach

The overall project was conducted within an action research framework (Kember & Kelly 1993), which is well established as a disciplined inquiry approach relevant to the educational context. Action research is regarded as 'a powerful tool for change and improvement at the local level' (Cohen, Manion & Morrison 2003: 227). It is also consistent with recommendations of an emerging literature on Best Evidence Pharmacy Education (BEPE) (Hammer et al. 2004). Basic components of an action research cycle are: planning, action, observation, reflection. Projects often require several iterations or spirals of this basic cycle and within each phase of the cycle, employing appropriate research methods to maintain research validity and rigour.

Across the various project components, including the 2007 and 2008–2010 projects, as indicated in Figure 1, various stakeholder groups were involved: project team/reference group, pharmacy academics, students, and preceptors/professional/registration body representatives in each of the states and territories and nationally. Building on the 2007 Project work of experiential placements mapping, workbook analysis and consultations, the 2008–2010 work has involved three key project components. Processes involved:

- establishing the website, online repository and collaborative professional learning workshops process to develop quality learning and assessment tasks
- initial workshops and iterative development through stakeholder consultations in regard to the graduated descriptors tool, followed by trialling and finalisation
- development and trialling of a quality indicators 'gap' survey, to assess the difference between stakeholder perceptions of what factors contribute to quality placements and stakeholder perceptions about what actually occurs. The survey was then implemented with various stakeholder groups and health professions.



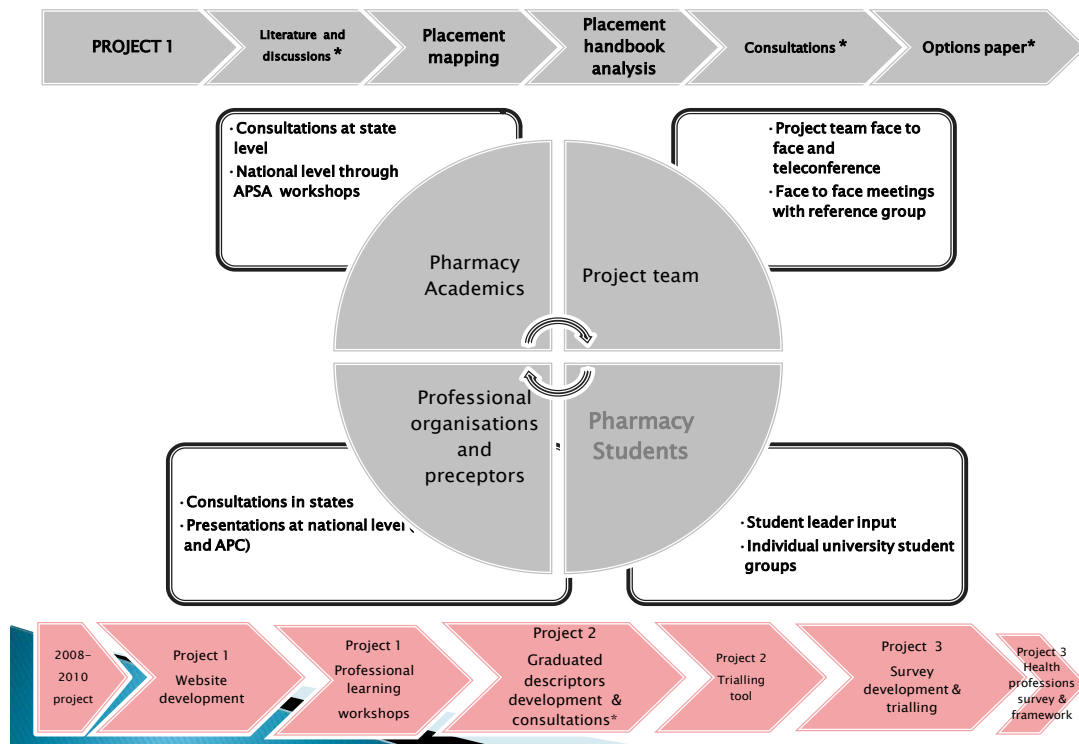


Figure 1: Stakeholder involvement and research components

Initial information on the processes for the three project components will now be provided.

Research method for project component 1: Online repository website development and workshops

A key objective was the establishment of a repository website, housing activities developed at collaborative workshops with participants using an educational template to guide the production of quality learning and assessment tasks. Building sustainability for the website and workshop was an additional aim. This project component, led by The University of Sydney, included creation of the template for experiential learning activities, and development of the web-based repository; preliminary consultation about website formats; conducting collaborative workshops to develop the tasks; undertaking further task refinement and publication and establishment of online feedback and quality control processes.

The use of the Drupal modular open-source content management system afforded an iterative approach to site development, with continual improvement occurring through user feedback both at workshops and via the online feedback functionality. The website was later expanded to incorporate the collaboratively developed learning and assessment tasks into a larger online presence, and the second and third aspects of the project (graduated descriptors and quality indicators).

Table 2 provides details about the stages, number of participants involved (shown as No. Inv.), stakeholder groups, purpose and data processes for this project component.

Table 2: Online repository and collaborative workshop research methods

Stage	No. Inv.	Stakeholder group	Purpose	Data	Collation & analysis	Comment details
Preparatory work	5	Project team	Website and educational template initial development			
Finalisation of preparatory work	11	Project team/ reference group	Test template, website, workshop process	5 pt Likert scale written feedback re website tasks and workshop	Manual collation and analysis	
Task development workshop	35	Workshop academics, professional/ registration, preceptors, students	Collaborative workshop to create tasks using curriculum template	5 pt Likert scale written feedback re website tasks and workshop	Manual collation and analysis	APSA Education Forum 2008 followed by finalisation of task by group and then quality control by project team prior to publication on web
Task development and online evaluation survey completion	30	Workshop academics, professional/ registration, preceptors	Collaborative workshop to create tasks using curriculum template	Written feedback re website tasks and workshop and online feedback on individual chosen tasks	Manual collation and analysis of written feedback and online collation re individual tasks	APSA Education Forum 2009 followed by finalisation of task by group; quality control by project team prior to publication on web
Ongoing: developing sustainability	-	Links with professional groups (APSA, APC, PSA)	Broadening website for all three projects and developing sustainability of website and workshop processes	-	-	Presentations at meetings, emails, workshop sessions to progressively build ongoing connections

See Section 4 of this report and the website for further details regarding the online repository, collaborative workshops and sustainability processes. Section 3 highlights the outcomes of the work in this project component.

Research method for project component 2: competency graduated descriptors

The aim of this project component was to establish competency graduated descriptors for student competence to support developmental stages within experiential placements and to pilot test the effectiveness of the self-assessment and feedback tool for students and preceptors.

This project component was conducted within an action research framework. This includes preliminary information gathering, draft graduated descriptors development and state and territory consultations, and refinement and pilot testing with final year students. These were followed by finalisation and dissemination of the graduated descriptors instrument.



Table 3 provides some details about the stages, number of participants (No.), stakeholder groups, and data and analysis processes. These include workshops at the national professional conference, the Australasian Pharmaceutical Science Association (APSA) and the national student leader conference (NAPSA).



Table 3: Graduated descriptors research methods

Stage	No.	Stakeholder group	Purpose	Data	Collation & analysis	Comment details
Preliminary work on tool	35	Project team + national student leaders	Develop initial descriptors for early & late placement student characteristics	Written records from Groups of 2/3 document early & late stage characteristics against 8 competency functional areas & written survey	Written feedback manual collation & analysis	National student leader NAPSA conf 2009
Preliminary work on tool	11	Project team/ reference group	Develop consultation document for early and late stage characteristics against 8 functional areas	17 page document regarding 8 functional areas for consultation & written survey	Written feedback manual collation & analysis	
Stakeholder consultat'n	201	Workshop academics, prof/registr'n, preceptors, students	State/territory consultations to progressively develop tool with varied stakeholder input	Written records from focus group comments	Manual collation & analysis	35 focus groups, 12 individual interviews: 102 students, 47 academics, 52 prof/reg/prec across all state/territories
Finalising tool & feedback	11	Project team & reference group	Finalise tool	Written survey re finalised tool	Manual collation & analysis	
Survey feedback on finalised tool	30	APSA educ'n forum attendees from across pharmacy schools/prof & registration	Provide feedback on tool	Group & individual written comments	Manual collation & analysis	APSA national professional workshop 2008
Interviews re tool & workshop	8	APSA education forum individual interviews	Feedback on tool	External evaluator records of interviews	Manual collation & analysis	APSA national professional workshop 2009
Feedback on finalised tool	35	NAPSA student leader forum	Provide feedback on tool	Group comments	Manual collation & analysis	NAPSA national student leader workshop 2010
Trialling & finalisation of tool	279	2 trial pharmacy schools final year students & preceptors & academics	Provide feedback on tool & training package as used in placements	5 point Likert scale written survey	Manual collation & analysis	Late 2009, 2010
Interview feedback	17	Project team/reference group	Provide feedback on tool	External evaluator records of interviews	Manual collation & analysis	APSA 2009, project team/reference group feedback Semi-structured interviews re satisfaction with workshops & materials & impact in own pharmacy school & with networks



Further detail on the competency graduated descriptors learning and assessment tool and the trialling and training processes is provided in section 5 of this report and on the website. Section 3 highlights the outcomes of the work in this project component.

Research method for project component 3: quality indicators survey and framework

The aim of this project component was to build on the Stage 1 stakeholder identified quality indicators for placements and indicators arising from other relevant literature and to prioritise various descriptors for their perceived importance and their actual occurrence in placements. A gap analysis was also undertaken, involving various stakeholders across a range of health professions.

The method may be summarised as shown in Table 4 below. This table includes steps involved, number of survey participants involved (No.), stakeholder group, purpose, collation and analysis and comments and specific details.

Further detail regarding the quality indicators processes is provided in Section 6 of this report and on the website.

Section 3 highlights the outcomes of the work in all project components.



Table 4: Quality indicators research methods

	No.	Stakeholder group	Purpose	Collation and analysis	Comment details
Survey preparatory work	5	Project team	Re-examine initial project quality indicators descriptors, collate key indicators and examine various survey models from a range of health disciplines		
Survey development	11	Project team/reference group	Identification of key descriptors and development of survey tool using 5 point Likert scale survey items re importance of descriptor and what actually happens		
Pilot test survey	201	Volunteer students, academics, professional/registration, preceptors	Trial survey	Spreadsheet collation and manual analysis	
Amend survey	5	Project team	Finalise tool for wide scale implementation		
Survey implementation collation, analysis	735	Volunteer students, academics, professional/registration, supervisors in pharmacy, OT, speech, physiotherapy, nursing, midwifery	Survey completion by various health disciplines and stakeholders using hard copy or online survey	Spreadsheet or online collation. Manual gap analysis re comparative health professions	370 pharm students 99 pharm interns 27 pharm preceptors 23 intern preceptors 14 pharm academics 16 other health prof supervisors 186 other health prof students (5 health prof)
Report	1	Project team			Journal article



3. Project outcomes and deliverables

This section of the report provides information about key outcomes and deliverables for the three project components, with subsequent chapters providing additional information about each project. Additional details are available on the website <http://peld.altc.edu.au>.

Online repository website and collaborative workshops

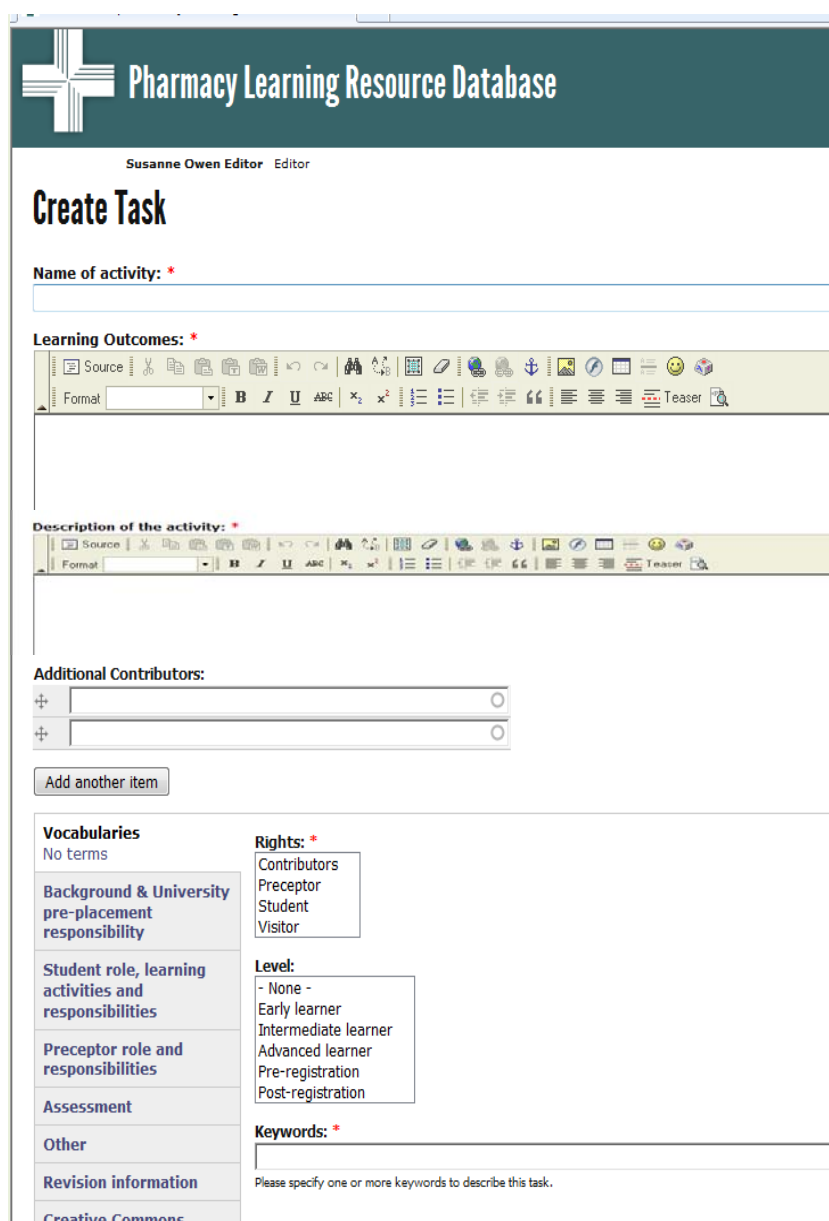
1. Improved planning of pharmacy experiential placement learning through the establishment of a national central online repository of collaboratively developed learning and assessment tasks using an educational template and planning model incorporating learning outcomes, criteria for assessment and evaluation processes.

Deliverable 1: Planned experiential placement learning and assessment tasks collaboratively developed and published within an online central repository website

A central online repository website has been established at <http://peld.altc.edu.au> with a template developed for creating pharmacy learning and assessment tasks linked to the Pharmaceutical Society of Australia competencies. The educational template was developed from the Stage 1 DBI Experiential Placements in Pharmacy project, which focused on clear objectives, scaffolded learning, explicit assessment tasks and criteria, negotiation opportunities, provision of feedback, moderation processes to ensure consistency and evaluation (Owen & Stupans 2007).

As indicated in Figure 2, the educational template included name of activity, learning outcomes and links to the pharmacy competencies, description of activity (background and university pre-placement responsibilities, student role, preceptor role/responsibilities, evaluation), as well as feedback and a creative commons license. The creative commons license means that free access is provided to materials when they are used for educational purposes where there is no commercial gain involved.





Pharmacy Learning Resource Database

Susanne Owen Editor Editor

Create Task

Name of activity: *

Learning Outcomes: *

Description of the activity: *

Additional Contributors:

Add another item

Vocabularies
No terms

Background & University pre-placement responsibility

Student role, learning activities and responsibilities

Preceptor role and responsibilities

Assessment

Other

Revision information

Creative Commons

Rights: *

Contributors
Preceptor
Student
Visitor

Level:

- None -
Early learner
Intermediate learner
Advanced learner
Pre-registration
Post-registration

Keywords: *

Please specify one or more keywords to describe this task.

Figure 2: Online repository task template

The online educational template was used in a series of workshop sessions. Four workshops took place to enable the collaborative development of materials. The collaborative workshop resulted in the development and publication of 17 tasks, with further tasks added during the December 2010 workshop sessions and currently undergoing finalisation processes. Tasks include topics such as patient counselling, researching the community, creating an experiential portfolio, smoking cessation awareness, taking a patient history and writing case reports, reflection, dispensing, compounding, inter-professional learning, over-the-counter products and medication management review processes. Prior to publication, a moderation and publication process was developed and a task checklist was used to ensure quality materials.

See Figure 3 for an example task on *Over the counter (OTC) cough and cold medicines*.





OTC cough and cold medicines

Learning Outcomes:

This activity is designed for intermediate and advanced level learners. On completion of the activity, students should be able to:

- Identify a range of cough & cold medicines available without prescription in community pharmacy
- name and explain the mechanisms of action of the active ingredients in each product group and their therapeutic purpose
- outline the pharmacist's responsibility in the supply of these products

The activity relates to the Competency Standards for Pharmacists in Australia: [Functional Area 1](#): Practice Pharmacy in a professional and ethical manner & [Functional Area 3](#): Promote and contribute to optimal use of medicines

It also relates to Graduate Attributes/Qualities [Body of knowledge](#) & [Ethics and Professionalism](#)

Description of the activity:

Go to the cough/cold section of the pharmacy and complete the table provided identifying :

- class of active ingredient;
- mechanism of action,
- the symptoms the medication is intended to treat;
- examples of products in each class of medication;

Identify the medicine classification/schedule of your example products, and the legal requirements for sale of your selected product considering the legislation in your country/ state or territory;

- how does this affect how you will handle a request for this product.

- ▶ [Background & University pre-placement responsibility](#)

- ▶ [Student role, learning activities and responsibilities](#)

- ▶ [Preceptor role and responsibilities](#)

- ▶ [Assessment](#)

Figure 3: Online task example: OTC cough and cold medicines



Figure 4 shows the moderation/publication process and task checklist, as outlined on the website.

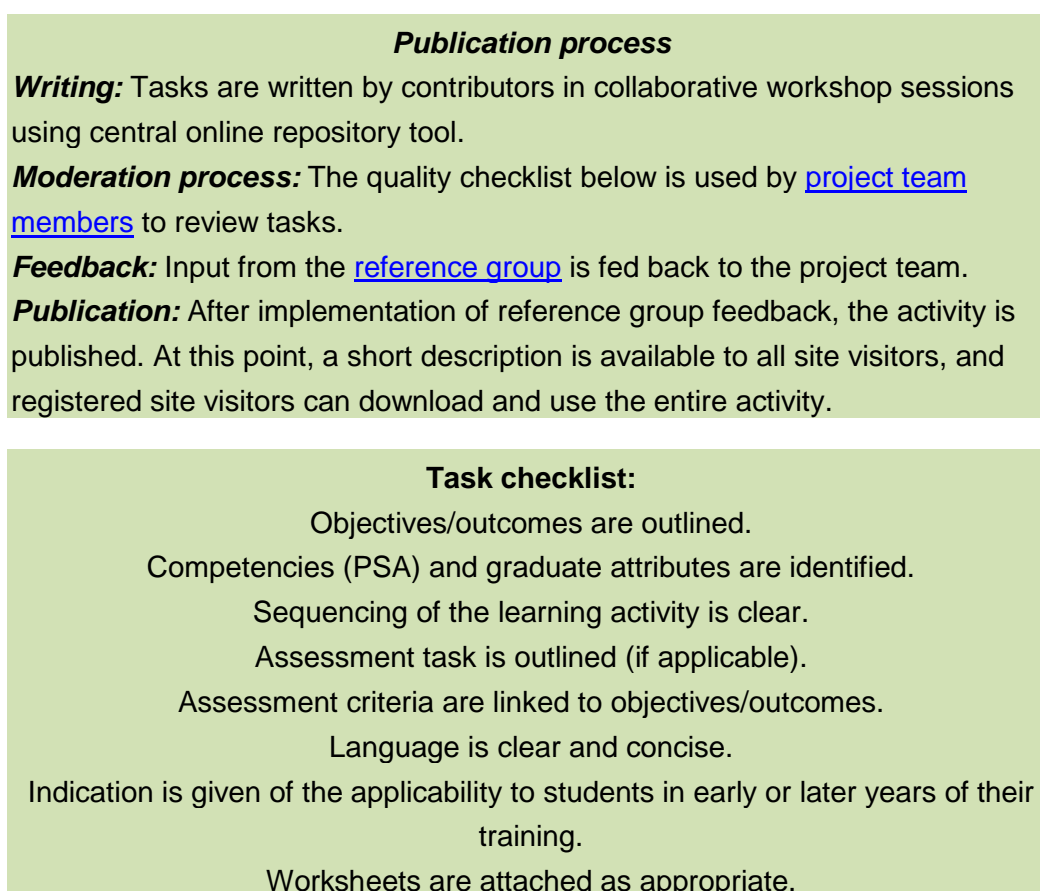


Figure 4: Task publication process and checklist

The website was publicised across the range of stakeholder groups throughout Australian states.

Deliverable 2: Sustainable infrastructure established for repository of experiential placement tasks, including website, collaborative workshops regularly scheduled within professional association education forum and quality assurance online feedback processes

The central online repository website, established through The University of Sydney pharmacy education site, was later broadened to include all three project components such as the work on competency graduated descriptors and quality indicators framework. Over 90 people have sought a password for detailed access.



Figure 5 shows the updated website, including all three project components.

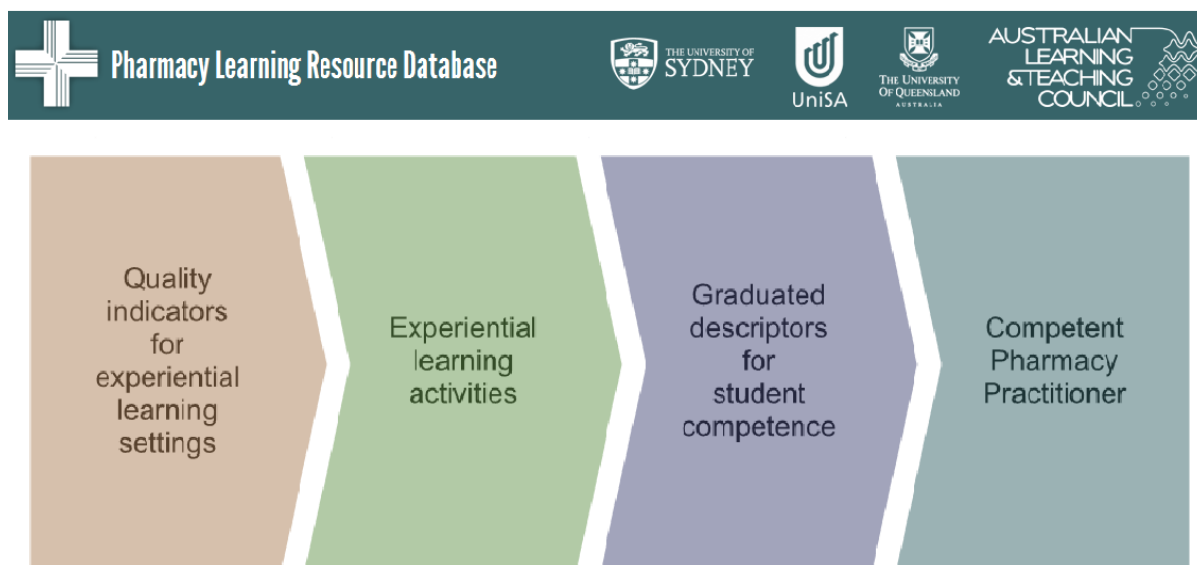


Figure 5: Website components

The Australasian Pharmaceutical Science Association (APSA) provided an ongoing opportunity within the annual national conference program for the pharmacy experiential placements workshops. Within the associated pre-conference education forum, academics from a range of universities were provided with the opportunity to collaboratively develop learning and assessment materials. See Figure 6 for an example of successful workshop processes.

1.15-1.20	<i>Introduction to pharmacy website/educational context</i>
1.20-1.45	<i>Exploring the pharmacy online repository website and individually providing online feedback on a task</i>
1.45-3.15	<i>Developing online tasks in groups: e.g. introduction to hospital, patient case studies, T-R nexus, portfolios, pre-placement primary health care, pre-placement counselling, scaffolding for placement, health information presentations, patient counselling in complex situations</i>
3.15-3.40	<i>Website tasks whole group feedback</i>
3.50-4.00	<i>Feedback and close</i>

Figure 6: Collaborative professional learning workshop process

To ensure the online repository contained quality tasks, an online evaluation tool was provided to seek feedback about individual tasks. Figure 7 provides the online survey questions.

Q1:	The activity is potentially relevant to my needs
Q2:	The activity documentation is clear
Q3:	The activity documentation is helpful
Q4a:	The learning tasks match the learning outcomes
Q4b:	The assessment component matches the learning outcomes
Q4c:	The assessment component matches the learning tasks
Q5:	The activity includes the necessary steps to achieve the learning outcomes
Q6:	In my opinion this activity could be used with modifications
Q6a:	The PELD site is easy to use
Q7:	I feel there are useful activities on their website
Q8:	General comments and suggestions

Figure 7: Online survey regarding individual task quality



In relation to broader aspects of sustainability of the website and collaborative workshops, there were a range of achievements.

Links were established within annual professional organisations and professional development contexts for ongoing work to improve pharmacy experiential placement learning. The APSA website was used to disseminate the Stage 1 pharmacy reports from the 2007 DBI scoping project. In this current project the newly created website for the online repository of learning and assessment tasks (hosted through The University of Sydney Pharmacy Education Unit for the duration of the project) was expanded to include all three project components. At the conclusion of the project, negotiations are underway with the APSA to promote the website and to indicate a link to the project website.

Regarding the collaborative workshop process, further tasks were developed within the APSA conference in late 2010, with the 17 published tasks to be supplemented by other tasks. Additional task development and publication will occur through other conference workshops conducted through APSA in future years. Discussions have occurred relating to the establishment of an education sub-committee and other processes to continue the workshops and ongoing maintenance of the website tasks and website in general.

Competency graduated descriptors tool and trialling

2. Improved feedback and support for students and preceptors through collaborative development of standardised graduated developmental descriptors related to competencies. Competency graduated descriptors are applicable to university students at the novice and advanced beginner levels using descriptors such as time taken to undertake tasks, rule bound versus flexible application to unique situations, and degree of patient focus.

Deliverable 3: Documentation of a framework of graduated developmental descriptor outcomes for experiential placement programs in relation to novice and advanced beginner students

The project team developed the graduated descriptors tool for student self-assessment and feedback. It included levels for early and late placement students on each of the eight functional areas of the profession's competencies. The tool's features include cues to identify key aspects relevant to functional areas. Detailed descriptor cues are indicated for early or late placement students and there are four developmental categories of: level of support, time taken for tasks, clinical problem-solving and degree of client focus. There are various degrees shown for each of these four categories indicating the progressive shift in skills towards competence at the point of registration (as shown on the right side as 'Newly-Registered Pharmacist').

Figure 8 provides a competency graduated descriptors example for one of the functional areas of competence related to the functional area: 'Practise pharmacy in a professional and ethical manner'. This indicates a summary of competency descriptors for early and late placement students (arrow A), the four categories as the basis of judgement (arrow B) and developing ability options (arrow C).



(A)

Functional Area 4: Dispense medicines
 Pharmacists manage the drug distribution process to ensure the safety, accuracy and quality of supplied products

Developing skills in safe and accurate management of products	Early Placement Student With assistance & significant additional time: <ul style="list-style-type: none"> assesses prescription validity clarifies medication orders assesses appropriateness of prescribed medicines follows predefined systematic dispensing procedures carries out specific documentation tasks identifies relevant information regarding medicines such as adverse affects, storage 	Late Placement Student With guidance & only some additional time: <div style="text-align: right; margin-top: 10px;"> & provides information to patients as appropriate </div>	I N T E R N S H I P
---	---	---	--

Newly-Registered Pharmacist
COMPETENT

Cues
Validates prescription and clarifies medication orders, confirming availability and considering prescribed medicine to apply systematic dispensing procedures and maintain records

LEVEL OF SUPPORT	<input type="radio"/> Significant assistance (direction)	<input type="radio"/> Minimal assistance	<input type="radio"/> Guidance (prompting, cues)	Independence
TIME TAKEN FOR TASKS	<input type="radio"/> Significant task time needed	<input type="radio"/> Some additional time needed	<input type="radio"/> Little additional time needed	Prioritises effectively and time efficient
CLINICAL PROBLEM-SOLVING	<input type="radio"/> Has knowledge, little application	<input type="radio"/> Recognises aspects of problem-solving	<input type="radio"/> Information integrated & applied	Identifies problem aspects and integrates
DEGREE OF CLIENT FOCUS	<input type="radio"/> Focused on own performance	<input type="radio"/> Partly client-focused, partly self-focused	<input type="radio"/> Mostly client-focused	Sufficient process skills for client focus

Comment (eg, discrepancies, areas of particular strengths, future action)

(B)

(C)

Figure 8: Competency graduated descriptors tool example

Deliverable 4: Training package of graduated developmental descriptors developed, trialled and disseminated online

Formal trialling occurred in two universities involving various student cohorts, with 249 students and 30 preceptors actually participating in trialling of the tool within community pharmacy and hospital contexts and in metropolitan and country locations (and with additional responses then sought for the amended tool). A PowerPoint training package was developed to support academics in the process (Appendix A). Within the two university situations, various approaches with progressive student trial groups were used by the academics involved. These case studies reflected successful strategies that could be modified for other contexts. A key finding was the importance of ensuring the use of relevant preparatory processes to suit the localised situation and background of students, particularly in terms of their understanding and experience in using competencies, familiarity and skills in self-reflection.



See Figure 9 for the two trial approaches.

Trial approach 1: final year students' 4-week placement

Pre-placement

In tutorial groups discuss experiential placement requirements.
Consider experiential placements course outline, assessment and opportunities available within placement to develop knowledge, skills, and attitudes.
Consider where you'll be in five years and what skills you'll require.
Examine PSA competencies. What are your current strengths and weaknesses?
Consider the 'journey' towards achieving the competencies. What degree of support do you need on placement from your supervisor, how much additional time does it take to do tasks, how able are you at applying your knowledge to particular client situations, are you able to focus on the client rather than yourself when carrying out tasks? What do you need to focus on at the placement?
View selection of PowerPoint slides of competency graduated descriptors tool.
Examine competency graduated descriptors tool and do self-assessment against competencies.
Identify areas for discussion with preceptor.
Consider which tasks to be undertaken in the placement portfolio provide opportunities to work on the competency areas identified.

During placement

Show tool to preceptor, including how to use it and own areas identified to work on during placement.
Early in placement, use the tool and self-assess and identify areas for discussing differences and similarities and how to improve.
At end of placement, use the tool and self-assess and also ask the preceptor to complete the tool and give you feedback and discuss differences and similarities and how to improve in future placements.

After placement

Debrief in tutorial groups and discuss experiences using the tool.
Consider strengths and weakness.
Plan for future action.

Trial approach 2: 1st year student placement observation

Pre-placement

Access online PowerPoint for graduated descriptors tool, choosing slides as relevant.
Discuss placement and key focus for observation session such as dispensing or communication.
Introduce graduated descriptors tool concentrating on relevant functional area.

During placement

Students to observe this aspect while on placement.

After placement

After placement experience, use the graduated descriptors tool (relevant functional area) and write a reflection about what is observed and how this matches the functional area descriptor (using reflection approach provided by university).
Place the written reflection within the online portfolio process provided by the pharmacy school.

2nd-4th year process

During placement

For 2nd, 3rd and 4th year placement situations, students participate in an activity on placement. They use the relevant parts of the graduated descriptors tool to provide some degree of evidence of gaining various competency element skills, undertaking self-assessment using the tool and then having a discussion forum with the preceptor. Students then upload a declaration form within the online Blackboard process to show they have had the discussion.

After placement

Preceptors indicate in written placement evaluations forwarded to the university that the discussion using the graduated descriptors tool has occurred.

Figure 9: Two trial approaches to graduated descriptors tool



Quality indicators framework

3. Greater collaboration between professional organisations, academics, students and other stakeholders and improved pharmacy experiential placements through further developing quality indicators for pre-placement, during placement and post-placement phases.

Deliverable 5: Quality indicators framework consultatively developed and published

The quality indicators project survey findings indicated that the descriptors provided to various health professions and stakeholders were all considered equally important for the placement quality. There was a gap between the perception of what makes a quality student placement and what happens in practice. See Figure 10 for the quality indicators framework that was then developed following completion of the 'gap' analysis survey.

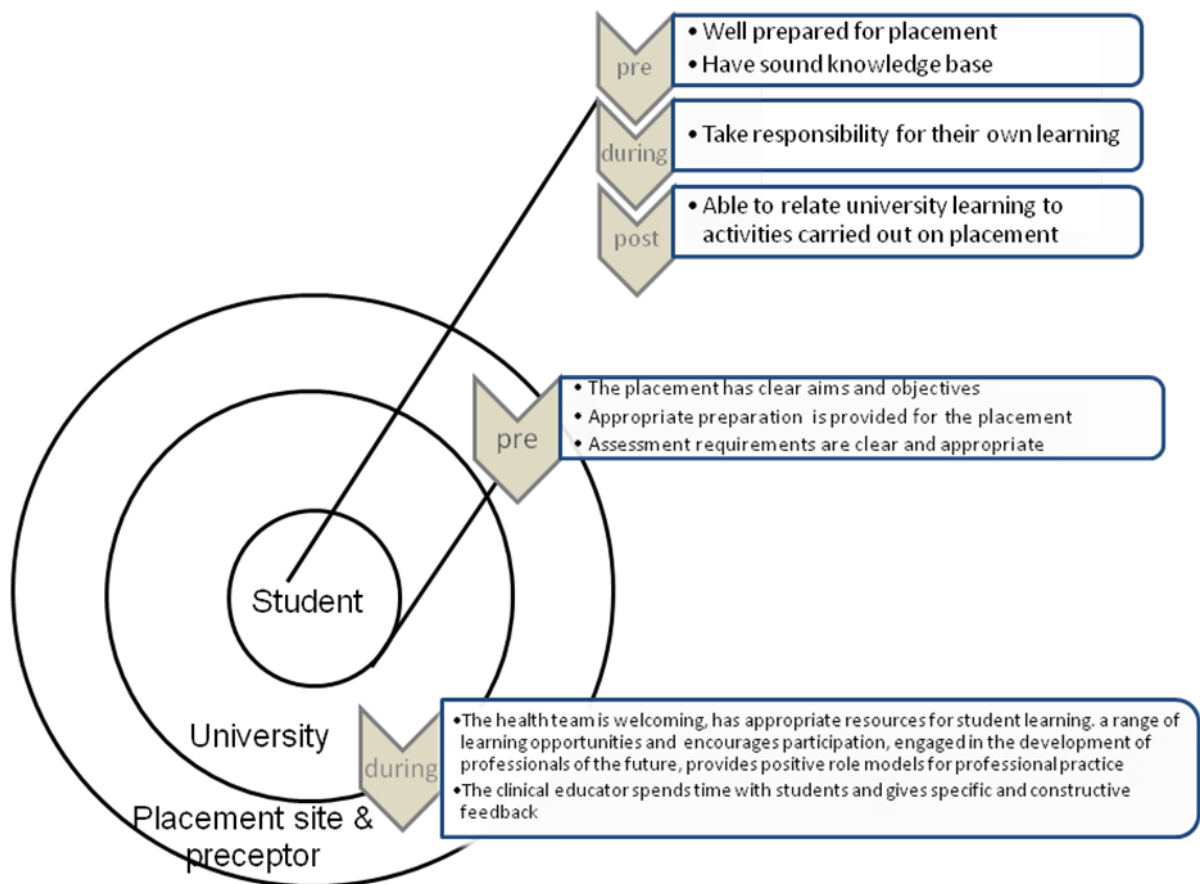


Figure 10: Quality indicators framework

Figure 10 indicates descriptors as relevant to various roles and whether the responsibilities are principally linked to pre-placement, during placement or post-placement phases. Further detail is provided in Section 6 of this report.



Papers and presentations

Deliverables 6 and 7: Interim reports/conference papers and journal articles prepared and delivered.

Various interim and progress reports were provided during the two-year period to meet contractual requirements.

Presentations and papers included seven refereed papers (plus three undergoing review and one which is near completion); five workshops and six formal presentations/posters within various pharmacy-specific, other health and various discipline contexts. Papers and presentations occurred within national and international contexts as listed:

Refereed papers

Owen, S, Stupans, I, Ryan, G, McKaige, L & Woulfe, J 2010, 'Involving students in research decision making: developing a graduated descriptors tool', in M Devlin, J Nagy & A Lichtenberg (eds), *Research and Development in Higher Education: Reshaping Higher Education*, 33, Melbourne, 6–9 July.

Owen, S, Stupans, I, Ryan, G, McKaige, L & Woulfe, J 2010, 'Support needed by pharmacy students in experiential placements: stakeholders' expectations', *Journal of Pharmacy Practice and Research*, vol.40, no. 2. pp. 99–102.

Stupans, I, Owen, S, Ryan, G, Woulfe, J & McKaige, L 2010, 'Scaffolding patient counselling skills in Australian university pharmacy programs', *Asia-Pacific Journal of Cooperative Education*, vol. 11, no. 2, pp. 29–37.

Owen, S, Stupans, I, Ryan, G, McKaige, L & Woulfe, J 2010, *Academic professional development for quality experiential placements: using national collaborative approaches for creating online repository tasks*. Proceedings of the Australian Collaborative Education Network (ACEN) 2010 National Conference: Work Integrated Learning (WIL): Responding to Challenge. 29 September – 1 October. Curtin University Perth WA, pp. 360–6.

McKaige, L, Stupans, I, Owen, S, Ryan, G & Woulfe, J (in press). 'Building Critical Reflection Skills for Lifelong Learning in the Emergent Landscape of a National Registration and Accreditation Scheme'. *Journal of Pharmacy Practice*

Stupans, I., Owen, S., Ryan, G, McKaige, L & Woulfe, J (in press). 'Development and Trialling of a Graduated Descriptors Tool for Australian Pharmacy Students'. *Assessment & Evaluation in Higher Education*.

Owen, S., Stupans, I., Ryan, G., McKaige, L., Woulfe, J. & Ingleton, C. (in press). 'Nurturing a Cross-institutional Curriculum Planning Community of Practice'. *Asia-Pacific Journal of Cooperative Education*.

Workshops

Owen, S, Stupans, I, Ryan, G & McKaige, L [invited speakers] 2008, *Competency assessment: developing competency in the student*. Workshop at the Australasian Pharmaceutical Science Association (APSA) Conference, Teams for Tomorrow, 2008, The Australian National University, Canberra.

Owen, S, Stupans, I, Ryan, G & McKaige, L 2009, *Competency graduated descriptors*. Workshop presented at Out of the Wilderness, Australasian Pharmaceutical Science Association (APSA) Conference 2009, Hobart, Tasmania.



Owen, S, Stupans, I, Ryan, G & McKauge, L 2009, *Online collaborative task development*. Workshop presented at Out of the Wilderness, Australasian Pharmaceutical Science Association (APSA) Conference 2009, Hobart, Tasmania.

Stupans, I, Owen, S, Ryan, G, Woulfe, J & McKauge, L 2009, *Graduated competency descriptors for university experiential placements*. Workshop at the 5th Pharmacy Education Symposium, Fitness to practice: competency-based teaching and learning in pharmacy, 2009, Monash University, Prato, Italy.

Stupans, I, McKauge, L, Owen, S, Ryan, G & Woulfe, J 2010, *Exploring the development of health professional graduated descriptors*. Invited workshop presented at ANZAME conference, Overcoming BARRIERS, RE(E)Forming Professional Practice, Townsville, July.

Stupans, I [invited speaker] 2009, Speech Pathology Education Forum, Adelaide.

Conference and poster presentations

Owen, S, Stupans, I, Ryan, G, McKauge, L & Woulfe, J 2010, *Involving students in research decision making: developing a competency graduated descriptors tool*. Peer reviewed paper presented at 33rd Higher Education Research and Development Society of Australasia (HERDSA), 6–9 July.

Ryan, G, Woulfe, J, Stupans, I, Owen, S & McKauge, L 2009, *Introducing the pharmacy experiential learning database (PELD)*. Oral and poster presentation at the 5th Pharmacy Education Symposium, Fitness to practice: competency-based teaching and learning in pharmacy, 2009, Monash University, Prato, Italy.

Stupans, I, Owen, S, Ryan, G, Woulfe, J & McKauge, L 2010, *Supporting experiential placement learning: using online curriculum planning*. 3rd International Pedagogical Research in Higher Education Conference. Research-teaching linkages to enhance student learning. Liverpool Hope University, October.

Woulfe, J, Ryan, G, Stupans, I, Owen, S & McKauge, L 2009, *The pharmacy experiential learning database (PELD)*, in Same places, different spaces: Proceedings ASCILITE Auckland [Internet]. 2009 [sighted 2010 May 13], pp. 1200–01. Available from: <http://www.ascilite.org.au/conferences/auckland09/procs/woulfe-1-poster.pdf>

McKauge, L, Stupans, I, Owen, S, Ryan, G & Woulfe, J 2010, *Building professional skills using a graduated descriptor tool to assess practice skill development*. Poster presented at ANZAME conference, Overcoming BARRIERS, RE(E)Forming Professional Practice, Townsville, July 2010.

Stupans, I, Owen, S, Ryan, G, McKauge, L & Woulfe, J 2009, poster presentation to ALTC Assessment Forum, November 2009, Melbourne.

There are four papers undergoing review or being finalised at the time of writing this report. These papers address the following topics:

- graduated descriptors tool process
- the online repository
- competency graduated descriptors trialling
- quality indicators.



4. Online repository and collaborative workshops project

This section supplements information already provided about online repository and collaborative workshops project, outlining investigative approaches. It also provides additional information about research methods and findings. Further information is provided in the published papers and conference presentations. Some of these papers are available on the website: <http://peld.altc.edu.au>.

Background

Academics are generally highly skilled in their discipline areas though they sometimes lack educational qualifications in, and knowledge of, relevant educational theoretical models, strategies for scaffolding and diversity of assessment approaches.

In considering experiential placements as a key component of the pharmacy education curriculum and the opportunities provided for students to apply classroom knowledge and theory in work settings (Waters 2001; Orrell 2004), academics who have an understanding of relevant teaching and learning models – including aspects related to pre-placement, during placement and post-placement aspects – are of particular benefit. Kolb's (1984) experiential learning model is particularly relevant. It focuses on reflection within phases of concrete experience; review of, and reflection about, this experience; the formation of abstract concepts and generalisations; and experimentation and application of new concepts. While learning can occur merely by being in the environment, Vygotsky (1978) has highlighted the importance of stepwise scaffolding, which involves systematic planning within a context and using people, texts, resources and mentors to accelerate the learning process.

To support academics in developing quality curriculum and preparatory materials for student placements, there is value in material being made available and accessible within online contexts (Fjuk 1997). However, supplementing the online materials with face-to-face collaborative development of materials and then disseminating the work within online repositories and other web technologies provides significant additional benefits (Read et al. 2003; Buntine et al. 2007). Various disciplines have used face-to-face and online processes to widen the skills of academics beyond traditional lecturing and examination approaches (Owen & Davis 2009; Timberlake 2008).

Research method

To support pharmacy academics in their curriculum planning, a key aim for this project component was developing an educational template and online repository website of quality tasks. Establishing national collaborative professional development workshops and building sustainability were other critical aspects.

In the preparatory stage, two existing local websites were examined by the project team for features relevant to the project. The Advancing Chemistry by Enhancing Learning in the Laboratory (ACELL) website was useful for its collaborative, workshop-based development model; and the Technology Supported Learning Database (TSLDB) site for its user-generated approach to site content.



As outlined briefly in Section 2 of this report, this project was based on the 2007 Stage 1 pharmacy experiential placements work and curriculum planning model. This model comprised:

- clear outcomes
- scaffolded learning
- explicit assessment and criteria
- negotiation
- feedback moderation to enhance consistency
- evaluation.

The project team and reference group initially held preliminary workshops involving 11 participants. At these preliminary workshops, finalisation of the learning activity template took place. This included aspects such as the name of the activity, learning outcomes mapped to the profession's competencies, description of the activity, university responsibilities, student role/responsibilities, preceptor role, and assessment items and marking guides. A series of workshops was then conducted within education forums that preceded the annual APSA professional conferences, and also within other special events. Academics and professional/registration board representatives from across all states and territories and most pharmacy schools worked together on various topics to develop learning and assessment tasks using the online educational template.

In the collaborative workshops, a list of potential topics relevant to experiential placements was forwarded to workshop registrants prior to the education forum events. Attendees selected a topic and brought along related materials from their own institutions. Topics covered varied with each workshop. Aspects included patient case studies, health information, introduction to hospital pharmacy, patient counselling in complex situations, scaffolding for placement, portfolios, teaching-research nexus, and pre-placement primary health. Each topic group was supported by a group leader, with leaders and other participants sharing materials from their own universities and then working collaboratively in groups of three or four to create a new task using the online template. After the workshops, follow-up occurred through assigned group leaders liaising with other group members to finalise the tasks. A 5 point Likert scale survey was used at the conclusion of the workshops to assess the value of the sessions, website effectiveness, and the collaborative learning process and impact on practice and colleagues. Free response questions provided additional opportunities for comment.

Prior to publication, the project team used a quality assurance process to ensure the tasks were of high quality. The tasks were assessed using a criteria checklist, which included outlining objectives/outcomes and identifying competences and graduate attributes. Other online survey items were designed to check whether the sequencing of the learning activity was clear; whether the assessment task being outlined and criteria linked to objectives/outcomes; clear and concise language; indications being given of the applicability to students in early and later years of their training; and attaching worksheets as appropriate (see Section 3 of this report for details).

Publication on the website then occurred. A short description was made available to all site visitors, and registered site visitors were able to download and use the entire activity. An online feedback tool was also available for each activity to further support the development of quality tasks (see <http://peld.altc.edu.au>).



Throughout the duration of this current project and building on the 2007 scoping study, the pharmacy experiential placements project involved establishing sustainable links with APSA as a key professional organisation, as well as with the Pharmaceutical Society of Australia and the Australian Pharmacy Council.

At various times during the two-year project semi-structured interviews were conducted by the external evaluator, with manual collation of results and thematic analysis taking place. Workshop attendees and project team and reference group members were involved in the interviews. Questions were asked about the value of workshops and the website impact on practice and networks.

To be able to judge the success of the project, initial targets related to the stated outcome of the project were identified at the commencement of the project. These included receiving positive feedback about the educational template, preliminary sessions and collaborative workshops; publication of at least 10 tasks, and documentation indicating wide representation of pharmacy schools and other stakeholders as relevant to various aspects of the work. Initial targets included the sustainability of the website structure, ongoing opportunities for collaborative workshops to further develop learning and assessment tasks, and over 70% positive responses to the published website tasks.

Results

Findings are provided in relation to:

- published online tasks
- workshop attendees
- written surveys on the tasks and the collaborative workshops
- evaluator interviews regarding the website
- evaluator interviews regarding collaborative workshop processes
- evaluator interviews regarding impact of the project
- online survey feedback on individual tasks.

Online tasks

Figure 11 gives an example of a task created using the online template and collaborative professional learning process, which is accessible through the website at <http://peld.altc.edu.au>. Over 90 pharmacy academics and professionals have enrolled on the Pharmacy Learning Resource database as contributors, editors and users.



Susanne Owen Editor - Edit

Medicines Review - Authentic patient

[View](#) [Edit](#) [Revisions](#)

Submitted by Susanne Owen Editor on Sat, 06/12/2008 - 3:30pm
in [Case history](#) [Communication](#) [Interprofessional collaboration](#) [Medication Review](#) [Patient interview](#) [Advanced learner](#)

Learning Outcomes:

This activity is designed for advanced level learners. On completion of the activity, students should be able to:

- elicit a comprehensive medical and medication history
- identify and prioritise actual and potential drug-related problems
- make recommendations regarding optimal management
- communicate effectively and ethically through appropriate verbal, written and visual formats with health and social care professionals with the aim of providing optimal patient care and safety

The activity relates to the Competency standards for Pharmacists in Australia:

[Functional area 2:](#) Communication (patient, preceptor, health professional)

[Functional area 4:](#) To promote and contribute to optimal use of medicines

[Functional area 4.2:](#) Evaluate prescribed and OTC medicines and

[Functional area 7.2:](#) Provide medicines and health information and education

It also addresses Graduate Attributes/Qualities [Body of knowledge, Analysis and problem solving](#) and [Communication](#)

Description of the activity:

The activity takes place in three stages:

Stage One:

- Patient is identified.
- Student researches required information and prepares relevant questions.
- Patient consent obtained for review process.
- Student attends and where possible conducts patient interview.

Stage Two:

- Results and key findings summarised.
- Written report:
 - Letter to the GP
 - recommendations and supporting evidence
- Oral case defence to other students, preceptor and GP

Stage Three:

Feedback provided by

- Preceptor
- GP
- peers
- university staff

Background & University pre-placement responsibility

Prior to interviewing the patient the following should be considered:

- Confidentiality forms
- Patient consent (written)
- Student orientation to the experiential environment.

Patient identification may be undertaken by preceptor or student.

Student role, learning activities and responsibilities

Please see the attachment:

Student Role Attachments:

[HMRstudent_preparation.pdf](#)

Assessment

See the following attachments for a suggested marking scheme

Assessment Attachments:

[HMRMarkingGuide.pdf](#)

Contributors

- Susanne Owen Editor
- [Lisa Pons](#)
- [Broenda Clifford](#)
- Gail Nalton
- [Andrew Kitching](#)

Related categories

Keywords : Case history

Keywords : Communication

Keywords : Interprofessional

collaboration

Keywords : Medication Review

Keywords : Patient interview

Browse by keyword

Communication community
community pharmacy
compounding cough/cold
Counselling extemporaneous
dispensing health promotion
lifelong learning medicine
classification OTC primary care
Product preparation project
reflection reflective
journal research schedule
[more tags](#)

Feedback

Seven short questions about your experience with this activity; please click below and help us improve it for future users.

[Feedback Survey](#)

- About the project
- About the Learning Resource Database
- Feedback
- My account
- Request account
- Create content
- Log out

Site content

- Introduction to the ALTC Experiential Placements in Pharmacy project
- Functional areas of pharmacy competencies
- Experiential learning activities
- What's New
- Project Team
- Licence
- Graduate attributes
- Graduated descriptors for student competence
- Quality indicators for experiential learning settings
- Dissemination

Learning activities

- OTC cough and cold...
- Creating an experiential...
- Smoking Cessation...
- Quality Use of Medicines...
- Community Health...
- Patient Case Report...
- Evidence based practice...
- Researching the community
- Prepare a pharmaceutical...
- Medicines Review...

[more](#)

Under Development

- Patient Counselling in...
- Overview of Hospital...
- scaffolding for Placement
- Communicating with...

Last modified: Monday 19 Jul 2010, 12:50am

Feedback: paul.pharm@syd.edu.au



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Figure 11: Medicines review – authentic patient example



The website exceeds targets set and currently contains 17 published activities, with three further tasks in the finalisation/editorial process. Published activities relate to patient counselling, researching the community, creating an experiential portfolio, smoking cessation awareness, taking a patient history and writing case reports, reflection, dispensing, compounding, inter-professional learning, over-the-counter products and medication management review processes. Task activities have been mapped to the Pharmaceutical Society of Australia's *Competency Standards for Pharmacists in Australia*.

Workshop attendees

Over 90 people attended the four preliminary and conference workshop events conducted during an 18-month timeframe. Workshop sessions included two education forum conferences attracting nearly 70 people. Academics from across all Australian states/territories and New Zealand and from most universities were a key participant group. There were also some professional workshop attendees and registration board representatives, preceptors and students.

Written surveys

Written survey findings from the two education forum conference workshop sessions indicated respondents noting positive benefits, with 100% of participants expressing satisfaction about the collaborative workshop process. Additionally, 87% intended sharing workshop information with colleagues and 100% intended to disseminate information to other networks.

In relation to the website, 80% of written survey responses indicated the website was easy to use and 100% noted its usefulness, commenting specifically on aspects such as 'usefulness of links to attributes and competencies' and 'dispensing info (information) for my course'.

Evaluation interviews regarding website

External evaluator interviews indicated that there were varying degrees to which the website had been used, with wider use likely in the future as more tasks became available and more links to other resources were made. An example comment of this viewpoint, as expressed by an academic, is:

I've used it ... it contains useful info: work is attributed – it's a truly shared resource. I've really appreciated the collegiate, generous, goal-oriented approach, rare in academic circles. It's not every day you're redesigning a course – that's when you'd use it. My colleagues are using it and I point people towards it. Not a day-to-day log on. It's a resource so I don't need to reinvent the wheel.

There was also a sense that as more resources were made available on the website, it would become more widely used, including having more tasks and links to journals or perhaps a more interactive area to encourage sharing of ideas. An example comment is:

The only shame is that with the database there are only 11 tasks [at that time]. Good if each uni could agree to put up new tasks every year. But the time taken to put it up and get it right is time we don't have. Maybe if each uni applied for funding to contribute to the database it would work.



Regarding individual tasks there were many positive comments from academics interviewed who were involved in the workshops, with comments being as follows:

- Definitely: the material on individual reflection on a group assignment has been used this semester. I was undecided as to how to do this before but I was shown a 'working example'.
- Changes to the description of reflection as an educative activity – used wording recommended by a colleague; wording was more 'student' orientated in the description.
- I set an exam question about reflection where the criteria for the answer were refined after a discussion at a workshop.
- I reworked practice questions [re non-prescription requests] given the discussion by community pharmacists re current practice.

A general comment about the value of the website was:

I've shifted across to using competencies in both the placement workbook and 1st year portfolio to explain why we do things. The teaching team has also gone back to see where the skills development is, and now have a progression going through the four years. The concepts of scaffolding and skills development have come to the fore; also that the uni is a safe environment in which to test skills – this is linked to scaffolding. I've introduced a new style of testing in exams, based on prac work. The formative tools used in the portfolio are also used in exams, so that the students are used to what is expected.

Evaluator interviews regarding collaborative workshop process

External evaluator interviews also indicated the value of the collaborative workshop process involved, with some longer term changes in curriculum planning and impacts on wider networks also evident. This is reflected in comments such as:

- Today: Great! The networking; getting input, swapping notes; extremely useful while we were sitting down working together. You get really good input [December 2009 interviews].
- Collaboration. New ways of looking at my teaching but ideas [are] not completely new. It's validating my knowledge. I'm learning that I've already thought about things that others may not have. It's validating my ideas. It's OK to have a multi-angle approach; that my approach is not too complex – and that the concept of competencies we are using is not black and white [December 2009 interviews].
- As a very new academic I was worried that I wouldn't have much to contribute. But having more experienced academics there has changed the way I think – I definitely learned from it [Evaluator report, Interviewee 9, September 2010 interviews].
- The workshops – and other meetings within my institution – have opened up communication about experiential learning and learning in general. The networking and collaboration with



experienced people willing to share has been invaluable
[Evaluator report, Interviewee 9, September 2010 interviews].

The cross institutional professional learning process was particularly valued, as indicated in these comments:

- Collegiality: engaged people on different occasions from different institutions to share ideas. There's not usually the opportunity to do that [December 2009 interviews].
- Collegiality – people coming along to contribute and sharing their experiences, breaking down the silos between the states [May 2009 interviews].
- Pharmacy education being placed above any notion (perceived or real) of inter-university rivalry [May 2009 interviews].

However, despite the overall emphasis on the positive aspects of collegial work, there were individual comments made about some negative aspects of collaboration concerning unequal contributions. An example response was:

Some people did not feel empowered to speak – were overshadowed by louder members in small groups. There was some competition between the small groups. It could have been better with more people from community and hospital practice [Evaluator report, Interviewee 1, September 2010 interviews].

Evaluator interviews regarding impact of project

As the project neared its completion, all participants involved in the latter interviews were reporting positively about the impact of the project and collaborative workshop events in terms of *influences on beliefs and practice*. Key themes related to using particular website activities in student learning activities and reworking assessment grids, as well as links to competencies. Example comments about the overall influence of the project on practices are:

- I'm becoming more sophisticated as an assessor – in the use of marking grids in both teaching and placements. The competencies have focused my thinking and teaching – I now use them in First Year [May 2009 interviews].
- Reflection – to be able to explain what it is. It goes beyond thinking, to the context I have to get students to think about. Nice activities in relation to assessment e.g. reflecting on style and the way the students write, how they put themselves into it. I've seen a difference in students putting down their expectations through my use of this material, and other academics are picking it up [Evaluator report, Interviewee 1, Sept 2010 interviews].
- Several things have happened to bring about a number of improvements: this collaboration, staff changes, and change in Faculty structure. Now the Portfolio gives much more structure. Before this, many students and Preceptors struggled with lack of guidance in Placements [Evaluator report, Interview 9, Sept 2010 interviews].



Examples of changes in student learning that participants noted during their involvement in the project, were:

- More focus on the learning objectives and expectations for placement.
- Reflection – a difficult concept to encourage in students; now asking students in all year levels and at all placements to report in this style.
- Group assignments – asking students to be critical so they report positive and negative aspects of the experience – not just what they think I want to hear! [May 2010 interviews]

General summary comments from two individual interviewees to the external evaluator about the value of the project and collegial work are as follows:

- It has been a really positive project: has got people thinking about experiential learning in a structured way. Took it out of the institution...The networking process: people from different backgrounds talking about learning; could we do things differently. The impact on the profession and on students has been a huge benefit [Evaluator report, Interviewee 9, September 2010 interviews].
- Here, we meet bottom-up and top-down aspects – this has been a great journey in my development as a teacher... To form a community of scholars around this has been very enriching [December 2009 interview].

Online survey feedback on individual tasks

Results from 24 respondents providing online survey feedback regarding various online repository tasks of their choice indicated essentially positive responses (not all respondents answered each question). Figure 12 provides the results. The figure shows the website tasks being essentially relevant to needs (96%), clarity and helpfulness of the documentation (96% respectively), learning tasks matching outcomes (95%), assessment matching outcomes (84%), assessment matching tasks (94%), and the website being easy to use (71%), steps being clear (79%) and providing useful resources (94%).



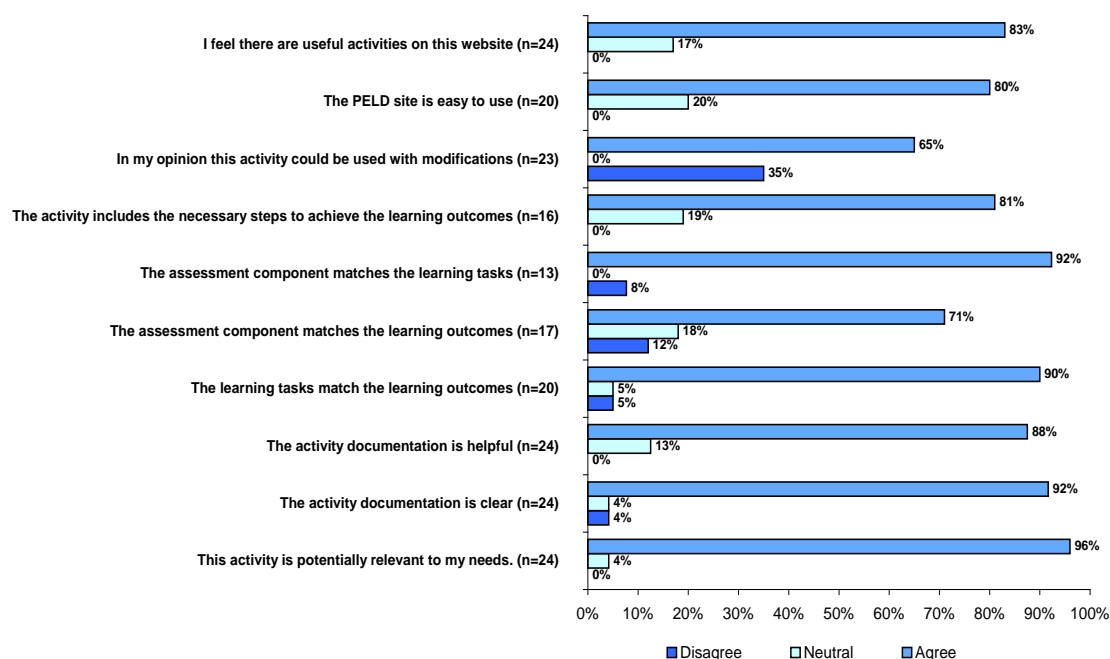


Figure 12: Online survey results regarding individual tasks

Of the respondents, 77% had actually used the task that they were commenting on, with or without modifications. Specific comments about particular tasks were: 'This activity highlights (in a concise manner) the central elements of reflective learning and the foundations of a reflective diary' and 'Being involved in creating these activities is helpful in updating and thinking about what we expect students to do on placement'; 'Very relevant. I like this and I wish I had known of its existence sooner. Are we able to use this resource?'

Broader comments were:

- the range of topics are all relevant to modern pharmacy.
- I really support the repository concept. [I] have contributed and have used pieces of it in developing my experiential learning program.
- perhaps need to structure a space for others to contribute how they may have modified the task to suit their purposes so that others can read and get ideas.
- helpful in updating and thinking about what we expect students to do on placement.

Summary

Overall, the project produced a valuable online resource for pharmacy educators and students in the broadest sense, with the overall website being renamed Pharmacy Learning Resource Database. The design of the online activity template is based on sound pedagogical principles and, as such, will be of use to other disciplines who are seeking to improve the planning, implementation and evaluation of experiential learning activities, particularly through collaborative professional learning processes.



5. Competency Graduated Descriptors project

This section supports previous information on the competency graduated descriptors project, outlining investigative approaches. It also provides additional information about research methods and findings. Further information is provided in the published papers and conference presentations, some of which are available on the website <http://peld.altc.edu.au>.

Background

Australian health professional and registration bodies accredit university health programs on the basis of the respective programs meeting various governance and academic requirements. Competency standards are used by professional and registration bodies for assessment purposes, with the pharmacy profession requiring an intern year prior to registration. However, assessment of competencies is usually based on a competent/not competent basis, which ignores the developmental process applicable to students and interns that occurs in the preparatory process. Consideration of the development phases of competencies is described in the literature by Benner (1984) and Dreyfus and Dreyfus (1996), including acknowledgement of aspects such as time taken, degree of support needed, the focus on the patient/client or self and clinical reasoning synthesis.

Previous work in Australia in health professions such as speech pathology and physiotherapy has developed feedback tools to acknowledge the developmental competency graduated (or incremental) descriptors for various stages of competency development, such as novice, intermediate and entry levels. In speech pathology, McAllister et al.'s research (2006; 2010) outlines an assessment tool for competency-based assessment of student performance in the workplace based on a rating of behaviours against developmental levels. New standardised clinical assessment processes for Australian physiotherapy placements have also been developed and trialled based on seven agreed assessment domains (communication, professional behaviour, assessment, analysis and planning, intervention, evidence based practice and risk management), with associated performance indicators (Keating, Dalton & Davidson 2009).

The Australian pharmacy profession differs from speech pathology and physiotherapy in that a year's internship is required after graduation before registration can occur. Competencies are assessed within that process. This means that focusing the pharmacy preparatory studies onto competencies is more problematic because the links to registration requirements are more distant. However, the Stage 1 Australian experiential placements in pharmacy mapping project (Owen & Stupans 2007) identified the importance of developing closer links between university programs and the profession's competencies and the need to acknowledge the developmental processes occurring within universities through graduated descriptors.

Research method

Little research has been undertaken regarding pharmacy students and how they build competence. Consequently, the aim of this Australian Learning and Teaching Council project was to use an action research approach to consultatively establish graduated descriptors relevant to competencies to support the developmental stages of skill building within experiential placements, including a focus on building student self-assessment skills.



Section 2 of this report provides some details of the research methods. In addition, the preliminary information-gathering stage involved summarising the key aspects of the eight functional areas of competence from the profession's competencies. Twenty-five student leaders representing most pharmacy schools at a national pharmacy student conference were involved in workshopping the summary material. Some initial ideas were developed for each competency about the characteristics of students' skills both in the early and late stages of placements.

A follow-up workshop group consisting of 11 academics and professional/registration board representatives (including project team/reference group members) then further expanded the descriptors for early and late placement students for each of the eight functional area competencies. A 17 page document was developed for further consultation and progressive refinement with key pharmacy education stakeholders in the Australian states and territories and also with professional organisations operating at a national level.

Subsequently, during the draft and consultation phase, over a five-month period, there were 35 group consultations and 12 individual consultations conducted. A total of 201 stakeholders contributed from across Australian states and territories and universities, including academics, students, preceptors, and professional/registration representatives. See Table 4 of this report for details. Consultation sessions involved discussion about competences, sharing ideas about successful strategies to support university students in developing competencies at university and within placements, and examination of various versions of the graduated descriptors self-assessment and feedback tool. In addition, consultation group participants provided suggestions. The researcher recorded consultation comments in note form, and this data was collated and analysed manually to identify key themes (Strauss & Corbin 1998). The draft instrument was progressively amended in preparation for consultations with subsequent groups.

Following manual coding and analysis of the consultation group feedback, the refinement of the graduated descriptors tool used reference group involvement and teleconferencing with a range of stakeholders. Further feedback on the final tool was obtained from conference participants and from a national student leader forum.

A training tool for students was also developed. Pilot testing of the graduated descriptors self-assessment and feedback tool in two large university pharmacy schools took place with final year students. Some preceptors also trialled the tool and provided written feedback about its usefulness using a five point Likert scale survey. Questions were asked about the usefulness of the training, overall ease of use of the tool, the focus on competency areas, the self-assessment focus, and whether the tool supported preceptor - student discussions and student learning. Finalisation transpired through consideration of pilot testing feedback, preparation of training packages documentation and conducting of conferences and online dissemination.

Indicators of success in this project component were the publication of the graduated descriptors framework, achievement of over 70% positive written feedback and participation lists in consultations revealing a range of stakeholders and locations. Other indicators identified were about placement handbooks increasingly reflecting graduated descriptors, varied sites involved in trials and the training package being completed and disseminated on the website.



Results

Results are presented in terms of the consultation tool documentation, consultation responses, written survey education forum responses from academics, written survey results from trial participants, interview responses to amended tool, and external evaluator interview responses.

Consultation tool documentation

An example of the graduated descriptors tool from one of the eight competency areas, as used in the latter phases of the consultation processes (prior to amendment), is shown in Figure 13.

Functional Area 4: Dispense medicines Pharmacists manage the drug distribution process to ensure the safety, accuracy and quality of supplied products				NEWLY-REGISTERED PHARMACIST COMPETENT
Developing skills in safe and accurate management of products	Early Placement Student With assistance & significant additional time: <ul style="list-style-type: none"> assesses prescription validity clarifies medication orders assesses appropriateness of prescribed medicines follows predefined systematic dispensing procedures carries out specific documentation tasks identifies relevant information regarding medicines such as adverse affects, storage 	Late Placement Student With guidance & only some additional time: <ul style="list-style-type: none"> 		Cues Validates prescription and clarifies medication orders, confirming availability and considering prescribed medicine to apply systematic dispensing procedures and maintain records
LEVEL OF SUPPORT	<input checked="" type="radio"/> Significant assistance (direction)	<input type="radio"/> Minimal assistance	<input type="radio"/> Guidance (prompting, cues)	<input type="radio"/> Independence
TIME TAKEN FOR TASKS	<input checked="" type="radio"/> Significant task time needed	<input type="radio"/> Some additional time needed	<input type="radio"/> Little additional time needed	<input type="radio"/> Prioritises effectively and time efficient
CLINICAL PROBLEM-SOLVING	<input checked="" type="radio"/> Has knowledge, little application	<input type="radio"/> Recognises aspects of problem-solving	<input type="radio"/> Information integrated & applied	<input type="radio"/> Identifies problem aspects and integrates
DEGREE OF CLIENT FOCUS	<input checked="" type="radio"/> Focused on own performance	<input type="radio"/> Partly client-focused, partly self-focused	<input type="radio"/> Mostly client-focused	<input type="radio"/> Sufficient process skills for client focus

* Circle the ☒ if student's performance is below the level of the categories provided

Comment

Figure 13: Dispense medicines graduated descriptors tool example (draft)

The competency graduated descriptors tool was subsequently amended, as shown in Section 3 of this report.

Consultation responses

There were over 201 participants from across Australia and from across stakeholder groups who attended the consultations. Key themes emerging from the consultations in relation to the competency graduated descriptors tool, which indicated positive responses, referred to:

- competency continuum from the university to the profession
- organisation of the tool into eight areas that reflected the profession's competency functional areas using abbreviated key 'cues' rather than lengthy details
- a focus on student self-assessment and reflection with students considering their own strengths and weaknesses
- provision of an assessment tool outlining clear expectations and opportunity for preceptors to give feedback linked to competencies

- provision of materials giving support and training to the preceptor
- university and preceptor scaffolding and student learning opportunities.

To a lesser degree there were also some concerns expressed by some individuals. These were about blurring of university/internship roles, developmental versus assessment purpose of the tool, and the graduated descriptors tool language and format.

Written survey responses from the education forum

In written survey responses, 80% of APSA national education forum attendees gave a high or extremely high response to the pre-trialling competency graduated descriptors tool, and they were especially positive about the potential for modifying it for local context use and the links to the competencies and self-assessment.

Written survey results from the trial participants

Two large university pharmacy student groups were involved in the trialling of the tool, with written survey responses obtained from students and preceptors in relation to placements. These placements were located throughout metropolitan, regional and more remote locations and across hospital, community pharmacy and other professional contexts. At one university, two groups of students (Q1, Q2) from various experiential placement timeframes were involved, as were some preceptors. Forty-five students (54%) in Q1, 48 students in Q2 and 30 preceptors (36%) (Q preceptors) completed the surveys, which asked for views on the graduated (pharmacy) competency descriptors tool. From the other university involved, 156 students completed the survey, including 117 students in the first group (S1) and 39 students in the second group (S2).

Figure 14 provides the results for the eight questions asked. The percentages of students or preceptors who responded on the Likert scale as satisfactory, very good or excellent have been grouped together and displayed.

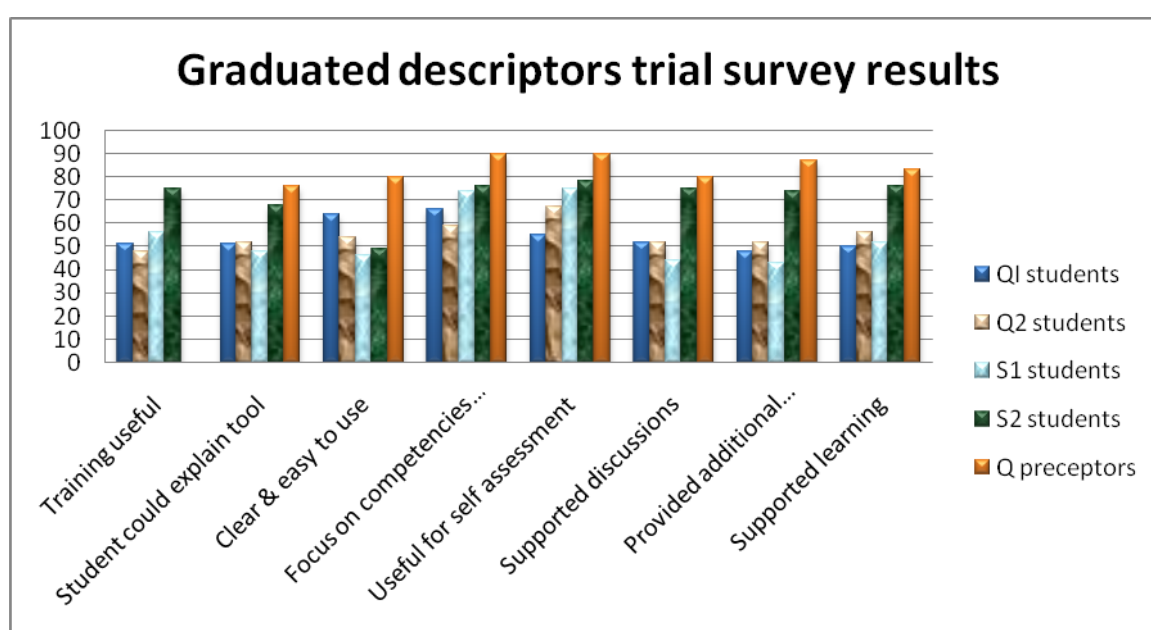


Figure 14: Competency graduated descriptors trialling survey results



Figure 14 indicates that, generally, preceptors and students were the most positive about the focus on competencies and in relation to self-assessment. Students from the S2 group showed more positive responses than others. Perhaps this reflected additional preparatory work by the placement leader through revisiting competencies and self-assessment prior to students using the tool and going on placement (see Section 3 of this report). Preceptors were particularly positive, especially in terms of the competencies focus, self-assessment and feedback opportunities provided by the tool.

The paper-based survey provided opportunity for free text comments. Some preceptors indicated additional responses, both positive and negative, with comments being:

- Clear, concise comprehensive and very easy to use.
- The tool was difficult to read and understand ... students were unsure of its purpose and so couldn't provide me with helpful info. The document was long and time consuming and although I filled it out I did not do it justice due to its ambiguity.
- Very difficult to understand considering most preceptors are time poor, the simpler the tool the better.

Student comments were positive and negative, with an example of positive comments being 'the tool's good, it helps me understand what was expected and what needed to be done' and 'gives good idea of where one should be at in terms of skills'.

Some students indicated they had not used the tool with preceptors for feedback, or that the tool was too long or was unclear and complicated to use. Comments which typified some of these views included:

- haven't had chance to discuss with preceptor. Too long. Needs more focus on the checklist of 'tasks'. Options for every functionality the same; so gets confusing.
- the layout was not clear cut and confusing. There was no preceptor feedback involved.
- the printed copy can be hard to read and the wording was slightly confusing.
- the GD [graduated descriptors] didn't seem to adequately match up to how I felt my learning was going. My preceptor thought the same e.g. the competencies were well described but I couldn't reflect my competency very accurately through the ...options provided.

Interview and survey responses to amended tool

Following the formal consultation, as shown in Section 3 of this report, amendments to the tool were made. These essentially involved reducing the wordiness of the instructions, providing a completed example in the instructions and removing some minor detail on the grid so the placement of the tick boxes was clearer.

Fifty-seven students from one of the trial schools provided survey responses to the amended tool. It was interesting that, while responses to many questions



were similar to the S2 results indicated in Figure 14, responses about the tool being clear and easy to use showed an increase from 50% to 72% in terms of being satisfactory to excellent. Continuing very positive responses related to the focus on competencies and self-assessment.

Preceptor responses to the amended tool provided at a conference event provided 100% positive responses (satisfactory to excellent) regarding all survey questions.

Comments from student interviewees at another non-trial university were all positive, as these examples indicate:

- very good idea... it shows that you have improved ... a good step ... it depends on the supervisor, some are busy. Sometimes they do have time to talk about it ... it's very useful for them [interview 1]
- clear instructions ... I don't have to spend time to find out what I have to do [interview 3].
- Having an example, it's very helpful ... it makes it clearer ... green tick and the blue crosses are very helpful [interview 1].
- good because it's clear for the preceptor as well ... this one allows the preceptor to give a bit more feedback in different areas [interview2].
- from this one: I could go through this and tick and its really convenient ... students can think how did they go for each criteria [interview 5].

External evaluator interviews

There was a positive response from interviewees involved in various aspects of the project, and some evidence of academics beginning to include the materials in their workbooks and programs. An example comment is:

I've used the GDs in 4th year for 4 week placements. Preceptors and students use them as a tool for discussion. Benefits are quite clear; feedback from Preceptors very positive. Student feedback ambivalent ...I was struck by the potential of the tool to encourage dialogue, especially where preceptors are not trained to work with students. The tool increases the chance of a dedicated discussion on a specific element of what the student is doing [Interviewee 1, Evaluator report September 2010].

Furthermore, external evaluator interviews showed that, concerning graduate standards and registration, it was generally believed that the linking of undergraduate programs with the profession's competencies was a significant issue for aligning the undergraduate and internship programs. This is reflected in the following comment:

The linking of the competency work is important; making the linkages between undergrad and post grad seamless. Instead of having a stand-alone internship, we need it integrated, a more educational escalator. Can this project do that? The issue is making sure students understand what they're required to do, rather than what they need to do to pass. They don't grasp competencies till they're in the workplace. Competencies need to be assessed fairly but preceptors



don't have much training in how to assess. How to ensure reliability of assessment is a bigger issue. If they can make the tool functional for assessment during the intern year that would be laudable (academic).

Summary

The graduated descriptors tool outlining a developmental skills approach to pharmacy competencies was developed with the intention of improving the links between university preparatory programs, internship and registration processes through a focus on competencies. The trialling of the tool at two Australian universities provides an indication that preceptors in those contexts support the use of the tool, with students being somewhat ambivalent, although mostly positive, about the focus of the tool on competencies and self-assessment. Consistent with a key professional competency related to lifelong learning and identifying future professional skills needs, strengths and weaknesses, one of the challenges being addressed by the pilot schools was about engaging students with the opportunities provided through the use of the tool. Section 3 of this report outlines some approaches used or suggested by the trial schools that relate to their local contexts.

Appendix B provides the final tool developed in response to trial school feedback from preceptors and students. Amendments essentially arose in the layout rather than content. Further, limited consultations indicated positive responses to the amended materials.

The competency continuum can be seen as a clear communication approach between the university, its students and the profession. The common competency approach in both education and practice lends itself to improved communication between pharmacy professionals and the education sector and is a starting point for a shared approach around supporting pharmacy students. External evaluator interviews of academics regarding the broad outcomes of the competency graduated descriptors project have indicated very positive response. Focusing on the competencies to provide clarity of expectations for students throughout their undergraduate pharmacy studies – including building self-assessment skills and reinforcing the link to the internship year – are achievements of the competencies project that are receiving considerable commendation.



6. Quality indicators project

This section supports previous information regarding the quality indicators project, outlining investigative approaches and providing additional information about research methods and findings. The quality indicators project focused on investigating the gap between stakeholder perceptions about various descriptors and their importance in experiential placements and what actually happens. Further information is provided in the published papers and conference presentations, some of which are available on the website <http://peld.altc.edu.au>.

Background

The importance of ensuring quality preparation for placements and linking theoretical information with practical workplace tasks is highlighted in various research projects (University of Ulster 2003; Blackwell et al. 2001; Orrell 2004). Quality indicators consistently emphasise the importance, for example, of stakeholder partnerships; taking a holistic view to experiential placements; quality monitoring and prior induction, including ongoing reflection, debriefing and identification of outcomes; formative and summative assessment shaping the learning process and supporting ongoing reflection; portfolios for recording learning and development over time; and quality supervision.

Research about the indicators of quality experiential placements in pharmacy has been undertaken in various Australian and international contexts (Owen & Stupans 2007; O'Sullivan et al. 2005). Consistent with the United States study, Australian research in pharmacy schools during 2007 identified pre-placement, during placement and post-placement stages quality indicators (Owen & Stupans 2007; O'Sullivan et al. 2005).

The aim of this current quality indicators project component was to build on the 2007 stakeholder-identified quality indicators for placements and to prioritise various descriptors for their perceived importance and their actual occurrence in placements. Stakeholders across a range of health professions were involved.

Research method

The research approach involved development of a survey for large-scale dissemination across various health professions and stakeholder groups, with views sought about the various descriptors that were provided. The descriptors were identified from the literature (University of Ulster 2003) and also those that were identified in the previous Australian pharmacy stakeholder research regarding quality indicators at pre-placement, during placement and post-placement stages (Owen & Stupans 2007). In pharmacy, these descriptors were about the site of the experiential activity, preceptors, university structures for experiential learning, student attitudes and learning approaches, and the overall environment (O'Sullivan et al. 2005). Key indicators for each category were collated and examined. Various survey models were considered regarding the strengths and limitations from a range of disciplines, including medicine, nursing and education. The 5 point Likert scale survey tool was used for the importance of a descriptor (not important at all to extremely important) and similarly for the degree it happens (rarely happens to often happens).

The survey tool was then piloted, refined and implemented. Minor refinement in the wording of the descriptors occurred, and some descriptors were subdivided. Students, preceptors/clinical educators/supervisors, academics and professional organisation representatives were then invited to complete the finalised survey, which was available in hard copy or using an online survey tool



format. Various health students from their final year in a university were also invited to respond. A convenience sample was used through making the survey available at targeted events such as conferences and workshops.

The hard copy survey responses were collated on an Excel spreadsheet and the online surveys were electronically collated. A paired two-tailed T Test was used to analyse the data, with means calculated for the importance of various descriptors and for the degree to which they occur in practice. A gap analysis was then undertaken and further analysis and comparative work followed. The strategy was to compare the various stakeholder groups and health disciplines regarding perceptions of importance of various descriptors and what actually happens and to identify perceived gaps' in experiential learning.

Results

A total of 708 people completed the surveys. This includes 533 pharmacy respondents consisting of various stakeholder groups of 370 students, 99 interns, 14 academics, 27 student preceptors and 23 intern preceptors. Additionally, 202 students and preceptors from across health professions – including physiotherapy, occupational therapy, speech pathology, podiatry, nursing and midwifery – also completed the survey.

The survey results for all pharmacy stakeholder groups are shown in Table 5, with data marked * representing a significant statistical difference at a 95% confidence level.

Table 5: Pharmacy stakeholders gap analysis

	Pharm. acad. N=14		Pharm Stud N=370		Pharm prec N=27		Pharm intern prec N=23		Pharm Intern N=99	
<i>Descriptors & means for importance and happening</i>	Imp	Happ	Imp	Happ	Imp	Happ	Imp	Happ	Imp	Happ
Site resources	4.1	3.2	4.4*	3.8*	4.4*	4.0*	4.6	4.5	4.5*	4.1*
Site opportunities	4.3*	3.4*	4.6*	3.6*	4.6*	4.2*	4.5*	4.1*	4.6*	4.0*
Site participation	4.4*	3.2*	4.6*	3.6*	4.5*	4.3*	4.7*	4.0*	4.6*	3.8*
Site dev professionals	4.3*	3.6*	4.4*	3.5*	4.5*	4.0*	4.3*	3.6*	4.3*	3.4*
Site welcoming	4.7*	4.0*	4.6*	4.0*	4.5	4.5	4.7*	4.3*	4.5*	4.2*
Site role models	4.6*	3.8*	4.6*	3.9*	4.7*	4.1*	4.7*	4.2*	4.5*	3.9*
Sup involves students	4.4*	3.4*	4.6*	3.5*	4.5*	4.1*	4.7*	4.1*	4.7*	3.9*
Sup spends time	4.4*	2.4*	4.5*	3.3*	4.5*	3.6*	4.7*	3.8*	4.5*	3.8*
Sup gives feedback	4.6*	3.0*	4.6*	3.4*	4.6*	3.6*	4.6*	3.6*	4.6*	3.7*
Uni preparation	4.6*	4.1*	4.3*	3.5*	4.3*	3.9*	4.0*	3.5*	4.1*	3.3*
Uni clear aims	4.6	4.2	4.2*	3.5*	4.5*	3.9*	4.3*	3.7*	4.2*	3.6*
Uni assessment clear	4.7*	4.0*	4.4*	3.5*	4.3*	3.7*	4.5*	4.0*	4.2*	3.4*
Uni assessment approp	4.5	4.3	4.1*	3.5*	-	-	4.4*	3.6*	4.2*	3.5*
Stud knowledge	4.0	3.5	4.3*	3.6*	4.4*	3.7*	4.4*	3.7*	4.3*	3.7*
Stud relate uni learning	4.6*	3.9*	4.4*	3.7*	4.6*	3.8*	4.4*	3.2*	4.4*	3.2*
Stud responsibility	4.6*	3.4*	4.5*	4.0*	4.6*	4.1*	4.5*	3.3*	4.4*	4.0*
Stud well prepared	4.5	3.7	4.3*	3.7*	-	-	4.5*	3.4*	4.2*	3.3*

It is noteworthy that most of the descriptors for all stakeholder groups have a significant gap. Exceptions for academics relate to site resources, university having clear aims, appropriate assessment, students having knowledge and well-prepared students. For pharmacy student preceptors and intern preceptors,



all aspects have significant gaps between beliefs and what happens, except in relation to the site being welcoming for pharmacy student preceptors and the site having resources for intern preceptors.

The gap for pharmacy students was significant for each aspect, as depicted in Figure 15.

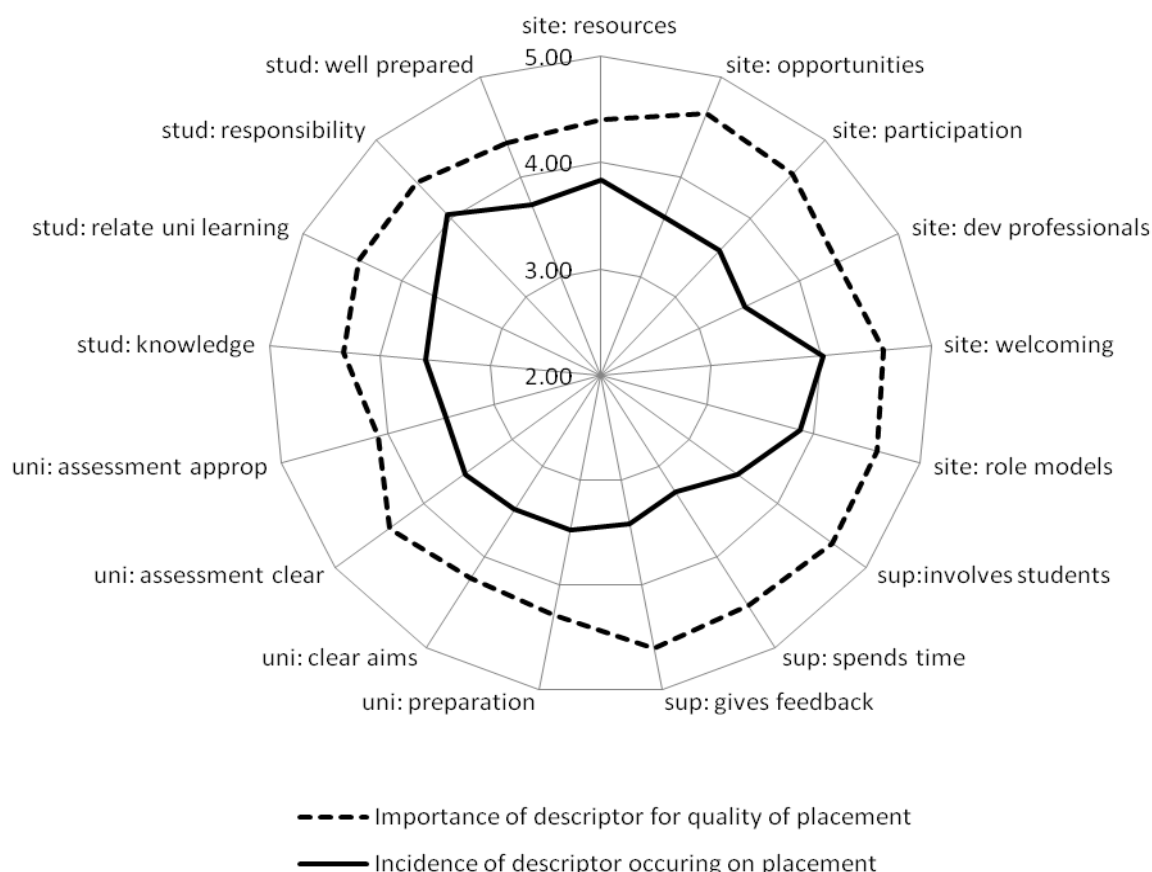


Figure 15: Quality indicators gap analysis: pharmacy students

Figure 15 shows that the students consider many descriptors relevant to the site, supervisors, university and themselves almost equally important in pharmacy experiential placements. However, the degree to which students consider that these aspects actually happen varies, with some descriptors showing a more significant gap than others. The biggest gaps highlighted by pharmacy students are for the supervisor spending time (gap of mean response for importance and happening=1.2), supervisor involving the students in activities (1.0 gap), giving constructive feedback (gap=1.2), and the site encouraging participation and providing opportunities (gap 1.0 for each aspect). Table 5 also showed consistency in pharmacy student responses with pharmacy academics in terms of academics indicating the gap for supervisors spending time and giving constructive feedback being significant issues (gap 2.0 and 1.6 respectively). In addition, academics indicated a gap for the site encouraging student participation (gap=1.2) and the supervisor involving students (gap=1.0), as well as students taking responsibility (gap=1.2).

Other health professions such as occupational therapy, physiotherapy, speech pathology, podiatry, nursing and midwifery, also completed the survey, as



shown in Table 6. Data marked * represents a significant statistical difference at a 95% confidence level. Again, across all groups of students and placement supervisors, there is a significant gap for most of the descriptors between the perception of importance and what happens in relation to placements.

Again, most health professions have significant gaps between beliefs and what happens in practice for most aspects. For health profession 1, focused on student responses, five results are not statistically significant, namely site resources, supervisor involving students, student knowledge, students being able to relate university learning to placement experiences, and students taking responsibility. For health professions 3, 4 and 6 (placement supervisors), only one aspect for each group had a gap that was not statistically significant – that is, the site being welcoming, students taking responsibility and students having knowledge, respectively. Health profession 5 had only a small sample size and so gap results are not statistically significant. Considering the most significant gaps (≥ 1.0), these seem to vary with the discipline; although supervisor constructive feedback is an issue that is evident in three health professions and with one group of supervisors.

Summary

This current section of the report provides additional information to that outlined in terms of Project Outcomes in Section 3 of this report. Section 3 provides details of the quality indicators framework for experiential placements. This framework outlines the key aspects that have been identified as important in ensuring a quality placement and the degree to which they are perceived as happening at pre-placement, during placement and post-placement phases. Aspects include site factors, preceptor/supervisor responsibilities, student role and university.

The results in Section 6 indicate that many aspects included in the survey, which are the responsibility of various groups, are not actually perceived as happening. Some very significant gaps have been identified that have particular relevance to various stakeholder groups and may need to be a focus for future collaborative work between stakeholders to create improvements in experiential placements in relation to the pharmacy profession.



Table 6: Various health professions gap analysis

	H1 Stud N=18		H2 Stud N=45		H3 Stud N=56		H4 Stud N=56		H5 Stud N=5++		H6 Supe N=16	
<i>Descriptors and means for importance and happening</i>	Imp	Happ	Imp	Happ	Imp	Happ	Imp	Happ	Imp	Happ	Imp	Happ
Site resources	3.9	3.8	3.7*	3.3*	4.7*	4.0*	4.2*	3.6*	4.2	3.8	4.5*	3.6*
Site opportunities	4.6*	3.8*	4.4*	3.5*	4.8*	4.1*	4.4*	3.6*	4.8	3.8	4.4*	3.6*
Site participation	4.5*	3.8*	4.2*	3.4*	4.7*	4.0*	4.5*	3.6*	4.2	4.0	4.6*	3.5*
Site dev professionals	4.6*	3.6*	4.2*	3.3*	4.5*	3.7*	4.3*	3.5*	4.8	3.3	4.7*	3.6*
Site welcoming	4.8*	4.5*	4.6*	3.6*	4.6	4.4	4.3*	3.7*	4.6	3.3	4.7*	4.0*
Site role models	4.7*	3.9*	4.4*	3.6*	4.6*	4.1*	4.4*	3.6*	4.2	4.0	4.9*	3.8*
Sup involves students	4.6	4.2	4.7*	3.9*	4.8*	4.2*	4.3*	3.4*	4.0	4.3	4.8*	3.9*
Sup spends time	4.6*	3.9*	4.7*	3.9*	4.7*	4.0*	4.2*	3.3*	3.8	3.8	4.9*	4.1*
Sup gives feedback	4.8*	3.5*	4.7*	3.7*	4.9*	3.8*	4.4*	3.5*	3.2	4.5	4.9*	3.7*
Uni preparation	4.5*	3.3*	4.5*	3.9*	4.6*	3.7*	4.2*	3.4*	3.8	3.3	4.9*	3.7*
Uni clear aims	4.2*	3.2*	4.1*	3.8*	4.5*	3.7*	4.1*	3.4*	3.3	4.0	4.8*	3.9*
Uni assessment clear	4.2*	2.9*	4.5*	4.3*	4.7*	3.6*	4.2*	3.4*	3.2	4.3	4.9*	4.5*
Uni assessment approp	4.2*	3.5*	4.2*	3.7*	4.6*	3.6*	4.1*	3.6*	4.0	4.3	4.9*	4.5*
Stud knowledge	4.3	3.9	4.5*	3.5*	4.6*	3.9*	4.0*	3.8*	4.3	4.0	4.3	4.0
Stud relate uni learning	4.4	4.4	4.4*	3.6*	4.7*	3.9*	4.2*	3.8*	3.3	3.0	4.6*	3.9*
Stud responsibility	3.9	4.0	4.3*	3.8*	4.7*	4.5*	4.0	4.1	4.5	4.2	4.8*	3.7*
Stud well prepared	4.1*	3.6*	4.4*	3.6*	4.6*	3.7*	4.2*	3.5*	4.3	3.5	4.7*	3.8*

+++small sample size impacting on results

7. Pharmacy experiential placements within the wider context

This final section of the report provides information about the key findings and outcomes of the project within the wider pharmacy professional context, other health professions and the higher education sector.

Introduction

The role of pharmacists is changing within the context of national health boards, with the scope of practice of various health professions being reconsidered. In meeting the increasing demand for health services, there is a shift towards more integration of hospital and community offerings and a focus on multidisciplinary approaches (PSA 2010).

In pharmacy preparatory education programs, considering national accreditation and registration, there is a refocus on rigorous academic preparation. This includes evidence-based approaches and ensuring pharmacy graduates are prepared for emerging roles and the enhanced range of professional services. Consistent with this ALTC-funded project, there is a re-examination of pharmacy knowledge, skills and personal attributes and the overall competency framework, especially in terms of self-assessment and lifelong learning, working relationships in complex situations and primary health care aspects. Internships previously overseen through state and territory registration boards are now being coordinated through various universities and professional bodies dependent on the jurisdiction involved. There is potential for more streamlined and coordinated paths from university to the workforce, including a refocus on experiential placements as part of the university preparatory process (PSA 2010).

Building on existing knowledge and linking with other ALTC projects

The three components of the 2008–2010 project were based on existing knowledge and prior pharmacy and other ALTC projects. For the online repository of learning and assessment tasks, these aspects include building on the 2008 pharmacy project (Owen & Stupans 2007), Kolb's (1984) experiential learning cycle and reflection, Vygotsky's (1978) scaffolding and curriculum planning frameworks, and the collaborative professional learning work of the Advancing Chemistry by Enhancing Learning in Laboratories (ACELL) project (Read et al. 2006; Buntine et al. 2007). For the competency graduated descriptors, prior research includes Benner (1984) and Dreyfus and Dreyfus (1996), as well as work from other health disciplines. The previous Australian experiential placements pharmacy project (Owen & Stupans 2007) and other overseas materials were also relevant for the quality indicators work.

The 2008–2010 ALTC Priority Project involved three project components, including the online repository and collaborative professional workshops, competency graduated descriptors and quality indicators. National collaborative workshops, state and territory consultations regarding the development of the graduated descriptors tool, and surveys and interviews were some of the research methods utilised. Interview and survey data has been collected. Outcomes and findings have been presented in previous sections of this report and reflect how the work of this project has advanced existing knowledge and practice. This includes building on the ACELL project



through taking on the initial professional development collegial work to develop tasks and, in the case of pharmacy, developing an online educational template and website. At the conclusion of several workshop sessions, 17 tasks have been published and there is a quality assurance process prior to publication and an online feedback tool. A relevant version of a collaborative professional learning process has also occurred for this project. To support dissemination in the broadest sense, the website has been further expanded to cater for the materials from all three projects.

Additionally, further expanding McAllister et al.'s (2006; 2010) work in speech pathology, and research by Benner (1984) and Dreyfus and Dreyfus (1996), a competency graduated descriptors tool for feedback and self-assessment and to support students and preceptors in placements has been devised. This tool not only further develops the notion of competency graduated descriptors but also includes a self-assessment component and can be used by students and preceptors in discussion. The tool has been trialled with generally positive response, and has also been amended. A training package and various case study options are available for use or for modification according to local context needs.

Also, building on previous Australian, British and United States research on quality placement characteristics in health, pharmacy and other professions (University of Ulster 2003; Blackwell et al. 2001; Orrell 2004; Owen & Stupans 2007; O'Sullivan et al. 2005), a quality indicators framework for experiential placements has been devised. Expansion from previous work includes indications of responses from various stakeholder group, gap analysis and comparative health professions' work and acknowledgement of pre-placement, during placement and post-placement aspects.

External evaluator interviews indicated highly positive responses and some changes in practice from project team, reference group members and other workshop attendees involved in several project aspects. Links established with the APSA education forum and conferences over several years and the opportunity for sustainability within an education sub-committee have taken place, including plans for the maintenance of the website and continuation of the workshops to build the repository resources.

Factors leading to and impeding success

While the ALTC project outlined clear methodologies for the project in the initial funding submission, a key learning has been about listening to the views of various project team members, the reference group and other stakeholders as well as being prepared to be flexible and using a variety of strategies to achieve the same ends. Revisiting of strategies and issues has also happened. For example, development of the central online repository and website has involved an iterative process and, over time, the site has been discussed, reviewed and refined to ensure clarity of presentation and comprehensiveness of content. Another example of being flexible is that, given the difficulties of attracting preceptors to daytime meetings to be involved in consultations about the graduated descriptors tool, various strategies have been used, including evening sessions, phone conversations, targeted sessions and onsite individual meetings. Flexibility is also shown in the development of the graduated descriptors tool itself. For instance, an action research approach was used and the tool was progressively fine-tuned throughout the consultation processes.

The project also developed a greater appreciation of the importance of student involvement and the ways in which this could be achieved. Students



in each pharmacy school have attended consultation sessions in large numbers. This participation was facilitated through each university's pharmacy student association. Project team members attended the annual student leader conference for four consecutive years in order to seek student views on the project. A relationship was thus established. Through valuing students and seeking their support and input into decision making, student leaders have helped the project team in bringing local students together for the consultation sessions within specific institutions.

In regard to factors impeding success, there has been significant difficulty for academics in being able to isolate time to work on this type of project. The project would ideally have had greater involvement from academics other than project leaders apart from within formally structured events such as conferences and consultation sessions. However, academics appear to be very time poor. The project may have benefitted through having a side project that worked with such academics and provided release time. This could have enabled them to have some additional structured time for academic development through, for example, working on the learning tasks for the online repository.

A key challenge for the project was also about building sustainability. Throughout the two-year timeframe, meetings, presentations and networking with state and national bodies were ongoing activities. Presentations and contact with key national professional and registration bodies occurred on an annual basis. Some meetings focused on sustainability and financial matters to maintain and regularly update the website and to coordinate and promote the annual APSA education forum workshop. Similarly, regular communication with the heads of all pharmacy schools took place, and information was forwarded to their network leaders for dissemination and other contacts.

The APSA annual conference, for which an ongoing agreement is in place, will continue to provide further opportunities for collaborative work on developing tasks. In the transition phase, a small amount of additional ALTC funding has been provided for collaborative development and uploading of new materials to the website and for overall coordination work.

Transferability of outcomes across various higher education institutions and disciplines

The report has previously outlined a range of dissemination approaches, including information provision and more engaging approaches. Stakeholders have been involved in various consultation sessions and workshops, and there have been presentations and posters prepared for professional bodies and national and international conferences, as well as journal publications, as specifically outlined in section 3 of this report. A range of health professions were also involved in the quality indicators health survey. This was undertaken by final year health students in physiotherapy, occupational therapy, nursing, midwifery, podiatry and pharmacy. As well, speech pathology supervisors and various pharmacy stakeholder groups across Australia participated in the survey.

The online repository website and curriculum planning collaborative workshops, with details and materials outlined in this report, have application to other health professions and to other disciplines in their placements processes and preparations. This includes the overall website, educational template for learning and assessment tasks developed; collaborative workshop process; moderation processes checklist; and the competency



graduated descriptors self-assessment and feedback tool for clinical placement in health and other disciplines.

Similarly, the developmental processes involved in the competency graduated descriptors tool for self-assessment and feedback have particular relevance within the emerging national health context in Australia, not only for pharmacy but also for other health disciplines. This is possibly true for other professions in their competencies, given that there is an increasing focus on competencies across all professions. Ensuring continuity from university preparatory studies to registration and continuing professional development with self-assessment by individual practitioners is a key skill for the future, especially in terms of lifelong learning.

Given the importance of placements and practical aspects within university preparatory programs for the professions, the quality indicators framework also has widespread relevance. This relates to university responsibilities, supervisor and site roles, student responsibilities, and wider professional aspects, also, considering pre-placement, during placement and post-placement responsibilities.

Dissemination and impact on pharmacy profession and beyond

Sections 1 and 3 of this report outline the range of dissemination approaches used in the project, including information provision and more engaged strategies. Deliverables from the project, as outlined in Section 3, included at least seven conference presentations and seven published papers. These targets have not only been met but exceeded in terms of presentations, including within the international contexts of Italy and Liverpool (UK) and with the publication of four papers. In addition, three papers are under review and three papers are undergoing finalisation by project team members. A range of national and international journals across various education, health, research and pharmacy areas are involved.

Beyond information provision, stakeholders from across pharmacy groups have been included in the development of materials throughout the two years of the project. They have also been involved in decision making and workshops within national professional, academic and student contexts.

With over 90 registered users of the project website and hundreds of stakeholders involved in various consultation processes, through the ongoing and final external evaluator interviews there is some evidence of the impact of the three components of the project. Impacts of the online repository tasks and professional learning processes, competency graduated descriptors materials and trialling and quality indicators work include:

- a refocus within experiential placements programs on competencies as explicit outcomes
- academics designing and using materials within their own pharmacy programs the new ideas/assessment/learning activities that emerged from the collaborative workshops or from the published website materials, including reflection, patient counselling, portfolios, self-assessment, research, dispensing and communication
- improved student learning and outcomes in terms of self-assessment, portfolios, patient counselling, reflection, and future skill-building directions
- more collaborative and cross-institutional approaches to developing



learning and assessment tasks, which include benefits such as gaining broader perspectives, addressing more issues, better product produced more efficiently, and more coherent curriculum design.

The overall benefit for the profession was captured by one interviewee who had been variously involved in the project. This comment is from the evaluator report:

It has been a really positive project: has got people thinking about experiential learning in a structured way. Took it out of the institution. The networking process: people from different backgrounds talking about learning: could we do things differently. The impact on the profession and on students has been a huge benefit.



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Appendices

Appendix A: Graduated descriptors training PowerPoint

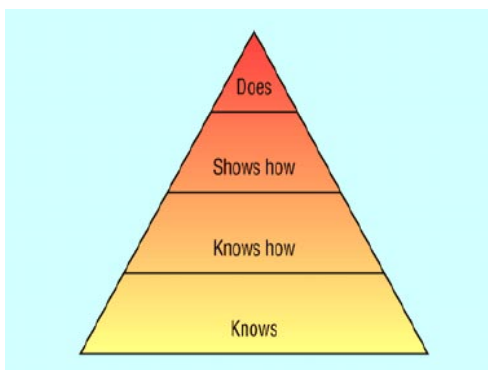
A professional development tool
graduated = stepped, incremental

What is “competency”?

- Competence is a generic term referring to a person’s overall capacity
- Competencies are made up of the attributes of knowledge, skills and attitudes.
- Competency Standards ‘define the competencies required for effective performance in employment’.
- ‘A competency comprises the specification of knowledge and skill and the application of that knowledge and skill within an occupation or industry level, to the standard of performance required in employment’



Workplace Competency



- Miller's triangle refers to assessment of competency.
- "Knows" factual exam papers
- "Knows how" clinical context type test
- "Shows how" simulated patient, OSCEs etc
- "Does" *in vivo* in the workplace

Levels of Competence

Novice Student/Intern (Owen & Stupans, 2007 adapted from McAllister 2001)

- can recall some aspects of theory
- high supervisory support
- time needed for clinical responsibilities
- focused on own performance not client
- problem-solving/planning support needed

Intermediate Student/Intern

- recognises aspects of theory in order to problem solve
- some supervisory support needed in complex situation
- developing automaticity
- needs support with prioritising, flexibility

Entry-level Student/Intern

- recognises theory to problem solve, is able to integrate theory (knowledge)
- seeks support for new activities
- sufficient automaticity for client focus
- can perform work independently in some areas

Workplace Competency

- Competence within professions is characterised by a body of knowledge, skills and values.
- Demonstration and interpretation of these attributes is highly contingent on multiple circumstances including the disposition of the individual practitioner, the individual client, the professional role, the professional task & environmental settings & policies.
- Competence is a relative term dependent on context.



Pharmacy Competency Standards (2003)

- Pharmacy has eight broad competency areas or functional areas. Associated with each of these is more detailed information about the actual competency units, elements and evidence cues which help in the assessing of the competencies.
- For example competency unit 1
“Practise pharmacy in a professional and ethical manner”

Assessment of competencies

- Formal assessment in the competencies mostly happens in the internship process prior to registration.

At university and within placements students are learning the skills and knowledge and getting prepared for forthcoming practice.

So for example in developing dispensing skills at university and in placements, students will be learning about pharmacology, therapeutics, legislation and practicing a dispensing process



(think of competency as a journey,
graduated = stepped, incremental)

- As an student “how well am I progressing?”
- As a preceptor “ how can I provide feedback for my intern?”
- Tool provides a **gateway for dialogue**
- Students should develop and apply self assessment skill
(importance of self assessment in the development of life-long learning skills, has been commented on in the context of pharmacy although difficulties around self assessment are acknowledged.)
- Preceptor should develop and apply feedback skill (verification supports student self-assessment such that istudents increase their self assessment accuracy)

Using the tool

- The tool is easy to use!
- Note the layout of the diagram tool on pages 2-5 there are 2 Functional Areas on each page
- At the top is the Functional Area (linked to the profession’s competencies) and a brief descriptor
- The left side of each diagram gives ‘cues’ about each competency area in terms of early placement, with some additional ‘cues’ for late placement
- The right panel relates to internship and the newly-competent professional
- The four developmental aspects already introduced of Level of Support, Time Taken, Clinical Problem-solving and Degree of Client Focus are shown, with boxes provided to tick relevant categories for each aspect. [\[51\]](#)
- A comment box is provided for clarifying remarks or to indicate ‘Not applicable’



Competency Graduated Descriptors Tool Example

Summary of
competency
descriptors

Functional Area 4: Dispense medicines				I N T E R N S H I P	Newly-Registered Pharmacist COMPETENT														
Pharmacists manage the drug distribution process to ensure the safety, accuracy and quality of supplied products																			
Developing skills in safe and accurate management of products	Early Placement Student <i>With assistance & significant additional time:</i> <ul style="list-style-type: none"> assesses prescription validity clarifies medication orders assesses appropriateness of prescribed medicines follows predefined systematic dispensing procedures carries out specific documentation tasks identifies relevant information regarding medicines such as adverse affects, storage 	Late Placement Student <i>With guidance & only some additional time:</i> <ul style="list-style-type: none"> & provides information to patients as appropriate 		Cues <i>Validates prescription and clarifies medication orders, confirming availability and considering prescribed medicine to apply systematic dispensing procedures and maintain records</i>															
	<table border="1"> <thead> <tr> <th>LEVEL OF SUPPORT</th> <th><input type="radio"/> Significant assistance (direction)</th> <th><input type="radio"/> Minimal assistance</th> <th><input type="radio"/> Guidance (prompting, cues)</th> </tr> </thead> <tbody> <tr> <td>TIME TAKEN FOR TASKS</td> <td><input type="radio"/> Significant task time needed</td> <td><input type="radio"/> Some additional time needed</td> <td><input type="radio"/> Little additional time needed</td> </tr> <tr> <td>CLINICAL PROBLEM-SOLVING</td> <td><input type="radio"/> Has knowledge, little application</td> <td><input type="radio"/> Recognises aspects of problem-solving</td> <td><input type="radio"/> Information integrated & applied</td> </tr> <tr> <td>DEGREE OF CLIENT FOCUS</td> <td><input type="radio"/> Focused on own performance</td> <td><input type="radio"/> Partly client-focused, partly self-focused</td> <td><input type="radio"/> Mostly client-focused</td> </tr> </tbody> </table>			LEVEL OF SUPPORT	<input type="radio"/> Significant assistance (direction)	<input type="radio"/> Minimal assistance	<input type="radio"/> Guidance (prompting, cues)	TIME TAKEN FOR TASKS	<input type="radio"/> Significant task time needed	<input type="radio"/> Some additional time needed	<input type="radio"/> Little additional time needed	CLINICAL PROBLEM-SOLVING	<input type="radio"/> Has knowledge, little application	<input type="radio"/> Recognises aspects of problem-solving	<input type="radio"/> Information integrated & applied	DEGREE OF CLIENT FOCUS	<input type="radio"/> Focused on own performance	<input type="radio"/> Partly client-focused, partly self-focused	<input type="radio"/> Mostly client-focused
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DEGREE OF CLIENT FOCUS	<input type="radio"/> Focused on own performance	<input type="radio"/> Partly client-focused, partly self-focused	<input type="radio"/> Mostly client-focused																
Comment (eg, discrepancies, areas of particular strengths, future action)				Developing ability															
Basis of global judgment																			



Appendix B: Competency graduated descriptors final tool

PHARMACY EXPERIENTIAL PLACEMENTS TOOL

HOW WELL AM I PROGRESSING: COMPETENCY GRADUATED DESCRIPTORS TOOL FOR SELF-ASSESSMENT AND FEEDBACK

What is it? A guide for assessing progress in achieving profession's competencies; focuses on student characteristics in early- and late-stage placements.
Who should use it? For self-assessment (e.g. prior to or during placements) or for preceptor feedback/discussion purposes.
How was it developed? In workshops & in Australia-wide consultations, as part of an ALTC (Australian Learning and Teaching Council) research project.

Suggested use of the Tool

- Look at the pharmacy Functional Area (there are 8^{**}): *Practise pharmacy in a professional and ethical manner ... to ... Apply organisational skills in the practise of pharmacy.*
See dot points under early placement, late placement.
- Before placement starts, student self-assesses (by placing ticks in the circles) in each of the 8 Functional Areas. (eg, green ticks ✓, as indicated below)
Level of Support - Significant assistance needed ... to ... Guidance (prompting, cues).
Time Taken for Tasks - Significant task time needed ... to ... Little additional time needed.
Clinical Problem-solving - Has knowledge, little application ... to ... Information integrated & applied; can connect knowledge elements and apply these.
Degree of Client Focus - Focused on own performance: the student is rule-bound and concentrating on themselves rather than the client in applications ... to ... Mostly client-focused: can apply processes flexibly to meet client needs.

LEVEL OF SUPPORT	<input checked="" type="radio"/> Significant assistance (direction)	<input type="radio"/> Minimal assistance	<input checked="" type="radio"/> Guidance (prompting, cues)
TIME TAKEN FOR TASKS	<input type="radio"/> Significant task time needed	<input checked="" type="radio"/> Some additional time needed	<input type="radio"/> Little additional time needed
CLINICAL PROBLEM-SOLVING	<input checked="" type="radio"/> Has knowledge, little application	<input type="radio"/> Recognises aspects of problem-solving	<input checked="" type="radio"/> Information integrated & applied
DEGREE OF CLIENT FOCUS	<input type="radio"/> Focused on own performance	<input checked="" type="radio"/> Partly client-focused, partly self-focused	<input checked="" type="radio"/> Mostly client-focused

- Early in placement student discusses the tool and their self assessment and placement goals with the preceptor.
- Mid way through placement student again self assesses, using a different colour tick for each category.
- Preceptor separately completes tool.
- Discuss similarities/differences.
- End of placement, repeat steps 5,6,7 using another colour and indicator. (eg, blue crosses ✕, as indicated above)

Use the Comment box to provide clarifying remarks.

** Based on the eight competencies of the Functional Areas from the Competency Standards for Pharmacists in Australia (Pharmaceutical Society of Australia, 2003). The right side columns acknowledge the links to "Internship" and "Newly Registered Pharmacist", with "Cues" indicating that "Competent" status has been achieved.

Context details:

Student Name: _____

University and Program of Study: _____

Placement Description: e.g. first, final, rural, hospital _____

Purpose of Using Tool: (circle) Pre-placement self-assessment During placement self-assessment Post-placement self-assessment Preceptor feedback (interim) Preceptor feedback (final) Other (indicate) _____

Goals set by student: _____

Overall Preceptor feedback: _____



Functional Area 3: Promote and contribute to optimal use of medicines				I N T E R N S H I P	Newly-Registered Pharmacist COMPETENT																			
Pharmacists in partnership with patients and other health care professionals use their unique knowledge and skills to optimise patient/client drug and health-related needs																								
Developing skills in therapeutic decision-making and management	Early Placement Student <i>With assistance & significant additional time:</i> <ul style="list-style-type: none"> identifies & accesses relevant information participates in client interaction using protocols provided processes records/information & identifies various options recognises own limitations & seeks advice from preceptor 	Late Placement Student <i>With guidance & only some additional time:</i> <ul style="list-style-type: none"> & monitors & reviews drug use & adapts to client needs in identifying treatment options & makes several recommendations with justification & identifies appropriate referral pathways 			Cues Can obtain patient history, review medication treatment, apply evidence-based guidelines, recommend changes. Assesses patient self-management and documents medication records, following up selected patients and also contributing to drug use trends information and reviews																			
	<table border="1"> <tr> <td>LEVEL OF SUPPORT</td> <td><input type="radio"/> Significant assistance (direction)</td> <td><input type="radio"/> Minimal assistance</td> <td><input type="radio"/> Guidance (prompting, cues)</td> <td>Independence</td> </tr> <tr> <td>TIME TAKEN FOR TASKS</td> <td><input type="radio"/> Significant task time needed</td> <td><input type="radio"/> Some additional time needed</td> <td><input type="radio"/> Little additional time needed</td> <td>Prioritises effectively and time efficient</td> </tr> <tr> <td>CLINICAL PROBLEM-SOLVING</td> <td><input type="radio"/> Has knowledge, little application</td> <td><input type="radio"/> Recognises aspects of problem-solving</td> <td><input type="radio"/> Information integrated & applied</td> <td>Identifies problem aspects and integrates</td> </tr> <tr> <td>DEGREE OF CLIENT FOCUS</td> <td><input type="radio"/> Focused on own performance</td> <td><input type="radio"/> Party client-focused, partly self-focused</td> <td><input type="radio"/> Mostly client-focused</td> <td>Sufficient process skills for client focus</td> </tr> </table>				LEVEL OF SUPPORT	<input type="radio"/> Significant assistance (direction)	<input type="radio"/> Minimal assistance	<input type="radio"/> Guidance (prompting, cues)	Independence	TIME TAKEN FOR TASKS	<input type="radio"/> Significant task time needed	<input type="radio"/> Some additional time needed	<input type="radio"/> Little additional time needed	Prioritises effectively and time efficient	CLINICAL PROBLEM-SOLVING	<input type="radio"/> Has knowledge, little application	<input type="radio"/> Recognises aspects of problem-solving	<input type="radio"/> Information integrated & applied	Identifies problem aspects and integrates	DEGREE OF CLIENT FOCUS	<input type="radio"/> Focused on own performance	<input type="radio"/> Party client-focused, partly self-focused	<input type="radio"/> Mostly client-focused	Sufficient process skills for client focus
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Comment (eg, discrepancies, areas of particular strengths, future action)																								

Functional Area 4: Dispense medicines				I N T E R N S H I P	Newly-Registered Pharmacist COMPETENT																			
Pharmacists manage the drug distribution process to ensure the safety, accuracy and quality of supplied products																								
Developing skills in safe and accurate management of products	Early Placement Student <i>With assistance & significant additional time:</i> <ul style="list-style-type: none"> assesses prescription validity clarifies medication orders assesses appropriateness of prescribed medicines follows predefined systematic dispensing procedures carries out specific documentation tasks identifies relevant information regarding medicines such as adverse affects, storage 	Late Placement Student <i>With guidance & only some additional time:</i> <ul style="list-style-type: none"> & provides information to patients as appropriate 			Cues Validates prescription and clarifies medication orders, confirming availability and considering prescribed medicine to apply systematic dispensing procedures and maintain records																			
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Comment (eg, discrepancies, areas of particular strengths, future action)																								



Appendix C: Consultations: organisations involved (various stakeholders including student associations from universities & states/territories)

- Charles Darwin University
- Charles Sturt University
- Curtin University
- Griffith University
- James Cook University
- La Trobe University
- Monash University
- Murdoch University
- Queensland University of Technology
- The University of Queensland
- The University of Newcastle
- The University of Sydney
- The University of Western Australia
- University of Canberra
- University of South Australia
- University of Tasmania
- Australian Pharmacy Council
- State/Territory Pharmacy Boards (New South Wales, Queensland, Victoria, SA, WA, Tasmania, ACT)
- National Australian Pharmacy Students' Association
- Pharmacy Guild of Australia (national, WA, NSW, Queensland, SA, Tasmania, Victoria, ACT)
- Pharmaceutical Society of Australia (national, WA, SA, NSW, Queensland, Victoria, Tasmania)
- Society of Hospital Pharmacists of Australia (national, WA, SA, NSW, Queensland, Tasmania, Victoria, ACT)



Appendix D: National workshops (APSA): Institutions represented

- Charles Darwin University
- Charles Sturt University
- Curtin University
- Griffith University
- La Trobe University
- Monash University
- Murdoch University
- Queensland University of Technology
- The University of Newcastle
- The University of Queensland
- The University of Sydney
- The University of Western Australia
- University of Canberra
- University of South Australia
- University of Tasmania
- University of Auckland
- Graylands Hospital, Western Australia
- Australian Pharmacy Council
- Pharmacists Board of Queensland
- Pharmacy Board of New South Wales



Appendix E: Quality indicators survey tool

What health profession do your studies relate to: eg podiatry, OT etc.....

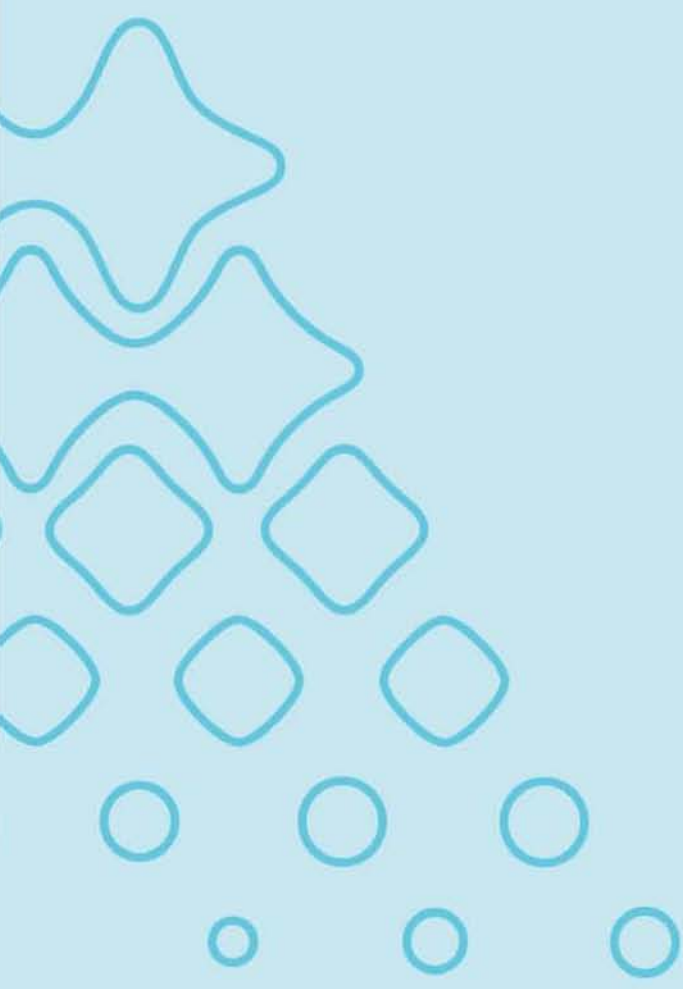
The purpose of this questionnaire is to find out opinions about what makes a quality experiential placement. The first component refers to the importance of the descriptor in contributing to a high quality clinical placement. The second component refers to the degree to which you believe this descriptor usually happens in placements (students can answer by considering their most recent placement).

1st component: 1= not important at all 2nd component: 1= rarely happens
3= of intermediate importance 3= sometimes happens
5= extremely important 5= often happens

Descriptor	Importance in contributing towards a high quality placement					To what degree does this describe what usually happens/happened on your last placement				
The placement site has appropriate resources for student learning e.g. information										
The placement site has a range of learning opportunities										
The placement site encourages participation in a range of learning opportunities										
The staff is actively engaged in the development of health professionals of the future										
The staff is welcoming										
The placement site provides positive role models for professional practice										
The supervisor involves the student in practice activities										
The supervisor spends time with students										
The supervisor gives specific and constructive feedback										
The university provides appropriate preparation for the placement										
The placement has clear aims and objectives										
Assessment requirements are appropriate										
Assessment requirements are clear										
Students are well prepared for placement										
Students have a sound knowledge base										
Students are able to relate university learning to activities carried out on placement										
Students take responsibility for their own learning										

Any other comments? _____





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