Scientia Education Investment FundGrants Final Report

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An application to facilitate mobile clinical Workplace-Based Assessments (CWAapp)

Medicine, Office of Medical Education

Project Leader:
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Project Team:
Mr Phil George (Medicine IT Manager) – later replaced by Clayton Gilbert (Senior Developer, Medicine IT)
Dr Rachel Ward (Program Authority, Exercise Physiology) – later including Amanda Burdett (Exercise Physiology Practicum Coordinator)
Jamie Patel (Medical Student)
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1. Executive Summary

- Summarise the project, context, priorities addressed, outputs, key findings and recommendations (if relevant)

The Clinical Workplace-Based Assessment application (CWAapp) captures data from a variety of work-based assessments (WBA) completed for and by students in the clinical workplace.

This project addressed UNSW 2025 Strategic Priority A2: Educational Excellence – UNSW Scientia Education Experience Model.

The outputs of the project are an iOS and Android version of the application built to budget and delivered on time. Both OS versions of the app are now in live use in the Medicine program (3805 and 3855) and are delivering data to students and Faculty alike. Live use will soon commence in the Exercise Physiology program (3871) in Semester 2 2018.

Key findings – Scoping external providers did not prove fruitful and the app was very successfully developed in house by Clayton Gilbert who is familiar with the Medicine programs and respective requirements and specifics. Native apps were developed for use in clinical workplaces not well served by wifi/mobile data services, since data-loss risks were identified when mobile webpage development was considered. Apps were developed separately in iOS and Android, with iOS developed first in order to provide a template for later Android development. Whilst this entails support of both OS's it was deemed that the benefits (specific customisation for devices using the respective OS's) outweighed this drawback. Student project team members provided useful insights and pointers during development phase, testing and piloting.

Recommendations

- Consider using in house development rather than expensive external developers who are not sufficiently cognisant of program context, requirements, opportunities and constraints.
- Carefully assess needs and constraints before committing to development in order to achieve the best fit solution to the identified problem.
- Involve students in projects at all stages wherever feasible.

2. Outcomes and impact

- Describe the major achievements of your project in relation to the outcomes and deliverables.

iOS and Android versions of the app: replace paper forms, improve security, capture data reliably, and seamlessly create the student record. The output of CWAapp will allow us to gather critical data for analysis of student progress and of clinical placement efficiency and effectiveness. CWAapp is highly flexible and will accommodate further adaptation for additional tasks/assessments/forms in order to capture data for as yet unforeseen future requirements.

- Discuss project impact – how and to what extent has the project impacted students, staff, faculty institution, and higher education as relevant to the project.

For students, CWAapp provides a user-friendly, flexible system for students to record clinical experiences and meet Faculty determined targets for certain experiences
For staff and Faculty, CWAapp improves efficiency of in-training WBA's and dramatically reduces administrative time in following-up on student completions of tasks.

- Include the strategic priorities addressed.

CWAapp is an exemplar of the Scientia Education Model because it:

- Is a 'digital solution'

- Personalises the student experience,

- Promotes feedback to students on critical development in clinical and other skills

- Involved Students as Partners during development and beyond

SEIF Priorities addressed: (in order of significance): 3. Incorporate an element of work integrated learning, 4. Demonstrate the effectiveness of innovative technologies in achieving educational outcomes, 6. Significantly enhance the student experience, 7. Allow UNSW to significantly increase the efficiency of a program.

- Include the number of courses/programs/students likely to benefit from this project.

On rollout, the UNSW Medicine program and UNSW Bachelor of Exercise Physiology students will benefit from this project. Curently, 540 Phase 1 medical students are benefitting from the app, and over the next year, uptake of the app will benefit students throughout the remainder of the program, totalling appoximtaely 1600 students. The Exercise Physiology program currently has 431 students enrolled, all of whom will use the app during their 4th year clinical practicum placements across two courses, HESC4611 Clinical Practicum A and HESC4622 Clinical Practicum B.

2. Dissemination strategies and outputs
- Describe the dissemination activities and events that have been implemented and/or being planned in the future.

Use of CWAapp is being disseminated throughout the Medicine programs by mandating use of the app for the collection of data by students relating to assessments/tasks in their programs.
In order to expedite uptake of CWAapp, it is possible that internal marketing videos may be created and utilised to further inform students and staff of its availability and functionality (but these were beyond the scope of the project grant).
In collaboration with colleagues at Manchester Medical School (UK), a workshop on mobile clinical workplace-based assessment at an international medical education conference is planned for 2019.

- Describe the outputs achieved until now and that are likely to occur as a result of this project.

Dr Silas Taylor is giving an oral presentation on Innovative Technology for Healthcare Communication at International Conference on Communication in Healthcare in Porto in September 2018 – "An application to facilitate mobile clinical workplace-based assessment of communication skills".
Dr Silas Taylor is planning to incorporate a professionalism assessment in to CWAapp, working in collaboration with Prof Juan Cendan, Assistant Dean, Simulation & Medical Director, University of Central Florida.
Dr Silas Taylor and Dr Rachel Ward will be giving an oral presentation at the UNSW Medical Education Interest Group Seminar Series in September 2018 – "Digitising Clinical Workplace-based Assessments'.

3. Evaluation of project outcomes

- Describe the evaluation strategy (formative/summative), tools and actions.
- Include any results of data collection or analysis.
- Provide an evaluation report on the approach and outcomes.

An issue log was created during pilot stage and 31 issues were raised and resolved using that system. Further issues are now logged through the IT Service Centre, and these are addressed through Medicine IT. No formal data collection or analysis was conducted, since incorporating existing evaluation surveys into the use of the app (as had been planned) excessively complicated the workflow. However, informal feedback on CWAapp has been very positive, both from students and staff.