
Showcase You on iTunes U: The iPortfolio enables student self-assessment of key capabilities and the public showcase of achievements

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Abstract

Increasingly, teaching staff and institutions are encouraging or requiring students to self-assess achievement of graduate capabilities and competences using electronic portfolios. This paper describes Curtin University of Technology's electronic portfolio, called the iPortfolio. The iPortfolio was piloted with 2000 staff and students in late 2009. As of May 2010, over 10,600 iPortfolio accounts had been created. Increasingly, media rich assessments and authentic iPortfolio-based learning experiences are being woven into the formal curriculum of many units. This paper places particular emphasis on describing the role of the iPortfolio in evaluating what students have actually learned in order to close the loop on curriculum design and its implementation. Key to the strategy is an on-line iPortfolio space called the My Ratings tab where students self-assess attainment of Curtin's graduate attributes. It is now possible for aggregated data from the My Ratings tab to inform a needs analysis used by teaching staff during the curriculum review process. A strategy is described for using the My Ratings tab as a staging area in which students plan and produce short video resumes. Video resumes and other media rich artefacts that highlight skills and key capabilities can be shared with selected others in the iPortfolio My Showcases tab. The iPortfolio holder can seamlessly publish My Showcase entries to the University's presence on iTunes U where they become broadly available to the public. Once published to iTunes U, these media rich entries facilitate further qualitative analysis of student achievement by teaching teams, curriculum review participants, accreditation panels, and prospective employers.

Introduction

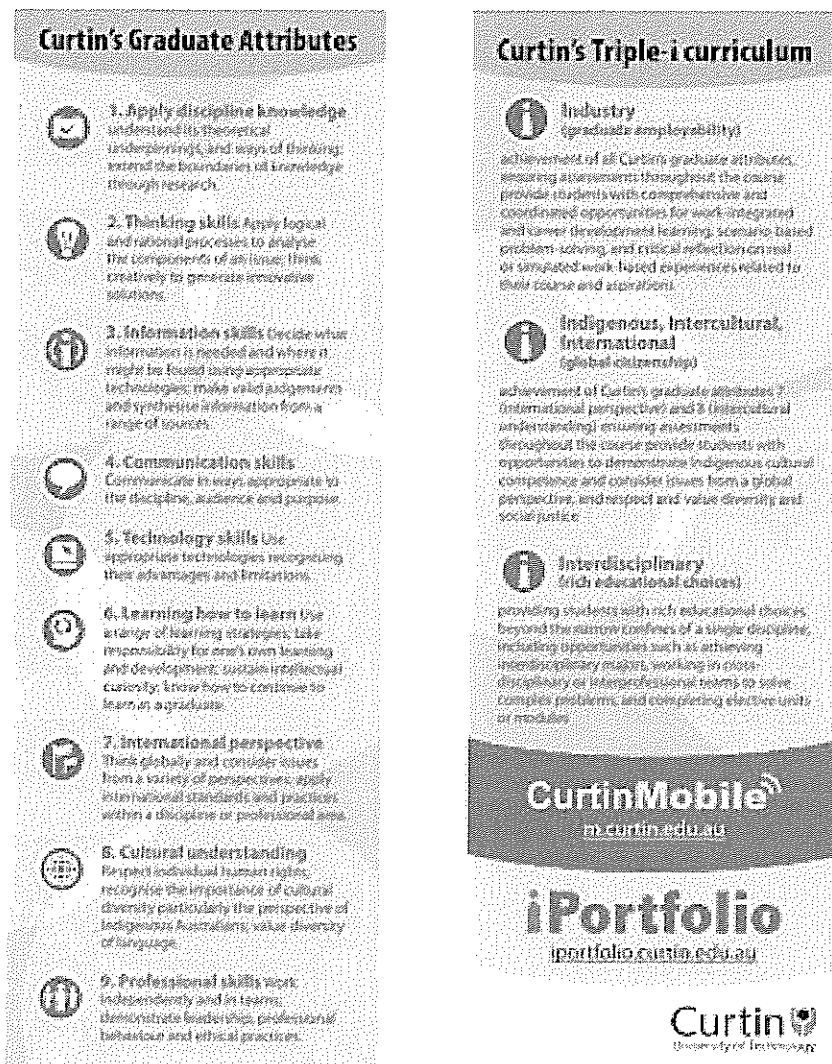
Curtin's iPortfolio is an online space for students and staff to create, share and publish evidence of their learning achievements. Students and staff can add reflections associated with a collection of tabs, including: About Me (profile picture, introduction, biography and goals); My Courses (create, share, manage and collaborate on assignment tasks and evidence of learning against generic and specific professional competencies); My Employment (resume and evidence of work-related skills, experiences and professional development); My Journals (for reflective journals); My Networks (entries reflecting on professional networks and organizations contributing to one's professional development, an overview of those who are invited to view, provide feedback or collaborate, and access exemplar portfolios); and My Showcases (to highlight examples of learning and professional development, and publish showcases to the iTunes U).

Background

The iPortfolio was developed following broad consultation with the University community, and from a general recognition that electronic portfolios have been shown to be effective in assisting students to reflect on their learning, be more confident in identifying their abilities, and more competitive in the labour market [1-3].

The decision to create an electronic portfolio with an institutional focus was taken at a time when the University was undergoing an institution-wide curriculum renewal initiative called Curriculum 2010 (C2010) [4], and based on research findings that showed a high proportion of Curtin students possess mobile devices capable of collecting movies, images, and audio and routinely access media servers like You Tube, Facebook, and iTunes [5].

Figure 1. The graduate attribute and triple-i curriculum book mark



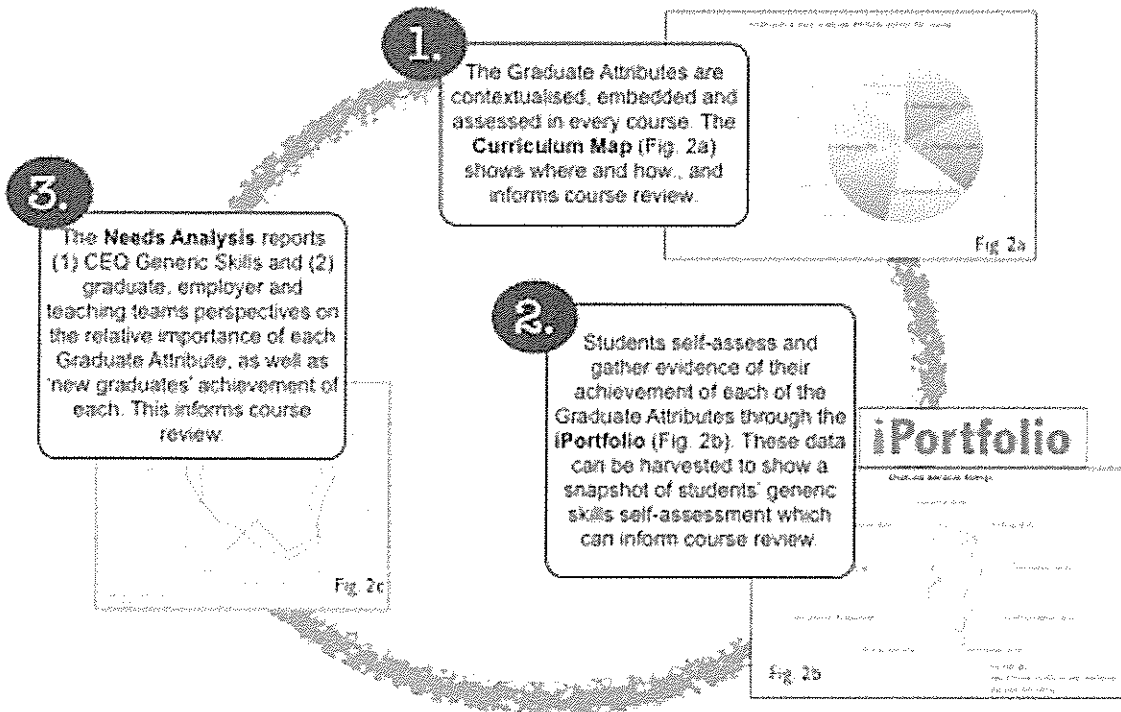
The iPortfolio and its role in 360 Degree Curriculum Design

During the C2010 project, the University reaffirmed its graduate attributes as the prime focus of student achievement and teaching endeavour. The University has embedded these attributes at the foundation of all its degree programs in the context of discipline specific learning outcomes and professional competencies. Emerging from this is the triple-i curriculum that highlights Curtin’s aim to produce highly employable global citizens who are educated beyond their first discipline [4].

The graduate attributes and triple-i curriculum have become well known by teaching staff and students. They are prominent in Curtin information resources, including unit outlines distributed to students at the beginning of each semester, posters displayed around the University, and on bookmarks like the one shown in Figure 1. They also form the basis for student self-assessment in the iPortfolio, branded with a leading “i” to convey this connection with the triple-i curriculum.

The iPortfolio provides an opportunity to close the loop on curriculum design, as shown in Figure 2. In Step 1 of the loop, the formal curriculum specifies where teaching teams intend for students to develop designated graduate attributes. This includes setting out how the graduate attributes are contextualised, embedded and assessed in the curriculum. In Step 2, students use the iPortfolio to self-assess their attainment of the graduate attributes and manage evidence of their learning achievements. In Step 3, a Needs Analysis is conducted to inform the next cycle of curriculum review and any subsequent re- design.

Figure 2. Closing the loop on curriculum design using the iPortfolio.



Traditionally, data used in the Needs Analysis have come from many sources and stakeholders. These include course coordinators, teaching staff, students, graduates, and employers, and data captured in Course Experiences Questionnaires (CEQ) [6]. It is expected that the iPortfolio will play an increasingly significant role in this analysis [4].

Effectively, electronic portfolios like the iPortfolio are personal learning spaces that are managed by individual students. Portfolios are indicative of what students have actually learned based on accumulated evidence and placed into context using personal reflections on learning and the attainment of professional capabilities. In contrast, the planned formal curriculum is managed by teaching staff. It defines the intended learning outcomes, together with the learning experiences and assessments meant to develop and measure them. Taken together, these provide opportunities for a 360-degree approach for embedding, assessing, and evaluating the graduate attributes in the formal curriculum [7].

Several strategic aspects of the iPortfolio are intended, in part, to assist with this 360 approach and to assist teaching teams to evaluate the effectiveness and impact of the curriculum as currently implemented:

- Students use the My Ratings tab and a star rating system to self-assess progress towards the attainment of the graduate attributes and the triple-i curriculum experiences.
- Students publish media rich My Showcase entries that highlight their skills and abilities to the University's presence on iTunes U. The publication of video resumes is particularly encouraged. For example, in a recently introduced video resume tutorial offered by the University Office of Assessment, Teaching and Learning, students learn how to produce video resumes that have been compiled from video reflections originally collected and organised under the My Ratings tab.

It is important to note that the content of individual iPortfolio entries is private. The teaching team cannot view them unless they have been invited to do so by the student, or until the student has publically published a My Showcases entry to iTunes U. An exception is aggregated star rating competence levels under the My Ratings tab, which can be reported to designated administrators as averages for a given cohort as a whole. This can be used to provide a quantitative snapshot of self- assessed progress towards graduate attribute attainment for a given group.

Table 1. The star rating system used to self-assess competence level in the My Ratings tab

Number of stars	Level	Description
One Star ★	Novice	You know and try to follow the basic rules and get as much information and experience as you can. You are tentative in making any decisions or deciding on successful outcomes.
Two stars ★★	Advanced beginner	You are able to follow instructions and build on your experiences. You are still somewhat tentative about making decisions or deciding on successful outcomes.
Three stars ★★★	Competent	Despite feeling perhaps a little overwhelmed with new information, you are able to plan appropriate actions based on your experience. You are more aware of what might go wrong. Your confidence is increasing.
Four stars ★★★★	Proficient	You feel confident making decisions and acting on your knowledge. You see what needs to be done and decide how to do it.
Five stars ★★★★★	Expert	You know what to do and how to produce a successful outcome. You are experienced, intuitive, and involved.

The My Ratings Tab

In the **My Ratings** tab, students self-assess progress towards attainment of the University's graduate attributes and triple-i curriculum experiences. Students give themselves a "star rating" for each attribute based on Dreyfus' five-stage model, using competence levels ranging from "Novice" to "Expert" as shown in Table 1 [8]. The student justifies the star ratings awarded with evidence and reflections.

An example of the **My Ratings** tab is shown in Figure 3, which has been expanded to show entries that capture industry-based triple-i experiences. This example includes both video and text-based reflections to explain accompanying evidence and justify the star rating awarded.

In all cases, the evidence and reflections stored in the **My Ratings** tabs are private until the iPortfolio holder requests feedback on them from specified critical friends, peers, mentors, and teaching staff. Only those invited to view or offer feedback are able to see an iPortfolio holder's **My Ratings** tab. Those invited to offer their feedback see the evidence and reflections left by the iPortfolio holder, but not the self-awarded star rating. Those providing feedback are able to make their own star rating assessment based on evidence and reflections provided in the tab. The average star rating awarded by those providing feedback is available to the iPortfolio holder, but only when the number of individuals providing feedback exceeds a pre-set threshold. This provides the iPortfolio holder an opportunity to evaluate if the evidence and reflections adequately convey the perceived level of graduate attribute competence to others. Those invited to offer feedback are able to do so using built-in social networking features to provide more detailed text-based comments.

Star rating values averaged for a given cohort can be extracted from the iPortfolio database. Currently database administrators extract aggregated data manually using SQL queries, with data graphically presented in a spreadsheet as shown in Figure 4. A planned enhancement will plot aggregated data for authorised administrators within the iPortfolio itself.

In the case of the cohort represented in Figure 4, these My Ratings data suggests that students feel competent (3 stars) to proficient (4 stars) for all graduate attributes, tending towards proficient for most attributes. In this example, students perceive particular strengths with respect to their professional skills, with some small opportunities for improvement with respect to international perspectives. Overall, however, students in this cohort perceived that they have attained relatively good achievement of all nine graduate attributes. It is anticipated that star rating data like that in Figure 4 will become increasingly significant when triangulated with national indicators for cohorts using data like the Course Experience Questionnaire and Australian University Survey of Student Engagement.

Figure 3. My Ratings expanded to show Industry triple-i experiences with video and text reflections and accompanying evidence.

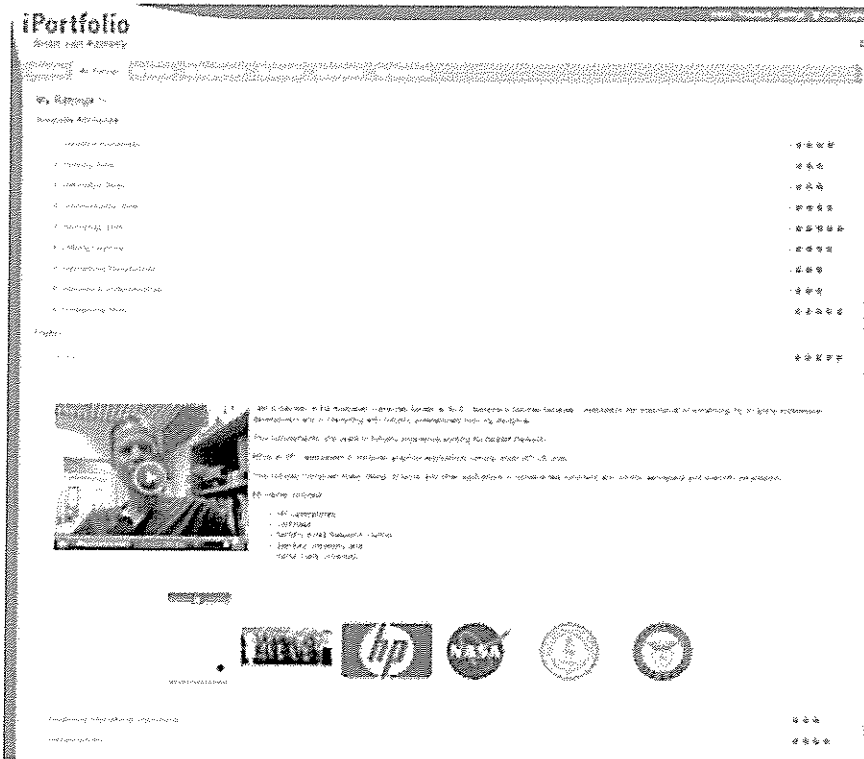
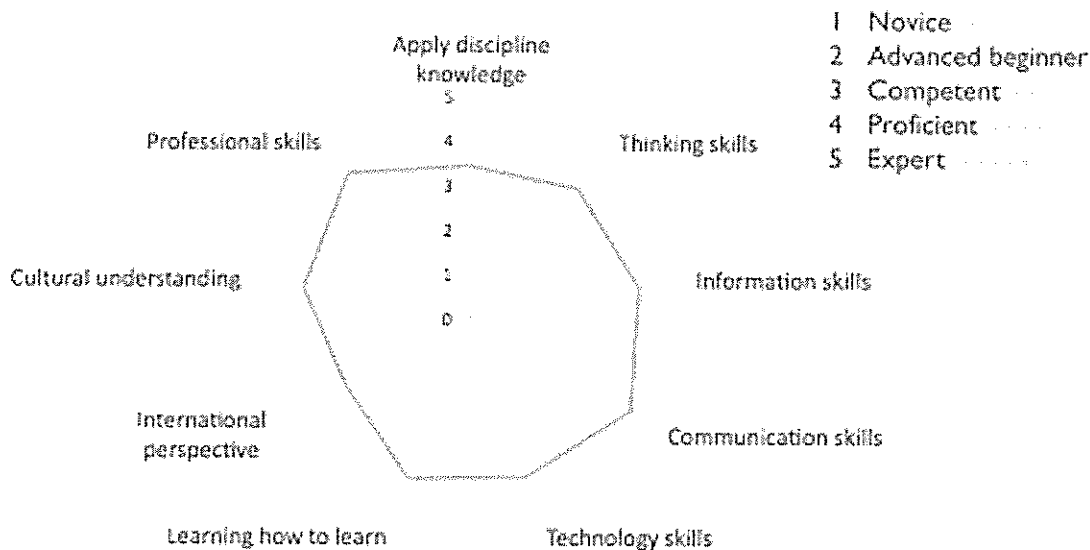


Figure 4. Average graduate attribute self-rating for students enrolled in a third year discipline-based professional practice subject (n=51).



The My Showcases Tab

The **My Showcases** tab is used for entries that highlight completed work that demonstrate skills and abilities, particularly those that are of value to the community or prospective employers. As with the **My Ratings** tab, all entries in the **My Showcases** tab are private until others are invited to view or provide feedback on them.

Entries in the **My Showcases** tab can be published through the University's presence on iTunes U where they become available to everyone. While all **My Showcase** entries can be published to iTunes U, media rich entries that include video and audio are particularly encouraged. These are well suited for distribution via iTunes U, and make it possible to highlight skills and abilities that are difficult to convey in static or paper-based formats. These may include recordings of authentic assessments such as those involving role-playing exercises, presentations demonstrating oral communication skills, or group-based learning experiences demonstrating teamwork and leadership. Short video resumes that summarise skills and abilities are also well suited to publication via iTunes U. Once published to iTunes U, these media rich entries facilitate further qualitative analysis of student achievement by teaching teams, curriculum review participants, accreditation panels, and prospective employers.

Video Resumes

New resources including a hands-on tutorial have been developed to assist students to create effective video resumes that are suitable for publication to iTunes U. The tutorial recommends the following steps, which tightly integrate the use of the **My Ratings** tab to guide video resume planning and production:

1. Review video resumes examples

Use iTunes U and You Tube to identify attributes of successful video resumes. Students will generally find that the most effective video resumes recount actual examples of graduate attribute attainment, have a central theme or message, and are less than 3 minutes in length.

2. Conduct a Graduate Attribute Self-assessment

Conduct a Graduate Attribute self-assessment to identify personal strengths. The self- assessment should focus on real evidence and specific examples that demonstrate progress towards graduate attribute attainment. It is helpful to conduct the initial self-assessment working in small groups, but ultimately this should be done individually using the star rating feature in the **My Ratings** tab.

3. Upload evidence to the iPortfolio

Use the iPortfolio Evidence Manager to upload evidence of graduate attribute attainment. Insert the best evidence into the **My Ratings** tab to justify the star ratings awarded. Students are advised to be selective, and to include only a few good examples under each attribute.

4. Write text-based reflections

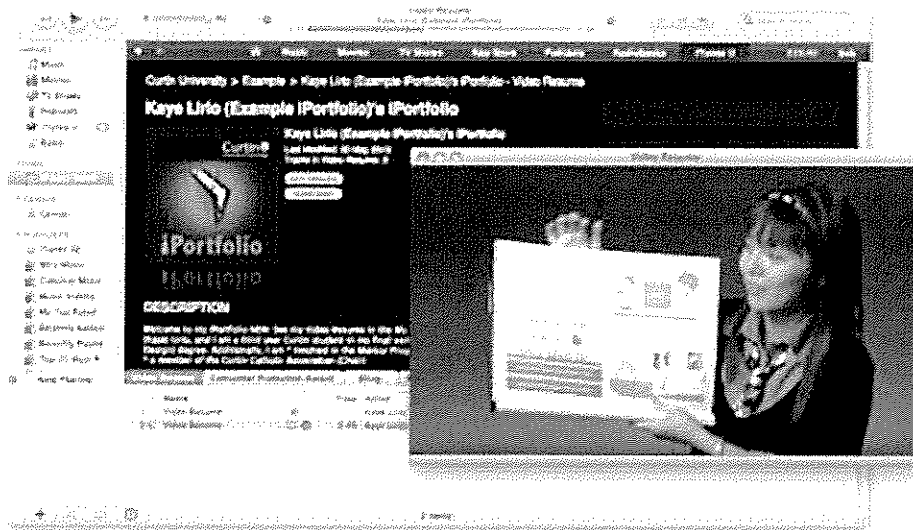
Write reflections to place the evidence for each graduate attribute into context. For example, if an essay is used to justify communication skills, the reflection should identify those aspects of the essay that exemplify excellence in written communication. Similarly, if a report arising from a group project is to be used as an example of Professional Skills, the reflection might consider identify aspects of the report or the processes used to compile it that demonstrate teamwork, leadership, or time management skills.

5. Record video reflections

Record video reflections for each graduate attribute and upload these to the iPortfolio Evidence Manager. Insert video reflections into the appropriate place under the **My Ratings** tab. A good way to do this is for students to record themselves reading the text version of the reflection using a web camera. Alternatively, an off-camera coach can ask the student questions about graduate attributes attainment. The coach and the student should agree on the questions in advance after discussing the student's self-assessment in the **My Ratings** tab. The questions asked by the

coach can be edited out of the recording, leaving only the student's responses. This approach can lead to a more natural and relaxed presentation on camera because the speaker is interacting with a human coach rather than reading from the screen or staring directly into a camera.

Figure 5. A video resume published to the university's presence on iTunes U.



6. Identify emerging themes

Identify themes that emerge from the **My Ratings** tab. For example, if international perspectives and communication and technology skills are obvious strengths, the emerging theme might be the ability to convey new technologies to others in the context of global economic markets.

7. Record short intro and wrap up video clips

Students should record a short video clip to introduce themselves to their audience. They should record another short wrap up clip to describe the emergent themes.

8. Edit the video resume

Use video editing software to splice together highlights. Macintosh users can use iMovie. PC users can use Microsoft Movie Maker, which comes bundled with some versions of Microsoft operating systems. Students are advised to use only the best examples that illustrate the

emergent themes, and multimedia cutaway and picture-in-picture features of the editing software to show actual evidence where appropriate.

9. Seek feedback and refine

Upload the video resume using the iPortfolio Evidence Manager and insert it into a **My Showcases** entry. Students use iPortfolio social networking features to seek feedback from critical friends and mentors and reflect on and refine the video resume based on the feedback.

10. Publish to iTunes U

Update profile information contained in the **About Me** tab, which is also used in the iTunes U banner for work published by the student. A button at the top of each published **My Showcase** entry takes viewers to the equivalent entry on iTunes U. Published entries can also be found under the University's iTunes U link in the iTunes store. A video resume published to iTunes U is shown in Figure 5.

Web cameras are available on campus in some computing labs, and at least one Department has purchased handheld digital camcorders for loan to students creating video resumes. Additionally, future enhancements are under consideration that will embed the ability to record video reflections directly into the **My Ratings** tab, and to easily edit these together to produce finished video resumes, working entirely within the iPortfolio.

Media-Rich Assessments

Increasingly, assessments and learning experiences that incorporate movies and images in media rich iPortfolio entries have been used effectively in many subjects.

For example, pharmacy students record patient counselling sessions on video and upload these to their iPortfolio [9]. In addition to facilitating an authentic learning experience, artefacts arising from this exercise have the potential to provide enduring value to graduates who use can use the recordings to demonstrate patient counselling competencies in a portfolio required for professional registration.

In Engineering, students use the iPortfolio to capture images, movies, and audio recordings made during site visits and relate these to formal learning in the classroom. This has resulted in enhanced student focus during site visits and guest lectures as evidenced by level of note taking, photography, video recording and audio recordings collected by all students and captured in student iPortfolios. Enhanced student research arising from fieldwork experiences has also been noted, as evidenced by extracts and references to other sources that support iPortfolio fieldwork entries. A new iPhone application that enables students to collect images, movies and audio while in the field, tag these with the University's graduate attributes, and upload them directly to their iPortfolio is intended to further encourage the use of mobile devices during fieldwork. However, recording can be prohibited for security reasons at some sites, limiting what can be collected in conjunction with some types of fieldwork.

Conclusions

Achievement of key capabilities and attributes is key to universities' mission to produce capable and employable graduates. This paper suggests one way that ePortfolio systems might enable this to occur through student self-assessment. Aggregated star rating data can be extracted from the My Ratings tab of the iPortfolio to quantitatively convey student perceptions regarding their attainment of the University's graduate attributes. When traditional indicators of student outcome attainment are triangulated with aggregated star rating data from the **My Ratings** tab, qualitative assessment of **My Ratings** tab reflections made by teaching staff, and through qualitative evaluation of video resumes and other finished media rich work publicly published to the University's iTunes U presence, course coordinators and teaching teams have powerful new tools to assist in curriculum review.

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