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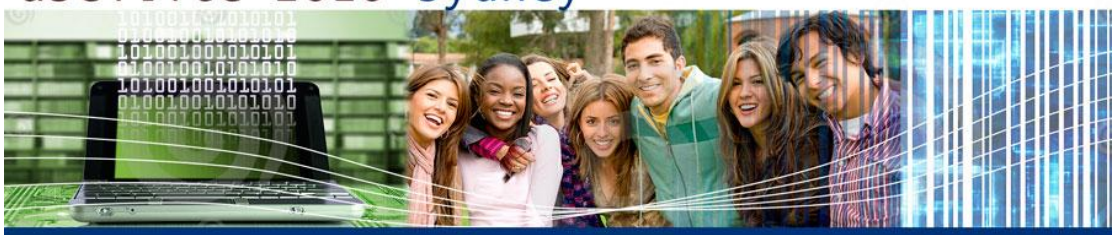

Transforming assessment in higher education: A participatory approach to the development of a good practice framework for assessing student learning through social web technologies

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Social web technologies, such as blogs, wikis, social networking and photo/video sharing sites, are increasingly being used in innovative learning activities in higher education. While there has been much discussion about the pedagogical rationale for using social web technologies in higher education, there has been little examination of the challenges involved in assessing the work students create or the activities they undertake using these tools. The transformation of academic authoring in a social web environment poses complex and urgent assessment-related challenges for policy-makers and educators alike. In this paper we describe the participatory approach we have taken in a project that aims to identify issues and support good assessment practices when students are asked to use social web technologies in medium to high-stakes assessment. In this paper, we outline the design rationale for the research, and describe the methods used in the three stages of this project: 1) documenting current practice through a nationwide survey and interviews; 2) initiating broad discussion across the sector about the issues raised; and 3) field-testing a draft good practice framework in 17 diverse teaching and learning settings. Our initial findings indicate that there are a range of complex student, teacher and institutional issues to consider. We conclude that bottom-up input from practitioners and students, combined with a policy-driven top-down approach is more likely to succeed in bringing about transformation and supporting good practice in the assessment of students' social web activities.

Keywords: Social web technologies, Web 2.0, assessment 2.0, participatory research, assessment practices and standards.

Background

Numerous tools and technologies are included under the umbrella label of "Web 2.0" or "social web technologies," including blogs, wikis, video/photo-sharing sites, and social networking sites. One of the common features of these diverse tools is that the content can be "co-created by and for the community of connected users" (O'Reilly & Battelle, 2009, p. 1). Users can easily publish and share their work, connect with a community of like-minded people, and comment on other users' contributions. Given this, many educational commentators have argued that social web technologies offer great potential for supporting students' learning in higher education (e.g., Alexander, 2006; Boulos & Wheeler, 2007; Huijser, 2008; Grosseck, 2009; McLoughlin & Lee, 2008).

While these commentaries typically offer sound pedagogical rationale for using social web technologies as learning tools, the issue of assessing students' social web activities is often overlooked (see Elliott, 2007, for an exception). We are conducting a project, funded by the Australian Learning and Teaching Council, which aims to develop resources to support good academic practice in the assessment of social web activities in higher education. To date, the project has: 1) documented current practice through surveys and interviews with lecturers who have used social web technologies in assessment; 2) initiated broad discussion about the issues raised; and 3) developed a draft framework for good practice, which has been field-tested in a range of teaching and learning settings.

In this paper we describe the participatory approach we've taken to examining current practice and developing and implementing a good practice framework. Below we outline why this is an important and timely issue, and why we have chosen to adopt a participatory approach in this research.

Social web technologies and assessment

Assessment is recognised as a powerful influence on learning in general (Rust, O'Donovan & Price, 2005) and on students' use of technologies in higher education (Kirkwood & Price, 2008). However, to date there has been little guidance in the published literature on what constitutes good assessment practices when students are asked to create and publish content, or participate in networking activities, using social web technologies. In previous work we have identified a lack of guidance on appropriate citation practices in the context of student Web 2.0 authoring (see Gray, Thompson, Clerehan, Sheard, & Hamilton, 2008), and noted that published case studies of social web activities in higher education rarely contain sufficient detail about assessment practices or offer guidelines that academics can draw from when designing and implementing assessable social web activities (see Gray, Thompson, Sheard, Clerehan & Hamilton, 2010).

Assessment activities using social web technologies can differ substantially from the sorts of assignments that students and staff may be used to. For instance, students might be asked to: keep a public blog throughout the unit of study; create or critique video presentations published on YouTube; or use a wiki to construct a new textbook in collaboration with the whole class. Social web technologies allow the multiple authoring of texts and facilitate authoring that encompasses different and, in some cases, informal styles of writing or different types of media. Because of the nature of the continuous and dialogic forms of text that social web technologies produce, their use in higher education may lead to questions about the nature of academic authorship and academic integrity that university students need to demonstrate. If the established understanding of academic authorship and integrity is challenged in social web environments, questions about appropriate assessment practices and standards need to be interrogated. Recent research has shown that a key component in improving the use of information and communication technologies in higher education is to provide guidance to academics wanting to use new technologies in their teaching (Tynan & Lee, 2009). If social web activities are to form a part of students' university education, the development of a framework for good practice, informed by empirical research, may assist in ensuring that assessment of such activities is appropriately designed and implemented.

Design rationale for research

The project described in this paper aims to identify and promote good practice in the assessment of students' social web activities across higher education. This project is being conducted by a cross-disciplinary team of seven researchers from three Australian universities. The project draws on elements of participatory and action research methodologies, ensuring the resources created are

relevant to and informed by the experiences of educators across the Australian higher education sector. We are using a combined bottom-up and top-down approach to implementing change, drawing on the experiences of those working "on the ground" – primarily lecturers who are using social web technologies in medium to high-stakes assessment – while also taking into account macro-level decisions and information, such as institutional policy regulations. The project has offered numerous ways for practitioners with different points of view and experiences to contribute their voices, creating a social and collegial setting for examining and testing ideas about good assessment practices. This approach aims to:

1. encourage academics to talk about and share their assessment practices;
2. enable multiple voices, representing different academic experiences, to contribute to the project; and
3. facilitate a participatory approach to improving practice.

These aims can be roughly mapped to the three main stages of this project: 1) examining current practice; 2) inviting discussion about the issues raised; and 3) developing and field-testing resources to improve practice. Each of the aims is described in further detail below.

1. Sharing experiences: documenting assessment practices

Tynan and Lee (2009) argued that "improvement and change for the better begins with a careful examination of current practices" (p. 99). As noted above, few of the published examples of the use of social web technologies in higher education contain detailed descriptions of assessment practices. In addition, many are based on single cases or individual academics' experiences (e.g., Bruns & Humphreys, 2005; Hemmi, Bayne & Land, 2009; Traphagan, 2007). Given the range of activities and tools that are labelled "social web technologies," and the various university settings in which they can be used, this is problematic for establishing transferable principles of good practice. It may be difficult for other academics to identify relevant principles and transferable insights from individual case studies (see Gray et al, 2010, for a review).

Carless (2007) noted that it is particularly difficult to encourage academics to talk about assessment because, for many, assessment carries "negative overtones." Bloxham (2009) has argued that assessment practices need to be made more explicit and shared beyond disciplinary boundaries: "[assessment] remains essentially an individual construct, heavily influenced by traditions in the subject discipline. [...] Subjectivity and differences within and across universities remain a difficult, if largely uninvestigated, field, where research is clearly overdue" (p. 218). As there appears to be a common perception that assessment is difficult and problematic (Carless, 2007), innovative assessment practices need to be shared and made more explicit to facilitate learning across the sector. Those involved in innovative practice may need encouragement to discuss and share their experiences in order to inform good practice in the transformation of assessment practices in settings other than their own. A key part of the approach adopted in this project is to create opportunities for reflection and dialogue on assessment practices, and therefore the potential for transformation of academic practices from individualised and tacit to shared and explicit. To achieve this aim, academics were invited to contribute their experiences through a nationwide survey and interviews.

2. Providing a forum for multiple views

A participatory approach can facilitate the broad institutional impact of academic development projects (Carless, 2007). Our project aims to identify principles that have relevance across a range of settings; it is therefore important that staff from various disciplines are encouraged to participate. Knowledge and discourse about teaching and learning can be discipline-specific; breaking down "disciplinary restrictions" and searching for more "interdisciplinary approaches" can extend this knowledge (Savin-Baden, McFarland, & Savin-Baden, 2007, p. 18). Stakeholders in good practice include, however, not only teaching staff on the ground, but also university leaders and managers. Academic practices need to address four key issues that can affect the reputation of the field of study or the university where it is used: major accreditation frameworks, other external stakeholders' expectations, endorsement of learning resources and activities, and questions of intellectual property (Collis & Moonen, 2008, p. 100-101).

Therefore, a combination of both bottom-up and top-down approaches is important to ensure that recommendations for change are based on both the experiences of those working with social web technologies in higher education, and the concerns of academic leaders and policy-makers. This project

also aims to identify principles of good practice that arise from a range of experiences, across disciplines and institutions, and that are relevant to various social web activities. To achieve this, we established a project advisory group and convened a national roundtable discussion, using the proceedings of this event to inform the development of a draft good practice framework. We also established a reference group, with staff and student leaders and managers from the three leading universities, who had the opportunity to contribute to the draft good practice framework, and who could champion and disseminate information about the project via various committees in their respective universities. We then conducted in-depth case studies in which we implemented and field-tested the framework in a number of diverse settings.

3. A participatory approach to implementing change

The approach we have used in conducting the entire project, but especially during the field-testing phase, draws on elements of action research, action learning and co-operative inquiry methodologies (Altrichter, Kemmis, McTaggart & Zuber-Skerritt, 2002; Marsick & O'Neil, 1999; Reason, 1999; Zuber-Skerritt, 2002). Collaboration with research participants is at the heart of these approaches: "research *with* people rather than *on* people" (Reason, 1999, p. 208). Participants in our field-testing case studies examined and discussed their own assessment practices and, where appropriate, used the draft good practice framework to inform their decision-making when implementing and assessing social web activities. Participants met regularly with members of the project team to report and discuss reflections on the assignments they were running, and to make suggestions for improvements to the framework and the project resources. The pilot projects involved, therefore, a process of action and reflection, a critical element of co-operative inquiry research (Reason, 1999).

Action learning can be particularly useful when there is no clear solution to a shared problem or complex situation (Zuber-Skerritt, 2002). The use of social web technologies in many areas of higher education has created a complex situation with regards to a shared understanding of appropriate assessment practices across the sector. Top-down or policy-driven approaches to recommendations for good practice in assessment may not take into account the experiences of lecturers who are using social web technologies to transform students' assessment activities. University assessment policy decisions may, therefore, have little relevance to the innovative practices that these lecturers are engaged in. At the same time, we cannot ignore the significance of grass-roots innovations for assessment policy, IT policy and academic integrity.

Our project has set out to examine current practices across a range of settings, to engage participants in discourse about their current practices, and to involve participants in identifying solutions, or principles of good practice. The project will produce resources that support academics who are using social web technologies in medium to high-stakes assessment activities. The resources will include empirically-based principles of good practice and exemplars demonstrating how social web technologies have been used in assessment in a range of settings. Below, we provide more information about the methods used in each stage of the project.

Stage 1: Documenting current practice

Survey

We conducted an online survey of Australian academics who have assessed students' social web activities in subjects they have taught. The survey was advertised in national learning and teaching forums. In addition, we directly contacted a number of academics who had recently published papers about their experiences of using social web technologies in their teaching; these participants were identified by canvassing recent conference proceedings and journal publications. Data were collected from August to October 2009. Respondents were asked to answer questions about one assignment they used in one subject. There were 64 respondents, of whom 53 completed all or most questions.

Table 1 shows the percentage of responses to the question: "What types of web 2.0 (or social web) activities do students do in this assignment?" Participants could select more than one response. As can be seen, wiki writing and blogging were the most common types of social web activities reported, but many participants also said they used activities that might be considered more innovative in higher education, such as social networking, virtual world activities, and social bookmarking. However, a closer look at the descriptions of the assignments that participants gave in open-ended responses has shown that, in many cases, students were given the option of using different types of social web

technologies to support their activities. In these cases, the focus of the assignment – and therefore the assessment – was not necessarily on the activities students undertook using those particular technologies. That is, those technologies were used to *support* students' assessment tasks, particularly the collaborative aspects of the task, rather than being the subject of the assessment. Participants who selected "other" in response to this question were asked to specify what other activities were used. Responses included "commenting on each other's blog entries," "collaborative mindmapping," "online discussions," and "audio slidecasting."

Table 2 shows the main disciplines or courses students were enrolled in when they completed the unit of study in which they undertook the assignment. Almost half of the respondents said the unit of study was part of a course in Humanities or Society and Culture, with a third from each of Education and Information Technology.

While further findings from the survey are not reported here, the survey elicited a broad array of information about specific assignments in which students had undertaken social web activities. This stage of the project aimed to document a range of assessment tasks involving social web technologies that together paint a picture of innovative assessment practices across Australia. While the survey invited academics to document their experiences in relation to one assignment, we also wanted to engage in more in-depth dialogue about lecturers' assessment practices and their use of social web technologies in their teaching, and therefore conducted follow-up interviews with selected participants.

Table 1: Types of social web activities

	Percentage of responses* (N=60)
Wiki writing	50%
Blogging/microblogging	48%
Social networking	27%
Audio/video podcasting	25%
Virtual world activities	19%
Social bookmarking	17%
Other	20%

* Participants could select more than one response

Table 2: Disciplines

	Percentage of responses* (N=50)
Humanities/Society & Culture	42%
Information technology	32%
Education	30%
Health and medicine	16%
Management and commerce	12%
Creative arts	6%
Natural and physical sciences	6%
Architecture	2%
Engineering	2%
Law	2%

- Participants could select more than one response.

Interviews

Members of the project team conducted telephone interviews with 22 survey respondents who volunteered to take part in a follow-up interview. The interviews were conducted in September and October 2009. They were semi-structured, focusing on details of practice and participants' perspectives on their use of social web technologies in teaching and learning. Most interviews lasted 30-60 minutes;

all were audio-recorded and transcribed. One interview transcript had to be discarded because of the poor quality of the audio recording, leaving 21 complete interview transcripts. A thematic analysis of these transcripts is currently underway.

Three project team members from different disciplinary backgrounds have conducted a close reading of the transcripts to identify key themes and categories in the data, which are currently being reviewed by the project team. In addition to the information we asked lecturers about in the interviews (e.g., assessment practices, assignment design and implementation, and rationale for using social web activities in assessment), the interviews have also provided in-depth information about participants' perspectives on a number of related key themes, including:

- Academic standards. For instance, participants spoke about copyright issues, plagiarism and the level of formality expected in students' social web authoring.
- Collaboration. Issues to do with collaboration included collaborating at a distance, developing students' skills at working with other students, and managing group work.
- Communication. Lecturers spoke of the connection between social web activities and classroom discussions, and suggested that, in some cases, social web technologies fostered peer communication and student-teacher interaction.
- Learning processes. Participants spoke of social web activities that facilitated authenticity, critical analysis, learner autonomy, peer review, and student reflection.
- Open publishing. Open publishing, in some cases, extended the learning community and enabled students to publish their work to a real audience. However, participants also spoke of the risks associated with open publishing and the need to protect students' work.
- Student reaction. When lecturers spoke about students' reactions to using social web technologies, they mentioned anxiety or resistance, in some cases a dislike and in other cases enjoyment of the task, the learning curve students followed when becoming familiar with the activity, and students' perceptions of the learning value of the activity.
- Student writing. This theme included discussion of collaborative writing, creativity, different writing styles, and encouraging students to develop their online voice and identity.
- Using online tools. Lecturers spoke of how conducting assessment tasks online enabled them to archive students' work, provided flexibility of time and space, and raised issues of identity management, information management, netiquette, and technology constraints.

The interviews have provided a wealth of information about issues relating to the use of social web technologies in higher education. The interview discussions were not limited to assessment practices: interviewees gave a great deal of information about their underlying learning philosophy, why they had chosen to use social web technologies in their teaching, the benefits and challenges of engaging students in social web activities, and their reflections on what they would do differently when implementing and assessing these assignments in the future. In many ways assessment practices cannot be disentangled from these concerns. In order to document and understand issues relating to assessment, it was important to explore the broader teaching and learning context.

Stage 2: Initiating broad discussion about current and future practice

The interviews and surveys set out to map current practice and identify issues that need to be addressed in guidelines on the use of social web technologies in assessment. In addition, we aimed to engage external participants in ongoing dialogue throughout the project, to encourage those with expertise in this area to discuss the issues raised and contribute to the project outcomes, and to involve stakeholder representatives in the project. To achieve this, we created an international advisory group, convened a national roundtable event, and established a reference group consisting of stakeholder representatives from the three participating universities.

Advisory group

We approached a number of academics from Australia and internationally who were known for their expertise in student learning, assessment, e-learning, and/or the use of social web technologies in university teaching. There was an overwhelming response to the request for participation in the advisory group. The advisory group has 30 active members, including selected interviewees who were able to attend the roundtable event (see below). Members of the group represent 18 universities across

Australia, three institutions in the UK, and one university in New Zealand. Advisory group members have contributed to the development of the draft good practice framework through face-to-face discussion at the roundtable, and through electronic communication, including contributing to a project wiki.

National roundtable

In November 2009 we convened a one-day national roundtable event. This provided the opportunity for people with expertise, interest and experience in areas relevant to the project, to come together to share experiences and ideas and provide multiple perspectives on assessing students' social web activities. Participants represented a cross-section of the Australian higher education sector, and included academics from diverse disciplinary backgrounds, educational developers, and lecturers with experience in using a range of social web technologies in their teaching. In addition, four postgraduate students took part. In all, twenty Australian universities were represented at the event. We used a shared wiki to upload written proceedings of the discussions as the event was taking place. Remote and international participants could then monitor the proceedings and contribute to the discussions by adding to the wiki pages or using the commenting facility on the wiki. The proceedings of the event can be viewed here: http://web2assessmentroundtable.pbworks.com.

Prior to the event, participants were provided with a discussion paper that included a summary of the survey and interview findings and an overview of issues identified in the literature. Participants were asked to respond to the issues and data it contained. The event included small group discussions about issues to do with a range of social web technologies, and about applying good practice principles to different stages in the assessment cycle (designing, conducting, marking, feedback, and quality assurance; see Bloxham & Boyd, 2007; Rust, O'Donovan & Price, 2005). Through these discussions we aimed to gather recommendations for good practice principles that universities and disciplines can apply when assessing students' social web activities. The proceedings of this event were used to inform the development of a draft framework of good practice that we then field-tested in a range of settings. Following the field-testing, the framework will be redrafted and packaged with a suite of resources, including detailed exemplars based on the field-testing case studies, to be disseminated across the Australian higher education sector.

Reference group

In addition to contributions from members of the advisory group, we have also sought contributions from stakeholder representatives at the three partner universities involved in this project. The reference group has 16 members, including academics, educational developers, e-learning advisors, and students. Over the course of the project, the reference group will be meeting quarterly to review and evaluate project progress. Reference group members have provided advice on the development of the good practice framework. They are committed to communicating the project outcomes on university committees and will be pro-active in influencing the uptake of practice improvements at their university. In addition, members of the reference group have provided advice on suitable case study settings and identified potential participants to take part in field-testing the draft good practice framework.

Stage 3: Field-testing a framework for good practice

Case studies

After collating information about current practices, identifying issues that are important to good practice in the assessment of students' social web activities in higher education, and engaging external contributors in dialogue about these issues, we developed a draft framework for field-testing and refining good practice in the assessment of social web activities. During Semester 1, 2010, we conducted 17 case studies that aimed to implement and field-test the draft framework in diverse teaching and learning settings, involving various social web activities. Table 3 provides an overview of the different settings and activities included in the case studies.

Table 3: Overview of case studies

Social web activity	Subject/Discipline
Blogging	Criminal Law Cultural Studies Cinema Studies Media Studies
Social bookmarking	Education
Social networking	Languages
Photo sharing	Communication Design
Vodcasting	Economics Business
Virtual worlds	Languages
Wiki writing	Accounting Education Science Information Technology Languages
Combined Web 2.0 tools	Information Management Information Technology

The 17 case studies have been conducted as in-depth ethnographic studies, involving regular interviews with participants, collection of relevant materials and examples, and, where possible, observation of classroom and assessment practices. The methodology also draws on elements of action learning and co-operative inquiry models. Participants have been actively engaged in the research, modifying or examining an aspect of their practice, reflecting on their practice, and engaging in dialogue with other researchers about the issues raised. In some cases, participants have introduced new assignments involving social web technologies during the project, providing an ideal opportunity to field-test the good practice framework. In other cases, participants have been using social web activities in their teaching for a number of years; these cases involved reflection and dialogue about established practices, rather than explicitly field-testing the good practice framework.

Ethics

The field-testing phase of the project involved a number of iterations to the process of obtaining appropriate ethics approval. In the first instance, the lecturers involved in the field-testing were research participants; it would not have been appropriate for them to be co-researchers during the semester while they were assessing students' work. However, because we wanted to make the field-testing stage as participatory as possible, we gave participants the option of joining the project as co-researchers at the end of the semester. This involved amending the ethics applications, giving participants access to the data collected, and inviting participants to contribute to the scholarly output of the project. In addition, although student work was not the focus of the research, it was impossible to extract examples of assessment practices without also including extracts of student work. We therefore needed to gain ethics approval to access and use students' work, and sought students' informed consent to use their work for our research.

Introductory workshop

At the beginning of the field-testing phase, all participants attended one of three introductory workshops. The workshops provided a forum for introducing participants to the main aims of the project, providing participants with an overview of the draft good practice framework, and clarifying the expectations regarding participants' involvement in the project. The introductory workshops also enabled participants to meet others engaged in the assessment of students' social web activities, to share ideas about the assignments they were designing and implementing, and to meet and discuss their assignment with members of the project team.

Data collection
Each case study has been managed by one member of the project team. Over the course of the semester, participants have met with that team member several times to discuss the assignment, using the draft good practice framework to guide the discussions. These meetings have been timed to coincide with different stages in the assessment cycle, occurring at different times in the semester. In some cases, project team members have been able to sit in on classes or observe participants' assessment activities. Participants have also provided copies of relevant documents, such as course overviews, assignment descriptions, access to students' work (where possible), and examples of marking artefacts, such as rubrics. Project team members have kept extensive field notes to document data collection activities.

Focus groups
At the end of the semester case study participants took part in focus group discussions. These provided participants with the opportunity to reflect on the process of taking part in this project, to offer their suggestions for improvements to the good practice framework and resources to be provided by the project, and to share their experiences with other participants. In addition, we have conducted focus group sessions with 20 students who were enrolled in the case study subjects. Students were invited to participate to provide some insight into their experiences of using social web technologies in their assessment tasks.

Data analysis
We will be using a template, based on activity theory, to summarise and analyse each of the pilot projects (Greenhow & Balbas, 2007). Activity theory is useful in this context because it provides a framework for taking a holistic approach. Using this model we can describe the overall context of the assessment activities, including the people involved in the activity, the broader institutional and societal context, the rules and regulations governing the activity, the tools or artefacts used, and the different roles that members of the community take on when completing this activity. Using a structured template enables us to undertake cross-case comparisons, and also to compare activities at different stages in the assessment cycle (Bloxham & Boyd, 2007; Rust, O'Donovan & Price, 2005). The results of these analyses will be disseminated nationally at the end of the project.

Conclusion

This paper has described the participatory approach we have taken in research conducted for an ALTC-funded project examining the use of social web technologies in assessment in Australian higher education. The project aimed to identify principles of good practice arising from a range of experiences, across disciplines and institutions, and relevant to various social web activities.

The research has progressed through three stages. In the first stage, we conducted a survey and interviews with Australian academics who have used social web technologies in assessment. We encouraged academics from various disciplines to talk about or document their assessment practices. Together, these accounts illustrate the innovative assessment practices that are being undertaken across Australia. While the survey findings are not reported in detail here, the survey showed the variety of social web activities and technologies being used in higher education in Australia, and reveal that Web 2.0 tools are being used in a range of settings, although largely concentrated on three main discipline areas: the humanities, education, and information technology. The interviews provided more in-depth information and revealed that there are many issues to consider when using social web technologies in assessment.

The second stage of the research aimed to extend the dialogue about assessment by engaging external contributors from across the higher education sector and encouraging people with diverse perspectives to contribute to the discussion. We sought contributions both from those "on the ground," including lecturers and student representatives, as well as university leaders and managers, while also taking into account policy regulations. During this stage, we established a project advisory group, consisting of national and international experts in this area, convened a national roundtable to discuss the key issues, and established a project reference group comprising stakeholder representatives from the three participating universities. The findings from the survey and interviews, and the discussions during this stage of the project, informed the development of the draft good practice framework, which we then field-tested in 17 different settings during the third stage of the project. The 17 case studies will produce detailed exemplars of assessment practices in a range of disciplines and settings. Lessons

learned during the field-testing stage will be used to further develop the good practice framework, which will be included – along with the detailed case studies of assessment practices – in resources to be disseminated nationally at the end of the project.

The multi-method and participatory approach used in this project enabled the draft good practice framework to be created based on the reflections of academics currently utilising the tools for assessment purposes in higher education. Field-testing this framework in a range of settings enabled us to validate and improve the framework and provide detailed case descriptions. The approach maintained the individual narrative whilst distilling the impact of social web technologies on both current assessment practice and university processes and policy. We anticipate that the participatory approach we've adopted, and the combination of bottom-up and top-down perspectives included in this project will ensure its broad impact across the Australian higher education sector.

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