



Project Document Cover Sheet

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Quality tracking at Ravensbourne

Quali-R

Final Report

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1. Acknowledgements

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2. Executive Summary

The project set out to support the process of institutional transformation as Ravensbourne College moves to purpose-built premises in North Greenwich. We aimed to demonstrate how emerging technologies can be used to help make institutional processes such as quality assurance and enhancement more efficient, engaging and effective. We sought to develop greater understanding of how "Web 2.0" technologies can support the effective use of, and access to, administrative information and increase the efficiency of administrative processes by eliminating duplicate activities, and streamlining progress monitoring. We have also started to explore whether, if these processes are made more transparent, and are provided with more structure, better participation will follow.

The project implemented a small-scale platform for managing and tracking quality assurance and enhancement actions through standards-based aggregation. A commodity issue tracking system was adapted to manage action items from relevant quality assurance processes with a simple web-service client facilitating the extraction of actionable items from narrative documents into time delimited actions and tasks.

We have succeeded in modelling a Web 2.0 workflow to sustain diverse action-based activities involved in the institutional administration and assurance of the quality of learning and teaching. This provides a demonstrator of the use of emerging technology to improve the efficiency and openness of administrative procedures. Specifically this has confirmed the benefits of RSS 2.0 and the possibilities offered by better structuring of information and narrative documents. The project has also highlighted a range of significant issues related to such institutional change and implementing innovation and enhancement generally.

3. Background

Ravensbourne College is a small, specialist institution serving the creative industries of design and communication. These disciplines are undergoing radical, disruptive change as a result of the introduction of digital technology. Learners typically have a relatively high level of technological sophistication, and the institution actively encourages the use of learner-owned technology and extra-institutional social software in learning and teaching. Ravensbourne is relocating to purpose built premises in North Greenwich in 2010. This building is designed around learner- and practitioner-owned technology, modelling the networked environment of the creative professional.

We have been developing our approach to elearning and are moving towards a personal learning environment that enables learners to assemble a rich learning experience from content available in the institution, and from extra-institutional resources and communities of practice. We have already moved a long way in this

through a previous JISC supported project (LIN-R). It has become clear that an important institutional contribution to the learner's personal learning environment is the quality assurance of the institution's learning experiences. Further engaging learners in this process by making it more transparent and ongoing can add an important layer to the personalisation of learning and benefit the institution.

Characteristically, quality assurance and enhancement is an enterprise process that is centrally managed with the results being shared with stakeholders at critical points. On the face of it an enterprise process is less amenable to the loosely-coupled, user-selected world of Web 2.0, particularly a process that aims to promote and uphold standards. However, it is also clear that effective quality assurance requires openness – learners, practitioners and other stakeholders should be able to see quality assurance processes at work, that improvements are made, and errors corrected, they should be able to measure for themselves a process of improvement and engage with this in an ongoing way. While we already strive for this as an institution we see an opportunity for the publication and dissemination of quality-assurance related activities to take advantage of the networked world of Web 2.0.

In addition we believe that making progress more visible and tangible encourages a responsive institution and visible quality assurance helps to create an institutional culture of continuous enhancement that draws on the expertise and experience of administrators, practitioners and learners. It is important in fostering an institutional culture that is reflective, self-critical, and evidence-based.

At Ravensbourne College, there are three important processes that contribute to the quality enhancement of teaching and learning – external examiners' reports, the annual course monitoring process, and learner feedback reviewed at course committees. The first two processes particularly are used to create action plans for quality assurance and enhancement. Course committees generate discrete action items. Over the course of the year the teaching team and support departments carry out these actions, and report progress at faculty committees.

Inevitably, other priorities supervene, and, over time, action items drop off to-do lists. Subject leaders are reminded before meetings of any outstanding items, and scramble to address them. Actors are well intentioned but overburdened, and quality is enhanced through a process of punctuated equilibrium. Learners, and external stakeholders, are often unaware of progress being made, and the lack of visible progress can lead to a rolling undercurrent of dissatisfaction and discontent.

These problems will, we believe, become progressively exacerbated as learners and practitioners assemble their own environments. The absence of at least semi-structured information about the progress of quality assurance and enhancement creates an obstacle when attempting to address this issue. For example there is no feed for an aggregator. Stakeholders can be left "outside the conversation", decoupled from the institution's processes, uninformed and disempowered.

The QAA commented in a previous institutional audit that one of the institution's strengths was the engagement of learners in its quality systems. We aim to sustain and develop this strength by enabling the possibility of pervasive engagement.

4. Aims and Objectives

The project set out to support the process of institutional transformation as Ravensbourne College moves to purpose-built premises in North Greenwich. We aimed to offer a practical demonstration of working smarter and doing more with less that could be applied to other action-based, narrative-driven administrative procedures within the institution. Also we aimed to demonstrate that quality assurance and enhancement processes are amenable to proceduralisation through emerging technology that makes these processes both more efficient, and, through stakeholder engagement, more effective.

We sought to develop greater understanding of how “Web 2.0” technologies can support the effective use of, and access to, administrative information, and what steps an institution should take in order to scaffold these outcomes. Appreciating that simply making feeds available is not sufficient to stimulate users to build personal administrative environments we wanted to understand how, if at all, Web 2.0 techniques can be effective in the mainstream.

In addition, we aimed to gain clearer insight into the “architecture of participation” by exploring issues such as the extent to which providing the opportunity to participate in the institution’s quality assurance and enhancement processes actually stimulate participation and if these processes are made more transparent, and are provided with more structure, whether better participation will follow.

More immediately, through supporting academics and administrative staff in using a more structured approach to managing activities arising from the quality assurance and enhancement process we aimed to increase the efficiency of administrative process by eliminating duplicate activities, and simplifying and streamlining progress monitoring.

We aimed, rather than any significant software development, to adapt commodity issue-tracking or project management web applications to manage quality action plans by creating a simple tool that uses a web service to create tasks from narrative documents. This allows us to syndicate the task deadlines using iCalendar feeds, and progress using RSS feeds. We also wanted to evaluate the feasibility of publishing the narrative documents themselves on a wiki or an extra-institutional document hosting service such as Scribd.

As well as providing raw feeds, we intend to aggregate the RSS and iCalendar data in the institutional VLE (Moodle) and an institutional wiki for learners and practitioners who prefer institutionally mediated aggregation. Although this has not been fully implemented, as described below, we have shown that it is possible and will carry it out. Learners and practitioners will have an opportunity to respond to the action items through discussion groups and XMPP chat rooms, as well as through syndicating the information into their own extra-institutional social networks.

Through all of this we set out to explore the aggregation of enterprise information, and to develop our understanding of how learners and practitioners make use of that information. In particular, we wanted to verify whether more effective use of narrative administrative information is possible when that information is given some light-weight, standards-based structure. By adopting RSS, iCalendar and HTML as standards, we wanted to have the ability to target a range of user-owned platforms from smartphones, to PDAs, to desktop or laptop computers. By selecting well-

known syndication technologies, we aimed to maximise the potential for consumption and reuse.

5. Methodology

The project implemented a small-scale platform for managing and tracking quality assurance and enhancement actions through standards-based aggregation. A commodity issue tracking system (Jira) was adapted to manage action items from external examiner reports, annual course monitoring reports, and course committees with a simple web-service client facilitating the extraction of actionable items from narrative documents into time delimited actions and tasks. The action items can then be syndicated as iCalendar feeds for a temporal overview of deadlines and deliverables, and as RSS feeds to provide narrative updates. We also can now represent achievement of objectives graphically to simplify performance monitoring.

Overall we have explored ways to present narrative quality assurance documents in an easy to consume way. At present, and for the foreseeable future, these documents are created using a word-processor, based on a standardised template. We considered representing the documents in an extra-institutional document repository such as Scribd or Google docs but concluded that it was better at this stage to make changes in the output. This was taking into account the readiness of staff (and other actors such as external examiners) and wanting to make changes evolutionary for them while focussing on the main user benefits of reducing paperwork, and time in meetings, while using Web 2.0 technologies to leverage time spent on quality assurance to deepen engagement, and encourage participation.

Rather than piloting it first, as we had initially planned, we implemented the project across all undergraduate programmes. Because Ravensbourne is a small institution there is a limited number of documents to handle and we judged this as the most efficient approach rather than operating two parallel systems. This allowed the team to devote additional time and effort to supporting those staff who most needed it.

We have chosen to slightly delay the syndication of information into the college VLE because a planned re-organisation of the VLE is running to a different timescale to this project. We have ensured that some of our project team members are involved in this re-organisation and intend to implement this element over the next academic year having already established that it will work in principle.

We explored ways to engage learners and practitioners, and to create opportunities for discussion and feedback. Our experience has shown that forums within the VLE, and discussion groups in extra-institutional social software are preferred by users. Teaching and learning at Ravensbourne has a strong social-constructivist bent and we have identified the opportunity to leverage existing constructivist practice to foster collaboration. With this in mind action planning data has been opened to all stakeholders, allowing them to comment on annual course monitoring and external examiner action plans. This also creates an opportunity for knowledge to be shared, and trends spotted by aggregating action items to faculty, and institutional levels.

In working with users through staff development events, one to one and through the quality tracking process itself the project highlighted a range of significant issues related to such institutional change and implementing innovation and enhancement.

For example, while empowering individuals and fostering a culture of openness and reflective practice are positively received as principles in practice they can be problematic and uncomfortable for both the institution and individuals. We have found considerable variations in how members of the academic community perceive and respond to institutional processes. Whereas a common institutional response to such variety is to impose greater bureaucracy and remove freedoms, we have taken the approach of trusting actors while also maintaining a layer of auditing. Particularly we have aimed to support this by systematising and improving the key workflows.

It is also clear however that while developing tools, and processes can have an impact they are only a part of the picture. Our project has confirmed that moving from processes that have traditionally emphasised quality assurance to those that focus more on enhancement, will require considerable shifts in perception from those involved. These will include surfacing and challenging beliefs about the institution and its internal relationships and those with its learners and external stakeholders.

It was important to consider issues such as these along with other more obvious ones to do with technical capabilities when making decisions about implementation. These decisions ranged from how to use e-mail alerts (gradually) to how much independence or flexibility to provide to practitioners over closing or re-assigning responsibility for actions. Considering this last issue highlighted the fact that service departments are not currently fully included in the processes we were working with.

We also found that these issues interacted with others in complex ways. For example we wanted to maintain the richness and contextualisation of narrative documents while being able to produce actions that can be effectively assigned, tracked and evaluated. The difficulty of this balancing act was exacerbated for us by issues of staff capability as well as values and beliefs. Within the processes we addressed it was rare for those involved to describe their aims for change in an actionable way. Also there was a focus on remedially addressing problems rather than generatively identifying enhancements. It seems that this was variously caused by a combination of not having practiced the skills, not perceiving incentives to do this and/or not valuing accountability let alone greater openness and transparency.

At the planning stage, we had understood an action arising from annual course monitoring or an external examiner's action plan in fairly simple terms, effectively equivalent to a to-do item, that is, a short title, with some optional narrative text describing this in greater detail where necessary. From a review of existing semi-structured documents, it became clear that our initial assumptions needed revising. In fact, action items were usually mini-essays several paragraphs long, and didn't always represent atomic actions. We adopted the approach of considering an action item in these terms: title, issue narrative, comments, actions, evaluation approach. Meta-data associated with the action item are: course, source (ie external examiner's report or annual course monitoring log), date created, date due, assignee. Once an action item is "running" additional comments can be added, updating on progress.

The project has allowed us to develop our understanding of how staff and learners engage with institutional systems. We have confirmed some views about aggregators as learning environments and as tools to support administration. Whilst we feel an aggregation model has merit, particularly when allied with a formal model for consolidating the use of information flows, we find in practice that even sophisticated users of technology are unsystematic in their approach, whether the

information they are managing is structured, semi-structured, or unstructured. Formal workflows for managing information flow can certainly be developed and taught, and taking a systematic approach to Web 2.0 is part of the institution's direction. We do not, however, expect revolutionary change across the institution but remain optimistic about the opportunities to further develop the systematic use of information flows.

The fact that the project has been of manageable size with focussed aims, seeking to effect targeted innovation have all been very positive. This has provided the opportunity to work with staff and students from across the institution in a focussed way to improve processes. Among the most useful sources of information and support has been the chance to work collaboratively as a cross institution team and with other, principally academic and ICT, staff at our institution. Also we have involved other stakeholders such as validating partners, external examiners and students in the process. This gave invaluable support in identifying the issues that were important to address within the scope of the project and workable solutions and allowed us to evaluate and adapt our approach as we went through the process. Also we were able to build on learning from our previously JISC funded projects.

The most successful method both in terms of dissemination and gathering valuable feedback has been through workshops and presentations but also offering to work one to one with staff as they engage in the revised processes. Also using existing relevant staff development events and forums such as committee meetings and staff students liaison committees has been very valuable to inform and update. Connecting the project and its aims to other institutional developments and processes has been important to maintain relevance and raise awareness. The project wiki and blog have also been invaluable for internal communication and development and dissemination. Through the project we applied a user-centred approach to evaluation ensuring that it has been closely linked to development and implementation. This process will continue as the conclusions of the project are further embedded and implemented to ensure the work is sustained.

6. Implementation

The initial phase of the project included setting up project communication and collaboration tools, notably a project wiki and blog; reviewing loci of quality assurance actions, and establishing the critical "paper trail" for translation to semi-structured data; assessing staff and student capability, and use of Web 2.0 technologies, particularly aggregation technologies and use of social networking; researching appropriate platforms for managing tasks and for publishing narrative documents, from which we decided to use Jira which was already in institutional use. From this we developed structured document templates and a simple client tool to create action items in the task management platform along with staff training in the use of the platform with supporting guidance. Throughout we refined our plans taking into account feedback from awareness raising events and training before inputting action items into the task management system.

We had planned from the outset to use a commodity system for tracking actions rather than building a system. We reviewed extra-institutional "to-do" systems such as Toodledo, as there are numerous available in the market-place, and many such systems provide an API, RSS feeds, and iCal support. At the planning stage, we had considered that a mechanism to tie action item creation and viewing into institutional

authentication would be a requirement. We had discarded parallel user accounts for the following reasons:

- Administratively burdensome to create accounts (in principle the actions could at least be viewable by everyone in the institution)
- Difficulty of leveraging institutional investment in identity (that is, the institution records the subject leader, academics, and who studies on the course)
- Poor visibility of who is accessing the information without additional analytics mapped back to institutional identities.

An extra-institutional service that provided Shibboleth federated access management would provide a standards-based way of integrating with institutional identity services, however, outside of the HE community, Shibboleth/SAML 2 is poorly adopted in the marketplace. As an alternative, we were prepared to consider OpenID sign-in. This would also allow us to leverage institutional identity, but has the advantage of being better supported in the marketplace.

We produced a collection of scripts, which interact with Microsoft Office applications: Word and Excel, XML documents, and the XML-RPC API of the issue-tracker Jira (<http://www.atlassian.com/>). This allowed us to make use of RSS feeds generated from Jira, for example to feed the VLE (Moodle) through its RSS widget, and other web platforms through embeddable widgets. The feeds from Jira are also served as iCalendar into Google Calendar. Specifically our approach helped to confirm a number of technical conclusions. For example how useful RSS 2.0 is for syndication. Many applications easily generate RSS, and it is easy to consume on the web, or in desktop applications. However it is also our experience that calendaring standards are less useful in practice, as described further below.

Overall we recognise that we could have taken the chance to explore alternative means of outward communication, particularly about the development of the project, for example podcasting discussions or workshops and uploading images / sketches to the blog or wiki. This could also have helped with adding depth to project reports.

7. Outputs and Results

The project has succeeded in modelling a Web 2.0 workflow to sustain diverse action-based activities involved in the institutional administration and assurance of the quality of learning and teaching. We achieved this by creating a simple tool to make use of web services to create tasks from narrative documents and have embedded this approach in the normal administrative practice of the institution. In support of this we have developed the project wiki and developed staff and institutional capabilities. This provides a demonstrator of the use of emerging technology and specifically standards-based aggregation to improve the efficiency and openness of administrative procedures for quality assurance, tracking and enhancement. Specifically this has confirmed the benefits of RSS 2.0 and the possibilities offered by better structuring of information and narrative documents.

8. Outcomes

All main aims and objectives have been achieved. We have particularly developed understanding in relation to the application of emerging technology to improve the efficiency and openness of specific administrative procedures for quality assurance,

tracking and enhancement. We have also identified a number of issues through this process and drawn conclusions that will be applicable to other procedures, particularly action-based, narrative-driven ones, at this institution and others.

Some of the wider more exploratory aims of the project will only be fulfilled as it becomes more embedded. Notably gaining greater insight into the “architecture of participation” will only be fully realised as the community has the chance to participate over time in the more transparent and accessible system.

We have not yet taken full advantage of the benefits of creating RSS feeds by aggregating into the institutional VLE but have shown that this is possible and are working with colleagues involved in examining the navigational structure of the VLE to ensure that this is implemented successfully.

We have demonstrated that emerging technology can be applied to improve the efficiency and openness of specific administrative procedures for quality assurance, tracking and enhancement. The processes addressed have been improved in terms of efficiency and transparency in line with project and institutional aims. This has had a positive impact on the understanding of and attitudes to the application of emerging technology in developing existing institutional processes. Consultation with stakeholders around the processes themselves has been beneficial in allowing reflection and consensus, encouraging ownership and responsibility. The outcomes of the project have been extended to FE and Postgraduate provisions to support a common administrative infrastructure and also potentially lead to a broader impact.

Staff and students have been positive about the project’s benefits for the transparency and efficiency of the quality tracking processes addressed and the possibilities for these to develop. The project has had a positive effect on the attitudes of those staff from beyond the immediate team who have been engaged in the process either directly or through taking part in committees and workshops. This project has also supported the institution in evaluating and recognising the effectiveness of the application of emerging technology to address issues at management, faculty and institutional levels through lightweight approaches.

9. Conclusions & Implications

As described we have shown how emerging technology can be applied to improve the efficiency and openness of specific administrative procedures for quality assurance, tracking and enhancement. There are however some specific issues that can limit further developments in this area more generally. For example, groupware is dominated by elephants in the room like Microsoft’s Exchange, and support for standards-based technology is less well developed. For example, the Moodle VLE cannot consume iCalendar feeds, though its Calendar widget will export them. The iPhone supports iCalendar files, but not iCalendar subscriptions, and so on. Standards-based calendaring is something we would like to see better supported.

Also the project shows the potential value of research into more systematic documentation standards, which balance the needs of machine processing with the narrative richness of human communication. The use of lightweight meta-data such as tagging and potentially technology mediated collaborative working environments that bring together different stakeholders seem to offer great potential. For example microblogging in a managed working environment would, we think, be worth exploring.