The development of an online learning and collaboration space for postgraduate students

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Abstract
The Department of Psychology at the University of South Africa is currently developing an on-line learning and collaboration space (to be known as the Marc Room) for the Masters programme in Psychology with specialisation in Research Consultation – MA(RC). The aim of the space is to provide learning, professional development, and networking opportunities for the psychological research consultation community. The intended users include students (current and former), lecturers, mentors, supervisors, placement providers, project leaders, and researchers in the research industry. The development of the space is one of the projects that the 2010 MA(RC) group of students could volunteer to be involved in to provide them with practical exposure to various aspects of research consultation, such as negotiating with clients (in this case the Department of Psychology), project management, academic writing, and collaboration with team members. The project team consists of three students and six academic staff members. This article describes the background to the project, the need for developing an online space, what already exists in terms of learning management systems, and the relevant aspects of Web 2.0 and Communities of Practice to this space. The article further discusses the design and development of this space and provides an overview of future goals.

Keywords: collaborative learning; e-learning; online learning; research consultation; research collaboration; research psychology; Web 2.0

The Masters programme in Psychology with specialisation in Research Consultation – MA(RC) – is unique to the University of South Africa (Unisa). Its constant growth
and change is due to the diverse and resourceful input from eight programme leaders and 138 students over the last twenty two years. This continual adaptation and transformation of the programme has persistently accommodated rapid changes in the research, academic and professional realms of research psychology as both lecturers and students have stepped from the twentieth century into the twenty first century’s knowledge economy. In the late 1980s, training in research psychology took second field to clinical and counselling psychology. This changed when external pressure in the form of social sanctions which isolated South Africa from the world’s resources and learning opportunities. The national government then decided to enhance the quality and quantity of local research to such an extent that twenty new national scientific journals were established. Such publications, which created a knock-on effect of an increased yield of academic research, produced a growing need for research training. Lecturers in the Department of Psychology at Unisa recognised this demand and with much planning and deliberation developed the MA(RC) degree in 1987. The programme was offered for the first time in 1989 and a total of three students registered for that year. The Psychology Association of South Africa (PsySSA) successfully proposed to the Professional Board of Psychology that all non-directed Masters in Research Psychology graduates be registered as professional research psychologists. This registration needed no formal internship but rather two full research papers published in approved journals.

For many years the syllabus consisted of three components: Two theoretical papers, a dissertation of limited scope and practical training in psychological assessment, data analysis, and report writing. In the mid-90s the syllabus was expanded, and teaching hours were extended to four days a week rather than the original one morning a week. The Department of Psychology submitted its internship training application early in 1997 and the application was approved and accredited by the Professional Board of Psychology. In 1999, a new requirement came into effect whereby students had to submit a research paper for publication when handing in dissertations for examination purposes. Soon after the turn of the century, a ‘knowledge-to-go’ programme, which promoted and provided practical research placements in industry for students, was implemented by the programme facilitators. Other elements of the programme that have been instituted since then include lectures on ‘ecologies of knowledge’, philosophy of science, knowledge management, and information graphics. Students have also increasingly been exposed to writing, editing, and peer-reviewing for New Voices in Psychology, an academic journal published by the Department of Psychology.

The programme currently consists of four components, namely attendance on campus of various workshops and lectures, two practical placement periods of 10 weeks each, project participation, and completing a full dissertation. Placements are offered by various organisations (private, government, and non-governmental organisations) that expose students to diverse industries such as market research,
health research, social research, information service providers, and welfare-related services. The projects range from exposure to quantitative-related research, evaluating programmes offered by the Department of Psychology and working with the *New Voices* editorial team to collaborate on various activities related to academic publishing. This year is also the first year that the programme pairs students with mentors within the Department to provide support and guidance throughout the year.

A brief reflection on the MA(RC) programme’s theme of ‘Cognition to Creation’ shows that the programme is relevant to the trends of the world as these trends unfold. So too, by training research psychologists, the programme keeps up with the trend of the growing need for researchers. The programme has grown in student numbers from a steady inflow of between three to six students per year until 2005. From 2006 to 2008, the programme almost doubled in numbers with approximately ten students each year and 2009 followed with a total of fourteen students. In 2010, a record-breaking total of 20 students from all over South Africa enrolled for the MA(RC) programme. The essence of the programme lies in the fact that it is a self-directed and ‘real life experience orientated’. Students can involve themselves in several dynamic aspects of the research psychology network and yet find themselves with research expertise in completely different arenas.

### THE NEED FOR AN ONLINE LEARNING AND COLLABORATION SPACE FOR THIS PROGRAMME

Research is about discovery, knowledge, and process, and an online space could potentially provide a learning and collaboration space for participants to manage and share their own learning and research. Learning and research in this context, which will take place in social networks, will serve as a knowledge warehouse for past, present and future research consultants.

The main envisioned outcome of this project is to create an on-line space (to be known as the Marc Room) for collaborative learning and research. Specifically, this space intends to:

1. simplify communication related to the administration of the programme;
2. encourage self-management of learning through collaboration, reflection and participation;
3. teach through technology and social network systems irrespective of physical time and space;
4. foster connections between the Department of Psychology, alumni of this programme, current students and prospective students;
5. create and manage personal research portals for participants that can then be shared with others;
6. create research consultation related networking opportunities for all participants to expand access to opportunities; and
7. facilitate the development of a range of skills including research, team collaboration, computer and internet skills, reflective practice and knowledge- and information management.

One of the potential outflows of this system would be to create research and academic publishing opportunities and the development and maintenance of these opportunities for future MA(RC) students. It is envisaged that future groups of the MA(RC) programme will continue to contribute to this community through participation and by undertaking specific research related to this community.

WHAT ALREADY EXISTS
Unisa’s Learning Management System

The use of Learning Management Systems (LMS) in higher education is ubiquitous in South Africa and internationally. At Unisa, myUnisa provides a secure space for registered students to manage aspects of their studies such as the downloading of study material, as well as being able to submit assignments and to contact fellow students and, in some cases, lecturers. The system also allows students to perform administrative functions such as the changing of personal and contact details, re-registering and checking of academic and financial details. Lecturers who choose to do so, may make use of social networking functions such as blogging and wikis. Students are also provided with a myLife account (provided by Microsoft) and are required to use this e-mail address in terms of their myUnisa related activities. Access to the system is restricted to registered Unisa students. The Marc Room, in contrast, will be open to various types of users in addition to students and lecturers, including alumni, prospective students, and research professionals outside Unisa.

Web 2.0

The use of online social networking services in higher education is a relatively new development, and open and distance learning institutions specifically have adopted Web 2.0 technologies to support teaching and learning. The vision for the Marc Room includes this facility for users to connect and network; share knowledge; learn, reflect on and document their learning and development as social researchers; and collaborate on, manage and publish aspects of research projects. According to Anderson (2007), in the minds of most, Web 2.0 refers to the set of well-known technologies such as blogs, wikis, podcasts, RSS feeds, and social networking services. Anderson (2007) argues that what is now known as Web 2.0 is the consequence of ‘a more fully implemented web’ (p. 6) and distinguishes between
the web ‘as a set of technologies’ and Web 2.0 that is used as a term to describe the result of the implementation of these technologies (p. 6).

The distinguishing feature of Web 2.0 is that individuals can engage with others in terms of content through on-line social networks. Web 2.0 functionality would therefore be the basis on which the Marc Room would be developed in order to allow for the realisation of the vision of the system to create networking and collaboration opportunities for its various users. Just as there are many different Web 2.0 services and technologies available to create such an online space (such as blogs, wikis, social bookmarking, and social networks), there are also many different perspectives on how individuals would engage with an online system such as this and how interaction would be sustained. As such, it would be salient to investigate various ways in which online social networking technology (Web 2.0 technology) could facilitate these various activities and to discuss best practices and challenges in terms of the adoption of Web 2.0 to achieve the aims of this project. The possible ways in which such a system could be sustained would also be relevant for the sustainability of this project.

Minocha (2009) investigated the effective use of social software within higher and further education and included a number of case studies to demonstrate the use of social software at various educational institutions in the United Kingdom. The study describes these initiatives, the benefits of using social software as perceived by academic staff and students, challenges experienced, as well as recommendations for future initiatives. The case studies illustrated the various applications of social software to specific needs of academic staff and students and these applications are summarised in Table 1.

**Table 1: Use of online social networking services**

<table>
<thead>
<tr>
<th>Social bookmarking</th>
<th>Students store and share resources related to specific projects. Students and academic staff share collections of bookmarks related to specific topics and themes. Students contribute resources to shared list in preparation for tutorial classes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blog</td>
<td>Students reflect on progress with programme. Students publish own work on blog to show to possible employers. Used by academic staff to publish what’s new and events related to the programme. Students ask questions on blog to be commented on by academic staff and peers. Academic staff post resources, including links, that students can engage with (programme- or discipline specific and general).</td>
</tr>
</tbody>
</table>
### Wiki
Enable student collaboration on projects (project planning, assignments, project journals, project resources, project reports).
Student portfolio development with or without comments and feedback from peers.
Collaborative authoring of text for publishing or podcasting.

### Videoconference
Student team meetings for projects.
Presentation of research projects to fellow students and lecturers.

### Social networks
Host discussion forums on specific topics related to programme.
Events organisation.
Updating in terms of news and events.
Academic staff answering student questions.
Help students to connect before starting with a programme.

### Podcasting
Distribute news and updates about programmes.
Part of final project to demonstrate ability in a specific skill.

### Communities of practice
According to Kimble and Li (2006), the term ‘Communities of Practice (CoP)’ was coined by Lave and Wenger, who described the process of learning in these communities based on an apprenticeship model whereby new members enter the community and learn from established members, thus moving from the periphery to full participation in the community. The most important concept of CoP is that learning is seen as a social process and that participation in the community is negotiated based on authority level, that is, whether one is, for example a ‘newcomer’ or an ‘old-timer’. According to Kimble and Li (2006), the term has subsequently been applied to knowledge management as well as virtual working. Cartelli (2006) further mentions some important characteristics of CoP that include a mutually understood joint enterprise, shared resources developed by members over time, and recognition of members as a social entity. Bartholomew (2005) mentions a particularly salient aspect of CoP for this project, namely that CoPs are not necessarily bound to one institution and that collaboration beyond organisational boundaries is supported. According to him, many CoPs exist to support specific professional activities where members act as mentors for new members and create a shared knowledge repository over time. Smith and Trayner (2005) suggest that a CoP perspective emphasises the collaborative and social nature of learning. They describe the process of meeting on-line, meeting face-to-face and then continuing to meet online as recursive where one type of interaction would impact on the other. Distributed Communities of Practice (DCoP) is the term that is used specifically to describe online CoP where members are not necessarily in the same time zone or physical space. Information and communication technologies (ICTs) facilitate interaction among group members between face-to-face meetings.
HOW ARE WE DOING THIS?

The Department of Psychology received funding from the College of Human Sciences to implement the Marc Room project and most of this funding will be allocated to the contracting of external technical specialists to implement the design of this space as specified by the Marc Room project team. Discussions about this space have been taking place for some time now, but the current team was constituted after the 2010 MA(RC) students were requested to volunteer for at least one project. The team members include Department of Psychology lecturers (Martin Terre Blanche, Matshepo Matoane, Eduard Fourie, Thandeka Tshabalala, and Precious Mubiana), an intern research psychologist (Angelo Fynn) and three current MA(RC) students (Lara Faris, Sydney Butler, and Leza Deyzel). The team divided the tasks related to this project into three main areas, namely programming, process recording, and academic output. The main focus of the programming team is to gather input from potential users to develop specifications that are to be negotiated with the external technical specialist(s). The process recording team keeps track of all documentation related to the project in order to facilitate the development of a detailed account of how the process unfolds. The academic output team is responsible for all academic output (such as this article), conference presentations (such as a poster presented at the 2010 Psychological Society of South Africa conference), as well as the organisation of a symposium in 2011. A wiki was created for the team to collaborate and share information between real-time project meetings.

Design process and considerations

Currently there is no formal design methodology that guides the team, but the process can be defined as an iterative process of discussion, mock-ups and writing about the process as it unfolds. The most important aspect of the design process is to clearly identify the different types of users and what functionality they would want from such a space. The team has completed a preliminary analysis of potential user groups and the possible functions that they would require. At present the team relies on the expertise of its individual members to contribute to the development of the specifications that will be negotiated with the external contracter(s). Daniel, O’Brien, and Sarkar (2008) describe the community-centered development framework that can be used to guide the development of Distributed Communities of Practice. This framework advocates for the assessment of members’ needs and inclusion of potential community members in the design process (especially prototype design and testing). It is envisaged that the academic output team will conduct a needs analysis of the users by surveying the current MA(RC) students’ perceptions of the envisaged system and the functionality that they would need from such a system.

There are certain important design considerations for the team. These include taking cognisance of, and providing for, varying levels of the users’ skills. How
online social networking systems are used within the educational context and the sustainability of participation are important aspects to be considered. The first consideration is relatively easy to address in terms of face-to-face and online training sessions. The latter is a serious concern for online collaboration systems and careful consideration needs to be given to this aspect. In this respect, Wang (2008) recommends that instructors should carefully design online discussion forums and link discussions directly to programme outcomes; encourage smaller (4 to 6 people) group interactions; and take care in assigning project based collaborative assignments (especially if they are linked to assessment outcomes). Daniel et al. (2008) identified several user-centred design principles that contribute to the sustainability of distributed communities of practice. These include the level of trust between participants; privacy and security issues; encouragement of participant entrance and participation; the usability of the space; and awareness of the roles of the different participants. Kimble and Li (2006) also mention the importance of trust in establishing virtual communities. Some of these aspects, such as fostering trust, might be difficult to engineer from a system coordinator perspective, but it would be important for a systems’ designer and facilitator to consider these aspects when designing and facilitating interaction in such an online space. Smith and Trayner (2005) describe some implications of what worked in terms of their CoP that met virtually as well as face-to-face: enough time should be spent on social processes; choosing the relevant media for the task at hand; draw in outside experts and create sub-groups within the CoP; and encourage people to shift from their ‘comfort zones’ in terms of how they communicate and learn. Wenger (2002) also lists various aspects that could contribute to the success of CoP, including a core group that will stimulate participation, a skilful and reputable coordinator, and a focus on practice and the involvement of experts.

Once the specifications for the space have been finalised, a dummy version will be made and feedback will be obtained from various potential user groups. When the space is ‘live’ and a ‘beta’ period is over (during which all major bugs can be fixed), the space will be marketed to potential users and other stakeholders. Content has been developed in the form of workshops and lectures and presented by various Unisa lectures and external organisations for the MA(RC) programme. This content could be used for the Marc Room, and the system could be designed to allow for the addition of new material as changes are made to the programme and as user needs change.

**Current description of the Marc Room**

Based on the current design, there will be four participant types with different roles, with each participant taking on one or more roles. The four participant types are: student, lecturer, research professional, and general public. There will be public- and password protected areas and users will be given access based on
their potential needs. Users that have access to the password-protected areas will have a personalised home page with a personal profile and a portfolio of all their involvement in the MA(RC) programme. Depending on their status, users will be able to take on one or more of the following roles: system manager or system user; lecture/workshop facilitator or lecture/workshop attendee; placement provider or placement user; research project manager or research project team member; and mentor or mentee. The home page will feature information and application material for the MA(RC) programme for prospective students; information about research consultation; a login space; Frequently Asked Questions (FAQs); contact details, news, and information about lecture content, projects, placements, and internships.

Publicly accessible content will be created by selectively harvesting newsfeeds from the blogs and status update features provided on each personal home page of all participants, as well as from placement and project feeds. The personal home page will include standard features across different participant roles such as: personal profile; personal research portfolio; personal calendar; personal blog; and an internal messaging system. Other user tools will include a referencing system that users can use to manage their references (similar to Mendeley); communication tools such as Skype; as well as podcasts; photo galleries; and short messaging systems. This system will include a space for collaborations that will include the following collaborations between participant types and roles: supervision, mentoring, research projects, practical placements, internships, lectures and workshops, universities, and research professionals. The basis of the space would be a social network and the team envisages the extensive use of Open Source software to build the online space according to the specifications provided.

WHAT NEXT?

Specific project milestones have been identified, namely the publication of this article, the initial system specification and contracting with programmers in June 2010, a project launch at Unisa in July 2010, and a poster presentation about aspects of the project in August 2010 at the annual conference of the Psychological Society of South Africa (PsySSA). The academic team is to arrange a symposium related to aspects of developing and implementing an on-line learning and collaboration space system during 2011. The purpose of the symposium is to share practices with others in terms of the development of online learning and research collaboration systems and then to publish the proceedings of the symposium, as well as provide for the dissemination of research resulting from this initiative. A summary of the important milestones is provided in Table 2.
### Table 2: Project Milestones and proposed dates

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Milestone</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>June</td>
<td>Initial system specifics, as the Design Brief for the contracted programmers</td>
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<tr>
<td></td>
<td></td>
<td><em>New Voices</em> article describing the process of learning through collaboration and social technology and the development of the project</td>
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<tr>
<td></td>
<td>July</td>
<td>Marc Room project launch at Unisa</td>
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<td></td>
<td>August</td>
<td>PsySSA Conference poster presentation</td>
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<tr>
<td></td>
<td>November</td>
<td>Finalising the website, in order to pilot next year</td>
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<tr>
<td>2011</td>
<td>February</td>
<td>Implement the Beta (pilot) version of the website</td>
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<td></td>
<td>June</td>
<td>Reflective Workshop to reflect on the development and implementation process</td>
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<td></td>
<td>November</td>
<td>Launch the website</td>
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<td></td>
<td>Conference/Symposium proceedings, with a guest speaker who is well known in the online learning field</td>
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<tr>
<td></td>
<td>December</td>
<td>Write and publish a book, related to the process of developing this website</td>
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### CONCLUSION

It is hoped that the Marc Room space will provide a stimulating on-line learning and collaboration space and that users will benefit personally, academically, and professionally from their participation. As described in this article, there are challenges to sustaining on-line participation, but these challenges can be managed with careful input from the programme coordinators and lecturers. The space will also relate opportunities for future psychological research consultants to participate in discussions about psychological research consultation, or at least to get an idea of what the MA(RC) programme is about and to start thinking about how they would want to relate to the psychological research consultation community. This space could also be instrumental in creating discussions around the identity of psychological research consultants and their contribution to the discipline of psychology, as well as its practical applications in diverse contexts.
BIOGRAPHICAL NOTES

**Leza Deyzel** is currently registered for the first year of the MSc in Psychology with specialisation in Research Consultation at Unisa. Her research interests are related to the application of technology in career counselling and how individuals make meaning of their life, study and work experiences through the use of reflective portfolios. She is the e-counsellor at the Unisa Directorate for Counselling, Career and Academic Development.

**Lara Faris** is a Research Consultation Masters student at Unisa, where she is reading attitudes and environmental impact behaviour for sustainable environmental change in South Africa, for her dissertation. Other research interests include knowledge management, sustainable development, social networking, and personality archetypes.

REFERENCES


