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The Carrick Exchange: Not Just Another Repository

Geraldine E. Lefoe
University of Wollongong, glefoe@uow.edu.au

Meg O'Reilly
Southern Cross University

D. Parrish
University of Wollongong

S. Bennett
University of Wollongong

M. Keppell
Hong Kong Institute of Education, China

See next page for additional authors

Publication Details

This paper was originally published as: Lefoe, G, O'Reilly, M, Parrish, D, Bennett, S, Keppell, M, & Gunn, C, The Carrick Exchange: Not Just Another Repository, The World Conference on Educational Multimedia, Hypermedia and Telecommunications (ED-MEDIA 2007), 25-29 June 2007, Vancouver, Canada, 108-113.

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Abstract
In 2004, the Carrick Institute for Learning and Teaching in Higher Education was established by the Australian government to "promote and advance learning and teaching in Australian higher education." (Carrick Institute, 2006). One aspect of the role of this institution is to establish the Carrick Exchange, "a new online service that will provide learning and teaching resources and functions to support communication and collaboration across the national and international higher education sector" (Carrick Institute, 2007a). This paper provides an overview of the purpose of the Carrick Exchange and will focus on the research contribution of ascilite, a professional association in Australia, in the first and second stages of the project development.

Keywords
repository, Carrick Exchange, community of practice, ascilite

Disciplines
Arts and Humanities | Social and Behavioral Sciences

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Authors
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This conference paper is available at Research Online: http://ro.uow.edu.au/asdpapers/55

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Geraldine Lefoe
University of Wollongong

Meg O'Reilly
Southern Cross University

Dominique Parrish, Sue Bennett
University of Wollongong

Mike Keppell
Hong Kong Institute of Education

Cathy Gunn
University of Auckland

Abstract: In 2004, the Carrick Institute for Learning and Teaching in Higher Education was established by the Australian government to "promote and advance learning and teaching in Australian higher education." (Carrick Institute, 2006). One aspect of the role of this institution is to establish the Carrick Exchange, "a new online service that will provide learning and teaching resources and functions to support communication and collaboration across the national and international higher education sector" (Carrick Institute, 2007a). This paper provides an overview of the purpose of the Carrick Exchange and will focus on the research contribution of *ascilite*, a professional association in Australia, in the first and second stages of the project development.

Introduction

The Carrick Institute for Learning and Teaching in Higher Education is a government initiative in Australia to "promote and advance learning and teaching" specifically in the higher education sector. The establishment of this institute in 2004, after two years of consultation, saw the allocation of the largest amount of government funding to improve learning and teaching in the history of the sector (Parker, 2004). One aspect of the role of this institution is to "develop effective mechanisms for the identification, dissemination and embedding of good individual practice and institutional practice into the higher education sector and to support networking and the formation of effective communities of practice" (Carrick Institute, 2007b). The Carrick Exchange will provide the primary means for this to occur by providing a combination of networking opportunities and resource access to engage the higher education sector in sharing aspects of teaching and learning. It targets those who "teach, manage and lead learning and teaching in higher education" (Carrick Institute, 2007b). In 2006, the contributions of three groups, *ascilite*, education.au, and ACODE have informed the development and design process. This paper provides an overview of the context for the development of the Carrick Exchange with a particular focus on the role played by the Australasian Society for Computers in Learning in Tertiary Education (*ascilite*), one of the leading professional societies in Australasia. The paper gives an overview of the research being conducted by *ascilite* and will provide a work in progress report on the development of the Carrick Exchange.

Background

A multitude of successful international repositories exist for the distribution of teaching and learning resources, and indeed many are involved in the development of partnerships across various institutions and countries for knowledge

and information sharing. However there are several key projects which may impact on the development of the Carrick Exchange through the development of collaborative processes and possible exchanges of research information.

In North America a key player is **MERLOT** (http://www.merlot.org/). MERLOT arose from "a growing recognition of the need for a large, shared and sustainable discipline-specific repository of quality instructional materials that faculty could use as a resource in the development of online courses and for the enhancement of traditional courses" (http://taste.merlot.org/). Growing from a user base of approximately 22000 members in 2005 to over 44000 members in 2007, MERLOT plays a significant role in the area as the group continues to expand research in the area (see for example MERLOT ELIXR Project and the Scholarship in the Online Teaching Commons) (Shea, McCall, & Ozdogru, 2006).

Other significant international players include the **Cooperative Learning Object Exchange** in Canada (**http://cloe.on.ca/**) which demonstrates clearly the importance of the community building approach through the sharing of teaching and learning resources primarily across Ontario in Canada (Harrigan, Carey, & Ld Team, 2005). In the UK the JISC funded Digital Repositories Programme (http://www.jisc.ac.uk/whatwedo/programmes/programme_digital_repositories.aspx) will also be examined to inform the development of the Carrick Exchange including JORUM, (http://www.jorum.ac.uk) to share teaching and learning resources, and particularly CD-LOR research which is examining the barriers and enablers to the successful uptake of such repositories with a strong community development focus (http://www.ic-learning.dundee.ac.uk/projects/CD-LOR/index_files/project.htm).

In Australia the project will build on other successful developments such as Edna Online (http://edna.edu.au) which is focused on sharing resources in all educational sectors; the LAMS Project (http://www.lamsinternational.com/about/); the COLIS Project (http://www.colis.mq.edu.au/COLIS_CD/index.html) and the Flexible Learning Project on the use of social software in the Vocational Education sector (http://socialsoftware-research.wikispaces.com/). All of these projects have had some form of government funding during their development and the Carrick Exchange project acknowledges the need to build on knowledge and understandings from previous projects rather than starting again, a key recommendation from dissemination strategy research conducted when the Institute was being established (McKenzie, Alexander, Harper, & Anderson, 2005; Southwell, Gannaway, Orrell, Chalmers, & Abraham, 2005).

The project: Stage 1

Stage 1 of the project was conducted over a short time frame in 2006 and each of the project partners contributed to a ThinkTank gathering of approximately 50 key stakeholders in Australasia. The *ascilite* component included a mapping of the landscape through a literature review and an online survey to inform the discussion about the direction and development of the Carrick Exchange (Parrish, Bennett, Keppell, & O'Reilly, 2006). The survey participants sampled were members of three professional associations in Australia, ascilite, ODLAA (http://www.odlaa.org) and HERDSA (http://herdsa.org.au). There were 138 respondents, with 86 completing all questions in the survey.
In one of the key questions respondents indicated that the most significant factors in selecting digital repositories (See Figure 1), combining important and vitally important results, are that the:

- Learning objects are easily accessed, downloaded and manipulated (98%),
- Search mechanism is consistent with Internet searching protocols (86%),
- Repository engages sound quality control practices prior to being accepted (85%), and
- repository provides detailed information (metadata) about the learning object (80%).

Although the focus of the survey was on the development of a repository, the ThinkTank Consultation with key stakeholders in the sector identified a need to go beyond the idea of a repository and build on the possibilities of Web2.0 technologies for communication and collaboration, identified by the group as essential to engaging the higher education sector. As a result the project will examine ways that Web 2.0 technologies can engage the development of a learning community for higher education whilst providing a central access to much of the earlier

and current resources and research related to teaching and learning in the sector, especially that funded by earlier government initiatives. The focus for the Carrick Exchange then will be on providing a collaborative space for the higher education sector as well as an area for resource sharing, leading into the second stage of the *ascilite* component of the project (Carrick Institute, 2007a).

3. Rate the following in terms of importance to you when selecting a learning repository:						
	of no importance	**not important**	**not sure if it is important**	**important**	**vitally important**	**Response Average**
a. The repository is suitable for the Australian context.	3% (3)	8% (7)	17% (15)	**48% (41)**	23% (20)	**3.79**
b. The repository stores the actual learning object rather than directing the user to a secondary website where the object is held.	5% (4)	22% (19)	13% (11)	**36% (31)**	24% (21)	**3.53**
c. The repository learning objects are easily accessed, downloaded and manipulated.	0% (0)	0% (0)	1% (1)	31% (27)	**67% (58)**	**4.66**
d. The repository search mechanism is consistent with Internet searching protocols.	0% (0)	2% (2)	12% (10)	**44% (38)**	42% (36)	**4.26**
e. The repository provides detailed information (metadata) about the learning object.	0% (0)	7% (6)	13% (11)	**43% (37)**	37% (32)	**4.10**
f. The repository engages sound quality control practices that are applied to all learning objects prior to being accepted.	1% (1)	5% (4)	9% (8)	**45% (39)**	40% (34)	**4.17**
g. The repository provides an evaluation (eg peer-review, user review) of the learning objects.	1% (1)	6% (5)	17% (15)	**57% (49)**	19% (16)	**3.86**
					Total Respondents	**86**
					(skipped this question)	**48**

Figure 1: Survey statement 3: Important factors for selecting a repository

The Project: Stage 2

There are three key drivers for the next stage of the project: consolidation of knowledge and current practice, engagement of the higher education sector and the development of communities of practice. The purpose of these drivers is to channel information into the development of a functional, searchable, engaging, useful and respected resource to be known as the Carrick Exchange.

Consolidation

The research will build upon the foundation information gained in preliminary studies that were presented to the Think Tank of key stakeholders in 2006 (Carrick Institute, 2007a, Parrish, et al, 2006). It will further inform the technical development of the Carrick Exchange through reporting of critical information of a broad range of user needs and contexts of use.

Engagement

With repositories and online services emerging world-wide, the general lack of user engagement has been identified as an ongoing cause for investigation and attention (Littlejohn, 2003; Gunn, Woodgate, & O'Grady, 2005). This project is intended to support the development of, and engagement with, online services and digital repositories through an examination of the professional groups that have knowledge and expertise in developing, utilising, adopting, adapting and disseminating best practice teaching and learning resources. In addition, the project will consider questions of engagement with the informal repositories of knowledge via Web2.0 technologies and explore the issues of capturing information and networks of users in this context.

Developing communities of practice

Existing online services e.g. MERLOT, CDLOR (UK), the Minister of Communication's Digital Strategy Advisory Group (NZ), Australian Partnership for Sustainable Repositories (APSR), and Australian Research Repositories Online to the World (ARROW), report a range of benefits and constraints with regards to how communities of practice emerge and may be sustained in the context of these services. The project team will interview key members of a number of similar services both nationally and internationally and liaise with key organisations within Australia and overseas to derive an understanding from the experience of others and to inform recommendations for the development of the Carrick Exchange.

Through an iterative process of information collection and analysis, the *ascilite* component of the project is working towards three key outcomes:

- Engagement: To recommend options for establishing and maintaining engagement by the higher education community with Carrick Exchange;
- Resource contribution and identification: To generate guiding principles and recommendations in response to emerging issues in resource contribution, identification and uptake for the Carrick Exchange through comparison and alignment with international equivalents; and
- Peer review and commentary: To derive protocols and mechanisms for Peer Review and Commentary on contributions of the higher education sector to the Carrick Exchange.

Research Methodology

The *ascilite* stage 2 project will adopt a design based research model (represented in Figure 2) to investigate and analyse the following research questions:

1. What Peer Review and commentary protocols and mechanisms can be derived from the higher education community?
2. What resource contribution and identification methods will engage and encourage users to contribute and collaborate within the Carrick Exchange?
3. What are the successful methods for establishing and maintaining engagement (i.e. use, reuse and recognition) by the higher education community with Carrick Exchange?

Design based research is well suited to this project as it is a systematic approach that draws upon and expands existing theory while also contributing to practice. Also called development research, this approach has three key characteristics:

1. It involves collaboration between researchers and practitioners to characterise problems in terms of previous research and practice; identify possible solutions; and test those solutions within real life contexts and across disciplines.
2. It is an iterative process in which evaluation feeds back into the design process, and issues with their inherent complexities that emerge during implementation can be addressed.

3. The outcomes of design research lead to the generation of new knowledge in the form of design principles that can be explicitly linked to underpinning theory.

(Design-Based Research Collective, 2003; van den Akker, 1999; O'Reilly, Bennett & Keppell, 2005).

Iterative cycles of data collection, analysis and reporting will be a key component throughout the process in collaboration with the other partners.

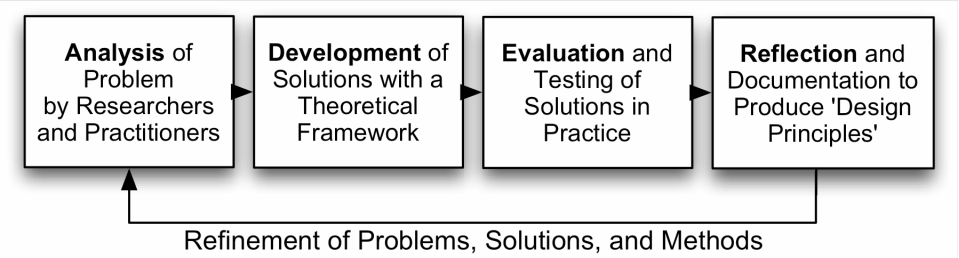

Figure 2: The design research cycle (Adapted from Reeves, 2000)

The research will entail a coordinated series of activities to inform the development of recommendations by distilling the available knowledge and expertise existing in:

- Literature,
- Current practice,
- Exemplary community development to foster engagement with online services, and
- Key practitioners and networks in both National and International settings.

Following ethics approval, data collection commenced with interviews of 45 key members of relevant professional associations and disciplinary groups. Initial findings from these interviews will be validated with findings from national and international research through a review of the literature. The emerging themes will be then validated through a series of focus groups later in 2007. Preliminary reporting of these findings will be a key component of the presentation.

Future Directions

As the development of the Carrick Exchange moves closer a number of sub-groups have been established to work towards the implementation of the next stage. There are now a number of sub-groups contributing to the development of the Exchange (Carrick Institute, 2007a):

- Develop the architectural and functional capability;
- Research, evaluate and recommend existing models of engagement, uptake and quality assurance **(*ascilite*)**;
- Identify content;
- Develop and implement strategies for sector communication;
- Develop policies and manage risk;
- Research, evaluate and recommend rewards and recognition for users of the Carrick Exchange;
- Design and implement a system of internal, formative feedback (Carrick Institute, 2007a).

In addition, Pilot groups have been invited to participate in the first iteration including a discipline-based development group, a project team, a learning and teaching development program sponsored by a group of universities and a Carrick Fellow (Carrick Institute, 2007a). Further consultation with the higher education community will continue through state-based road shows and workshops and interested people have been invited to nominate as Carrick Champions to encourage feedback throughout the process.

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Acknowledgement

Support for this research has been provided by the Carrick Institute for Learning and Teaching in Higher Education, an initiative of the Australian Government Department of Education, Science and Training. The views expressed in this paper do not necessarily reflect the views of The Carrick Institute for Learning and Teaching in Higher Education. We also wish to acknowledge the additional support provided by the *ascilite* executive team, and the Carrick Exchange Project Team including Project Leader Prof Jan Orrell, Project Coordinator, Elizabeth Greener, and Senior Fellow, Rob Phillips.