



# **Factors influencing the adoption and use of web-supported teaching by academic staff at the University of Adelaide**

## **Executive Summary**

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# Executive summary

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This project was established in June 2002 to investigate and evaluate factors in the adoption and use of web-supported teaching among academic staff at the University of Adelaide. It has been supported by a Learning and Teaching Development Grant (LTDG). Initially the vision was to identify factors in the non-adoption of MyUni, the University's centrally supported learning management and materials development system. MyUni was piloted in Semester 1 2001, further developed in Semester 2 2001 and adopted as a whole-of-University system in Semester 1 2002.

The evaluation study was funded based upon the premise that the adoption of MyUni was beneficial to students, staff, administration, management and the University as a whole in the strategic plan for the University.

The slow uptake of MyUni and some observed resistance to migrating existing web-based courses to MyUni was the intended area of study. However, the study developed substantially to include not only factors related to non-adoption of MyUni, but also the beliefs and values about web-supported teaching and learning among three groups of University of Adelaide teaching staff:

- those who had never used web-supported teaching
- those who had adopted MyUni
- those who had adopted other web-based learning systems or platforms

The study also encompassed the reflections of these groups on what would be required to develop their use of MyUni and, for users of other systems, to migrate their courses to MyUni. For those who had used web-supported teaching their observations in relation to the impact of web-supported teaching on their students and on their own teaching were canvassed.

The methods used were semi-structured interviews and a survey of academic and administrative staff at the University of Adelaide.

The findings indicated that there were more staff who valued computers in higher education than were using them, and more teaching staff who valued web-based learning in higher education than were adopting it (table 11.2). The likely response to such a finding would be to develop strategies that minimise the 'gaps' for these staff. Our evaluation process revealed that the reasons for these gaps were related largely to:

- time and workload
- concerns about the value of web-based learning for improving students' learning outcomes
- issues around the selection and stability of the University infrastructure and web-based learning management system, and integration of the different systems
- prioritising of teaching in the range of tasks against which an academic is monitored

Our evaluation revealed that the respondents' views of priorities in addressing these concerns related to further and more focused / accessible support for adopting and extending the use of web-supported teaching, and skills development for teaching staff. The support identified included:

- staff development and training
- IT and administrative support
- management support at all levels (including through policy and funding)

We acknowledge that the University already provides much support and training for web-supported teaching and MyUni through ITS and the LTDU.

The scope and development of the policies and professional development to address the particular needs of departments and faculties is beyond the scope of this stage of the study. The intended next stage of the study involves conducting focus groups to take the findings and recommendations of this report to departments and faculties, to validate the findings at a local level, and to discuss locally appropriate policies and strategies for staff development and other support. This stage 2 can be modestly undertaken within the TDG budget.

Our evaluation also revealed that there is continued use of web-supported teaching systems that exist parallel to the University's centrally supported MyUni learning management system. The reasons for this continuation often related to a different vision for web-supported teaching in a department's priorities. These different visions related either to a perceived 'lack of fit' between MyUni as an LMS and a department's needs, or to resistance to the University directive (achieved largely without consultation) to adopt MyUni after a department had introduced an alternative system.

The next section of the executive summary summarises the main findings of the interviews and sections of the survey. The final section summarises the recommendations.

## Main findings

The main findings are summarised under headings that relate to the interviews, and the sections of the survey, which are as follows:

- Section A: About the respondents (all respondents)
- Section B: For respondents who had never used web-based teaching tools
- Section C: For respondents who had used web-based teaching tools
- Section D: Learning outcomes and values (for respondents who had used web-based teaching tools)
- Section E: Teaching outcomes and values (for respondents who had used web-based teaching tools)
- Section F: Future intentions about web teaching tools at the University of Adelaide (all respondents)

## Interviews

Interviewees who were using MyUni or a parallel system both had well-developed arguments and rationales for their persistence with their mode of operation.

For interviewees who were using a parallel system their rationales were based on beliefs about teaching and learning, technology or the stability and features of their own platform compared with MyUni. They were concerned that MyUni could not meet their needs or could not be integrated with their system.

MyUni adopters countered many of the arguments of the users of other systems as all had previously been operating within similar parallel or simple web-page system.

They summarised their beliefs with the suggestion that they were past proselytising the benefits of MyUni – that a centrally supported, stable and integrated system, despite myriad irritations, was preferable to multiple school or department-based systems:

Why should students have to use a parallel system when MyUni is working, and working well?

However, their advice was that the question of uptake should be resolved at the departmental level, and not University mandated.

## **The survey**

### ***Section A: About the respondents***

Most survey respondents held full-time tenured or tenure-track positions, and most taught undergraduate courses. Compared with the University as a whole, the survey sample had an over-representation of tenured/tenure track staff, of less experienced (in teaching) staff, and of females. It is important to keep in mind that the sample was not representative of the whole University academic staff on these measures.

The use by survey respondents of web teaching tools was not matched by the value they placed on them, or by the knowledge they considered they had about MyUni, revealing a gap that may provide an opportunity for effective support activities.

### ***Section B: For respondents who had never used web-based teaching tools***

The survey found that respondents who had not used web-based teaching tools had a general desire to do so, and disclosed some of the barriers to their adoption of these tools. The survey responses also revealed some barriers to further use among respondents who had used web-based teaching tools. Prominent issues included:

- concerns about the quality of teaching and learning using web-based tools
- concerns about lack of skills and knowledge
- the need for staff development and training
- pressures of work inhibiting use of web tools
- the need for support from managers

The existence of these concerns among respondents does not imply that the means for their resolution does not exist within the University. It does suggest that respondents are not accessing available support for web-based teaching to an extent that meets their needs, and therefore that access to support could be improved. There may also be a need to modify, extend and focus the support provided.

### ***Section C: For respondents who had used web-based teaching tools***

The respondents who had used web teaching tools all taught undergraduate courses, and by and large had used MyUni, but other tools were also important. This group appeared to be early adopters of web-supported teaching, but their use tended to be mainly for communication and content delivery. There appeared to be lower use of the more interactive, advanced uses of these tools. There is an opportunity here for the provision of more accessible and more flexible support to foster more advanced uses of web-supported teaching.

In their comments respondents showed an appreciation of the time / workload and efficiency benefits that could be achieved for themselves using web teaching tools. Their comments also indicated that many respondents were aware of student benefits, although in other parts of the questionnaire they also expressed concerns about learning outcomes and other student benefits. An interesting subgroup felt they had used web teaching through reasons outside their own control.

### ***Section D: Learning outcomes and values***

While most respondents who had used web-based teaching considered that this mode of learning and teaching had benefited their students, a considerable minority did not, or were uncertain, indicating a possible need for respondents to use more or more focused student evaluation in their courses.

Respondents considered the benefit to students to be evident mainly in the development of generic skills, particularly IT skills and independent learning. They were less certain (although they still gauged a positive impact) about the development of lifelong learning skills and whether web-based teaching had had an effect on links with employment. In terms of equity and access issues for students, respondents were most concerned about University infrastructure and access to and cost of printing. Thus, while the respondents in general felt their students had benefited from web-supported teaching and learning, at the same time they were aware of the issues students are likely to face, including the limitations of and access to adequate infrastructure to support positive outcomes for students.

This section raises the need to improve infrastructure and student access to it, and an opportunity to promote the embedding of the University's graduate attributes program into web-supported teaching.

### ***Section E: Teaching outcomes and values***

Respondents who had used web-based teaching tools considered overall that there had been a benefit for their teaching, and there was an overall increase in IT skills, pedagogical skills and teaching confidence. Respondents were also positive overall about institutional support provided in a number of areas. Many also recognised the benefits of experience, and some distinguished time and workload efficiencies and benefits for students, especially in some courses and for some types of students. At the same time respondents reported a greater time and workload required for several aspects of web-supported teaching and the predominant concerns expressed in the open comments were about time and workload.

The findings in this section also supported the previous finding (in section C) that many respondents had not used online assessment or assessment management, and the issue of copyright was raised.

The need is indicated for support to relieve teaching staff of the extra time and work involved in development and provision of high-quality web-supported teaching. There is also an opportunity to promote the findings concerning respondents' views about benefits.

### ***Section F: Future intentions about web-based tools***

Most respondents intended to use MyUni in the future for web-supported teaching, whether or not they had used it in the past. There was also a significant proportion who intended to use other systems, in addition to or instead of MyUni. Commonly, respondents were keen to increase their use of MyUni, to more of the basic features or to more advanced, interactive uses, particularly in relation to assessment and assessment management. A need is indicated here for support for users of parallel systems, and for collaborative investigation of real or perceived barriers to integration with or adoption of MyUni by this group.

The perceived barriers to respondents' adopting MyUni to a greater extent included concerns about the quality of the learning and teaching possible using web-supported

teaching, time and workload pressures, copyright concerns, and various aspects and levels of support.

The next section of the executive summary distils the recommendations that arose from the findings of the survey and interviews.

## Recommendations

The preliminary recommendations that arose from the findings are reported in detail in chapter 4. The recommendations relate to a variety of types and levels of needed support that were suggested by the findings. In this section the recommendations are distilled from the preliminary recommendations and organised according to types of support that were perceived to be needed.

The numbers square brackets at the end of each recommendation indicate the preliminary recommendation/s from which they arose. The original recommendations are numbered according to the survey questions which gave rise to them; for example, recommendation 45.1 is the first recommendation to arise from question 45 of the questionnaire.

### Staff development and training

Recommendations about staff development and training fell into four main sections:

- Subgroups of teaching staff
- Levels and types of use of web-supported teaching
- Access, variety, flexibility
- Evaluation

#### ***Subgroups of teaching staff***

- 1 Provide more or higher priority staff development and training in using web-supported teaching for subgroups of teaching staff within the University, and for different delivery modes and student groups [8.1, 44.2], including the following:
  - 1.1 staff at different levels of adoption of web-supported teaching and MyUni, from non-use to more advanced levels of use [IR 4, 13.1, 15.2, 20.1, 65.2]
  - 1.2 staff on regional campuses – these staff may find it difficult to travel to North Terrace Campus for training and staff development [interview recommendation (IR) 1]
  - 1.3 different faculties, departments and disciplines – while there is a common core of good practice in relation to web-supported teaching, these groups have different needs in relation to their disciplines, programs and types of courses [IR 4, 44.2]
  - 1.4 teachers of undergraduate students – direct staff development and support in the first instance towards the needs of undergraduate teaching – as those teachers also have responsibility for postgraduate teaching [2.1, 22.1]
  - 1.5 teachers of postgraduate students – explore means of increasing the use of web-supported postgraduate teaching where appropriate to enrolment profiles and numbers, and to programs. [22.2]
  - 1.6 new teaching staff – Incorporate familiarisation with the use and benefits of web-supported teaching into the Teaching at University course offered by the LTDU. [8.2]
  - 1.7 casual and contract staff [5.1]

## **Levels and types of use of web-supported teaching**

- 2 The findings suggested the need for staff development and training for the following types and levels of use of web-supported teaching:
  - 2.1 more advanced features of MyUni – interactive features (discussion groups, multimedia etc) to facilitate student learning; features of MyUni for course administration and management to gain efficiencies; assessment and assessment management [21.1, 21.2, 45.4, 71.2, 71.3]
  - 2.2 staff development /training and support to minimise the gaps between the value placed on electronic resources and the extent of their use [11.1]
  - 2.3 the pedagogical aspects of web-supported teaching and MyUni [21.3, 71.1]
  - 2.4 embedding web-supported teaching into undergraduate courses and the curriculum [22.1]

## **Access, variety, flexibility**

The findings suggest that, for a variety of reasons, many teaching staff do not have access to adequate staff development and training:

- 3 Provide a greater variety of opportunities for staff development and training, and provide a greater variety of support; for example, short, specific workshops, refresher courses before the beginning of semester, sharing of experiences of current staff who have used web-supported teaching, provision of templates [9.1, 71.1, 72.1]

## **Evaluation**

- 4 Promote and develop more widely among teaching staff the effective use of evaluation (including SELTS) and seeking feedback from students about their learning experiences, particularly in relation to web-supported teaching. [25.1, 43.1]

## **Tools and infrastructure**

A variety of issues arose in the findings in relation to tools and infrastructure. Implicit in these issues was the need to continue to improve tools and infrastructure, and access to them:

- 5 Integration – support the integration of other web teaching tools with MyUni. Consult with staff who use other systems that have already been developed: a more consultative approach could support and supplement both the functionality and the extent of use of MyUni. [IR 2, 17.2, 69.1]
- 6 Access for particular groups – acknowledge and support the needs of different faculties, departments and schools in relation to hardware, software and infrastructure, and student needs [IR 4]
- 7 Student printing – Ensure that staff and students understand the student printing quota system, and provide ways of facilitating its use. Assess the adequacy and effectiveness of the student printing quota system. [41.1]
- 8 Better tools – Develop more online resources (such as Java-supported activities) within the University to support interactive exercises, and provide support and training in their use. Enhance the capacity of MyUni to provide interactive and multimedia materials. [71.4, 71.5]

## **Outcomes, quality, benefits**

- 9 Awareness – Seek to increase understanding of the benefits for students and staff, and the processes, of using MyUni and the internet to support teaching, especially among those who are undecided about their future use of web-supported teaching, those who have not used web-supported teaching, users of parallel systems. Such a program might highlight the experiences of teaching staff more experienced in web-supported teaching. [7.1, 13.2, 14.1, 15.3, 17.1, 25.2, 43.2, 44.1, 45.3]
- 10 Graduate attributes – Focus some staff development on how web-supported learning and teaching can support the University’s graduate attributes program. [26.2]
- 11 Research – Support further research into the ways in which web-supported teaching and learning can benefit particular groups of students, modes of delivery, programs and courses. This would enable focusing of scarce support and staff development resources into areas where the returns were likely to be worthwhile. [44.3]
- 12 Time efficiency – provide activities and resources (for example, easy-access tips) about effective use of online teaching tools, including communication tools, to gain time and workload efficiencies. [64.2]

## **Other support**

The findings indicated that many teaching staff do not have adequate access to adequate some other types of support, even if it is available.

## ***Use of current resources***

- 13 Promote the University’s current support for internet use in teaching, including resources and support provided not only through staff development but also through the University website, the Barr Smith Library, search resources, off-campus library sites and other existing resources. [7.2]
- 14 Promote the use of MyUni through staff development and in other ways, including University information resources such as Inside Adelaide, and by showcasing effective and innovative uses of MyUni to support learning and teaching. [12.1]
- 15 Investigate ways in which teaching staff can access more fully the support provided by the University for the development of web-supported teaching, especially in relation to staff development/training. [16.1, 65.1]

## ***Policy and strategy***

- 16 Integrate and make readily visible and accessible to staff, current and future support for web-supported teaching and learning through policies and strategies for its adoption and increased use. [7.3]
- 17 Establish a structured pathway for teaching staff to develop the use of web-supported teaching and embedding it into the curriculum and regular teaching practices. Consider accreditation for such structured staff development. [8.3]
- 18 Investigate more closely the types and extent of support needed by teaching staff from different disciplines, with different levels of experience of web-supported teaching and at different stages of developing web-based materials for particular courses or programs. Consider the most cost-effective way of providing such support. [73.2, 73.3]
- 19 Develop strategies to facilitate staff having the time to learn new skills, to incorporate web teaching into their normal teaching cycle, and which acknowledge the greater time



and work involved in developing, delivering and managing high-quality web-supported teaching and learning. Such strategies might include time release, encouragement from local managers, instructional design guidance and the provision of support staff to produce content. [15.1, 45.1]

### ***Faculty and department managers***

- 20 Raise awareness of the potential benefits of web-supported teaching, and the time and workload costs, among school, department and faculty managers. Increase (or increase the visibility of) management support at those levels for web-supported teaching. Provide structured University-wide support (policy, strategies, advice about effectiveness and rewards) for managers to facilitate web-supported teaching in their areas. [16.2, 45.2, 72.3]

### ***Information Technology Services***

- 21 Encourage ITS to work actively to dispel the notion that it is autocratic and non-consultative, and to change the notion in some areas of the University that ITS 'delivers' without adequate consultation of needs, requirements and sectional differences.

### ***Copyright***

- 22 Give high profile to further information sessions about the new copyright laws as they relate to use of online resources in teaching, promote understanding and use of the University's Digital Resources Management Centre, and further develop support in relation to use of digital resources. [64.1]