THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Teaching Large Classes Project 2001

Final Report

March, 2003

**Teaching and Educational
Development Institute**

Executive Summary

The aim of this project was to achieve practical outcomes that lead to the improvement of the quality of teaching and learning in large classes across the Australian university sector. To achieve this, the project team undertook to:

- identify emerging issues relating to the teaching of large classes through conducting a review of the literature relating to teaching large classes, particularly those which provide practical teaching strategies and case studies of good practice; and review ways in which universities, both in Australia and internationally, have responded to this issue;
- develop and implement a strategic approach to staff development and the enhancement of the teaching quality in large classes throughout the university sector;

Two concurrent phases were implemented.

Review Phase

A multi-method and multi-level approach was used to obtain a comprehensive body of information on current practices adopted in the teaching of large classes, the issues that emerge in the teaching of such classes, the strategies that are used to deal with the demands of teaching large classes, and the institutional responses to the challenges involved in the teaching of large classes.

Dissemination Phase

The model of dissemination for this project was based around the concept of highly accomplished teachers (HATs) and academic developers (ADUs) based in each university. Two to three teachers from each of the 24 participating Australian universities, in a number of disciplines who had responsibility for large classes, and one member from the university's academic development unit were invited to participate in the project. The participants from each university, participated in surveys, attended 2 national workshops and implemented a project to enhance teaching in large classes in their own university or region.

There are two main points to come out of the project:

- there are qualitative differences in the way good teaching practice is enacted in large classes, but the basic principles of good teaching remain the same, and
- (b) the importance of management, particularly resource allocation cannot be underestimated if the students in large classes are to be engaged in a quality learning experience.

The project team believes that the model of dissemination developed for carrying out both the review and dissemination aspects of the project was innovative and demonstrably effective. It involved a significant number of Australian universities in the project from the outset, with each university implementing a development or improvement strategy. From the perspective of the overall operation and management of the project, having a central project team based at one location, meant that organisational and administrative issues were effectively project managed in terms of process, resource development, budget and time management. It is a model we believe has produced significant outcomes and recommend it to the AUTC committee for possible application in future projects.

The project team has not taken a value position on whether teaching and learning should take place in large classes. We have neither advocated nor argued against the use of large classes. Our purpose was to identify and disseminate what we understand to be good teaching practices which, if implemented, enhance the students' learning experiences in large classes.

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Teaching large classes project

Australian academics are increasingly faced with challenges involved in teaching large classes. Large classes are a common experience for many students, particularly those in Science, Business and Arts disciplines, as well as in first-year courses across the disciplines. Moreover, traditional lectures remain a widely used teaching approach throughout the university sector.

In many instances, attempts to deal with these challenges have failed to move beyond the techniques traditionally used in classes with small to moderate enrolments, or have been implemented at the individual, rather than at the institutional level. Therefore, for various reasons, it seems that research findings on the topic and understandings of what constitutes good practice in large class teaching are not being taken up by many of the academics who have responsibility for teaching large classes.

There is a significant body of literature from both Australia and overseas which deals with teaching large classes, and includes related issues such as: the quality of student learning; dealing with student diversity; limitations in resources; formative assessment in large classes; and the connection between discussion groups/tutorials and large classes.

The project team has not taken a value position on whether teaching and learning should take place in large classes. We have neither advocated nor argued against the use of large classes. Our purpose was to identify and disseminate what we understand to be good teaching practices, which, if implemented, will enhance the students' learning experiences in large classes.

Project Team Membership

The team consisted of University of Queensland staff from several disciplines and the academic development unit are as follows:

Denise Chalmers (Project leader) - The Teaching and Educational Development Institute
Ron Weber – School of Commerce
Doune MacDonald - School of Human Movement Studies
Debra Herbert - The Teaching and Educational Development Institute
Nan Bahr - School of Education
Deborah Terry - School of Psychology
Ottmar Lipp - School of Psychology
John McLean - School of Psychology
Rachel Hannam (Project Coordinator)

Much of the success of the project can be attributed to Rachel Hannam who in her role as Project Co-ordinator kept the project and the team on track. Her contribution was significant and impressive.

A.1   Overview of Project

The teaching large classes project involved two main phases, review and dissemination.

Review Phase

A multi-method and multi-level approach was used to obtain a comprehensive body of information on current practices adopted in the teaching of large classes, the issues that emerge in the teaching of such classes, the strategies that are used to deal with the demands of teaching large classes, and the institutional responses to the challenges involved in the teaching of large classes.

(1) The literature review documents and discusses the research findings and practices that relate to the teaching of large classes - across disciplines both nationally and internationally, identifies the range of ways in which large classes are organised and taught (e.g., in terms of characteristics such as contact hours, amount of practical/tutorial work, whether classes are taught in multiple or single sections, type of assessment, and procedures adopted for the provision of student advice

(2) A survey of lecturers of large classes and academic developers participating in the project was conducted to obtain in-depth information on the issues faced by teachers of large classes and the strategies that they have implemented in the teaching, structure, organisation, and assessment of large classes, and any institutional support in place for large class teaching. This contributed to a collection of case studies of best practice in large class teaching.

Dissemination Phase

The model of dissemination for this project was based around the concept of highly accomplished teachers (HATs) and academic developers (ADUs) based in each university. Two to three teachers from each of the 24 participating Australian universities, in a number of disciplines who had responsibility for large classes, and one member from the university's academic development unit were invited to participate in the project. The participants from each university, participated in surveys, attended 2 national workshops and implemented a project to enhance teaching in large classes in their own university or region.

The 1st National Teaching Large Classes Workshop was convened in July 2001 to create a core network of large class teachers around Australia to discuss major issues and share both the least successful and most successful strategies they have tried in teaching large classes. Dissemination initiatives were brainstormed and developed in institutional groups and regionally-related university groups.

Participants from each university then implemented a project in their own university designed to enhance large class teaching with seed funding provided from the central budget. A full description of each of the participant university projects is available on the website under *Reports.*

The 2nd National Workshop was convened in November 2001, to disseminate the project findings and resources, to obtain feedback on the project activities and individual university initiatives and to encourage participants to continue to be "agents of change" within their own institutions.

A comprehensive website was developed and works as both method of national dissemination, and as a historical account of the project (http://www.tedi.uq.edu.au/largeclasses/).

A.2   Key findings

What is a large class?

The size of the class group does not directly link to the quality of the teaching and learning experience. Rather, it is the interaction between several factors and how they interact that is the key issue in whether or not a large class is perceived as 'large'. Three major factors have been identified: (1) the number of students in the group, (2) the teaching and learning activities (TLAs), and (3) the facilities and physical environment. The interaction among these factors impacts on both the teacher's and the students' perception of whether the class is 'large'.
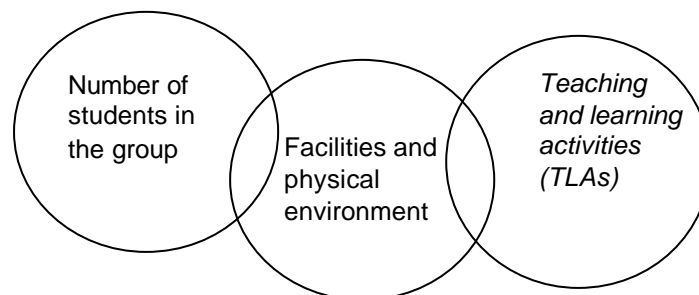
While many may immediately think that the key factor in what constitutes a large class is the number of students, this really depends more on the nature of the other two dimensions. For example, delivering a didactic lecture to 20, or 100, or 400 students does not involve a different activity for the teachers and students. For example, if the TLA is a traditional-type lecture, the physical environment is a tiered lecture theatre seating 450, and the number of students is 350, then this teaching situation probably does not constitute a 'large class'. The teacher and the students do the same things regardless of whether there are 20, 100 or 400 in the class.

If one of these dimensions changes, then the perception of class size is more likely to change. If the teacher wants to involve the 350 students in interactive discussions in small groups in the tiered lecture theatre, then the class will most likely be perceived as 'large' and managing the interactive discussions in such a setting would be challenging. However, if the physical environment was changed to a large flat-floor room with moveable chairs, interactive discussion becomes easier to achieve, but managing the movement of the 350

students and the TLAs becomes an important factor in whether this will be a quality teaching and learning experience.

The crucial link is the choice of the TLA – what the teacher does, and what the teacher wants the students to do. When this is known, then the facilities and number of students become important in impacting on the perception of the group as 'large', and therefore potentially problematic.

The key messages from the project

There are two main points to come out of the project: (1) there are qualitative differences in the way good teaching practice is enacted in large classes, and (2) the importance of management, particularly resource allocation cannot be underestimated. These are developed below.

1. It is not the number of students itself that is the crucial ingredient in teaching large classes. The general principles identified as important for good teaching are just as relevant, if not more so, for large classes. We already know what good teaching looks like, but for large classes, those general dimensions or principles have different actions (or enactments). For example, 'personalising' the student experience is an important quality of good teaching. A teacher might action this by establishing small discussion groups and circulating and contributing to the group interactions. However, in a large class, the action of 'personalising' may have to come from the teacher establishing student-to-student buzz groups and feedback mechanisms, rather than being able to directly contribute to student interactions. The teaching principles remain the same, but they are enacted in qualitatively different ways in large class settings

2. The management of large classes is a crucial issue that must be considered. Resource allocation and management is even more crucial in dealing effectively with large classes than smaller classes. The importance or coordinating and preparing other teaching staff and tutors to ensure cohesiveness of the curriculum and use of effective teaching and learning activities in classes cannot be underestimated. In addition, the time involved in addressing large numbers of student issues and management of assessment is significant. These have often been left to the individual coordinators to manage as best they can. However, departments can do much to support their staff through the provision of administrative support, sufficient funding for tutors, recognition of the work involved in workload allocation, recognition in performance appraisal and the like. Large classes *do* have resource implications and providing minimal resources to large classes *will* impact on the quality of the teaching and learning experience.

A.3   Overall Impact of Project -

The brief from the AUTC emphasised that the Teaching Large Classes project should result in practical outcomes for students and university staff, as well as have an impact across the university sector. It included the following as important aspects:

1. identification of the emerging issues relating to the teaching of large classes, a review of the literature relating to teaching large classes, particularly that which provides practical teaching strategies and case studies of good practice; a review of the ways in which universities, both in Australia and internationally, have responded to this issue;

2. the development and implementation of a strategic approach to staff development and the enhancement of the teaching quality in large classes throughout the Australian university sector;

In order to have an impact across the Australian university sector, it was vital that the project could involve as many institutions as possible with a good cross-section of discipline areas. This was achieved with the involvement of 24 Australian universities (+ 1 New Zealand university represented at the 1st National Workshop) and 80 highly accomplished teachers in large class teaching. The institutions, the participants and their discipline areas are shown in Table 1.

Project Model

The model developed by the Project Team for carrying out both the review and dissemination aspects of the project was innovative and was demonstrably effective. It relied on the creation of a national network of experienced large class teachers and academic developers. The existence of such a network meant that opportunities for dissemination were increased in three ways:

- The two national workshops created opportunities for the project participants to share their experiences and expertise with both the Project Team (as part of the review phase of the project), and with each other. The sharing of ideas among participants was one of the most valuable aspects of both workshops, as shown by responses in the workshop evaluation forms.

- The provision of funds to support the participants' attendance the workshops and the individual university initiatives meant that the dissemination of the project, it's outcomes (e.g., the website and associated resources such as the sets of guidelines for large class teaching), and strategies for best practice did not solely rely on the Project Team at the University of Queensland, but had many departure points across Australia. The sharing of project funds among all participant universities increased both the status of the project in the individual institutions, as well the commitment to their own dissemination initiatives (see Table 1 below for a summary of participants and projects, and Appendix A for a more detailed description of the projects).

- Establishing a team of participants from each university, with each team being spread across disciplines meant that each participant could share ideas and experiences within their own disciplines in an informal manner as well as through their institution-based initiative. By allowing each team of participants to develop a project tailored to their own institution's needs, it increased the likelihood that the initiative would be sustained for a longer period. In many cases additional funding and extensions to their projects were sought and provided from within the individual institution. (see section C.2 in Dissemination Phase).

From the perspective of the overall development and management of the project, having a central Project Team including a Project coordinator based at one location, meant that organisational and administrative issues were dealt with by one group, and decisions could be made quickly when required and follow-up actions were immediate. Regular feedback and updates was also easily provided to all other project participants from this central group. This made the project management more streamlined in terms of both budget and time management. Also, having a multidisciplinary-based Project Team brought a breadth of expertise and experience in both teaching, and discipline background. This provided a range of insights and feedback into all aspects of the project.

Table 1: *Large classes project universities, participants and dissemination projects*

UNIVERSITY	Participants & Disciplines	Dissemination Project
NEW SOUTH WALES		
University of NSW	ADU (Iain McAlpine, Michele Scoufis) Economics (Trevor Stegman) Accounting (Rosina Mladenovic) English (Sue Kossew)	Survey and focus groups – how teachers are using technology in large classes, issues and problems. Development of range of WebCT templates for effective online learning.
University of Western Sydney	ADU (Sandii Chan) Law (Anne Scarff) Science (Diedre Tronson) Accounting (Jean McCartney)	Focus on 1st year – surveys of students, heads of schools, large class coordinator – research to inform the development of staff development strategy aimed at improving the first year experience in large classes.
University of Sydney	ADU (Simon Barrie) Sociology (Christine Crowe) Law (Patty Kamvounias)	Network of mentors, utilising web and other resources to support large classes teaching staff (vignettes of good practice – focussing on use of group work).
University of Wollongong	ADU (Maureen Bell) Geosciences (Gordon Waitt) Statistics (Anne Porter) Learning Development (Bronwyn James) Mathematics (Caz McPhail)	Identify Large Class teachers, and hold focus groups (strategies, issues and needs), develop email survey of those not involved in focus groups. Prepare report for University Education Committee with recommendations regarding LCT, tabling further project proposal for 2002.
Macquarie University	ADU (Sharon Frazer) Economics (Rod O'Donnell) Education (Kerri-Lee Krause) Actuarial Studies (John Shepard)	Recommendation Report (from literature reviews, surveys, focus groups) to order to apply for funding to support and implement peer mentoring program for large class teachers.
Charles Sturt University	ADU (Gail Wilson) Education (Sue Clancey) Humanities and Social Sciences (Dr Rabiul Islam)	Inclusion of large class teaching module in Introductory Program for new academics, workshop on large class teaching, dissemination of project and university initiatives in CELT newsletter.
University of New England	ADU (Catherine McLoughlin) Health (Jan Brown) Finance & Accounting (Sophie Geddes) Ecosystem Management (Lisa Lobry deBrun)	Development of video resource – showing range of successful large class teaching approaches across disciplines. Use in workshops for large class teachers.
Australian Catholic University	ADU (Paul Chesterton) Religious Education (Kath Engebretson) Arts and Sciences (Shurlee Swin)	Survey of Heads of Schools – the nature and extent of large classes. Develop 3 state-based workshops for large class teachers, and development of material for wider dissemination (use ACU website).

UNIVERSITY	Participants & Disciplines	Dissemination Project
VICTORIA		
University of Melbourne	ADU (Dr Marcia Devlin) Commerce (Carol Johnston) Economics (Nilss Olekalns)	Resources for web – vignettes on large class teaching; Workshop (in collaboration with Macquarie University); Resource material for dissemination to colleagues.
RMIT	ADU (Alex Radloff) Medical Sciences (Nick Vardaxis)	Workshop for teachers of large classes, with resource including vignettes of good practice and using IT effectively in large classes.
Monash University	ADU (Malcolm Ely, Tony Gilding) Biology (Paul White) Biochemistry (Robert Pike)	Website with 'cases of adaptations for large classes', and information pages on issues relevant to large classes. Discussion list with general forum as well as a scheduled topic area.
Deakin University	ADU (Di Challis) Business and Law (Pauline Hagel) Science & Technology (Richard Russell)	Forun for 1st Year Large Classes Teachers (54 attendees) – using handbook with AUTC project material, discussions on major issues, ending with plenary. Creation of support network (supported by online resources).
SOUTH AUSTRALIA		
University of South Australia	ADU (Ted Nunan) Accounting (John Medlin) Communications (Dr Rob Macpherson)	Workshop for teachers of large classes, and a monthly forum for discussion and sharing.
Flinders University	ADU (JanOrrell) Law (Gary Davis) Science & Engineering (Craig Simmons)	Project to support large class teachers to implement group learning and assessment processes (law, earth science, psychology) – using a system of coaching, and putting documentation on website as models for others to adopt.
WESTERN AUSTRALIA		
Murdoch University	ADU (Marion Kemp) Media, Communications and Cultural Studies (Tara Brabazon) Biological Science and Biochemistry (Simon Avenell)	Economics Departments across Australia – sharing and dissemination of large class resources using database on website (making this part of a new project "Economics Virtual Commons" at Murdoch).
University of Western Australia	ADU (Allan Goody, Deborah Ingram)	Combined Regional Project: Creation of a Register of large class teachers (54 @ 11/2001), survey of teachers to inform on issues and add to resource document for dissemination. Forum on large class teaching for the region.
Edith Cowan University	ADU (Rod Ellis) Biomedical and Sport Science (Dr Elizabeth Rose)	
Curtin University	Business (Rob Guthrie)	

UNIVERSITY	Participants & Disciplines	Dissemination Project
QUEENSLAND		
Griffith University	ADU (Margaret Buckridge) Law (Lillian Corbin) Environment (Ass. Prof Janet Chaseling) Marketing and Management (Tracey Harrison-Hill) Psychology (Dr David Shum)	2 Workshops for 1st Year large class teachers, and development of resources – set of pedagogical strategies – accessed on web for public dissemination. Advocacy case addressing administration and technical support in large classes - PVC's Group.
Queensland University of Technology	ADU (Ms Georgia Smeal) Economics and Finance (Dr Jeremy Williams) Health – Nursing (Robyn Nash)	Submission to Teaching and Learning Committee for funding program for Coordinators of Large Units in 2002 and ongoing – includes creation of network, meetings and forums.
University of Queensland	Economics (Dr John Asafu-Adjaye) Human Movement Studies (Dr Craig Engstrom) Science (Dr Craig Franklin) Project Team members and TEDI staff	Development of staff development program for large class issues – 4 workshops (teaching, assessment, management and coordination, helping students to learn) – start in 2002 and ongoing.
TASMANIA		
University of Tasmania	ADU (Sue Jones) Psychology (Greg Hannan) Information Systems (Merry Joyce)	Workshop for large class teachers in tutor training (identified as a major concern - consistency of standards etc), with support resources.
ACT		
Australian National University	ADU (Linda Hort, Pamela Roberts) Resources, Environment & Society (Richard Baker)	Creation of video as resource for large class teachers – 6 case studies in teaching large classes (biology, accounting, geography, history, statistics, sociology).

A.4   Time and budget management

Timeline

The project was conducted over a 12-month period (as outlined in the proposed timeline below). The review and dissemination phases overlapped in order to maximise both time and resources. Project participants were involved in both phases concurrently, in providing information for the review of issues, strategies and cases of best practice, and then in the development of dissemination programs at the institutional level.

The project milestones were met, with the two national workshops providing workable deadlines for both the project team and project participants. While the project officially ended in January 2002, the majority of the institutional dissemination projects are continuing in 2002, with some having been embedded into institutional practice in an ongoing manner (e.g., staff development agendas, established networks of teachers etc),

and some being extended through further grants from their individual institutions. The project team will continue to document these through the regular updating of the Large Classes website which take place every 6 months over a 3 year period.

Table 2:   Project time-line and milestones

Date	Review Phase	Dissemination Phase
December 2000 January 2001 February 2001 March 2001 April 2001 May 2001 June 2001	Literature review Web-based review Lecturer survey/Observational study	 Selection of Project participants [Academic Developer, Highly Accomplished Teachers (HATs) of large classes]
July 2001 August 2001 September 2001 October 2001 November 2001	Data analysis	National workshop I + Reference Group meeting • State/Regional network development • Web-site development • Dissemination projects at individual universities National Workshop II + Reference Group meeting
December 2001 January 2002	Collation and synthesis of workshop discussion data	 Finalisation of Project + Evaluation Report

Budget

Table 3 presents the proposed budget, as approved by the AUTC, and the actual expenditure to date. The development of the website was not sufficiently budgeted for in the original budget, however, this deficit has been picked up through savings across the other categories. As not all universities have yet invoiced the Project for their portion of the University Network Seeding Funding, so the final budget is not yet available. Any remaining funds will be allocated to maintain and develop the website over the next three years.

Table 3:   Budget proposed and expended

Description of Expenditure	Proposed Budget	Actual budget @30/11/02
Personnel and Administration costs (inc. Research Assistant full time for .75 year, stationary etc)	$45, 650	$43, 865 - salaries $1, 000 – stationary

Description of Expenditure	Proposed Budget	Actual budget @30/11/02	
Web Development Site for the facilitation of on-line communication, and for the dissemination of project reports, resources, etc, and professional community functions for local and national networks - promotional postcards	$5, 000	$14, 062 $7, 269 $ 179	(update)
1st National Symposium/Workshop Subsidy for 2 invited master teachers from each tertiary institution to attend pre-conference workshop (approx. 30 universities, with $500 per person)	$30, 000	$28, 000 $2, 544	- funding – catering, venue hire etc
2nd National Workshop/Evaluation As per 1st National Workshop + catering etc for 2 days	$30, 000 $5, 350	$19, 200 $3, 840	– funding – catering, venue hire, etc
Intra-University Network Seeding Funding Funding made available to universities to establish internal initiatives (dependent on submission of proposals and progress reports). Approx $1, 000 per university.	$30, 000	$19,000	
Reference Group Meetings	$4, 000	$ 300.00	
Total*	**$150, 000**	**$140, 259**	

This leaves $9, 741 of the original $150,000. This will be used to update and maintain the website for the next 3 years.

Detailed overview of each phase

Full reports and documents referred to in this section can be found on the Large Classes website <http://www.tedi.uq.edu.au/largeclasses/>

B.   Review Phase

B.1   Literature review

The literature review began with a series of web-based and database searches (including ERIC, AUSTROM and PsychInfo) using key words and phrases. Several noteworthy texts on the subject of teaching large classes were utilised, including the 1992 book "Teaching Large Classes in Higher Education" by Gibbs and Jenkins, Oxford Brookes University resources, as well as generic education texts and papers on teaching large classes, discipline-specific journals and texts. Key papers, articles and chapters were summarised and organised into broad topic areas. These areas were:

- **Student issues** (e.g., motivation, interest, interaction, heterogeneity of needs/backgrounds, students at risk);

- **Teaching management and curriculum issues** (e.g., curriculum and course design, staff/tutor coordination and management, tutor/staff training and professional development);

- **Administration, resources and institutional support issues** (e.g., teaching and assessment resources, budgeting, space and equipment requirements, staffing, institutional support for large class teaching);

- **Teaching and learning strategies** (e.g., managing student inquires, ideas for effective presentation strategies); &,

- **Assessment** (e.g., setting valid/authentic assessment, giving feedback, marking load and management, standardisation of assessment and marking).

A draft literature review was sent to all participants prior to the 1st National workshop in July, 2001. During Session 1 of the workshop, these five topic areas formed the basis of group discussions. As a result of these discussions, feedback was obtained from participants on the general findings and organisation of the literature review. Following the workshop, the literature review was revised and extended. It was subsequently reorganised into the following sections, including an executive summary titled *What's different about large classes?:*

- Student performance in large classes;

- Teaching and assessment in large classes;

- Administration and management of large classes;

- Large classes across disciplines;

- Policies and trends in higher education;

In total, the literature reviews consist of over 30 000 words. Approximately 150 references were cited across the five reviews. The list of all references is available as a separate document and is provided, along with the executive summary and the five literature review sections, as a downloadable pdf file at the Large Classes web-site.

Issues arising from the review

In general, the literature revealed that issues important in large university classes are the same issues important in university classes of any size, such as being systematic and organised, motivating students, maintaining quality of learning and developing authentic assessment tasks. However, many of these issues and challenges appear to be magnified with large groups. Most of the research in this area suggests that larger classes lead to increased diversity and complexity. This means that in many cases the situation changes qualitatively. Much of the literature emphasises that it is not desirable or sufficient to simply increase what we do for smaller classes.

We found many descriptive papers and case studies in the literature that identified or described ways in which increased class size creates problems for staff and students, as well as outlining possible strategies in terms of managing, teaching and assessing large groups.

Student performance

In terms of student performance and class size, there is some conflicting research evidence where some studies reveal detrimental effects on student performance as class size increases, but other studies suggest that class size does not affect student performance. This seems to suggest that what the university and lecturers *do* to support learning in large classes appears to be more important than actual size. Some studies indicate that students are less likely to achieve higher-order learning goals in larger classes, however this effect may be remedied through modification of teaching strategies that actively engage students. In terms of student ratings research, student satisfaction with their courses appears to be unaffected by class size and may actually increase as classes reach a certain size.

Teaching and assessment

Some of the literature notes that the problems relating to teaching and assessing students are exacerbated in large classes. Principles of good teaching and learning such as communication and negotiation, linking theory with practice and encouraging metacognition are often harder to build into the large class context. Large classes may make it harder to personalise lectures, engage and maintain attention and create interaction. Of the five topic areas, most has been written about this aspect and it seems

there are many effective ways to teach and assess large groups effectively, especially with the advent of information and communication technologies. (The AUTC Assessment project (2001-2) looks in some detail at issues of assessment in large classes http://www.cshe.unimelb.edu.au/assessinglearning/)

Administration and coordination

Other issues arising from the literature reviews include the problems with coordinating and resourcing large groups. A common concern was that university faculties are often forced to devote less money per head to students in large first year courses than in smaller or later year courses. Less has been written in the higher education literature about how to deal with this issue at the departmental or subject level. Nonetheless, many case studies exist describing innovative ways in which large course coordinators have reorganised resources to improve tutorials, laboratories and practicals and facilitate better communications with students, other teachers and administrative staff. (The AUTC sessional teaching project (2002) has covered some of these issues http://www.tedi.uq.edu.au/sessionalteaching)

Policy and trends

The two most influential trends in recent times that have affected learning in large classes have been (1) reduced government expenditure and (2) the use of teaching and learning technologies and the Internet. Universities and academics have, in many instances, adjusted successfully to their changing roles and found cost-effective, high-quality solutions to the task of teaching more students. However, the need for more federal resources or, in their absence, a redistribution of university resources to improve teaching and learning in large classes is highlighted in the literature, although ideas about how departments or individuals might achieve reprioritization of large class teaching issues and thus a redistribution of resources within institutions is limited. Some strategies, such as forming strategic alliances, have been suggested by participants in the project, including Dr Linda Hort from the Australian National University (see www.tedi.uq.edu.au/largeclasses/Linda_Hort.pdf). However, in addition to any efforts made to secure additional support or funding, the need to identify and disseminate improvement strategies and ideas for large class teaching remains.

A knowledge economy and a changing labour market demand that universities provide appropriate education and ensure that graduates emerge with appropriate technology skills and abilities. As such, innovations in the use of information and communication technologies for teaching have proliferated. University faculties will undoubtedly continue to make use of the latest and most appropriate technology to provide personalized and flexible learning for large classes. Thus it seems the need to describe and disseminate a range of cost-effective and high quality teaching practices will be on-going. (The AUTC 2001-2 project on flexible learning technologies provides some tools and guidelines for the effective use of learning technologies)

Other issues

Another issue raised in some sections of the literature was the need for more recognition of academics teaching large classes. Though quality in teaching and learning is demanded, it is still believed that promotion is strongly tied to research performance. Methods of addressing this issue have not been widely disseminated but include Faculty or School-based initiatives such as the systematic imposition of goals and benchmarks, and recognition of the skills and talents of their staff members. The literature in this area mirrors several participants' comments at the 1st and 2nd National Workshops; namely that by bringing together committed and interested teachers within or across academic units, it may be possible to achieve small, practical goals for enhancing large class teaching, which over time, result in wider and more obvious changes.

B.2   Survey of teachers of large classes

As part of the review phase, the project participants were emailed a survey questionnaire asking about the organisation and delivery of their large class courses in order to gather some data on how various sized classes operated within Australian universities. They were also asked about the major issues they had experienced as teachers of large classes, and least successful and most successful strategies they had implemented in addressing some of these issues. (See the website for a full report of the survey)

Major issues

Survey participants most frequently reported that a major problematic issue in large classes was the inability to get to know students and reduce students' feelings of anonymity, and also to create interest and interaction in class. The diversity of class groups was also a common problem particular in relation to knowing where to 'pitch' the material and in identifying students at risk, as was the giving and receiving of assessment (including managing marking loads and maintaining consistency).

Such responses were by and large consistent with, and paralleled by, the available literature on large classes. Much has been written about managing assessment and effective delivery in large class settings, and also highlights the issue of student anonymity as a major concern (although students generally experience more disadvantage because of this anonymity). The anonymity of students in large classes has been associated with students taking a more passive role and being less likely to participate with in-class activities, hoping that their lack of involvement will 'go unnoticed'.

Most and least successful strategies

In trying to deal with such issues in teaching large classes, the kinds of strategies that survey respondents reported as successful were also likely to centre on the issues of student interaction, reaching a diverse group of students, and assessment/feedback. The most common successful strategies were: the use of small group or pair discussions/activities/exercises in class; introduction of web-based course materials (such

as course web-site, other on-line resources, discussion boards etc); and the use of mixed media in lectures (including music, videos, comic strips, powerpoint, overheads). Several of the examples given were quite unique and innovative. For example, one lecturer in business involved having students complete exercises in lectures using carbon paper to create two copies of their responses; one to keep for themselves and one to hand in to the lecturer. This method can act as a kind of informal assessment whereby the lecturer can monitor individual student understanding and progress, and also provide feedback to the entire group at the following lecture. Another example is an engineering-mathematics lecturer who reported that he provides short, interesting problems at the beginning of each lecture so that 'early bird' students have something to do while the 'stragglers' arrive.

There were fewer answers to the survey question about least successful strategies for large classes, and many of them involved things that reduced communication and/or interaction between staff and students in attempt to be more time or resource efficient. Interestingly, two of the most common responses were the use of non-assessable activities, and discussion groups in class. Given that such methods also rated as some of the most successful, it is obviously important to note that not all strategies will be suitable for all large classes – there are differences across disciplines in the nature of the courses and the groups of student, and there are also differences across year levels – what works with one group of students may not necessarily work for another.

The responses gathered from this survey provided valuable information for the project. First, they provided an overview of the state of large class teaching in Australia, and value-added to the literature review that was based on a vast array of generic, international, discipline-specific research, theory and case studies. Second, it enabled us to begin formulating ideas for best practice that would feed into the development of the guidelines.

B.3   National Workshop I

The first National Workshop took place on July 8, 2001 with the majority of project participants in attendance. There were 44 highly accomplished teachers and 24 academic staff developers from 24 universities (including 1 participant from Victoria University, Wellington, NZ). The workshop was run by a sub-committee of the project team; Denise Chalmers, Ron Weber, Doune Macdonald, Debra Herbert, and Rachel Hannam. This team was assisted by Catherine Manathunga (an Academic Consultant at TEDI, University of Queensland) and Carol Nicoll (a member of the Reference Group) who both helped as facilitators. (See the website for a full report of the first National Workshop)

The aims of the workshop were:
(a) To create a national network of teachers with expertise and interest in teaching large classes
(b) To discuss major issues in teaching large classes in a university environment

(c) To identify methods of good practice across a range of disciplines

(d) To plan for institutional and/or regional-based strategies for encouraging uptake of best practice in large group teaching.

Evaluation of workshop by participants

Participants were emailed a Workshop Evaluation form in the week following the workshop – 55% of participants responded. Of those who responded, the majority agreed that the 4 aims of the workshop had been achieved (ranging from 71% for D, to 97% for B). The mean overall rating of the workshop was 4.11 (on a 5-point scale ranging from 1 = low quality to 5 = high quality).

Below is a selection of comments from participants:

"the workshop provided the opportunity to meet colleagues from across Australia and to develop clear plans for future action. The combination of discipline specialists and academic developers was a particular strength."

"I thought that having a small group discussion was a good idea, but it achieved less than I believe it could/should have because of the breadth of the issues each group addressed. The time constraints meant issues remained more at the surface/obvious level than I'd anticipated."

"More pre-work before meeting on part of participants should be required. Get us to consider issues and come having done something. Make us work harder!"

Issues arising out of the workshop

Workshop participants were invited to comment on any "burning issues" that had arisen for them but had not been addressed at the workshop. Below are some representative comments:

"The majority of issues raised were focussed at the operational and strategies level. There is a stronger need for greater focus on policy and systematic change."

"How to manage 'upwards' dissemination strategies to elicit support for large class teaching and 'get it on the agenda' of higher levels of management eg. Heads of Schools, Deans, VC's etc."

"There needs to be an explicit clarification of the assumption that large enrolment = large classes = large 50 minute lectures and that this happens interactively."

"Need to address students' perceptions of issues experienced in large classes in terms of their experiences of the curriculum, assessment, help/hindrances etc"

It should be noted that the issues raised regarding needing to manage 'upwards' and to address policy and systematic change were addressed in the 2nd National Workshop. Workshop sessions were run on Managing Resources (invited speaker, Dr Linda Hort) and

Change Management (led by Doune Macdonald), and a discussion session was led by Prof Rod O'Donnell (project participant) on the issues of government/institutional policy, under-resourcing of large classes etc.

C.   Dissemination Phase

C.1   National Workshop II

The second National Workshop took place on November 26-27 2001, with the majority of project participants in attendance. There were 38 highly accomplished teachers (HATs) and 22 academic development unit staff (ADUs) from 21 universities. The workshop was run by a sub-committee of the project team; Denise Chalmers, Ron Weber, Doune Macdonald, Nan Bahr, Debra Herbert, and Rachel Hannam. (See the website for a full report of the second National Workshop)

The aims of the workshop were to:
- Disseminate project findings, introduce new resources and obtain feedback on these resources;
- Create opportunities for participants to share information on university-based project activities;
- Share information and issues relating to university-based dissemination projects;
- Encourage participants to become 'agents of change' within their own institutions.

Evaluation of workshop by participants

Participants were emailed evaluation forms asking for comments and feedback about the workshop and 39% of participants responded. Feedback was generally very positive with the majority of these respondents (87%) agreeing that their time was well spent at the workshop. In terms of the Workshop aims, the majority of participants agreed that the workshop satisfied these stated objectives (ranging from 73% for D, to 92% for B).

Below is a selection of comments from participants:

"(strength of workshop was) the parallel sessions and presentations from participants were interesting and informative….I expected to have more opportunity to hear about projects from other universities."

"A really great opportunity to find out where Higher Ed is heading. Linda Hort was very challenging (not just nice). The web-site demo was terrific! Thankyou for taking the approach you have; namely including the sector. Such a contrast to the other 'expert' driven projects. I hope you get many more as your approach to this has been a credit to you. I have loved being involved. The staff from my university have gained much from their

participation and we have forged new and productive relationships as a result. I hope that your approach is duly recognised and appreciated by the sector"

"I felt privileged to be present with so many dedicated teachers"

"The strongest aspect was that there was meaningful debate about the key aspects of quality university teaching (resources, methods, standards etc) amongst a group of people who understood how to achieve these aims. The variety of opinions from the different ADUs and teaching staff was enlightening".

"There was too much crowded into the workshop and insufficient time for worthwhile discussion...It seemed that the organisers were unsure whether this was a conference with speakers, or a meeting to review the draft guidelines, or a meeting to discuss the dissemination projects...In the end, it did some of each and none of them very satisfactorily..."

Issues arising out of the workshop

As for the 1st National Workshop, participants were invited to comment on any "burning issues" that had arisen for them but had not been addressed at the workshop. Below are some representative comments:

"I think it is essential that the right message go to policy makers and higher administrators in universities. While acknowledging that large class teaching is a part of university teaching now more than ever, the value of small group teaching, peer-group teaching, and other adjunctive small group methods must <u>not</u> be lost. We <u>cannot</u> replace <u>all</u> of all teaching with large classes. Large classes are not a simply magnification of a small class. Resources must be made available to maintain small group teaching <u>where appropriate</u>."

"....if these issues (need for resourcing) are not reflected in the final report we are missing a vital opportunity to raise issues while offering wide range of strategies for both individual staff and organisations as a whole.."

"I have real concerns that this project is legitimising the lack of resources for tertiary education..."

"The TLC Project outcomes should (must!) include some recommendations (and principles) that will go forward to key places such as AUTC, DETYA, AVCC. This is a wonderful opportunity to have a national TLC impact!"

C.2   Institutional Projects

Twenty-two universities undertook dissemination initiatives following the 1st National workshop. A wide range of dissemination strategies were used and combined to share

information about good practice in large classes. The following table summarises the types of dissemination strategies and activities carried out as part of the various initiatives.

Table 4:   University dissemination projects by type

Type of activity/dissemination strategy	Number of universities using this strategy
Workshops and discussion forums	13
Web-pages and newsletters (usually incorporated into existing Teaching and Learning web-sites or newsletters)	10
Surveys/interviews (with individuals or groups of large course convenors and/or students of large classes) to identify educational needs and models of good practice	8
Case studies (existing or developed subsequent to interviews or surveys and to be disseminated at various forums)	2
Network or registry (of interested teachers to share ideas and solutions)	3
Establishment of peer-mentoring or coaching schemes (staff and students)	3
Video production (show-casing and describing examples of good practice)	2

Many of the dissemination activities continued into 2002. For example, Edith Cowan University established an online registry of academics who teach large classes. People who register are provided with a variety of resources and contacts to assists in their efforts to teach large classes. They are also invited to provide feedback on the issues and possible solutions to problems that arise in their own large classes. Edith Cowan intend to use the information they obtain through the registry to randomly survey students of large classes to find out what they perceive to be the major issues and best teaching/learning practices in large classes.

Several participants have also informed us that they have subsequently made successful applications for funding to continue or extend these initiatives within their universities. For example, building on the strength of their previous work in the dissemination project, Flinders University participants applied for, and received, two internal innovation grants for 2002 worth $10 000 each to improve large class teaching in Law and in first year Psychology and Science. The peer mentoring network for teachers of large classes set up by the University of Sydney team has also received further funding to continue this project.

C.3   Project Team Dissemination of Project

Members of the project team have been actively presenting the project to various audiences throughout 2001 and 2002. The following is a list of conference and seminar presentations to date:

A letter has been sent to all Vice Chancellors informing them about the project, and recognising the efforts of the particular staff involved from their institution. Further letters are planned to include an Executive Summary of the Large Classes and Sessional Teaching Project. It is hoped that this will add to the awareness across Australia about the issues of large class teaching, and of the accomplishments of this project, including the individual institutional initiatives.

Presentations at conferences, forums

- **HERDSA Conference, 2001** (University of Newcastle, July 8)
  Paper presented by Debra Herbert.
  Debra Herbert, Denise Chalmers, Deborah Terry and Ottmar Lipp. *Teaching large classes: An AUTC project on the evaluation and dissemination of best practice in Australian universities.*

- **Teaching & Learning Forum, 2002** (Edith Cowan University, 5-6 February).
  Presentation by Rod Ellis, Allan Goody and Elizabeth Rose on the West Australian combined institutional dissemination projects, and promoting the Teaching Large Classes website.

- **National Teaching Forum 2001** (Canberra, December 3)
  Invited presentation by Denise Chalmers, Debra Herbert and Ron Weber. *Teaching Large Classes, AUTC project*

- **ICED Conference, 2002** (Perth, 2- 4 July)
  Paper presented by Denise Chalmers
  Denise Chalmers, Rachel Hannam, Debra Herbert, Doune Macdonald & Ron Weber, *A national educational development project to enhance teaching in large classes.*

- **HERDSA Conference, 2002** (Perth, 6-10 July)
  Pre-conference 1/2 hay workshop conducted by Denise Chalmers and Janice Orrell. *Teaching large classes. What are the issues and what are we doing about them?*

- **Article in The Australian – Higher Education Supplement** *Size matters less than quality of instruction*, Wednesday 13 February 2002.

- **Coordinators of Large Units Network - QUT** (Seminar, March 14 2002)
  Presented by Debra Herbert and Rachel Hannam. *Teaching Large Classes Project and demonstration of website*

- **Ninth Annual Teaching Economics Conference,** (University of Queensland, July 2002).
  Paper presented by Debra Herbert *Teaching Large Classes – Issues and Strategies for Economics.*

- **School of Life Science – Friday Forum** – QUT (August 23, 2002)
  Presented by Denise Chalmers, Debra Herbert and Rachel Hannam, *Teaching Large Classes and demonstration of website.*

- **Promotional postcards** – sent to all project participants to forward to colleagues in their workplace, also distributed at National Teaching Forum, HERDSA and ICED conferences, 2002

Website for Teaching Large Classes - *www.tedi.uq.edu.au/largeclasses*

Several of the project team members formed a working party to develop a web-site for the project in order to document and disseminate the project findings and provide access to resources and good proactice. TEDI has committed to maintaining the site for at least three years (2001-2004).

The website was developed during Semester 2, 2001 and was launched at the 2nd National Workshop in Brisbane on November 27, 2001. At the workshop, project participants provided feedback on the usability and functionality of the site. This feedback was incorporated into the second version of the site. A major restructure of the site took place to make it more accessible to teachers of large classes and to add more case studies. Version 2 went live in June, 2002.

The current site consists of eight main sections. These are:

1. **About the project**: provides a brief overview of how the project took place

2. **Guidelines**: contains four sets of guidelines for teaching large classes (in html)

3. **Case Studies**: brief reports on individual large class teachers showcasing exemplars of good practice.

4. **Resources**: contains literature reviews and other reports (in pdf format) and useful links to other sites

5. **Reports**: contains notes and reports from the two National workshops

6. **Bulletin Board**: a discussion list for teachers of large classes

7. **Sessional Teaching**: brief description of the 'spin-off' project entitled *Training, Support and Management of Sessional Teaching Staff*

8. **What's New and Events**: updates of new or interesting activities related to large class teaching.

Feedback provided at the workshop on the usefulness of the site was generally very positive. Comments and postings to the bulletin board by the project participants were noted.

To incorporate these suggestions, and others from the project team observed by using and demonstrating the site changes were made to ensure that all resources developed as part of the project are easily accessible. The changes made included:

- Case studies of good practice to be added in 2002 and beyond;

- The guidelines edited as a result of feedback from the 2nd workshop and new versions of these replaced the original guidelines;

- Links to be added from the Sessional Teaching page to the Sessional Teaching project site and from the Resources page to the AUTC Assessing Learning web site; and,

- Additional links to useful outside web sites will be added to the resources section.

The website administrator, Debra Herbert, will update and monitor the site on a regular basis, including frequent checks of the bulletin board for useful (or inappropriate) postings etc.

Appendix A: Australia-wide dissemination initiatives

Summary of dissemination strategies being used

University	Strategy	Contact person
Australian Catholic University	• Survey of Heads of School to map the nature and extent of large group teaching at ACU • Planning and implementation of three state based workshops (Brisbane, Sydney and Melbourne) for staff involved in large group teaching to - • Share information and strategies • Identify issues and barriers in their own contexts • Make recommendations in relation to the barriers, to be referred to the University's Teaching and Learning Committee • Preparation of material from the workshops for wider dissemination in ACU (this may include, for example, placement on the ACU intranet site)	Paul Chesterton P.Chesterton@mary.acu.edu.au
Australian National University	To produce a video that records examples of innovative teaching in large classes at the ANU. The video would be approx 1 hour, and would provide 4-5 teaching scenarios that model strategies and techniques that can be put into practice by other academics. The academics show-cased would provide an explanation of their selection and use of strategies and teaching context. The target audience is both teachers of large classes and educational developers. The video would be available as a resource that can be used by individual academics to visualise innovative techniques and develop a better understanding of their use in practice. The video would also be designed for use by educational developers in teaching workshops. ANU would provide site for creating the video, which would be available to academics nationally (for cost recovery fee).	Margot Pearson margot.pearson@anu.edu.au
Charles Sturt	CELT Newsletter October 2001 which will be written and edited by Dr Rabiul Islam and Gail Wilson about the project. This newsletter targets all academic staff at CSU. Rabiul Islam will run a 2 hour session on the induction program for new academics in 2002 across 3 campuses. Three (3) campus-based workshops in early 2002 run by CELT (G Wilson) and Rabiul Islam	Gail Wilson gawilson@csu.edu.au
Deakin	Workshop: "The first year experience" (Teachers of Year 1) 10-30am – 3.30pm	Di Challis diana@deakin.edu.au

University	Strategy	Contact person
Edith Cowan University, University of WA & Curtin University of Technology	• Identification of large class teachers (and their support staff including course controllers and non-academic staff and technical assistants) to form registry through individual university contacts; • Survey administered via email to those on the registry to gather information on issues, practices etc; • Survey administered to a sample of students in large classes across all three campuses; • Development of resources (hard copy and web based) based on information collected from register and students and building on information coming out of the National workshop; • Forum (~ half day) to discuss issues and strategies (open to staff at all WA universities); • Report written to administrators addressing issues raised; • Report to academic developers to guide future development activities; • Summary presentation at the 2002 Teaching and Learning Forum; • (Activities will be based in part on the model used at the Newcastle workshop).	Allan Goody agoody@csd.uwa.edu.au (Steering committee with members from all 3 universities)
Flinders University	The prime activity for this dissemination project will be to target specific large enrolment topics in law, earth science and psychology to: Stage One: • Identify existing large class strategies and the difficulties encountered in implementing group learning and assessment, • Design new, appropriate group strategies for the three topics, Stage Two: • Implement them through a system of coaching, • Record the process of implementation and outcomes on the *Flinders University Teaching For Learning* web-site as models for other topics in the same disciplines to emulate. The target audience is academics who have enrolments of 300+ first year students and who currently largely use lectures and examinations are their primary mode of teaching and assessment. In the first instance three topics will be selected. Selection will be based on topic coordinators who have expressed a wish to implement group learning and assessment strategies, but who also need support in doing so. This is based on a premise that group learning and assessment strategies are often tried and quickly abandoned when the problems of implementation are encountered.	Jan Orrell janice.orrell@flinders.edu.au

University	Strategy	Contact person
Griffith University	• The activity will consist, initially, of two 3-hour workshops. • The target audience will be the convenors of large first-year classes across the whole institution • The workshops, which will have an identical format, will be held on the Gold Coast campus and on one of the Brisbane campuses • Follow-up activities will include the publication of an annotated set of curriculum and pedagogical strategies and the development of an advocacy case in relation to the administrative and technological issues. The strategies document will emerge from the discussion at the workshops, and are likely to be made public via the GIHE website; the advocacy issues will be shaped and forwarded to the Group PVCs (Arts, Business, Health/Science). The project team members are collaborating in the shaping of the workshop activities and will facilitate smaller group activities within these two events. They will subsequently collaborate in the compilation of the material generated and in its further carriage.	Margaret Buckridge m.buckridge@mailbox.gu.edu.au

University	Strategy	Contact person
Macquarie	• Provide and/or familiarise participating academics with an up to date literature review about peer mentoring systems, including establishing contacts with experienced practitioners throughout the sector *eg Barbara Kelly UQ*; • Surveying staff across MU regarding their understanding and interest in peer mentoring; • Inviting staff to a Discussion Forum to investigate the level of interest in establishing peer mentoring at Macquarie, and identifying issues to be addressed; • Co-ordinating with the Macquarie Transition Program participants in surveying students about their learning needs, and the suitability of peer mentoring as a support strategy; • Disseminating the results of initial findings (literature review, networking and discussion forum) by presenting a paper at the Macquarie First Year Experience Conference, November 12th, 2001; • Providing a Discussion Paper, outlining recommendations for the contextualisation of Peer Mentoring as a support strategy for Macquarie and its discipline areas, written for the university policy makers; • Developing an application for funding to trial this initiative. • The conference in November provides us with a venue for raising the profile of the initiative and gaining institutional feedback. Eventually we see the peer mentoring system being contextualised to deal with specifics such as international students, part-time students attending out of hours classes etc., but initially it will be focussed upon supporting large classes, particularly for level 1 students.	Sharon Fraser sfraser@ocs1.ocs.mq.edu.au
Monash University	**Website component** *Cases* • .. could be found from known examples of developments that have incorporated FL adaptations in order better to cope with large classes in some way. Set up a 'dob in a colleague' facility to find people doing interesting stuff. • .. might also be found from previous winners/applicants for VC's teaching awards ..	Malcolm Eley malcolm.eley@CeLTS.monash.edu.au

University	Strategy	Contact person
	some of those reported work related to large classes.	
	• .. develop a template for the cases .. HEDU 'guiding' role to authors here .. the basic idea is that all cases should focus in some fashion on assisting with students' learning/study processes and approaches. But within the context of teaching within large classes. The general frame should be one of pre-to-post, with a problem or issue that needs resolving being presented first, followed by the sorts of things that were considered in developing a response, then a description of the response itself, finishing with a 'good news' slant on how things are now.	
	Information pages	
	• .. a series of single issue pages .. structured to be short overview (digestible bites) with the option (navigation buttons or hotwords) of progressing to more detailed pages or downloadables if viewer wants (indeed the lit rev itself could be available as a downloadable PDF).	
	• .. ideas can come from the AAUT lit review, maybe also the final report when it comes, maybe also the 'critical' issues survey that was done.	
	Discussion list component	
	General Forum	
	• .. a general discussion list on which anyone can post a question, point, experience. No moderation applied. It's just a place where anyone with a particular problem could ask a question of the entire Monash community, allowing self-help within the community.	
	Scheduled Topics	
	• .. a moderated discussion with scheduled topics or issues. Runs in parallel with the more general forum. The topics for discussion could initially be devised from the AAUT review and report .. ie. issues/recommendations/conclusions.	
	Initially, the entire project would be established as a 'pilot project' operating within WebCT. This will allow two things .. **one**, to try out ways of organising/operating the envisaged presentation components (both the 'webpages' and the 'discussion lists'). Using WebCT enables interested parties to get 'invited' to be part of it initially, before the whole thing gets 'published' on the general Monash website. **Two**, offers yet another opportunity for Monash staff to familiarise with WebCT.	

University	Strategy	Contact person
	Will also be used to test whether the My.Monash portal can be used as a device for awareness raising .. determine which staff are teaching classes of say 100 or up, and then have a 'flag' attach to those people's portal sites so that when they log in a 'notice' comes up advising them of the existence/purpose of the site/lists.	
Murdoch University (Economics)	Development of a web site for a database of teaching materials to be shared between economics departments across Australia. This web site will be based at Murdoch University as part of the Economics Virtual Commons Project, which is already under way.	Marian Kemp M.Kemp@murdoch.edu.au
Murdoch University (Science & Maths)	There will be a one day workshop for teachers of large classes in science and mathematics in Perth WA The medium will be face to face at the workshop followed by email correspondence and on-line communication of materials. The workshop will be held at Murdoch University Function Centre on 12th October 2001	As above

University	Strategy	Contact person
Queensland University of Technology (QUT)	*Policy* One submission relating to resource, management and pedagogcial issues associated teaching large classes has been tabled at University Teaching and Learning Committee, a second submission will be tabled on 4 September 2001 proposing a staff development and support response for teachers of large classes. *Practice* An off-campus show-case event will be conducted at the Stamford Plaza in October 2001involving teachers of large classes to a) consolidate networks b) share best practice c) seek feedback on proposed long term staff development and support strategy for teachers of large classes. *Long term staff development and support strategy* A key outcome of activity in 2001 will be the development of a comprehensive staff development and support for teachers of large classes. This strategy will be developed in consultation with University Teaching and Learning Committee and those teaching large classes. *Building on previous work* A core group of staff members who teach large classes has already been identified to assist with this initiative. The October showcase follows on from a full day program for large class teachers offered in March 2001 where key management and teaching issues were shared and discussed. As previously indicated the showcase event and endorsement of the longer-term strategy has and will continue to be canvassed through University Teaching and Learning Committee. University Teaching and Learning Committee comprises Assistant Deans as representatives from each faculty, T&L support staff and the DVC as Chair. A reference group, representative of all faculties is in the process of being established. The 2001 showcase event will be heavily promoted through the TALSS and HR information dissemination networks. The 2001 showcase will represent the launch of much larger and centrally supported longer-term strategic initiative.	Georgia Smeal g.smeal@qut.edu.au

University	Strategy	Contact person
University of New England - Armidale	• Capture a range of successful approaches in teaching large classes in a range of disciplines using video recordings, then develop the video as a means of showcasing and disseminating good practice. • Implement staff development workshops where discussion of diverse approaches to teaching large classes is the focus, using the videos to trigger discussion. • Target audience is staff at UNE, particularly junior staff and those without a strong track record in teaching large classes. May be of interest to other universities	Catherine McLoughlin mcloughlin@ metz.une.edu.au
University of Melbourne	Web page containing vignettes to be posted on the CSHE web-site under the Program for Excellence in Teaching and Learning banner as well as linked to faculty and subject web pages. These web pages will provide a permanent, yet flexible forum for dissemination of material relevant to those teaching large groups	Marcia Devlin m.devlin@unimelb.edu.au
University of South Australia	Workshop (Riveria Hotel) and on-line dissemination. Initially 8 Div. Bus. & Ent. core course coordinators ($\approx$ 1200 internal, 300 external, 600 Open Learning and 500 offshore students each year per course). Then large class coordinators in other Divisions of UniSA. Incorporate results on Learning Connection web site as a permanent resource for teaches of large classes at UniSA	John Medlin John.medlin@unisa.edu.au

University	Strategy	Contact person
University of Sydney	• The first step will be to develop a pro-forma for submission of examples of the use of groups and invite expressions of interest in participating as a mentor/mentee. The first year coordinators will be asked to identify a possible unit of study in their faculty where there might be interest in introducing groups. The invitation to contribute vignettes of effective group work will be extended to the other Sydney basin Universities given the relevance to 'groups' of the proposed topics of their projects. • The second stage is a meeting to share examples and launch the network by establishing mentor-mentee connections, initially targeting nominated first year units of study in each faculty. • The third stage will be to foster ongoing support by the mentors for curriculum initiatives involving the introduction of groups in large classes across the university. • The fourth stage will be the documentation of the supported curriculum initiatives to add to the resource of successful 'group' strategies and the inclusion of the mentees as future faculty based mentors in subsequent cycles. 1. Target audience is initially those staff responsible for curriculum design in large first year classes. The target group of potential mentors is all staff using groups in their teaching. 2. Establish a network of interested First Year unit of study coordinators and teachers both as mentors and as mentees – initially through the existing First Year Coordinators Group. Extend the network of Mentees through the following channels: The Graduate Certificate graduand email list, Faculty teaching committees, the First Year Working Group of Deans representatives. 3. Locations will include the ITL meeting room and ITL web page for communication.	Simon Barrie S.Barrie@itl.unisyd.edu.au

University	Strategy	Contact person
University of Tasmania	Target audience: unit co-ordinators of large units, particularly first year. 1. Workshop for co-ordinators of large units on training tutors/demonstrators, run by external consultants along "Train the trainer" lines. 2. Guidelines posted on university Teaching and Learning web site after the workshop. Workshop to be held in Hobart initially and possibly extended to the Launceston campus of the University of Tasmania, dependent upon viable numbers	Sue Jones S.M.Jones@utas.edu.au
University of NSW	The initiative is to investigate ways in which educational technologies can be used to facilitate and enhance the quality of learning outcomes in large group teaching. The first step is to use the information generated at the Newcastle AUTC workshop and the experience of the participants to design a survey that can identify and elicit data from all teachers and tutors currently engaged in teaching large groups. This will be used to obtain a snapshot of current use. This is probably as far as a $1,000 budget will go. The team, however, will explore ways in which projects can be developed that will lead to enhancement of large group teaching. Additional resources will be sought after the survey data is interpreted and a plan for further developments is formulated. 1. The target audience is all teachers of large classes, particularly first year groups. The initial approach will be to first year coordinators. 2. The survey will be conducted by survey and personal contact. Dissemination will be in print, via staff development workshops, and on the Web. 3. The location will be all schools at the University of New South Wales. Dissemination at UNSW will be via a web-site and also through staff development workshops in Large Group Teaching. This project ties in with another initiative on this university to improve the quality of the first year experience - which is where most of the large groups are. The findings will be provided for dissemination on the UQ web-site.	Iain McAlpine i.mcalpine@unsw.edu.au

University	Strategy	Contact person
University of Wollongong	• Focus groups - a number of UOW academics from each faculty will be invited to meet over lunch and provide information about their strategies and needs for teaching large classes. • UOW AUTC project members and other educational developers will gather the data from focus groups. • Compilation of strategies and a report on needs will be written and provided to focus group members, University Education Committee, Faculty Education Committees and CEDIR, and provided to AUTC project. • Special edition of the University teaching and learning newsletter (UniTeaching UOW) on Large Classes, paper based and on web.	Maureen Bell Maureen_Bell@uow.edu.au
University of Queensland	• Identify (through interviews and surveys) and document various models of large class teaching and management used at UQ across a range of disciplines (mostly 500+ students per course). Post on web-site, distribute at lunch time meetings (see below). • Possibly conduct surveys/interviews with students [those at credit- level (5)] of large classes to identify student behaviours that support successful participation in large classes. This information will inform 'tips for teaching large classes' package (see below) and may be developed into 'tips for students in large classes'. • Develop generic 'tips for teaching large classes' based on project data (from HATs, student surveys, etc) and the literature, with supplementary materials, UQ models (see above), resource and other information for those interested to learn more. • Lunch time gathering(s) of large classes teachers, UQ wide – free lunch, informal brief 'launch' of the 'tips' package, networking opportunities, feedback most welcome. Maybe two alternative times, so as to maximise attendance. • Seek financial support (from Staff Development Committee?) to run on-going networking luncheons (in 2002 and beyond) for all large class teachers at UQ.	Rachel Hannam on behalf of the project team r.hannam@tedi.uq.edu.au

University	Strategy	Contact person
University of Western Sydney	1.Target Audience – data will be collected from staff and first year students involved in large class teaching situations. 1.1 Outcomes of this locally focussed research project and the larger AUTC Teaching Large Classes Project will be to inform the development of a staff development strategy aimed at improving the first year experience in large classes at UWS. The research will involve interviews and surveys of both students, course and subject coordinators and Heads of School and will be conducted on 3 campuses of UWS. We will provide a copy of findings and report to the UQ project, place a copy on our units homepage and make copies available to the various teaching and learning committees at UWS	Sandii Chan s.chan@uws.edu.au

Appendix B: A survey of large class teaching around Australia

Introduction

Sixty-nine highly accomplished teachers (HATs) and 21 academic developers (ADs), from 23 Australian universities, have been involved in this AUTC project aimed at identifying and disseminating best practice for teaching large classes. The HATs were emailed a survey questionnaire asking about the organisation and delivery of their large class courses in order to gather some data on how various sized classes operated within Australian universities. They were also asked about the least successful and most successful strategies they had implemented in teaching large classes. A survey was also emailed to the ADs, asking about the major issues in large class teaching, the most and least successful strategies they had come across for dealing with large classes, and details about any institutional support programs for large class teaching. Response rates were excellent, with 64 (93%) HAT surveys and 15 (71%) AD surveys returned.

Class Size

Most of the HATs (70%) taught between 70 and 500 students in their largest classes, however class sizes of between 500 and 1000+ students were reported. Class sizes varied within and across universities, however respondents from the University of NSW, the University of South Australia, the Queensland University of Technology and the University of Melbourne reported the largest classes (1000+ students). All of these were 1st year courses. Table 1 shows the distribution of class sizes reported by each university responding to the surveys.

Table 1.
Distribution of class sizes taught by HATs surveyed at each university.

University	70-299	300-499	500-999	1000+
University of NSW	1		1	1
Macquarie		1	1	
University of Sydney	1		1	
University of Western Sydney	6	3	2	
University of Wollongong	3	1		
Australian Catholic University	1	1		
Charles Sturt University	1			
University of New England	4			
Australian National University	1			
Griffith University	1	2	2	
Queensland University of Technology		1		1
University of Queensland		1	2	
University of Melbourne				3
Deakin University	1		1	

University	70-299	300-499	500-999	1000+
Monash University	3			
RMIT	1			
University of South Australia		1	1	1
Flinders University	2			
University of Western Australia	1			
Murdoch University	3	2	2	
Edith Cowan University	1			
University of Tasmania	1	1		
Sub-totals	30	15	13	6

Range of disciplines

The HATs surveyed came from a range of discipline areas. These have been roughly grouped into four areas: 1) business-related, 2) science-related, 3) social sciences and humanities and 4) maths and physical sciences. Class sizes varied across the full range of disciplines, however first-year business-related classes (such as business management, accounting and economics) do feature prominently in the larger categories (500-999 and 1000+). Table 2 shows the overall distribution of disciplines taught by the survey respondents.

Table 2.
Distribution of disciplines

Discipline area	Business -related (accounting, law, economics, business management)	Science-related (chemistry, biology and health science)	Social science & humanities (education, cultural studies, psychology)	Mathematics & physical sciences (including statistics and engineering)
Number of cases (N=64)	**24**	**17**	**16**	**7**

Organisation of the classes

Survey participants were asked to provide general information about the teaching modes used, as well as some details about how they coordinated smaller sessions such as tutorials and labs. Details provided include the number of tutors employed, and the types of resources they provided to staff and students (eg. study guides).

Lectures

Nearly 66% of respondents (40 out of 64) indicated that they taught as part of a team of 2 or more lecturers. The likelihood that the class was taught by a team of lecturers did not appear to be influenced by class size. About two thirds of lecturers of both smaller classes (90-299 students) and very large classes (1000+ students) reported teaching in teams.

Most of these on-campus university courses were generally organised in a similar way, offering a weekly lecture supplemented by a weekly tutorial. About 75% of participants (47/64) reported giving 1 weekly lecture, although repeats of the same lecture were presumably used in larger classes (500+ students). Only 25% (16/64) reported providing 2 or more lectures on a different topic per week. The likelihood that more than one lecture per week was provided seemed to decrease with increased class size - 30% of classes with 70-299 student vs. 9% of classes with over 500 students.

Small group sessions

Small group sessions (labs, tutorials etc.) were used by 94% of HATs surveyed (60/64). Of these, 11 provided fewer than one small group session per week (usually fortnightly instead), but the majority (47 HATS) reported offering students a weekly tutorial or laboratory class. Only 2 of the HATs said they offered twice-weekly small group sessions; both of these had less than 200 students.

Not surprisingly, classes with fewer than 300 students tended to have fewer tutors or lab demonstrators. Two thirds of these employed small group facilitators, the number ranging from 1 to 4. Only 7 classes involved five or more small group facilitators. As would be expected, most of the larger classes (300 to 1000+ students) employed 5 or more tutors, with all of the 1000+ classes employing more than 8 tutors.

All of the smaller classes (90-299 students) with 5 or more tutors appointed a tutorial coordinator or senior tutor to manage the team of tutors. Tutorial coordinators were appointed in about half of the larger classes (300+ students). Where one tutor was not assigned the role of coordinating the team of tutors, the course coordinator usually assumed this role.

Class sizes in small group sessions (eg. tutorials) tended to increase as overall enrolment numbers increased. Whereas more than 50% of courses with less than 300 students reported running tutorials/labs with fewer than 20 students per group, only around 10% of the courses with more than 500 students were able to manage this. In the category of 300-500 students, around half kept small group sessions under 20 per group. However, some had as many as 40 students per group. Table 3 shows the class sizes of tutorials and small group sessions for three categories (70-300, 300-500 and 500+ students).

Table 3
Small group session size as a function of number of students enrolled in course

Small group session size	< 500 students	300 - 500 students	500+ students
< **20** students per group	17	8	2
> **20** students per group	13	7	17
Sub-totals	30	15	19

In terms of supporting tutors and students in large class contexts, 41 of the 64 respondents provided tutoring guidelines, handbooks or set materials to assist tutors with their teaching. This proportion increased in the largest category (1000+), where 5 of the 6 provided tutorial guides to help inform and manage large teams of tutors. In addition, 5 of the 6 1000+ respondents said they used some form of study or learning guide for students to work through, which tutors could also (presumably) use and refer to in class. Courses in the 300-500 category also commonly reported the use of study guides, with 12 of the 15 (80%) reporting that they offered such a resource to students.

Assessment

Assessment modes

Survey participants were asked to provide information about assessment used. Some respondents included a breakdown of weighting for each assessment item (eg. 50% exam, 25% assignment, 25% group project). However, others simply listed and described their assessment without this breakdown. Therefore, this section will discuss and summarise the range of assessment items used across various discipline areas and class sizes.

In general, the larger courses (500+ students) and business-related courses used more traditional assessment procedures; namely written assignments, sometimes accompanied with a seminar presentation, and one or more written examinations. Less "traditional" assessment exercises such as formative assessment, group projects, marks for participation (online or in class) and portfolio work were used across all discipline areas but tended to be utilised more frequently in the smaller courses (less than 500 students). As would be expected, most science-related and practical subjects, such as nursing (approx. 80%) incorporated practical assessment items such as experiments or fieldwork.

Interestingly, most respondents (54/64) reported using 3 or more pieces of assessment per semester, including exams, essays, reports, pracs, group work and portfolios. This was the case even in very large classes. Research suggests that a range of assessment items, if appropriately designed, increases the validity of the assessment program (Biggs, 1999). Thus, it may not be surprising that most respondents used a variety of assessment, given that the respondents were selected for the project on the basis of their teaching skills. However as discussed below, many still felt they had to use less meaningful and less authentic assessment exercises in larger classes than they would in smaller classes.

Table 4 shows the number of HATs reporting use of various assessment exercises with their large classes. Some overlap between categories did occur and thus a few assessment activities were recorded under two headings (such as online examinations, recorded under *exams* and *online assessment*). Written reports (including essays, research papers and topical assignments) were the most frequently used assessment activities. Examinations were most common, although less likely to be used in social sciences and humanities subjects where various types of written assignments were used, sometimes with no formal written exams at all.

Table 4.
Reported frequency of use of various assessment activities

Assessment activity	No. Used (N=64)
Written reports, essays or assignments	53
Mid-semester and/or final exams	52
Formative and/or non-graded assessment *(including MCQ quizzes, set questions or problems, etc)*	25
Tutorial or seminar presentations	20
Practical exams *(+ those with accompanying written tasks)*	19
Group projects or activities	19
Peer- and self-assessment	18
On-line assessment *(including online tutorials, computer assisted learning, etc.)*	16
Participation marks *(on-line or in class)*	7

Respondents were not specifically prompted to make mention of peer- and self-assessment tasks used in their large classes, however 18 reported using some form of assessment activity carried out by someone other than a teacher. This included peer marking, group exercises with a self- or peer-marking component and formative self-assessment (such as marking one's own work against a set of criteria). None explicitly mentioned that these marks contributed to final course grades. However, in response to a survey item asking about the most successful strategies used, one HAT suggested that the introduction of peer marking had to some degree reduced the teachers' marking loads.

One of the HATs who taught over 800 students explicitly described his use of flexible assessment where students have the option to omit certain assessments if they are happy just to pass, whereas students wishing to obtain a high grade undertake all assessment tasks. This arrangement has reportedly reduced the number of students appealing their final grade as well as the overall marking load.

Marking

Survey participants were asked to say who marked the various assessment activities. Eight of the respondents (all in the 70-300 students category) said they handled all marking on their own. The remainder of HATs reported sharing the marking load amongst all teaching staff (including lecturers and tutors). The use of computer marking was only specifically mentioned by 8 respondents. Only 3 mentioned hiring casual markers to handle large marking loads. A common arrangement was for lecturers to take responsibility for marking exams and sessional staff (tutors or lab demonstrators) for marking their own students'

essays, lab reports, presentations etc. In 10 of the 64 cases, sessional staff carried out all marking tasks according to guidelines set by the lecturer, with the course coordinator moderating final marks and mark distributions. As mentioned below, marking load was still seen as problematic in large classes, with 11 respondents specifically mentioning this as a major issue.

Teaching and Learning Technology

HATs were asked whether their courses included any web-based activities to structure or enhance students' learning. In 40 of the 64 cases, web-based activities were described covering the full range of disciplines. As shown in Table 3, 16 cases involved on-line assessment that contributed to between 2.5% and 40% of students' final grades. Twenty-eight of these had course-specific web-sites or web-pages (such as Web CT) for students to down-load course materials such as marking criteria and lecture notes, perform practice exams and access course updates and announcements. Five reported using computer conferencing or discussion boards. Three of the HATs running 500+ classes report using audio-streaming to make video clips and lectures available online.

One respondent required all students to down load pre-lecture material before attending classes.   Two HATS from the same university reported using computer managed testing whereby students down-load and print out random sets of test questions, take home and work on the questions and return within 1-2 weeks to input their answers which are then corrected by the software program. Students wishing to seek further clarification or explanation can discuss the questions with their peers, in tutorials or approach the lecturer personally.

The remaining 12 cases that did not have course-specific web-sites described a more incidental use of web-based activities where students were directed to related web-sites and encouraged to use the web when writing assignments or answering set problems. HATs were not directly asked about their use of non web-based teaching and learning technology. However some did specifically mention using various forms of technology. One HAT reported the successful use of a set text accompanied by a CD ROM study guide. Several respondents commented on their use of teaching technology such as Power Point presentations. Interestingly, one respondent said Power Point was the most successful lecturing tool she had used for structuring lecture content whereas two others deemed it to be the least useful method, claiming that it reduced flexibility in teaching and in movement around the lecture hall.

Major Issues

Survey participants (both HATs and ADs) were asked: "What do you see as the 2 major issues/problems in teaching large classes?". The most frequently reported problematic issue in large classes was the inability to get to know students personally and reduce students' feelings of anonymity in class.   The frequency with which HATs reported various problematic issues arising in large classes is as follows (number of responses in brackets);

- Knowing students and creating interactive classes (27)
- Engaging students' interest, maintaining attention of back rows in lectures (22)
- Heterogeneity of the group; knowing at which level to pitch the lecture (14)
- Coordinating and managing assessment; marking load (14)
- Identifying and making time to help students at risk (11)
- Getting/giving feedback and managing student inquiries (11)
- Course design (including how to add value to course materials), planning and preparation time (10)
- Consistency/conformity of teaching and feedback (10)
- Co-ordination/training of tutors/staff (8)
- Motivating students to participate in class (7)
- Limited resources and budget for the class size (6)
- Devising authentic/valid assessment (5)
- Crowd control/noise levels (5)
- Finding capable/enthusiastic staff (5)
- Lack of admin support (inc. timetabling assistance) (4)
- Finding effective presentation methods, varying presentation strategies (3)
- Devising manageable yet flexible learning (3)
- Getting authentic, student-centred learning to occur
- Space/equipment requirements (including configuration of lecture theatres) (2)
- Plagiarism (1)

HATS providing these responses had the opportunity at the 1st National workshop held in July, 2001 to discuss and further 'tease out' these issues with one another. Techniques and ideas for coping with these problems were shared and summaries of these discussions may be accessed by visiting www.tedi.uq.edu.qu/largeclasses/ .

Responses to the "major issues" question were by and large consistent with, and paralleled by, the available literature on large classes. Much has been written about course design, managing assessment and effective delivery in large class settings. Most of the literature that deals specifically with the problems encountered by members of large classes (teachers and students) highlights the issue of student anonymity as a major concern (although students generally experience more disadvantage because of this anonymity). The anonymity of students in large classes has been associated with students taking a more passive role and being less likely to participate with in-class activities, hoping that their lack of involvement will 'go unnoticed'. Several techniques have been suggested that can encourage and obligate students to be more involved in class. These strategies, as well as a range of other methods for managing these issues haven been reported in the literature (see literature review) and are touched upon in the following section.

Most successful strategies with large classes

The choice of teaching and assessment methods is directly and indirectly influenced by class size. Issues such as insufficient physical space, resource constraints and workload for marking can directly constrain the choice of teaching and assessment methods for large classes. Class size also impacts on the range of teaching and learning methods that can be used effectively and these in turn affect the appropriateness of various instructional and assessment tools.

In an attempt to identify effective methods currently being used to teach and assess large classes, survey respondents were asked the question: "What are the 2 most successful things you have implemented in teaching a large group?" A wide variety of descriptions were provided, although there were some with a common and similar theme. The most common response was that introducing a course web-site was a successful means of facilitating learning and communication with large groups. However, a range of responses were provided covering issues of delivering lectures, handling students, coordinating small group sessions and managing assessment. The frequency with which various strategies were reported as successful is as follows (number of responses in brackets);

- Small or focus group discussions in lectures and tutorials (eg. student-centred discussion) (12)
- Web-based course materials, course web-site, discussion boards, on-line resources (including video clips of lectures) (8)
- Using mixed media including videos, music, slides, overheads etc (8)
- Lecture exercises, individually or in pairs, students to discuss and/or write (8)
- Study and learning guides, tutorial and lecture guides, lecture outlines with space to write (7)
- Encouraging team work amongst tutors and academic staff (6)
- Tutorial or lecture tests/quizzes (5)
- Peer assisted learning; study-skills sessions, teaching collaborative learning skills (5)
- Problem-based learning (4)
- Innovative use of lecture space (eg. rearranging furniture), and/or using flat floor lecture room (4)
- Clear marking guidelines; moderation or standardisation of assessment (3)
- Helpdesk, student liaison officer, tutor on 'duty' roster (3)
- MCQ's in lectures and a show of hands; direct Q&A in lectures (2)
- Tutor teaching guide/plan for activities (2)
- Oral presentations (group and peer assisted) (2)
- Open door policy & after/hours for students (2)
- Case studies/narratives (2)
- Provocative introductions; use of real examples from media etc (2)
- Learning names (2)
- Power-point presentations (1)
- "Special topic" lectures/guest lectures (1)
- Short breaks (1)
- 'Rehearsing' lab sessions in tutor meetings (1)

- Range of interesting topics (1)
- Replacing tutorials with longer, less frequent workshops (1)
- Skills based assessment (1)
- Diagnostic assessment (to identify students at risk) (1)
- Assessment of tutorial participation (1)
- Tutorial exercises as weekly feedback (1)
- Essay examinations (to avoid plagiarism) (1)
- Standardisation of assignments across all tutorial groups (1)
- Multiple assessment methods (1)
- Portable microphones around lecture theatre to encourage student participation (1)

A few examples were given which, although included under one of the above categories, were somewhat unique in nature. One simple yet innovative example provided by a business lecturer involved having students complete exercises in lectures using carbon paper to create 2 copies of their responses. This method may act as a kind of informal assessment, as students are required to hand one copy to the lecturer at the end of class and keep one copy for themselves. Presumably the names of students submitting a copy could be recorded and this information used either to provide a small number of marks or in case of borderline end-of-semester results. The lecturer could also select a random sample of responses for discussion at the following lecture.

One HAT teaching statistics reported on the success of using games to teach statistics and an engineering-mathematics lecturer reportedly provides short, interesting problems at the beginning of each lecture so that 'early bird' students have something to do while the 'stragglers' arrive. On the issue of maintaining attention in large lectures, several HATs report success with using a variety of multi-media, including beginning their lectures with pop music and/or interesting videos or comic strips that relate (however tenuously) to the lecture topic. Last, on the issue of coordinating sessional staff, one respondent reported *pre-running* lab experiments to ensure quality control, as well as provided thorough training of lab demonstrators and conducting "wash-up" meetings with all lecturers, demonstrators and technical staff at the end of each semester to identify and correct any problems.

As noted above, class size often determines the appropriateness of the instructional and assessment tools that could be used, meaning that some teaching and learning methods that are effective with smaller groups are less effective (or entirely ineffective) with large classes. Hence, participants in the present survey were also asked to comment on any strategies or techniques they had tried that had been *un*successful in teaching or managing large groups.

Least successful strategies with large classes

Participants were asked the question: "What are the 2 least successful things you have implemented in teaching a large group?" Again, a wide variety of responses were provided, although some shared a common and similar theme. The most common response

was that optional activities and workshops that were not assessable or were unrelated to assessment items were least successful in motivating students and encouraging participation. The frequency of which various strategies were reported as least successful is as follows;

- Optional (non-assessable) workshops/classes/activities (7)
- Straight didactic lecturing (5)
- Overloading tutors/staff; inadequate support/guidance (4)
- Discussion groups with 400+ students; group work in lectures (4)
- Over-reliance on, or inappropriate use of technology (4)
- Power-point presentations; strict lecture notes (4)
- Poor coordination/communication amongst tutors & academic staff (3)
- Assigning marks to tutorial preparation and/or participation (3)
- Q&A in lectures (3)
- Incongruent lecture and tutorial topics (inc. different essays/exams for different groups) (2)
- On-line discussion groups (due to students lacking skills) (3)
- Over reliance on MCQ exams/final exam; badly written MCQs (3)
- Lack of preparation/organisation (3)
- Weekly tutorial papers (increases marking load) (2)
- Group assignments (due to lack of participation from some students) (2)
- Student-driven tutorials; "self-discovery" exercises with 200+ students (2)
- Asking redundant questions (eg. "Does that make sense?") (2)
- Guest lecturers (with little integration to overall course) (2)
- Student note-taking without skeleton hand-out (1)
- Giving students a full set of lecture notes (1)
- Assisting formation of study groups (1)
- Time consuming training of first years to use web site (1)
- Take-home tests (1)
- Learning portfolios with no regular follow-up/encouragement (1)
- Taking rolls; making lectures compulsory (1)
- Too much focus on bottom end (needy) students (1)
- Streaming students according to ability or major (1)
- Computer marking (due to lack of qualitative feedback) (1)
- Didactic teaching methods (1)
- After-hours student contact (1)
- Jokes (1)
- Personal anecdotes in lectures (1)

Once again, responses to the "least successful" question were largely consistent with much of the available literature. Much has been written about the need for assessment to be a part of the learning process and for activities to be related to or incorporated into the assessment. Furthermore, the literature has frequently highlighted the importance of systematic coordination and communication with sessional staff (tutors etc) as well as many of the other issues and examples described above (see literature review).

As with the "most successful" responses, a few examples of least successful strategies were somewhat unique and interesting. One HAT teaching marketing commented on the use of video "up-linking" of lectures in real time to remote lecture theatres in order to avoid running repeat lectures. The comment was made both in the HAT survey and by several HATs at the workshop that this technique was ineffective due to poor sound quality, a lack of feedback and interaction between teacher and students and the impersonal atmosphere the remote lecture creates.

In keeping with the literature on effective note-taking, a lecturer in nursing noted that providing complete sets of lecture notes had previously caused some students to 'switch off' and so now uses structured lecture notes with key points/questions left blank for students to fill in during lectures. Also consistent with the literature was a comment from another lecturer that on-line resources such as bulletin boards are unsuccessful if not properly promoted and incorporated into the course and into at least some classroom activities.

Institutional Support

The ADs surveyed were asked to describe programs for supporting large class teaching that were operating from their Academic Development Unit, or at the Faculty/School level. Not all universities represented by the survey respondents had any support programs in place currently, or in the past. In about 75% (10 of 15 universities represented), there were either no ADU run programs, or no Faculty/School based programs. A small number of universities did not have any support programs for large class teaching. There were a range of different initiatives described, but the most common included the following:

ADU programs

- generic teaching workshops with large class component (eg. Introduction to Teaching, Good Lecturing)

- large class specific workshops (eg. Encouraging Active Learning in Large Classes, Teaching Large Classes)

- projects on large class issues (eg. Using Peer Assessment to Improve Student Learning in Large Classes, Promoting Teamwork in Course Coordination)

Faculty/School Programs

- tutor training (often supported by ADU resources), tutor Manuals

- peer mentoring (for tutors)

- student learning support (eg. Supplemental Instruction, Peer Assisted Study Sessions)

- administrative support for large classes

- support for creating and maintaining web-based materials for large classes

While a few universities seemed to have a range of support mechanisms in place, in the majority, these initiatives were often ad-hoc and only operating on a needs basis (i.e. school/individual goes to ADU for resources which may include a workshop).

Summary

The survey results show that, for the most part, large classes across Australian universities are similar in many respects. The majority of large classes are taught as part of a team of 2 or more lecturers (and tutors), and are generally organised around a model of weekly lectures supplemented by a weekly small group session (eg. labs, tutorials etc). Most classes also supported tutors with tutoring guidelines, handbooks or set materials to assist tutors with their teaching. In terms of assessment, the larger courses (500+ students) tended to use more traditional assessment procedures (eg. written assignments and exams) while smaller classes (less than 500 students) were more like to include alternative assessment methods such as formative assessment, group projects, marks for participation (online or in class) and portfolio work.

The major issues faced by teachers of large classes were similar, with the most frequent issues centring around student and teacher interaction (eg. getting to know students, engaging students' interest, facilitating interactive classes), heterogeneity of the group (eg. knowing where to 'pitch' the lecture, identifying and making time to help students at risk), coordinating and managing teaching and assessment (eg. consistency/conformity of teaching and feedback, getting/giving feedback and managing student inquiries, co-ordination/training of tutors/staff), course design (eg. planning and preparation time, how to add value to course materials).

The strategies that teachers had implemented to enhance the ir large classes teaching were also similar, but there were also many different methods used. The most successful strategies that survey respondents reported included small or focus group discussions in lectures and tutorials, web-based course materials, discussion boards and on-line resources (including video clips of lectures), using mixed media in lectures (eg. videos, music, slides, overheads etc), giving lecture exercises (individually or in pairs, getting students to discuss and/or write), providing study and learning guides, tutorial and lecture guides, and lecture outlines with space to write. The most frequently reported least successful strategies that had been tried included using optional (non-assessable) workshops, classes or activities, and straight didactic lecturing.

In terms of available institutional support, the results indicate that there is little systematic or ongoing support operating currently in Australian universities. The most common initiatives involve workshops offered once or twice a year from the ADU, and tutor training workshops run by individual Schools or Faculties (but usually not across the board at a single university)

Appendix C: Report on the 1st National Workshop

The first of 2 national workshops was convened on July 8, with the majority of project participants in attendance. There were 44 highly accomplished teachers and 24 Academic Staff Developers from 24 universities (including 1 participant from Victoria University of Wellington, NZ). The workshop was run by a sub-committee of the project team; Denise Chalmers, Ron Weber, Doune Macdonald, Debra Herbert, and Rachel Hannam. This team was assisted by Catherine Manathunga (an Academic Consultant at TEDI, University of Queensland) and Carol Nicoll (a member of the Reference Group) who both helped as facilitators.

The aims of the workshop were:

- To create a national network of teachers with expertise and interest in teaching large classes

- To discuss major issues in teaching large classes in a university environment

- To identify methods of good practice across a range of disciplines

- To plan for institutional and/or regional-based strategies for encouraging uptake of best practice in large group teaching.

The workshop consisted of 3 main sessions. In the first session, participants broke into 5 groups (organised prior to the workshop, with a mix of disciplines, universities and teachers/academic developers) to each discuss one of the 5 major issues identified through the literature review and surveys:

- Student issues (e.g., motivation, interest, interaction, heterogeneity of needs/backgrounds, students at risk etc)

- Teaching management and curriculum issues (e.g., curriculum and course design, staff/tutor coordination and management, tutor/staff training and professional development etc)

- Administration, resources and institutional support issues (e.g., teaching and assessment resources, budgeting, space and equipment requirements, staffing, institutional support for large class teaching etc)

- Teaching and learning strategies (e.g., managing student inquires, ideas for effective presentation strategies etc)

- Assessment (e.g., setting valid/authentic assessment, giving feedback, marking load and management, standardisation of assessment and marking etc)

Each issue area was discussed in relation to questions such as – In what ways does a large class impact upon students?; What other problems do large classes present with regards to this topic?; What have you or your universities done to address these student issues?; What are the effective strategies you have used in this area with large groups?; What are the least

successful things you have tried or seen used with large groups?. Main points were then reported back to the whole group.

The second session involved participants breaking into discipline areas, and discussing the important issues for large group teaching in a particular discipline, and the strategies that have been employed, why they worked or didn't work etc. There were 4 broad discipline groupings (and each could break out into smaller groups if appropriate);

- Business related (accounting, commerce, management, law)
- Science and mathematics
- Social science and humanities
- Economics

For both session 1 and 2, all discussions were scribed and sheets collected by the facilitators. This data has been collated and documented in a report to incorporated into the report/s from the literature review and surveys.

In the third session, participants joined together as institutional groups, and brainstormed ideas for an appropriate dissemination initiative for their institution. Regionally-related university groups (e.g., Qld, Sydney-based, NSW regional, Victoria, WA) then shared ideas and, if appropriate, planned for collaborative initiatives/projects. First, participants were provided with a brief overview of educational change and the types of strategies that might be relevant for different levels (e.g., level 1 - surface change, relatively easy; use of new and revised materials and activities). This information was intended to serve as a prompt for discussion, and participants were also provided with a dissemination initiative proposal form on which they could document their ideas and proposals (including the goals of the initiative, audience, medium, location, participants roles and responsibilities, budget outline, timeline, and evaluation strategy). Several universities indicated that they would collaborate with other institutions in their region (e.g., UWA, Curtin, Murdoch and Edith Cowan), while a large number of universities intend to coordinate internal activities.

The proposal forms have subsequently been emailed to the Academic Staff Developers (or appropriate contact person). Each university/regional project group is required to complete and return the proposal form in order to receive the $1000 contribution towards their dissemination project. The deadline for submitting proposals is August 3.

The workshop also offered participants an opportunity to raise issues not directly addressed at the workshop. This was achieved by providing "Burning Issues" forms on which participants could write down their thoughts, ideas or concerns about large class teaching and deposit them in a box. These, along with all field and discussion notes 'scribed' by participants and UQ project team members were collected and have been collated and summarised for distribution to participants. This data will also be used to inform future project activities (such as conceptualising a theoretical framework for large class teaching, and planning for the 2nd workshop in November).

All participants were emailed a workshop evaluation form requesting feedback on aspects such as the organisation, delivery, achievement of goals and venue of the workshop. Feedback via this evaluation has so far been generally positive, and many of the participants have also provided positive feedback and comments by way of informal emails.

Prepared by:
Debra Herbert
On behalf of the Project Team

Appendix D: Report on the 2nd National Workshop

The second of two national workshops was convened on November 26-27 2001, with the majority of project participants in attendance. There were 38 highly accomplished teachers (HATs) and 22 Academic Development Unit staff (ADUs) from 21 universities. The workshop was run by a sub-committee of the project team; Denise Chalmers, Ron Weber, Doune Macdonald, Nan Bahr, Debra Herbert, and Rachel Hannam.

The aims of the workshop were to:

- Disseminate project findings, introduce new resources and obtain feedback on these resources;
- Create opportunities for participants to share information on university-based project activities;
- Share information and issues relating to university-based dissemination projects;
- Encourage participants to become 'agents of change' within their own institutions.

Workshop sessions

The workshop consisted of nine distinct sessions over the 2 days. Sessions for Day 1 were:

- Presentation by UQ project team of major findings – a summary of the project's activities and general findings from literature review and UQ survey;
- Presentation by UQ project team of AUTC project on Sessional Teaching (commencing 2002) – an overview of the project inviting expressions of interest from participants;
- Web-site launch by UQ project team – an overview of the draft version of the 'Large Classes' web-site;

Concurrent presentations by Highly Accomplished Teachers from the University of Queensland and Queensland University of Technology. These sessions served to flag innovations in large course teaching and management and to obtain feedback from workshop participants on the draft guidelines (approximately 15 people per group). Each session was run twice, and participants attended two of the four sessions. Issues addressed in these sessions were

- Managing online
- Managing Assessment
- Tutor management
- Computer lab session (to view Large Classes web-site);

A discussion was chaired by Ron Weber and led by Professor Rod O'Donnell (Macquarie University) on "Reflections on What We're Doing". Invited speaker Professor Margaret Gardner (PVC) gave a presentation on "Flexible Delivery and Quality Assurance in Universities".

Sessions for Day 2 were:

- Invited speaker Dr Linda Hort (Director CEDAM, ANU) led the discussion on "Managing Resources in Large Courses";
- Parallel sessions for university-based dissemination project teams - participants broke into 3 groups (approximately 7 universities were represented in each group) to report on completed and planned activities (ie. their use of the $1000 funding to support dissemination);
- Presentation by UQ project team on change management in universities.

Papers based on the workshop discussions have subsequently been provided by two of the invited speakers - "Managing and Resourcing Large Classes" by Dr Linda Hort and "Reflections on what we're doing" by Professor Rod O'Donnell. These papers will become available via the Large Classes web-site at www.tedi.uq.edu.au/largeclasses later this year. A workshop evaluation was sent to all participants in the week following the workshop and feedback was obtained for each of these sessions (see below).

University-based dissemination projects

Prior to the workshop, the contact person for each dissemination project was contacted and asked to provide a one-page description on what their university had achieved or planned to achieve in the near future in terms of dissemination. Upon arrival workshop participants received a copy of these as part of their materials package.

Each of the universities represented at the workshop presented a 10-15 minute report on their dissemination activities. Although participants only heard a sample of other dissemination projects (around 6-7), every participant received a description of all projects being conducted. Participants also had opportunities to discuss their university's activities informally during the 2 days.

The universities reporting on dissemination projects were Australian Catholic University, Australian National University, Macquarie, Monash, Murdoch, University of New England, University of Melbourne, Deakin, University of NSW, University of Wollongong, University of Western Sydney, RMIT, University of Sydney, University of South Australia, University of Tasmania, Griffith University, QUT, Flinders, Edith Cowan and University of WA. These last 2 (Western Australian) universities conducted a cross-institutional dissemination project. All other institutions conducted university-based projects.

These sessions proved to be most useful to participants in sharing ideas and creating networks of expert teachers as evidenced by informal comments and evaluations data.

Workshop Evaluation

All participants were emailed evaluation forms asking for comments and feedback about the workshop (see section below for sample form). A total of 23 responses were received (39% response rate). Feedback was generally very positive with the majority of these respondents (87%) agreeing that their time was well spent at the workshop.

The majority of participants agreed that the workshop satisfied its stated objectives (see above) with approximately 80% or more of respondents agreeing or strongly agreeing with the statement that each purpose of the workshop was met.

Respondents generally agreed that the Day 1 sessions were worthwhile, with around 80% agreeing that the sessions were worthwhile, although there was less agreement about the suitability of the session on flexible delivery and quality assurance.

The majority of participants agreed that the parallel sessions on Day 2 were very worthwhile (87%). Likewise, most respondents felt that the closing comments from the AUTC representative was beneficial (74%), however there was variable agreement on the usefulness of the other Day 2 sessions.

All respondents found the pre-workshop communication and organisation satisfactory or better (with 87% choosing very good or excellent). Just over 70% of respondents rated the workshop facilities and refreshments as very good or excellent.

Most people found the length of the workshop to be "just right". Only two respondents felt that the workshop was "too short" and four rated it as "too long". See Appendix B for a summary of responses to all of the above survey questions.

Participants were specifically asked to comment on any sessions they rated as "poor". These comments have been collated and summarised for future use (see Appendix C). Participants were also asked to comment on particular strengths of the workshop. A number of the positive comments pertained to opportunities provided to participants to network and share ideas and strategies for teaching and disseminating best practice (see Appendix C). In addition, many of the participants provided informal positive comments and feedback by way of phone calls and e-mails.

Other feedback

The workshop also offered participants an opportunity to raise issues not directly addressed at the workshop. This was achieved by providing "Burning Issues" forms on which participants could write down their thoughts, ideas or concerns about large class teaching and deposit them in a box. These, along with all field and discussion notes 'scribed' by UQ project team members were collected and are in the process of being collated and summarised for inclusion on the web-site. This data will also be used to inform any future activities relating to this and other projects.

Prepared by:
Rachel Hannam and Debra Herbert
On behalf of the Project Team.

Workshop evaluation form

1.   Please indicate (with X) the degree to which the purposes of the workshop were met:

= strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree					
The purposes of the workshop were to:	**1**	**2**	**3**	**4**	**5**
1. Disseminate project findings, introduce new resources and obtain feedback on these resources					
2. Create opportunities for participants to share information on university-based project activities					
3. Share information and issues relating to university-based dissemination projects..					
4. Encourage participants to become 'agents of change' within their own institutions.					

2.   Please indicate the degree of your agreement with each of the following statements:

1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, 5 = strongly agree					
Workshop Delivery:	**1**	**2**	**3**	**4**	**5**
1. The workshop was appropriately structured.					
Day 1					
2. "Major project findings" session (Debra Herbert) was worthwhile.					
3. "Web-site preview" (Nan Bahr) was worthwhile.					
4. Concurrent sessions with guidelines (web-site and 3 case study speakers) were worthwhile					
5. The discussion on "Reflections on What We're Doing" led by Professor Rod O'Donnell was worthwhile.					
6. The session on Flexible Delivery and QA led by Professor Margaret Gardner was worthwhile.					
Day 2	**1**	**2**	**3**	**4**	**5**
7. The session on "Managing Resources" led by Dr Linda Hort was worthwhile.					
8. The parallel sessions for sharing university-based dissemination projects were worthwhile.					
9. The session on 'change management within universities' (Doune Macdonald) was worthwhile.					
10. Carol Nicoll's (AUTC) closing comments were relevant and worthwhile.					

For any item you *disagree* with please tell us why.

3. *Please rate (using X) the organisation and administration for this workshop.*

1 = poor, 3 = satisfactory, 5 = excellent					
Organisation and Administration:	**1**	**2**	**3**	**4**	**5**
Pre-workshop communication (e.g. notification, information about the venue, other pre-workshop information)					
Suitability of rooms and facilities for the workshop activities					
Refreshments and lunch					

 For any item you rate as *poor* please tell us why.

4.   Was the workshop: Too short? _____   Just right?_____   Too long?_____

Comments:

5.   Overall, what is your assessment of this workshop out of 5 (1 = low, 5 = high)?

1 ___	**2**____	**3** _____	**4** _____	**5** _____

6.   Overall, do you think your time at this workshop was worthwhile?

Not at all **1** ____	**A little** **2** _____	**Moderately** **3** _____	**Mostly** **4** _____	**Completely** **5** _____

7.   If you had any expectation of the workshop you thought would be addressed that were not, could you please describe these below.

8.   Please comment on particular strengths of this workshop.

9.   Any further comments.

Summary of responses for Evaluation of National Workshop II

Question	1.1	1.2	1.3	1.4	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	3.1	3.2	3.3	4*	5	6
Mean Rating	4.09	4.35	4.09	4.0	3.83	3.87	4.17	3.86	4.35	3.0	3.70	4.23	3.64	3.9	4.61	3.96	4.0	2.09	3.9	4.0
% Agreed	87	96	87	74	78	78	87	78	83	43	65	87	57	74	87	70	74	74	74	87

1 = strongly disagree/very poor

2 = disagree/poor

3 = uncertain/ average

4 = agree/above average

5 = strongly agree/excellent

*For this item

1 = too short

2 = just right

3 = too long

Summary of comments for Evaluation of National Workshop II

Q2. For any item you disagree with please tell us why.

- The majority of comments related to participants' disappointment that more time was not devoted to hearing about all of the dissemination projects being conducted at the various universities. A few people also felt that more time could have been spent reviewing the draft guidelines.
- Four respondents suggested that the session on flexible delivery and quality was not entirely appropriate for this workshop.

Q4. Was the workshop too short, just right or too long? Comments:

- Respondents mostly agreed that the workshop was 'just right'. Those who rated it as too long remarked that they felt certain sessions (eg. flexible delivery and change management) were not necessary. Those who said it was too short noted that they would have liked to spend more time discussing dissemination projects, the draft guidelines and the web-site.

Q7. If you had any expectation of the workshop you thought would be addressed that were not, could you please describe these below.

- Many respondents expected more time would be allocated to discussing university-based dissemination projects. Some had hoped that certain of the more interesting ones would be presented to the whole group.
- A few respondents suggested the workshop could have been improved by having fewer presentations and more opportunities generally for discussion (such as the projects, guidelines, web-site etc).
- Some remarked that they expected more discussion about 'campaigning' for extra resources for large classes, but others noted that Carol Nicoll's closing remarks made clear that this was not one of the projects' aims.

Q8. Please comment on particular strengths of this workshop.

- Most of the responses in this section pertained to the opportunities created for participants to network and make valuable future contacts.
- Several mentioned the opportunity to hear about what other universities are doing (dissemination and other projects) and share ideas.
- Several respondents also remarked that the workshop was well-organised and that the team was professional and welcoming.

- Three people commended the workshop for foregrounding some of the political issues (such as resourcing large classes) as well as the willingness of the project team to allow such debate and discussion.

Q9. Any further comments.

- Again, several respondents remarked that the workshop was well-organised and that the team was professional and approachable.

- The comment was made that the workshop had inspired a few of the participants to prepare an application to develop a training and orientation program for tutors.

- A few respondents reiterated that the workshop could have been improved by having fewer presentations and more opportunities generally for discussion.

- An example of one of the many positive comments made about the workshop (and project in general):

> *"A really great opportunity to find out where Higher Ed is heading. Linda Hort was very challenging (not just nice). The web-site demo was terrific! Thankyou for taking the approach you have; namely including the sector. Such a contrast to the other 'expert' driven projects. I hope you get many more as your approach to this has been a credit to you. I have loved being involved. The staff from my university have gained much from their participation and we have forged new and productive relationships as a result. I hope that your approach is duly recognised and appreciated by the sector" (workshop participant).*

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