

Administration and management of large classes

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Introduction

The expansion in student numbers that has occurred in recent years has not been accompanied by a corresponding increase in staff levels or resources, which has necessitated a radical reappraisal of existing teaching methods and course structures in many institutions. Universities have coped with the situation by reducing the number of courses offered, and increasing lecture sizes and the number of support classes (tutorials and laboratories). There has also been an inevitable increase in the administrative burden for academics and course coordinators, who have assumed responsibility for managing larger numbers of teachers, general staff and students. These changes have had the effect of undermining students' access to staff members' time and assistance. Therefore, universities have been compelled to introduce new support measures to assist students in the transition to university life and cope with the increasingly isolating experience of large classes.

This review will examine the issues related to teaching management followed by a critique of the literature on administration and institutional support issues that affect large classes. Information in this section has also been derived from responses to a University of Queensland survey conducted as part of the project.¹

Teaching management issues

Little empirical research has been undertaken into teaching management and curriculum development, and that which does exist primarily constitutes case studies and anecdotal evidence from teaching staff who have modified or re-designed their large courses. The problems and issues frequently reported in both the literature and in the recent University of Queensland survey include:

- Preparing course materials and completing administrative tasks efficiently;
- Managing the exchange of feedback with staff and students;
- Staff and tutor training, coordination and management;
- Organising practical activities or field trips.

¹ For further details about this survey see the [report on survey of large class teaching in Australia](#).

Organisation and administration

The successful management of large classes involves substantial and meticulous preparatory work in compiling content information, teaching methods, teaching materials and procedural rules. The burden associated with these tasks can be ameliorated with the use of standard forms, letters and spreadsheets, a systematic method for distributing and collecting papers and pre-preparing reusable teaching materials. Survey respondents reported that their least successful teaching experiences were a result of a lack of planning. This is an area where professional development would be of significant benefit and would result in dramatic improvements to teacher efficiency, student retention rates, and the effect on independent thinking and active learning in class (Barkham & Elender, 1995; Lopp, 1999). Also, the wider dissemination of research that offers advice and strategies to improve large-class teaching and management skills (such as Biggs, 1999; McKeachie, 1999; Habeshaw, 1995; Ward & Jenkins, 1992) would be of benefit to the individual teachers and the higher education system as a whole.

Communication and exchanging feedback

The respondents of the recent University of Queensland survey indicated that common teaching management procedures that enhance communication with students in large classes include the use of:

- Comprehensive Undergraduate handbooks;
- Course outlines that delineate learning goals and objectives, assessment procedures, criteria and policies, important dates and deadlines, etc.;
- Course workbooks or learning guides.
- On-line materials and facilities

Although these tools have proved useful in disseminating information to students, the reliance on such literature has encountered various problems often specific to large classes. Academics have had to overcome printing delays, the erratic distribution of resources to students (who either fail to purchase the workbook or miss particular lectures), the ordering of incorrect numbers of set texts and inadequate library resources. Increasingly, the administrators of large courses have circumvented these problems by introducing web-based course materials and course outlines. Similarly, it is increasingly expected that web-based learning (WBL) tools will be used to relieve these sorts of problems (Housego & Freeman, 2000).

Even in the most well structured courses the volume of student inquiries and interactions, as well as assessment loads involved in large classes, provides a significant administrative burden. Gibbs and Jenkins (1992) suggest that institutions need to reassess the balance in resources allocation to diminish the reliance on expensive teaching staff to provide administrative work. They suggest increasing the employment of additional printed materials, support staff and special technical support services to perform these administrative functions. Gibbs and Jenkins argue that the most efficient employment of resources involves confining the responsibilities of teachers to teaching. Thus, in order to alleviate the administrative burden from lecturers, large courses often employ their own administrator to handle student inquiries, assessment matters and all other communications with students, though this has often come at the expense of teaching staff.

Irrespective of the auxiliary administrative staff employed, the reality is that many student inquiries can only be handled by academic staff. For this reason, a common complaint from lecturers of large classes has been the burden on their time posed by incessant inquiries from students seeking feedback and advice. McKeachie (1999) suggests that these problems can be alleviated by improving systems of communication between students, such as establishing learning partners, peer-feedback procedures and peer assisted learning programs (discussed later). Bulletin boards are a particular means of facilitating peer assistance and a means of addressing frequently asked questions in a fashion that reduces the workload on lecturers. The use of WBL tools may also provide solutions to the workloads of lecturers. For example, a science lecturer from Macquarie

University has reported on his successful use of a web-based workbook that delivers randomly individualised problems with accompanying solutions, thereby providing immediate feedback to students on their academic progress (University of Queensland survey, 2001).

Academics often find that obtaining feedback from students about their courses is more difficult with large groups. Hanrahan (1997) suggests that this can be remedied by acquiring feedback from students on teaching and course-related issues early in the semester and systematizing it as an on-going process. The success of this strategy would be enhanced if presented in a manner that presents it as an avenue for a negotiated curriculum by requesting suggestions for improvement.

Staff and tutor management

The recent increases in student numbers have largely been accommodated by an increasing reliance on casual support staff, such as graduate teaching assistants and tutors. University tutors are a reliable pool of casual teaching labour because they are often eager to participate in programs that provide them with an opportunity to improve their teaching skills (Barrington, 1999). The reality is that most permanent academic staff have their first teaching experiences as tutors and, therefore, professional development programs for tutoring staff have both immediate advantages, for the teaching in the particular course, and long-term benefits in preparing the future teachers of the higher education sector. Furthermore, Barrington points to the frequent concerns from students, academic developers and various academics about the quality of teaching students receive from tutors, to highlight the need for improved tutor training programs. He particularly advocates tutor training in the teaching of first year students because those students are the most vulnerable. Less than half of all first year students are satisfied with their tutors' inductive instruction and only 53% believe academic staff are enthusiastic about what they teach (McInnis, James & McNaught, 1995). Davis (1996) also supports tutor training, especially for first year students, because positive experiences of teaching and learning in the early stages of a degree program have positive and lasting effects upon students' approach to learning. As has been aforementioned, tutors are often eager to participate in professional development to enhance their skills, the problem usually lies in convincing policy makers and administrators at the departmental level to invest the resources. The University of Auckland has been in the forefront of efforts to improve the quality of teaching by its casual staff. It has offered training courses in the evenings to permit greater attendance, established an annual forum specifically to address the concerns and issues of tutors and teaching assistants, and targeted special populations of tutors, notably its Maori tutors.

In recent years the University of Queensland has introduced a program to train its new tutors to teach in its first year Psychology course. Following the introduction of tutorials several years ago, a team of tutors was recruited and trained, with all new tutors being inducted into the program. The training takes place during weekly meetings with all tutors and experienced "lead" tutors, as well as the course administrator and the course coordinator. At these meetings, the group discusses assessment requirements and standards, common mistakes made by students and content issues as well as giving and receiving feedback. New tutors are also paid to attend all lectures to ensure their familiarity with the content being delivered. The course coordinator is convinced of the benefits of the tutorial program, despite the considerable time, effort and money invested. The tutorial system facilitates interaction between students in small groups and has permitted the introduction of written assessment (a lab report and essay), which has allowed students to develop writing and reasoning skills previously untaught and impossible with the resources available. There have been other positives as failure rates have slightly decreased and retention rates and participation in second-year have increased, with more students choosing to major and minor in Psychology.²

² For more information about the success of these changes, see the report on [Teaching Psychology in large classes: An international survey of solutions](#).

The first year program for tutors in Psychology at the University of Queensland is but one of many such programs at Australian universities. Academic Development Units (ADUs) at various Australian universities hold regular workshops and staff development programs related to sessional teaching in large classes, including tutorials. These workshops address teaching methods, assessment issues and other topics relevant to large class teaching, such as using WebCT. Many schools also have various programs aimed at developing teaching, including policy documents related to sessional staff, workshops for tutors and lab demonstrators, CD guides and specific teaching notes or manuals. Of the 50 or so teachers surveyed, almost half reported that their Schools required tutors or lab demonstrators to attend professional development activities.

Unfortunately, in many cases schools have been circumscribed in improving the quality of tutoring staff by being under-resourced. Many have selected casual teaching staff on the basis of their lower financial cost and been unable to afford formal professional development. But this is an economic problem, as most lecturers recognise the importance of equipping part-time staff with appropriate training and teaching skills.

Off-campus activities

A number of academics have reported discontinuing off-campus or field-based activities (such as teaching practicums, biology field trips, etc) because of the increased difficulties posed by large classes. Corresponding increases in institutional or faculty support, or assistance in coordinating and monitoring the larger student participation, has not accompanied the increases in class size. Those academics that continue to rely on field-based activities as a teaching tool maintain their efficacy is dependent on the inclusion of built-in assessment items. Gold & Haigh (1992) employ field-based activities that contribute towards assessment, such as *teacher-defined fieldwork trials*, which have been used with large groups (80+) of geography students. These weekend field trips require students to work independently in small groups that shape their own objectives, strategies of inquiry and time management. The program relies on a combination of teacher assessment, self-assessment, peer-assessment and group-assessment, to reduce the marking load and acclimatise students to the increasing reality of limited staff support (Gold & Haigh, 1992).

Administration and institutional support issues

Academic concerns about levels of administrative and institutional support recur through both the research into administering and managing large classes and the University of Queensland Survey (2001). They include:

- Lack of administrative or institutional support for students and staff
- Inadequate or insufficient teaching spaces and equipment
- Working with diminished resources and limited budgets

Institutional support for staff

Most of the strategies and initiatives that are mentioned in the previous sections of this review could be implemented in any course or department at any university, provided that the institutional culture supports such change. Changes in the design of courses invariably requires a re-assessment of resource allocation, such as increased funding for staff training, the employment of additional staff, the purchase of new resources and software, supplementing the printing budget, or enlisting the help of an educational consultant. Without support at the institutional level large-scale improvements are impossible. Booth and Watson (1992) have elucidated two major recommendations to promote change in assisting staff and students to cope with larger classes:

- More active involvement from Heads of schools (and/or year level coordinators) in the process of change, such as attending or organising workshops to discuss potential strategies for change.

- Funding and facilitating Academic Development Centres to run seminar or workshop programs on developing learning support materials and implementing good practice with large classes.

Booth and Watson suggest that the most important feature of both recommendations is that they span school and faculty structures to promote best practice with different cultures and disciplines. At the Oxford Polytechnic, initiatives of this kind have standardized views about best practice, resulting in a review of contact time norms for particular courses, time allocated to generating and marking assessment, and means of student support other than traditional lectures and timetabled “office-hours”. Other suggestions from Booth and Watson included:

- Encouraging staff development policies (or review of existing ones) in each school to ensure adequate attention is given to teaching and learning in large classes, as well as research interests and the personal growth of staff.
- Imbuing course teams with sufficient discretion to determine how to deliver courses and then building in institution-wide incentives to promote greater efficiency.
- Raising the status of teaching with promotion opportunities specifically for teaching achievement.
- Extra funding to promote more frequent evaluations by staff, as a means of stimulating debate about successful practice
- Increasing accountability for senior members of staff, as well as committees, to develop and execute an implementation plan for the above ideas.

Institutional support for students: student services

There are contrary findings about the value of student support services to students of large classes at universities and colleges. Davis (1998) discovered that vulnerable first-year students who attended study skills courses had significantly higher self-efficacy than those that did not attend courses. Her findings also suggested that such study skills programs could insulate all students against declining self-efficacy. At the same time, other studies have suggested that study skills programs and other student support services do not significantly affect academic performance or retention rates of first year students (Alderman, 1998; Candia, 1999). It is possible that this failure of support programs and services to make an impact could be attributable to an absence of a continuing regimen of contact throughout the entire semester.

Peer tutoring

Peer assisted learning programs run by individual faculties or teaching and learning centres, have had the most significant success in assisting the transition to university life, probably because they target groups of students rather than individuals. In 1990, the Queensland University of Technology introduced Peer Assisted Study Sessions (PASS) (sometimes called supplemental instruction or SI programs) to assist first year students of large classes. PASS offers voluntary study sessions run by trained second or third year students who have performed well in the target subject and are deemed to have appropriate interpersonal skills. It targets “high risk” subjects (rather than “high risk” students), which previously experienced high failure rates. PASS employs two leaders per group of 25 first years, who are either paid or given course credit to assist the first year students. The responsibilities of the group leaders include attending 50% of the lectures for the relevant subject, and discuss the material presented in class that week. The PASS have increased academic achievement, with regular attendees averaging a whole grade higher than student who

did not attend. In first year subjects which ran such a program, around 85% of students who received High Distinctions had attended PASS (Chalmers & Kelly, 1997).

PASS programs have since been established in a number of other universities around Australia, North America and the UK (Ward & Jenkins, 1992; Biggs, 1999). Students at the University of Southern Queensland who attended Supplemental Instruction (another PASS-type program) for a first year accounting course averaged 1.15 of a grade higher than those who did not participate (Couchman, 1997). Participants were only one-third as likely to fail, nearly four times more likely to gain a high distinction, approximately equally likely to gain an A grade; over twice as likely to gain a B grade; and three-quarters as likely to gain a C grade than non-participants. The International students who chose to attend regularly had a pass rate of 78% compared with 48% for those who chose not to attend regularly.

Peer assisted learning programs have enjoyed consistent success in improving academic achievement, increasing re-enrolment probabilities, enhancing course evaluations, reducing student failure and withdrawal rates. This has been demonstrated to be the case in the United States (Biggs, 1999), other overseas universities (Martin & Arendale, 1993) and at several Australian universities including the University of Queensland and the Queensland University of Technology (Loh, 1994). PASS programs have also been demonstrated to be successful in assisting students of large classes across a range of disciplines, including statistics (Clulow, 2000), engineering (Hands, Reid & Younger, 1997), education and sociology (Arnold, 1995; Yockey & George, 1997), commerce (Beasley, 1997), chemistry and English literature (Kelly, 2001). The programs are effective because they create a more intimate, relaxed atmosphere for students to seek clarification and receive informal instruction, both individually and in small groups. The more personal interaction has been beneficial for both 'at risk' and typical students in modifying negative cognitive schemas about assignments, deadlines and examinations. The interpersonal nature of the interaction has also promoted the development of communication skills (Couchman, 1997). Other benefits for students include:

- Weekly study sessions to keep students "on track"
- New insights into course material
- Insights into difficulties other students are having
- The mentor can give information about successful coping strategies
- International students particularly like opportunities to discuss without staff present.

PASS programs can only be successful if they receive the necessary institutional support, because they require a re-assessment of patterns of resource distribution between teaching, library, computing and student support services. Studies do indicate that the programs have long term financial benefits for institutions because they are a cost efficient means of providing support to large numbers of students (Couchman, 1997). To be successful, PASS programs need to be properly integrated into courses and new students should be fully informed about how the system works and the assistance available.

Insufficient teaching space and equipment

The University of Queensland surveys respondents indicated that buildings, lecture theatres and classrooms (often built decades ago) are frequently inadequate for group and independent work, and are often too small or poorly designed for large classes. A Sydney University lecturer in the CUTSD project (1997) commented that approaches to teaching were circumscribed by an over-abundance of very large tiered lecture theatres and small tutorial rooms with seating limited to only 16-20 students, and a lack of medium sized rooms with flat floors and movable desks. As a consequence, he was restrained to utilising tutorials as the main source of group learning opportunities for students. Flexible time-tabling of classes to ensure access to better classrooms has yielded positive results in certain courses, but this has not addressed the problem of improperly configured or poorly maintained buildings.

Conclusion

Problems pertaining to the administration and management of large classes remain unresolved in many institutions. A lack of funds has been the most common reason cited by administrators and course coordinators for their deficiencies in improving the quality of student learning in large classes. Faculties are often forced to devote less money per head to students in large (often first year) courses than in smaller or later year courses. Nevertheless, some large class coordinators have been successful in negotiating with senior management a redistribution of resources to improve the quality of learning in large classes. But even for these people, the process of change has usually been slow and required support at all levels.³

³ For further information on change management within universities, please check the Forum Reports and Resources pages on this web-site in the coming months.