Report on Class Sizes

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Introduction

This report was requested by the Graduate Studies Committee, Faculty of Economics and Commerce at the University of Melbourne. The report arose in response to increasing concern from some academics that large classes are having a negative impact on the delivery of a quality educational product, which will, in turn, influence our ambition to become a world-class Economics and Commerce Faculty. The report has been written to provide the Graduate Studies Committee and the Faculty with an understanding of the literature surrounding class size and its impact on teaching and learning.

The report is in two parts: **Part I** looks at the pedagogical, educational and economic issues in general terms. It covers the following: 1) What is a "large" class? 2) Do large classes need to be reduced (and are there disadvantages as well as advantages in doing so)? 3) What are the implications of class size for teaching and learning? 4) What are the economic issues concerning class size (i.e., do large classes necessarily mean a cost saving and what are the implications of this?); 5) What are the potential models of class size arrangements?

Part II outlines a recommended framework for the Faculty allowing departments to choose class size, within broad guidelines, but allows for accountability or monitoring at department and program levels.

Part I: The Issues

1. The Educational Context

The business of learning is booming in Australia. Education is now Australia's second largest export industry within the services sector and the fourth largest export earner overall (Simmonson, 2005). It contributes more than 6 billion dollars to the Australian economy (Davis, 2004). Demand for educational services to Asian students in particular is expected to rise dramatically over the next twenty years when there is expected to be 7.2 million students from Asia studying here. By 2025 Australia's share of the global demand for educational services is expected to increase from 3 percent in 2000 to more than 8 percent (Bohm, Davis, Meares, & Pearce, 2002). This rise in popularity has occurred with a parallel decline in government support for higher education (*Growing Esteem: Choices for the University of Melbourne*, 2005). At last count, international students provided 15 percent of all university revenue (Department of Employment, 2005; Deumart, Marginson, Nyland, Ramia, & Sawir, 2005). International students made up 24 percent of the student body in 2004 and fee income from students grew from $30 million in 1996 to $200 million in 2004. The target for 2007 is around $270 million (Deumart et al., 2005, *Growing Esteem: Choices for the University of Melbourne*, 2005). International students are expected to inject $38 billion into the economy by 2025 (Roach, 2003).

This growth in the demand for higher education, and corresponding decline in government support, has naturally translated into larger class sizes. The same pressures have been reported elsewhere with exactly the same consequences in both the US (Maxwell & Lopus, 1995) and the UK (Gibbs, Lucas, & Simonite, 1996).

An issue which this raises is the impact of large class sizes on: a) student achievement in higher education; and more generally b) the student experience of the Faculty and the university. Does a large class size adversely influence the teaching and learning context? Do large classes have a negative impact on how students see the faculty and the university, and does this have implications for current and future students?

2. What is a "large class"?

The terms "large" and "small" are obviously a matter of debate. In some published studies, "small" is defined as "30 or fewer students" while "large" is defined as "70 or more students" (Gibbs et al., 1996; Toth & Montagna, 2002). Other studies distinguish "normal" classes as consisting averaging 39 students and "megaclasses" of 120 or more students (Hancock, 1996). Other papers define a "small" class as having a ceiling of 55 students and a "large" class as having a ceiling of 120 students (Maxwell & Lopus, 1995). Averaging these different views we arrive at the following definitions. A "small" class has around 41 students; a "large" class has around 103 students. Very large classes (or "megaclasses") have at least 103 students with no ceiling. Rounding up allows the following distinctions (see **Part II, 5.2.1.** for further discussion of categories of class size):

Class Sizes	Number of Students
A. Small	<35
B. Small-Medium	36-50
C. Moderately large	50-70
D. Large	70-110
E. Very Large	110+

Given this, a class of 70—the current "cutoff" figure for many subjects—is outside the range of a small class and within the range of a "large" class (70-110) as defined in published studies. Dichotomising classes in this way (small, large and very large)—as opposed to allowing continuous increases in students—has been said to provide a means of allowing reasonable policy decisions to be made about the full cost and impact of increasing class sizes (Maxwell & Lopus, 1995).

3. Advantages and Disadvantages of Small/Large Classes

There are several arguments usually advanced in favour of keeping classes large at postgraduate level:

- If smaller classes are consolidated into larger classes there are substantial cost savings. This has been confirmed in the literature (Maxwell & Lopus, 1995). See [5] below.
- There is negligible or no loss of educational value in large classes compared with smaller classes (there is also evidence for this in the literature). See [5] below.

By contrast, there are compelling arguments often advanced for keeping classes "small" (i.e., between 35-50) at postgraduate level:

- Postgraduate subject content is often discursive and analytical in nature. This requires interpretive responses from students in discussions. This is impractical if classes are "large" (i.e., more than 50 students).
- Students learn more and get more individual attention when classes are smaller. By contrast, it is often assumed that large classes lead to a reduction in learning outcomes (we shall see that this is not necessarily confirmed in the literature).
- Smaller classes give the Faculty a marketing/advertising edge and reflect well on the Faculty. We can "sell" this and market ourselves accordingly. This allows us to distinguish

our "product" from rival institutions. With the move to "graduate school" model this advantage cannot be overstated.

- Smaller classes lead to higher student satisfaction as measured by student evaluation surveys and a high likelihood of continuing enrolment from *existing* students. If classes are smaller—and students are "happier" with their educational experience—they will be more likely to progress to further study. (As we shall see from the literature, there is evidence that existing students will enrol in other Faculty courses in direct response to their experience in smaller classes. There is a corresponding decline in re-enrolment from students who have experienced larger classes. See [5] Below.)
- Smaller classes will lead to word-of-mouth advertising and increased enrolments from *new* students and a net financial gain.

4. The Literature: Class Size and Teaching and Learning

A number of studies have looked at the influence of class size on a variety of teaching and learning issues. However, most of these emanate from the secondary sector (Glass & Smith, 1979). Some more recent papers have looked at the issue of class size in relation to higher education (Borden & Burton, 1999; Drago & Peltier, 2004; Gibbs et al., 1996; Glass & Smith, 1979; Hancock, 1996; Hou, 1994; Kennedy & Seigfried, 1997; Kopeika, 1992; Levin, 1988; Litke, 1995; Maxwell & Lopus, 1995; McConnell & Sosin, 1984; McKeachie, 1980; Milner, 1992; Noble, 2000; Raimondo, Esposito, & Gershenberg, 1990; Toth & Montagna, 2002; Williams, Cook, Quinn, & Jensen, 1985). The emphasis of these studies has been the impact of class size on the following: 1) student achievement in general; 2) knowledge attained by students; 3) students' experience of university; 4) students' re-enrolment in subsequent courses. We shall look at each of these in detail below.

4.1 Class Size and Student Achievement

The empirical results in this area have been mixed. Van Allen has argued that, in the current tertiary environment, the "quantitative product" is outweighing the "qualitiative product". By "quantitative product" Van Allen means the monetary gains that accrue from increased enrolments; by "qualitative product" he has in mind the outcome of well-educated, well-rounded, highly employable graduates with transferable skills (Toth & Montagna, 2002; Van Allen, 1990).

By contrast, Pascarella and Terenzini (1991) conducted a wide-ranging study on the impact of class size and student achievement and, in the process, summarised sixty years of research. They found that class size has no bearing on student achievement as measured by acquisition of content and skills. Pascarella and Terenzini did suggest, however, that class size may influence the level of motivation of students, student attitudes, and students' "higher-level cognitive processes". This conclusion is in line with the views of other researchers (Levin, 1967; Litke, 1995; McKeachie, 1980, 1990; Milner, 1992; Williams et al., 1985).

One study has made the plausible point that student "achievement" can mean different things (high grades, factual knowledge attained, the acquisition of transferable generic skills, and so on) (Kennedy & Seigfried, 1997; Toth & Montagna, 2002). A consequence of this is that invalid inferences about the impact of class size might arise from conflating these very different measures, or by using only one measure to the exclusion of others. This can result in a seriously misleading view of the relationship between class size and achievement.

Studies that use high grades as a measure of achievement, for example, are likely to be confounded by the well-established phenomenon of grade inflation, where high grades can lead to a *quid pro quo* arrangement between teachers and students for acceptable student evaluations of teaching, and a "ceiling effect" where are large proportion of grades cluster in the higher ranges (Franklin & et al., 1991; Gibbs et al., 1996; Greenwald & Gillmore, 1997; Grimes, Millea, & Woodruff, 2004; Hoffman, 1983; Kennedy & Seigfried, 1997; Krautmann & Sander, 1999; Nelson & Lynch, 1984; Noble, 2000; Powell, 1977; Toth & Montagna, 2002; Van Allen, 1990; Zangenehzadeh, 1988). This problem is particularly evident in the US where there is no 'generally recognised standard for performance within degrees or for modules within degrees' (Gibbs *et al*., 1996). This clustering might give the impression that there is no negative impact of large classes on high grades. Clearly, however, given the grade inflation phenomenon, high grades do not necessarily constitute unambiguous support for large classes (Gibbs *et al*., 1996). According to Gibbs, *et. al* (1996): 'In these circumstances it is very difficult to use comparative data concerning the effects of class size on student assessment performance with any confidence, and few have attempted it. … hence performance cannot easily be related to class size'.

Despite this proviso, the literature on class size and student achievement as measured by grades is compelling. Hancock (1996) conducted a study in which grades from a class of over 120 students was compared with six normal classes averaging 39 students over a three semester period. Variables such as instructor, test and grading procedures were controlled for. The study showed that there was no negative influence of class size on student achievement. However, it has been noted that the sample size was small and that Hancock used a "narrow definition of achievement" (Toth & Montagna, 2002).

Kennedy and Siegfried (1997) also found no significant negative impact of class size on student achievement using a pre- and post-test experiment. Their study used results from a number of institutions and controlled for a variety of variables outside the influence of the instructor regarded as having an influence on learning (student ability, number of hours spent studying, and so on). Their conclusion was cautious, however. They found that class size does not reduce the ability of students to learn the principles of Economics (not that there is no negative impact at all). They also warned that this might be a function of instructor characteristics insofar as Economics lecturers do not change their teaching style as class size increases. They also claim that this result does not justify large classes but a range of different class sizes that caters for different learning styles (Kennedy & Seigfried, 1997; Toth & Montagna, 2002).

4.2 Class Size and Knowledge Attained

When "knowledge attained", as indicated by final grades, is used as a measure of achievement it has been shown there is no discernable difference between larger and smaller classes (Kennedy & Seigfried, 1997). However, if by "achievement" , transferable skills such as problem solving, critical thinking, and the like are meant, then the literature suggests that smaller classes allow for a more effective educational experience (Kennedy & Seigfried, 1997).

A key paper in this area is Toth and Montagna (2002). Toth and Montagna have usefully summarised the research published on this topic between 1990 and 2000. Of the quantitative studies reviewed, the majority defined "achievement" only in terms of high grades. Two of the studies surveyed reported no significant impact of class size on student achievement (Hancock, 1996; Kennedy & Seigfried, 1997) and three report a negative relationship (Borden & Burton, 1999; Gibbs *et al.*, 1996; Raimondo et al., 1990). The two remaining studies report inconclusive results (Hofman, Postcraro, & Presz, 1994; Kopeika, 1992). One quantitative study reported a positive impact though cautioning on the size of the sample (Hou, 1994; Toth & Montagna, 2002). Other studies not mentioned in Toth and Montagna's review report a positive relationship between larger classes and higher levels of instructor support in online courses, though no significant relationship in terms of global class effectiveness (Drago & Peltier, 2004).

Gibbs, *et. al*. (1996), tested two hypotheses in their study: firstly that there was a negative relationship between the number of students enrolled in a topic and average grades obtained, and secondly that as the numbers increased over time, student performance would decline. Two predictions were made: 1) the higher than number enrolled, the lower the average grades; and 2) the higher the enrolments over time, the lower the grades over time. Confusingly, the first prediction was confirmed but the second prediction was not confirmed (Gibbs *et al*., 1996). There appears to be no unambiguous evidence that the size of the class negatively influences the grades obtained.

4.3 Class Size and the University Experience

More recent studies have looked at the issue of class size in relation to pedagogies such as “active” as opposed to “passive” learning. They have argued that large classes have a negative impact on the university experience for students (Mixon & Hsing, 1994). Other studies suggest the staff-student relationships suffer when classes get too large (Brown, 1994; Smith & Malec, 1995), and others have shown that large classes have a negative impact on students who are under-prepared for tertiary study or who have academic deficiencies (Borden & Burton, 1999). This might well be important for a Faculty such as ours with a large number of international students and a large number of students from non-English speaking backgrounds.

4.4 Class Size and Enrolment in Subsequent Courses

Another quantitative study compared large and small classes in terms of whether students would enrol in subsequent courses. This study demonstrated an overall negative influence of large class size on subsequent enrolment. It was found, moreover, that students in larger classes did not perform as well as students in smaller classes and there was a heightened impact of large class size on students with lower academic ability (Borden & Burton, 1999; Toth & Montagna, 2002).

The findings from these studies are supported by a qualitative study in which students were interviewed by telephone and in a faculty forum about the factors perceived as most critical in their continued enrolment and academic success, among other factors. A consistent comment in the interview was that small class size was important as both a reason for continued enrolment and as a factor in determining academic success (Hofman *et al*., 1994; Toth & Montagna, 2002). Toth notes that these findings are interesting insofar as demonstrate that students themselves perceive the benefits of smaller class sizes and the classroom interaction that smaller classes allow, that is, this is not just a perception of educators (Toth & Montagna, 2002).

Another qualitative study reported an increase in graduating students from a department of electrical engineering. When very large classes were reduced to smaller classes of between 65 and 70 students, there was an increase in the number of successful graduates (Kopeika, 1992, 2000; Toth & Montagna, 2002). Of most interest in this study were the reports from industry and graduate schools on the improved quality of the graduating students despite an actual decline in academic preparedness of the students commencing the course. Kopeika (2000) argues that the economic argument that class sizes need to be larger needs to be counted by the increased revenue from the increase in graduates. Clearly in our faculty, Kopeika’s argument for smaller classes will not hold, as class numbers of around 70 are already being maintained.

5. Cost Effectiveness: The Economic Issues

Too few studies have been done on the issue of cost effectiveness of large classes, and no firm conclusions can therefore be drawn (Levin, 1988; Maxwell & Lopus, 1995). Of the studies that do exist, the conclusion seems to be that substantial financial gains can be made by increasing class size. However these gains appear to come at a significant cost in terms of loss of revenue from subsequent enrolments.

In their study comparing small classes and large classes in Economics, Maxwell and Lopus (1995) show that the financial gains are as high as US$5,081 or $38 per student if three small classes are combined into one large class (in today's dollars this would be $US 47.12 per student). This assumes a class of only 132 students. This would amount to a saving of US$6300.33 in today's dollars (or AUS$8,722.16). In a Faculty with student numbers as large as ours, this could amount to significant savings.

Consistent with other studies mentioned earlier, Maxwell and Lopus' research indicates no negative impact on student achievement. They used a pre- and post-test analysis of student responses to a multiple choice examination, and found negligible differences between the results from smaller classes and a large class. However, they do express caution in extrapolating from their results to classes larger than 120-150 (i.e., while they show no significant differences in student achievement in classes of 120, it does not follow that in very large "megaclasses" there is no achievement loss).

However, there is a cost to the economic savings from larger classes. The cost is that there is a marked decline in the enrolments of students in subsequent courses of the same type (that is, interest in studying the subject appears to decline). Maxwell and Lopus' results show a 38.17 percent decline in the predicted probability of continuing to study Economics (as measured by enrolment figures). Students are more likely to continue to study if they have smaller classes as compared to larger classes (in fact, 1.6 times more likely). (Maxwell & Lopus, 1995). In other research, perceptions about studying the subject have also been found to alter (McConnell & Sosin, 1984). Thus, this might plausibly lead to an overall decline in the numbers of future students in subjects that are negatively affected by increasing class size (Maxwell & Lopus, 1995). This finding has been noted elsewhere (Bellante, 1972).

6. Models of Class Arrangements

Consideration of the above points suggests that while the evidence is mixed, there are sound pedagogical reasons for keeping class sizes as small as possible. There are several ways that the class size issue can be accommodated in a mass-market university under financial constraints. These might be considered potential **models for action.** All have advantages and disadvantages. This section outlines some potential models. **Part II** recommends a specific plan of action for the Faculty.

1. The Differentiated UG/PG Model:

UG classes might be considered the principal source of the revenue and postgraduate classes might become the source of educational "quality" (i.e., UG classes subsidise PG classes). This might be the model if the mooted changes to the curriculum go ahead and Melbourne becomes more aligned with a graduate school model of education.

Advantages:
1) Consistent with the new "Melbourne Model" of a graduate school;
2) allows a richer educational experience at graduate level.

Disadvantages:
1) Postgraduate enrolments are in fact increasing relative to undergraduate enrolments;
2) Reduced educational experience at the UG level which, in turn, can effect graduate enrolments (UGs may not "migrate" to postgraduate studies if this experience is not perceived to be high quality in terms of class size.)

2. The Advanced Elective Model:
Some PG offerings (i.e., "cash cow" subjects) effectively subsidise other advanced PG electives in the same department. Departments might be asked to nominate a ratio of subsidising subjects to advanced electives.

Advantages:
1) A realistic potential solution that acknowledges the financial constraints as well as the pedagogical concerns.
2) Allows departments themselves to make the relevant decisions.

Disadvantages:
1) Inequitable burden placed on some staff relative to others;
2) Difficulties in selecting subsidising subjects;
3) Arbitrary. All subjects are important. How can this be decided?

3. The Large Lectures/Small Tutes or Workshops Model:
Classes might be arranged so that lectures are large but tutorials or workshops are significantly reduced in size. This might allow for the advantages of large enrolments and minimise the potential pedagogical disadvantages. Large group seminar-style format might be phased out and replaced with smaller tutorials or workshops allowing an enhanced educational experience and more personalised attention.

Advantages:
1) A realistic potential solution that acknowledges the financial constraints as well as the pedagogical concerns.

Disadvantages:
1) More classes needed resulting in higher overall costs;
2) Employing less experienced Lecturer A staff to cater for demand in workshops would stifle the educational advantages of smaller classes;
3) As noted in **Part II, Section 3,** Monash is trialling this without success.

4. The Differentiated Class Size in Department Model:
In this model, some departments carry the financial load for others effectively subsidising them. For example, "skill-based" subjects in which large classes do not have an obvious impact on learning might subsidise more discursive subjects (e.g., Management) where discussion and oral debate are necessary.

Advantages: unclear.

Disadvantages:
1) Some departments and subjects are unfairly disadvantaged in terms of workload.
2) All subjects require discursive analysis to some degree.

5. The Online Hurdle Model
An online hurdle requirement might be introduced in many subjects in which allows for some content to be taught before students arrive or concurrently with their face-to-face classes. This might allow for smaller, more dedicated, classes.

Advantages:
1) Allows for segmentation of class content into a) what needs to be taught under dedicated guidance from instructor, and b) what might be best dealt with in small classes or in individual study.

Disadvantages:
1) Enormous effort and expense involved in turning class content to online format;
2) Does not sit well with the "Melbourne experience" (emphasising the benefits of class-based experience);
3) We are not set up well for "online" learning;
4) May turn away students.

6. Professional versus Non-Professional Classes
The Faculty might consider making a clearer distinction between subjects that are "non-professional" in nature (which might be large in size), and "professional" subjects to cater for the highly experienced, advanced student. Students might be required to do a range of NP and P subjects or be allowed to stream into one or the other (the professional subjects might be more expensive).

Advantages:
1) A realistic potential solution that acknowledges the financial constraints as well as the pedagogical concerns;
2) Acknowledges different market segments.

Disadvantages:
1) Admission that some of our subjects are not "professional" in nature (may be a marketing problem);
2) Effectively segments the student body into two streams, one being more highly regarded;
3) Students may not want to stream into "non-professional" subjects.

Part II: A Plan of Action for the Faculty of Economics and Commerce

1. The Challenge:

Prospective and current students often use class size as a proxy for quality. We are pursuing a quality leadership strategy, charging prices at or near the highest in the Australian market. Consequently, our "customers" expect appropriate class sizes. Currently there is substantial variability in class sizes across the faculty's postgraduate offerings, yet there is no systematic approach for strategically managing class sizes.

2. Task:

Explore alternative approaches for *managing* postgraduate class sizes in a manner that is both pedagogically sound, and economically efficient.

3. Competitive Environment:

Several Go8 competitors were informally polled in an attempt to obtain comparative data on maximum class sizes (per stream). Class size is clearly an issue of concern both to academics and students at competitor institutions. There is substantial diversity amongst programs within the one institution as well as across institutions. By way of comparison:

- The three-hour seminar is by far the most common approach to curriculum delivery. Monash University has this year begun a trial of a lecture/tutorial format to combat excessive class sizes, however the trial has not been well received by academic or administrative staff, student feedback is not yet available.
- The University of Queensland has a target maximum class size of 50 students. This target is reportedly often difficult to achieve (especially in core units such as Accounting, in large part due to staff shortages). Repeatedly exceeding 50 students mandates remedial action be taken. In any event, when class sizes do exceed 50 it is standard practice to complement the three-hour seminar with additional smaller (optional) workshops.
- The University of Sydney has historically viewed 80 as size cut-off. With the number of classes exceeding this being subject to monitoring by the Faculty's Graduate Studies Committee.

4. Delivery models:

As noted above, the three-hour seminar is by far the most common mode of delivery, with supporting workshops if necessary. Several factors support this as the best option among comparable alternatives (we do not consider here intensive delivery, which has been subject to a prior submission to the Graduate Studies Committee, see: *Intensive Teaching: Report of the Working Party* (Davies, Hardy, & Lakomski, 2004; Davies, 2006). The class size working party briefly considered options such as lecture/tutorial and mixed-mode delivery using online components, and full online delivery. Six criteria were used:

1. *Student convenience*. The three-hour seminar is by far the most convenient for the critical part-time domestic market.
2. *Academic workload.* Ceteris paribus, the three-hour seminar is the preferred option for most academics.

3. *Student experience.* Options such as large scale online delivery can negatively impact student experience. To be economically efficient tutorials in a lecture/tutorial model can be run by lesser qualified (and thus cheaper) staff, but this can also involve sacrificing quality of education.
4. *Economic efficiency.* Both online delivery and lecture/tutorial models can actually increase cost of delivery if they are done in manner that seeks to maintain quality.
5. *Timetabling complexity.* Timetable administration and management is substantially simplified in the three hour seminar mode as compared with, for example, the lecture/tutorial model.
6. *Change.* The three-hour model is currently the norm both at the University of Melbourne, and beyond. Substantial reworking of curriculum is likely if a large scale move is made to an alternative delivery model.

In light of the above, the working party has chosen to focus on the three-hour seminar as the primary model of delivery, and focused its efforts on developing a solution to best manage class sizes strategically within this model.

5. The Recommended Approach

Effective management of class sizes rests on two key judgments/decisions:

1. Forecasting, accurately, demand for a given class in a given semester.
2. Strategic allocation of capacity (teaching resources) in light of the forecast.

5.1 Forecasting

Given the present admissions environment, accurate forecasting is extremely challenging. Currently local applications are open until only a month before classes start. Furthermore, given the economic incentives to increase enrolment numbers at the postgraduate level, it is also not uncommon for late applications to be accepted. Acceptances are thus not finalized to quite late, and enrolments only take place in the week before semester. Some of these problems may be eased by the shift to online enrolment that is shortly to be phased in across the University.

At present there is no clear single authority responsible for forecasting. Departments appear to make decisions about offerings, based on estimates of numbers, and Professional Programs Office do their best to keep departments informed of expected growth in numbers and classes that are hitting size cut-offs. The tight timelines between enrolment and the start of semester, together with the informal sharing of responsibility makes this an extremely difficult task for all concerned.

Consequently, **the working party recommends that the faculty give proper consideration to formalizing forecasting practices.** It is beyond the scope of the working party's terms of reference to explore appropriate administrative structures and responsibilities in this regard. This is a non-trivial exercise, as it requires greater control over admission procedures and processes. As there is effectively no single authority responsible for the end-to-end admissions processes, there is no direct accountability possible for forecasting and demand management. Part of the problem here also lies in our overall approach to postgraduate admission, which at present admits anyone who applies that exceeds the relatively "fixed" admission criteria. This is in stark contrast to undergraduate admissions in which admission criteria vary to appropriately match demand and supply.

5.2 Strategic Allocation of Capacity

Premise: Departments, as holders of discipline-specific teaching expertise, are the best equipped to assess the impact of class size choices on the quality of educational experience and outcomes on a subject-by-subject basis.

In light of this premise the working party has endeavoured to develop a framework for the strategic allocation of capacity that continues to leave the decision making authority with departments. The goal then has been to provide assistance to departments in making such decisions and provide a vehicle for effective monitoring of those decisions to ensure consistency with Faculty strategic objectives.

5.2.1 The Class Categories

Based on the literature discussed and our deliberations, we propose five class size categories as follows:

Class Size	**Number of Students**
A. Small	<35
B. Small-Medium	36-50
C. Moderately large	50-70
D. Large	70-110
E. Very Large	110+

A student's experience should cover a range of class across the different categories. A program or student experience comprised entirely of small classes (A) is likely to be uneconomic, although it may be justifiable on other strategic grounds (e.g. new program development). Conversely, a student experience comprised entirely of large classes (D) or very large classes (E) is likely to not be the quality experience for which Melbourne strives, and which our fee-paying students now expect.

By way of information the breakeven points for class size by departments are as follows:

	ABIS	Economics	Mgt & Mktg	Finance
2006 Budget	48.74	84.07	54.33	51.30
2005 Actuals	47.87	85.68	56.15	46.75

A primary cause of the differences in the break-even points is due to the variability in normal teaching load per academic staff member. ABIS staff typically teach four (4) subjects per year, as does Finance, whereas Management & Marketing teach three (3), and Economics only two (2) subjects.

Category (D) above provides scope well above all the break-even points, and is above the current cut-off of 70. Consistent with current practice**, it is recommended that workshops be provided for units in Category (D) and (E) as an option for students who may be struggling.** ABIS already does this for Accounting and Decision Making which routinely hits class limits. The practice is also used by our competitors (e.g., the University of Queensland).

5.2.2 Planning and Control: Choosing the Appropriate Mix.

Departments may be expected to offer a range of classes across the full spectrum of the five Categories. This ensures they are both providing for quality experience, while maintaining economically viable programs. Department heads will need to plan accordingly to ensure an appropriate mix.

The decision of what constitutes an appropriate mix is rightly, a decision of the Faculty Executive, and the working party makes no recommendation in this regard. **However it is recommended that an appropriate mix be defined.** Further, **it is recommended that procedures be put in place for monitoring the mix obtained relative to the target mix, and incentives or sanctions be put in place for unjustified deviations.** Individual class size decisions, i.e., the appropriate category for a given class, should remain a choice of the department. However, the mix achieved should be monitored by the Faculty. Specifically this monitoring should be from two perspectives:

1. *The Department Perspective*. To ensure departments are maintaining an appropriate mix balancing quality of student experience and economic viability.

2. *The Program or Student Perspective.* To ensure the “typical” experience of a student in any given program meets an appropriate mix balancing quality of student experience and economic viability of the program, consistent with the strategic positioning of the program.

It is recognized that while as matter of equity departments will all likely face the same mix target, the same cannot be said of programs. Clearly, some programs are positioned in strategically different places to others, and as such a different mix would be appropriate for the different program.

SUMMARY CONCLUSIONS AND RECOMMENDATIONS

It is clear that the issue of class sizes is a contentious one. From a student perspective it significantly impacts their perceptions of quality, and indeed if not handled well the actually quality of education experienced. From a Faculty and Department perspective it has substantial economic and strategic ramifications, both short-term and long-term, that need to be considered. Clearly it is also an issue of concern over equity and workload among individual academic staff.

The working party therefore makes the following recommendations that the Faculty:

1. ***Develop a formal approach for forecasting demand for classes, including relevant policies and procedures to ensure actual demand is consistent with forecasts and related resource planning.***

2. ***Rest ultimate decision making about appropriate class sizes with the relevant department, subject to the guidelines and monitoring recommended below.***

3. ***Establish a framework recognizing different Categories of class size (from small to very large), as outlined in the body of the report.***

4. ***Establishing target mixes of class sizes for departments and programs.***

5. ***Establish policies and procedures for monitoring actual class sizes relative to mix targets, together with appropriate actions to be taken when actuals deviate from the relevant target mix[1].***

6. ***Formalize existing practices so as to require that additional workshops (optional for students) be provided for classes which are delivered to large and very large streams.***

[1] The working party recognizes that the establishment of the monitoring framework may be viewed by some as administratively onerous. However, given the economic and strategic importance of class size decisions it seems inappropriate to leave this to informal practices. The establishment of a guiding framework is necessary to ensure class sizes are being effectively managed in the best long-term interests of the Faculty. Notably, the need for such an administrative framework would be greatly reduced if the admissions process could use more dynamic admission criteria so as to effectively match demand and supply (while achieving strategic goals of quality, diversity and the like) – akin to the current undergraduate practices with Enter scores. Unfortunately the current market environment for postgraduate education in Australia, together with the manner in which University performance targets are specified, make this unlikely.

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