

53 Powerful Ideas All Teachers Should Know About

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Class Size Matters

As an undergraduate in the 1960's my lectures at university contained about 20 students and my seminars about six. My teachers knew me, and their doors were open to discuss my essays and lab reports. As resources in higher education have declined in recent decades, class sizes have got bigger ... and bigger... and bigger. One of the side effects of the current 'rationalising' of course provision at many institutions is that, despite level funding, the same overall number of students on the fewer remaining courses are inevitably going to find themselves in larger classes. Does this matter?

Well it certainly matters in schools where, as class sizes increase, teachers behave differently, learners behave differently, attitudes to learning change - and attainment goes down markedly. Average school class sizes are used in international league tables as indicators of national commitment to schooling. You don't find school class sizes approaching those used in UK higher education outside of third world countries. The effects of class size are greatest for younger pupils and least, but still substantial, for those of 18 or over. Studies of what goes on in higher education discussion classes, as they get bigger, still reveal a predictable pattern of fewer students saying anything at all, and the little they do say being at a lower cognitive level (for example checking facts rather than discussing ideas). Students in larger

classes have been found to take a surface approach (only attempting to memorise) to a greater extent and a deep approach (attempting to make sense) to a lesser extent. Higher education students judge teaching to be less good in large classes (even when the same teachers gain good ratings when they teach smaller classes), so if managers are hoping to improve overall quality and National Student Survey (NSS) scores by 'rationalising' course provision, then they have their work cut out.

It might be argued that classrooms, and their size, are less influential in higher education, after all students are supposed to spend most of their time studying independently. However even 25 years ago, when the range of class sizes in HE was much narrower, tripling a class size could halve the proportion of students gaining an 'A' grade. For some disciplines, class size was found to have more impact on performance than did students' A-levels points scores. These are not small effects, and class sizes are now much larger than 25 years ago.

Logistics play a key part in class size effects. Two of the best predictors of student engagement, and hence learning, 'close contact' and 'feedback on assignments', are much harder to arrange in large classes. Assessment tends to become mechanised and the intellectual level of assignments and tests

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tends to drop to allow quick and cheap marking. Marking loads, and the number of parallel discussion classes, increase beyond the capability of a single teacher, and so postgrads or part timers are drafted in. Student performance and retention are known to be lower when more part time teachers are used. Access to learning resources becomes competitive. My daughter, studying at a Russell Group University, did not tackle a single essay on a topic she was interested in during her final two years because by the time she got to the library, all the key books for the popular topics were already out. Facilities such as design studios stop containing personal spaces that individual students 'own' for the duration of their design project, and start being places they visit occasionally. Each 12 students added to a course cohort in Art and Design has been found to reduce average marks by 1%.

These are 'cohort size' effects rather than 'class size' effects: they are about how students change the way they study on large enrolment courses. So size still matters in higher education, and cohort size is strongly negatively correlated with student performance. This may be one of the reasons that very new universities in the UK often outperform much more established institutions on various rankings of teaching quality – they tend to be much smaller and their class sizes are much smaller.

In very large classes social processes start breaking down and students can become alienated. This matters because retention is

improved by social engagement. Cheating, hiding library books, and anti-social behaviour at the back of lecture theatres, can all proliferate. Learning gains are known to be improved by social learning processes – and they are harder to arrange and much rarer in large enrolment courses.

All these negative 'size' effects are not inevitable, but generally follow from 'scaling up' and 'thinning down' of conventional teaching and assessment practices, as class sizes increase, without regard to the likely consequences for how students go about their studying. For example 'formative-only' assessment – assignments with feedback but no marks - is known to be important to learning, but has disappeared from most large enrolment courses. Often this happens because resources – and especially teacher time both in and out of class – are not allocated pro rata as classes get larger. It is usual for large classes to be threadbare and to be used as 'cash cows' to allow far more resources to be allocated to small and optional courses offered in the final year of a degree programme. If resources were allocated more equitably, some of the problems could be overcome. A study of the effects of class size over a period of ten years at Oxford Polytechnic found one subject that did not suffer from class size effects - and it turned out that in this subject they strategically allocated more resources per student in the first year, not less. Third year students, having developed the necessary habits and skills, were able to study effectively with much less support. Most teachers find that the resourcing model is

53 Powerful Ideas All Teachers Should Know About

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completely out of their control and that if they are allocated a large enrolment first year course they are unlikely to be allocated the resources to teach it properly. When a Head of Department says “It is simply not possible to set 500 students projects to write and give them proper feedback” an honest response would be “it is only impossible because that is the way you have chosen to distribute teaching resources”.

In contrast to the normal pattern of large classes producing lower quality education, the Open University regularly tops NSS league tables and yet has much the largest cohorts with some course enrolments of over 10,000, and few under 500. However they do not teach like everybody else. Open University students have very high quality learning resources at their fingertips (and not just in lecture notes), have tutor groups of only 20 (and usually each tutor has only one group, and so gets to know their students), and have far more assignments and enormously more feedback than is usual. Large enrolment courses are allocated far more resources to develop learning materials, and all courses have pretty much the same pedagogic model, tutor group size, number of assignments,

quantity of feedback, and so on. Often students would have no idea how many students are enrolled on the courses because their experience is unaffected by cohort size. Their pedagogic system works very well to support student learning despite huge enrolments. The National Centre for Academic Transformation in the US has helped scores of institutions to redesign large-enrolment, first-year courses. They have shown that it is possible to improve student outcomes while reducing teaching contact time - and reducing funding – but not by simply ‘scaling up and thinning down’ conventional methods.

As with most educational research evidence, findings about class size describe what normally happens given the way teachers normally behave and the way courses are normally designed. It is possible to ‘buck the trend’ by doing things differently.

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