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LARGE CLASSES, STUDENT LEARNING AND QUALITY EDUCATION

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The present book seeks to address the question of whether or not it is possible to increase the opportunity for student learning in large classes and achieve quality education. This question is particularly relevant in developing country contexts, where the availability of quality education relates directly to the development process. The ability to create conditions for students to develop such cognitive skills as critical thinking and problem solving has a direct influence on the development of a society, as these skills lead to innovative and knowledge-based economies. Indeed, many of the contributions in this volume are by academics who are either experienced or currently working in developing country contexts, and put special emphasis on ways of promoting quality education and student learning in spite of large classes.

The drawbacks of large classes should not be underestimated, especially not in the developing world. Large classes challenge the motivation, engagement and fostering of higher order cognitive skills: that is, they tend to discourage the acquisition of the very skills that are integral to economic development. This means that the risks associated with large-class learning environments in higher education are of particular significance in developing countries, so that large-class teaching and how to approach it takes on renewed importance. But the problem of large classes is not unique to the developing world. It seems that large classes are a fact of higher education, regardless of development status. The contributions in this volume, although rooted in a developing country context, are therefore generally relevant.

A number of broad themes emerge from the various chapters: the role of the lecture, teacher-student interaction, teaching strategies and assessments to foster effective student learning, and support in aid of student learning in large classes arise consistently throughout the book, with the authors offering both conceptual considerations and empirical evidence that activate our thinking around some of the issues associated with large-class teaching.

PART THREE • SUPPORTING LARGE-CLASS TEACHING**THE LECTURE AND LARGE CLASSES**

The contributors to this volume give careful consideration to the purpose and role of the lecture in particular, the importance of contact, the role of technology and OER, and the general usefulness of lectures revealing contradicting views on the value of the lecture. The contribution by Allais draws on a 'sociology of community' perspective to argue that the physical lecture is necessary to promote active student learning and is a good platform for teacher-student interaction. Allais asserts that abandoning the lecture in favour of distance education or online formats poses real challenges to fostering effective student learning. By contrast, Butcher and Hoosen suggest that technology can be an effective means to promote interaction and address the financial implications of large-class teaching, and make special mention of open educational resources, which are free and readily available via the Internet. While Butcher and Hoosen take care to note that technology should not replace teacher-student interaction, it is clear that they do not consider the formal or typical lecture essential. Summerlee contributes to the debate by suggesting, based on a historical overview, that the formalised lecture is not the natural place for teaching and/or learning, and that we must challenge our conceptions of how student learning is promoted. Indeed, Summerlee suggests that the empirical evidence does not support the idea of the lecture as integral to student learning at all.

Such contrasting views of the usefulness of the lecture highlights an important conceptual issue: are large-class lectures fundamentally flawed as a mechanism for the dissemination of knowledge and the fostering of higher cognitive skills? It would seem that all agree on this point. In particular, the contributors to this book agree that teacher-student interaction should be the central focus, as it is an important facet in student learning. Consideration now needs to be given to how we organise spaces for this interaction: through maintaining the traditional lecture, through the use of technology, or by completely reinventing the learning environment. This question informs one of the major contributions of this book to the literature: an exploration of how best to promote student learning in large classes.

Privileging student learning in the way we that construct our curriculums in large-class teaching proves to something of a revelatory insight, as much of the consideration to date has focused on how best to manage these environments. However, focusing mainly on the management of these contexts really misses the point of teaching, which is to motivate, engage and activate our students to pursue knowledge. If management is the goal, student learning will be neglected, as there is no way that one management style can account for all the different ways that students learn. It also reinforces the perception that the role of the lecturer is that of a conveyer of knowledge rather than a facilitator in the process of building knowledge that underpins didactic teaching styles, which have been shown to have limited positive effect in terms of promoting active learning. Indeed, it creates an expectation on the part of students that they will receive the information they need neatly packaged in a lecture, instead of having to pursue,

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compile and analyse information themselves. This creates a passive student who tends not to think critically and processes information only at the surface level.

EVIDENCE OF EFFECTIVE LARGE-CLASS TEACHING

The notion that large classes necessarily spell disaster for student learning is false. An emphasis on student learning in teaching and assessment strategies results in a quality education environment, regardless of class size. While large classes may pose particular challenges, small classes are not inherently more effective, especially not if teaching and assessment strategies are ineffective, unfulfilling or just plain boring. Meyers and Nulty (2002) contend that it is possible to achieve deep approaches to learning in large classes by adapting teaching and assessment strategies to promote higher order cognitive skills. Hence it becomes important to consider how higher education is currently structured and provided.

As noted above, the role and value of the lecture is contested but not dismissed. Indeed, it appears to remain the core practice for the time being, and it is up to us to find ways to accommodate this pragmatic reality and connect with students in the learning process. In order to do so, we need to shift the focus of our analysis to understanding how the provision, transmission and fostering of knowledge is best achieved in large-class scenarios.

This brings us to another key contribution of this volume: various authors discuss practical ways to successfully promote student learning in large classes. Many of the chapters provide empirical evidence from across a range of disciplines about how to make a difference to teaching and learning in large-class contexts, and suggest strategies for lecturers for stimulating active and deep student learning in large classes. These chapters suggest that is indeed possible to encourage critical thinking skills and deep learning in such environments.

In particular, Brenner describes how the use of technology (a 'clicker' system) had a real impact in her large science classes. In fact, the system provided an opportunity for teacher-student interaction and critical engagement with the subject matter that may not have been possible otherwise. For their part, De Matos-Ala and Hornsby implemented various teaching and assessment strategies to strengthen their students' engagement in the discipline of International Relations. The evidence provided by their class survey suggests that students, even in large-class scenarios, are able to adapt their learning strategies to align with efforts to promote deep learning, and that they prefer strategies that promote interaction and critical thinking.

The contribution by Brenner and Nichols demonstrates how critical writing skills may be developed in large-class scenarios and illustrates how the Critical Engagement Through Writing (CEW) model (adapted to be relevant to one's institution and situation) can aid in the development of the higher order cognitive skills of critical thinking and problem solving. Finally, Willems discusses how blogging may be used to address

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the limitations of large-class teaching and provides evidence that it can promote and enhance critical thinking, participation and teacher-student interaction.

The availability of empirical evidence of effective large-class teaching strategies remains a critical issue in the literature of large-class pedagogy, because, if we are to be successful lecturers and facilitators of learning, it is crucial that we develop strategies to ensure that quality education prevails.

SUPPORT FOR LARGE-CLASS TEACHING

Another theme that emerges from the work in this book is the (lack of) support given to large classes in higher education environments. It is apparent that, even if they are linked to higher dropout and failure rates, large-class environments produce more graduates than small ones by sheer force of the number of students involved. And no matter what perspective one takes, more graduates from higher education institutions is clearly a desirable outcome for the institution concerned, society at large, and the country that will ultimately reap the economic benefits of having more skilled professionals. Yet, little consideration appears to be given to appropriate support for large-class learning environments as a means to facilitate effective learning and promote quality education.

Three of the chapters in this book explicitly address this aspect. Jawitz believes that the prevailing attitude within university structures towards large-class lectures results in them being under-supported and lecturers being ill-equipped to manage the interaction required to support learning. He therefore urges significant changes to institutional attitudes and practices to ensure that these learning environments receive the appropriate level of expertise, consideration and resources. Glenda Myers' contribution considers the important role that embedded librarians can play in promoting information literacy in large-class environments by means of a case study showing how collaboration with librarians can facilitate the development of higher order cognitive skills. Finally, Moore explores the integral role of space and design in the learning process and offers a compelling argument that, given the ever-increasing number of students and staff who are connected through technology, higher education institutions should take advantage of this situation to find new spaces and places for learning. Again, in a developing country context, where infrastructure is still evolving, careful consideration of the design of learning places and spaces is imperative.

MOVING THE DEBATE FORWARD

The present volume does not aspire to definitively resolve the problems associated with large classes *per se*, but rather to inspire further consideration of this complicated issue. As it stands, the debate about large-class pedagogy in higher education is still in its infancy, particularly in terms of its impact on quality education and student learning and how this relates to the experiences of developing countries. Indeed, the first aspect begging for more attention is the impact of large classes on the quality of

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higher education in particular. As noted in the introduction to this book, the literature relating to class size at the primary and secondary school level is well established, but large-class environments in higher education are a relatively new phenomenon that requires more debate and discussion.

It is vitally important that the debate be informed by collaborative scholarship between both North-South and South-South higher education institutions regarding best practice in large-class contexts. Given the large and active pool of North American scholars producing research on the subject, it is not surprising that the available literature offers a largely North American perspective and does not take into account the unique conditions that may prevail in other parts of the world. We would like to see the emerging group of South African scholars in this field collaborating with their Northern Hemisphere colleagues to establish international research networks so as to broaden the debate and perhaps inspire more research in other regions.

There appears to be a belief in policy-making circles that large classes produce more graduates for fewer resources. On the surface, this would suggest that large-class environments ultimately benefit society through the positive correlation between increased higher education levels and health (productivity) and economic potential. However, this assumes that the quality of education or rather, the quality of the *educational experience* does not change with larger class sizes. It is our contention that this is simply not the case. Large classes may turn out more graduates, but it is far from certain that these graduates possess the necessary skills to contribute to the economic and social development of society. Moreover, the effects of large-class teaching on academic infrastructure, academics, and academic output in particular should also enter into the equation. What would a cost-benefit analysis of large-class teaching reveal? Are there examples from other regions that could point to best practice to follow or pitfalls to avoid? These are questions begging further study.

Much of the research discussed in this volume treats quality education and student learning as two sides of the same coin one that appears to be in short supply in large-class environments. However, the literature is remarkably silent about special needs, both in terms of students with learning disabilities and high-potential students: what impact do large-class environments have on special needs students' learning, and how can these students be accommodated and supported?

Finally, a narrower focus on students' experience may offer exciting insights about how to manage large classes and enrich the debate about whether quality education is achievable in such contexts. What skills or processes do students apply to not only cope, but even excel in large classes? Is mentoring and student development possible in a large-class setting? Does the use of technology matter to students, and to what extent?

In concluding this volume, it would appear that we ask more questions than we answer. Yet, one thing seems self-evident: in seeking to achieve quality education we must prioritise student learning in our higher education environments, particularly in

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developing country contexts. As this book so amply shows, large classes *per se* no longer constitute an insurmountable obstacle to the development of the higher order cognitive skills required to achieve innovation and knowledge-based economies. It is possible to provide quality education in large classes; it is up to us to find ways of making it so.

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