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POSITIONING THE UNIVERSITY OF MANCHESTER AS A PREMIUM PROVIDER OF WORLD CLASS UNDERGRADUATE EDUCATION

A Briefing Paper for the 2007-08 Review of Teaching, Learning and the Student Experience

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I. Introduction

The Review of Undergraduate Education has been established to answer a single question:

How can The University of Manchester ensure the highest international standards of excellence in the quality of the students we admit, learning environments we create, the learning experiences we offer and the graduates we produce?

In setting the stage for the Review, this Paper is organised around six essential benchmarks of the finest undergraduate education in the world at the beginning of the 21st Century:

1. Superb undergraduate students and high academic standards;
2. A powerful commitment to teaching and learning expressed in the plans, priorities, values and structures of the university and led by outstanding academic and support staff;
3. Superbly designed curricula informed by a clear sense of the purpose of higher learning;
4. Richly interactive learning communities;
5. High quality on-line learning environments; and
6. Outstanding academic and student support services.

In contemporary higher education around the world, these defining characteristics of excellence are most fully realised in renowned centres of higher learning such as Oxford and Cambridge, Harvard, Princeton, Stanford and Yale, and prestigious American liberal arts colleges such as Amherst, Vassar, Williams and Wellesley.

But while such institutions set the benchmarks of excellence, simply emulating the

organisational structures, curricula and student experience through which they deliver excellence is not a viable option for The University of Manchester.

Innovation, not uncritical emulation, is what we need. For with its non-collegiate structures and immense student population, Manchester will never be more than a pale reflection of the college-based tutorial system of Oxbridge, or the beneficent *student:staff ratios* of the best-endowed undergraduate programmes in Ivy League institutions, unless it finds new, innovative ways to reach the same high levels of excellence.

In accepting the need for innovative solutions, Manchester will be seizing an important opportunity. For this University has no destiny other than as a large, multi-purpose, research-led institution of higher learning. Its mission is to engage, not resist, the contemporary realities of mass higher education, including the large and variegated student constituencies that come with higher levels of social inclusion. No less committed to the highest international standards in research or education than any of the world's elite universities, Manchester actually seeks to differentiate itself from them as an institution at once more inclusive, more multi-functional and better able to serve diverse educational purposes superbly well.

Ideally, this multiple-mission, consciously inclusive orientation leaves Manchester better-able than many smaller, more exclusive institutions to:

- contribute effectively to widening participation,
- engage responsively with the corporate world and the professions in meeting demands for executive education and high-level skills,
- exploit global demand for high quality, readily accessible higher and executive education on-line, and
- address the vital humanising task of balancing and enriching professional education and advanced skills formation with an understanding of the broader challenges facing human society in the 21st Century.

Yet while all the disclaimers about emulation are valid, and while differences of size, resourcing, mission and strategic orientation make *indiscriminate emulation* an inappropriate response to benchmarking against international elite competitor institutions, we also need to be relentlessly honest. There is no short-cut to excellence. Accepting the need to be innovative must not be misconstrued to excuse, justify or tolerate second rate solutions to the profoundly challenging task of making Manchester a superb undergraduate university. We may in some cases achieve excellence in innovative ways, but achieve it we must, and against the best educational practices and outcomes in the world.

To stimulate discussion in the various Task Forces set up as part of the overall Review, this Paper attempts to set the scene for the evaluation of the current performance of the University against each of the six benchmarks identified (above), and foreshadows innovative solutions.

1. **Benchmark 1: Superb undergraduate students and high academic standards**

The first Task Force to be established under the overall Teaching and Learning Review is an **Admissions and Standards Task Force**. It will be asked to review, evaluate and advise on a range of complex matters.

The quality of the graduates produced by universities is determined by an apparently simple formula:

Quality at Graduation = Quality at Admission x Educational value-adding.

The trouble is that quality at all levels is difficult to measure accurately, and sometimes even defining it can be controversial.

Having said that, the importance of *educational value-adding* is obvious. It is higher education's essential *raison d'être*. Indeed, if their university experience adds little or no educational value, undergraduate students are wasting precious years, and the Government is wasting taxpayers' money. But despite widespread scepticism about many of the things that universities do, no-one seems seriously to suggest that an undergraduate education does not add value. It is therefore taken-for-granted in this Paper that higher learning – the intellectual and educational *value adding* that universities provide – is an important contributor to the development of informed, educated citizens and highly skilled knowledge workers.

Nonetheless, in determining the quality of graduate outcomes, *educational value-adding* is probably the less important of the two key variables. *Quality at admission* is probably the primary driver of *quality at graduation*. For the purposes of the present analysis, however, it is sufficient merely to recognise that *quality at admission* is of major importance in determining undergraduate outcomes.

That truth has serious implications for The University of Manchester, for at its present stage of reputation building, Manchester does not have uniformly high appeal to the highest achieving school-leavers in every discipline area. Wonderful students flock to iconic institutions, and their presence there does much to make the reputation for excellence which first attracted them a self-fulfilling prophecy. A university admitting students from only the top 0.5 percentile of an age cohort is bound to produce a greater proportion of virtuoso graduates than a university whose cohort represents the top 10 or top 15 percentile band. Scholarly excellence is thus largely self-replicating.

Where does that leave The University of Manchester? Realism requires us to accept that the importance of *quality at admission* is a major challenge. For unless the University is as successful as the world's most renowned universities in attracting extraordinarily talented young people to enrol in its undergraduate programmes across the board, it cannot expect to match them in the quality of its graduates. At present, Manchester's entry requirements, while very high in most areas and in comparison with most competition institutions, in some areas *fall short of those typically required for entry to the world's most elite institutions*.

In reflecting on such realities, the **Admissions and Standards Task Force** will, presumably:

- Assume that every annual cohort of students admitted to The University of Manchester should include substantial numbers of students equal to those admitted by the best universities in the world;
- Accept that the *Manchester 2015 Agenda* also places a high premium on the role of the University as an inclusive institution genuinely committed to widening participation in higher education; and
- Recognise that in so doing Manchester is accepting responsibility for assessing, classifying and certifying a wider range of academic achievement and potential.

Policies in relation to admissions and standards need to be reviewed in light of these assumptions.

The response cannot be simply to raise entry standards to match those of the world's most elite institutions. For one thing, this could not be achieved quickly, if at all, while still meeting enrolment targets; for another, a powerful commitment to widening participation means that admissions policies in Manchester should not seek to simply mirror the entry requirements of the elite.

Upholding “standards” and managing admissions effectively are complex matters, and if Manchester can manage this complexity in sophisticated and innovative ways, it may, paradoxically, simultaneously achieve better widening participation outcomes and improved *quality at admission*. There is plenty of evidence, for example, that prior educational performance, while a powerful predictor of academic performance at university, is by no means 100 per cent accurate. We know, for example, that in the UK some students with levels of secondary educational performance significantly below the minimum requirements for entry to elite institutions can and often do graduate with levels of performance exceeding those of many whose enrolment qualifications fell clearly within those requirements.

To an extent, such aberrant outcomes reflect imperfect assessment of “A” level (or equivalent) examinations. More significantly, however, they also reflect important differences between *educational* attainment and *potential*. Students privileged (for whatever reasons) in the quality of primary and secondary education they have received are for obvious reasons over-represented among those gaining access to elite universities. The corollary is that students of intrinsically higher potential who have been disadvantaged in their primary and/or secondary education are going to be under-represented unless specific account is taken of educational disadvantage and potential.

To optimise both widening participation outcomes and quality at admission, admissions policies and procedures will need to be carefully re-thought and recommendations for alternative approaches thoroughly tested. Almost certainly, we will need to resolve the difficult problem of weighting actual performance to take account of educational potential - and to do so in ways that are informed, transparent, defensible and contestable. In the end, the performance of students admitted on the basis of potential will have to produce results justifying the faith placed in them.

Likewise, the **Admissions and Standards Task Force** will be asked to reflect on the fitness for purpose of the ways in which academic standards are set, assessment conducted and performance classified and certified in the University. Might one means of attracting more of the very best students be to develop a better means of recognising and rewarding the most outstanding graduates? While celebrating the successes of all graduates, should we improve our capacity to identify and reward genuine virtuosity? Might better, more discriminating systems of reward and recognition be a key to positioning Manchester as an *inclusive* undergraduate university committed to serving not one, but several different echelons of excellence, all at the upper end of the undergraduate spectrum, but variegated nevertheless?

Task Force 1

The Admissions and Standards Task Force

As part of the overall Teaching and Learning Review, an Admissions and Standards Task Force will be established to consider the issues raised above, and to identify other issues, in the process of reviewing the admissions policies and procedures in The University of Manchester.

The Admissions and Standards Task Force will provide advice to the Review on the setting of entry requirements, and in particular on the desirability and practicality of:

(i) weighting formal academic outcomes to take account of prior educational opportunities and experience, and

(ii) adopting as a matter of long term strategy – as distinct from short term necessity, the policy of developing undergraduate education able to serve a wider spectrum of educational aspiration and achievement than more elite providers do, while formally identifying and rewarding Manchester graduates deserving recognition as equal to the best graduates in the world.

2. Benchmark 2: A Strong Institutional Commitment to Teaching and Learning

Strong institutional commitment to undergraduate education manifests itself in two ways. The first is the quality of the academic teaching and support staff available to students; the second, the value placed on undergraduate education within the overall imperatives and priorities of a university.

Two separate Task Forces will be established to report to the Teaching and Learning Review on these matters. Task Force Two will focus on matters relating to the appointment, promotion and support of academic teachers. The remit of Task Force Three will be the priority accorded undergraduate education in the institutional culture, academic structures and funding arrangements of the university. It will be asked to provide advice primarily in relation to possible structural and funding innovations and other changes promising to strengthen Manchester as an institutional culture genuinely and profoundly committed to the importance of undergraduate teaching and learning.

2.1 Superb academic teachers, tutors and mentors.

The presence of outstanding academic teachers, mentors and advisors is a defining characteristic of the finest undergraduate learning environments in the world. The universities that attract such people are all well-funded institutions, providing staff and students alike with excellent facilities. Whatever their geographical location, they all sustain thriving academic communities, and are foci for the vibrant intellectual and cultural life that grows up around such communities. But there is wide variety in such things as the size of host city and/or community, the spatial density and architectural integrity of the campus and the numbers of students enrolled.

Except in the case of liberal arts colleges in the US, another characteristic also stands out. The world's best undergraduate teaching universities are characteristically research-intensive universities. Leaving aside the intriguing question of why the best American liberal arts colleges are able to attract superb teachers *without* being researched, it is important for The University of Manchester to ask what it is that makes high profile research-intensive universities the preferred destinations for the best academic teachers and scholars.

Two primary reasons stand out. Firstly, the best teachers want to work with the best students, and the best students – undergraduate *as well as* postgraduate – typically are drawn to universities notable for the international quality, visibility and reputation of their research. The latter decision makes sense for several reasons, not least the fact that research-intensive universities are better funded in general, and therefore tend to offer higher levels of amenity to *both* undergraduate students and scholarly researchers. But an even more basic reason is the reality that over the past 100 years or so research eminence has become the key driver of institutional reputation in higher education worldwide. Students wanting to maximise the chances of their degrees continuing to have high recognition and carry high prestige over the 40 years or so of their professional lives, rightly understand that the best chance of achieving this is through association with a premier research university.

Secondly, the best academic teachers are either eminent researchers in their own right, their scholarship being informed and refreshed by their engagement in knowledge creation, or outstanding scholars who, while concentrating on teaching and mentoring, are drawn by the sheer intellectual vitality an intensive research culture brings to scholarly activity in general. As a President of Princeton once put it, what makes Princeton a magnet for brilliant students and virtuoso scholars alike is rich vibrancy of intellectual life in an academic community where “there is a genius behind every bush”.

The simple lesson for a university like Manchester is clear. *We do not have to choose between excellence in research, on the one hand, and excellence undergraduate teaching, on the other. In profoundly important ways, the two are inextricably linked.*

It follows, for example, that the more iconic appointments we make and the higher the quality of the research staff we recruit at all levels, the better will be the quality of undergraduate teaching and mentoring and the richer the learning environments we are able to offer to undergraduates. It follows, too, that there should be no hard-and-fast distinction between investment in teaching and investment in research. Indeed, one of

the best investments it is possible to make in the quality of an undergraduate learning environment is to invest in superb researchers and research activity.

But simply building research strength and providing good teaching and learning infrastructure in an amenable campus community will not in themselves build a world class undergraduate university. We must place a particular focus on the appointment, promotion, recognition and support that we offer to academic teachers. Much has already been done in this area but significant challenges still remain.

Task Force 2

Appointing, Promoting and Supporting Academic Teachers

A Task Force will be established to examine current policies and procedures for attracting, promoting, recognising and rewarding excellent academic teachers, tutors and mentors, and to advise the Teaching and Learning Review on:

- 1. Further changes, if any, that might be introduced to the policies and procedures of the University in order to further elevate the status and prestige attached to teaching and learning; and*
- 2. Improvements in the range and quality of professional development programmes and support available to academic teachers at all levels of the University, but particularly to early career staff or postgraduate students becoming engaged as tutors, mentors and advisors of undergraduates.*

2.2 The centrality of undergraduate education in the life of the university

The place of teaching and learning in the institutional culture of a university is critically important. The University of Manchester is committed in principle to parity of esteem between research and teaching. Much has been done to embed this principle in policies and procedures within the University and the Annual Operational Performance Reviews (OPRs) of Schools and Faculties place considerable weight on student feedback about the quality of teaching and learning.

Despite all these well-intentioned initiatives, the norms, values, aspirations and expectations that dominate Manchester's institutional culture and some of its structural and budgetary arrangements reflect the pre-eminence of research in academic consciousness and behaviour. *Yet we will have failed most of our key stakeholders if we end up being judged excellent in our research and mediocre in the provision of undergraduate education.*

In saying that, I am reminded of what Harold Shapiro, a former President of Michigan and Princeton, predicts in *A Larger Sense of Purpose*, a thoughtful examination of the challenges facing 21st century research universities. His main point is that research excellence alone will not suffice. "Even the best research university," he explains, "gains social legitimacy only by fulfilling the specific responsibility of providing the next generation with the capacities, beliefs, and commitments thought necessary to ensure society's goals..."

We cannot afford to qualify nor relax our absolute commitment to progressively strengthening Manchester as a research university. At the same time, however, we must seek to change the institutional culture of the University in relation to undergraduate teaching and learning. We must do this because it is self-evidently the right thing to do. We must also do it because anything less than a reputation for excellence in undergraduate education will in the end undermine our efforts to build a world leading reputation as a research university. *Few challenges, however, are more daunting than changing the culture of an institution in fundamental ways.*

Task Force 3

Institutional Priorities, Structures and Commitment in Relation to Undergraduate Education

A Task Force will be established to evaluate the priority and commitment accorded undergraduate education in the overall institutional culture of The University of Manchester, and to advise the Teaching and Learning Review on:

- 1. Steps that might be taken to ensure parity of esteem between undergraduate education, on the one hand, and research and research training, on the other, both within the formal management and oversight of the University and the consciousness of the University community; and*
- 2. The case for extending current arrangements in parts of the University under which responsibility for teaching and learning is strengthened through the provision of separate structural and budgetary arrangements.*

This Task Force will undertake a fundamental review without being constrained by existing structures and processes.

3. Benchmark 3: Superbly Designed Curricula

Designing anything without a clear sense of the purposes is *prima facie* likely to be futile. It is therefore curious how readily university communities, in designing undergraduate curricula, seem to proceed without any coherent, agreed understanding of desired learning outcomes. As Harvard's Derek Bok puts it in *Our Underachieving Colleges* (Princeton, 2006), when faculties sit down periodically to review and revise the curriculum, "All too often ... the debate begins without the parties first having paid close enough attention to the objectives that a proper undergraduate education should pursue. Almost everyone agrees in principle that it is impossible to plan any human activity effectively without first forming a clear idea of what one wishes to accomplish. In practice, however, many faculties give this step only cursory attention ..."

3.1 Reluctance to Define Educational Purposes and Agree Learning Outcomes

This deep-seated reluctance to burden higher education with responsibility for delivering agreed outcomes is driven by a number of different forces operating within the academy, including a lack of agreement about what higher education's essential purposes should be.

At best, scholarly discomfort about purposes and outcomes reflects a commendable (if often ill-defined) commitment to open, rational inquiry. The core thinking is that the best higher education teachers teach students *how* to learn, not *what* to learn. The implication is that in a curriculum organised around the primacy of rational inquiry, the emphasis should be on letting learning outcome emerge from the learning process, not on shaping the curriculum and informing the teaching process with educational outcomes in mind.

But there is a flaw this implicit argument. Teaching students *how* to learn and teaching them *what* to learn are not alternatives. Higher learning can (and should) be about both. Some students undoubtedly enter university with a greater capacity for rational inquiry and complex problem-solving than others, but *all* students benefit enormously from deliberate, purposeful learning designed to develop high-order skills of rational inquiry, logical argument, sophisticated analysis, advanced conceptualisation and informed criticism. Yet while few would argue that the pursuit of open, rational inquiry is a *fundamental purpose* (some would say *the* fundamental purpose) of higher education, there is often a sub-conscious reluctance to identify skills enhancement as an explicit purpose that leads to measurable educational outcomes and that should inform curriculum development.

The best learning environments in the world do not exhibit such reticence. They emerge characteristically where the high-order skills of rational, open inquiry are explicitly valued, purposefully pursued with a clear sense of the specific learning outcomes – identifiable, teachable, and, in principle, measurable – associated with the enhancement of high-order analytical skills. In short, teaching students *how to learn* means helping them systematically to develop important high-order skills or competencies.

There are less admirable reasons why some university teachers resist being tied to agreed purposes and outcomes. Higher education curricula are too often designed around the interests and expertise of individual scholars or groups of scholars rather than shaped by the carefully-considered needs and interests of students. There is, of course, great value in a teacher bringing the excitement of current research preoccupations or personal scholarly interests into the classroom. But undergraduate education is about breadth as well as depth, about acquiring intellectual discipline as well as intellectual passion, and unless passionate preoccupation with a particular - and often quite narrow - area of scholarship is combined with a much more synoptic view of a wider body of knowledge, the quality of undergraduate learning is prejudiced.

Finally, the essential nature of universities as organisations makes it difficult to create and maintain coherence and common purpose in something as complex as the undergraduate curriculum, and as susceptible to continuing evolution. Universities are “adaptive” organisations, loosely coupled and poorly equipped to create and maintain coherent approaches to university-wide programmes, including curriculum development. Where a curriculum has been carefully crafted to achieve specific purposes, its fitness for purpose can readily be eroded by *ad hoc* adaptation. Courses and programmes sometimes disappear or change fundamentally as key individuals leave the academic staff, or join it; and if the newcomers have no clearly articulated set of educational purposes to guide them, the disintegration of purpose, content and pedagogy

is all the greater. In any outstanding learning environment, the on-going management of curriculum change and development thus becomes an important challenge for academic policy and practice.

A crucial question remains, however. Assuming agreement, in principle, that curriculum design and development should be informed by a coherent understanding to educational purposes and learning outcomes, *what should the primary purposes of higher learning be?*

3.2 The Primary Purposes of Higher Learning

Comparisons with best practice elsewhere suggest that The University of Manchester should adopt a clear, relevant Statement of the Purposes of Higher Education to inform the development of its undergraduate curricula.

The following indicative list may help the **Curriculum Design and Development Task Force** develop an appropriate Statement of Purpose. It draws substantially on a schema proposed by Derek Bok in *Our Underachieving Colleges* (Princeton, 2006), although with significant modification and re-ordering.

The Purposes of Higher Education

The undergraduate curricula should be designed, developed, accredited and assessed:

- **To develop critical thinking and higher order conceptual, reasoning and analytical skills,**
- **To promote mastery of a discipline,**
- **To challenge and equip students to confront personal values and make ethical judgements,**
- **To prepare graduates for citizenship and leadership in diverse, global environments,**
- **To broaden intellectual and cultural interests,**
- **To prepare graduates for professional and vocational work, and**
- **To develop advanced skills of written and verbal communication.**

All students should understand at registration that these purposes will be pursued, by different means and with differing emphases, in all the courses and units they undertake, and that the University, in assessing the quality of the undergraduate education it offers, will seek evidence of educational value-adding in relation to each of the purposes to which it is committed.

An elaboration of the Statement is attached as Appendix One.

A key task for the Teaching and Learning Review will be to consider, revise and, hopefully, endorse the Statement (or an amended version of it) as an essential template going forward in relation to curriculum design, development, assessment and review.

3.3 Issues of Scale, Cost and Quality in Curriculum Development

Designing, developing and delivering superb curricula enhances learning outcomes not only by making teaching and learning more purposeful and better focused pedagogically, but also by making better use of scarce resources. For the quality of undergraduate education reflects the time, expertise and commitment that teachers and tutors are able to share with student.

Yet modern universities have become profligate in spreading vital preparation time over unnecessarily broad curriculum options. Carefully designed options are important, but too many provide little or no educational enrichment at an enormous cost in terms of academic time. As Appendix Two illustrates, the demands on academic time of teaching 100 students in a single programme can be around seven times lower than offering those same 100 students a virtually identical learning experience in 10 programmes with average enrolments of just 10 students.

The implication is clear. The cost of delivering a higher education programme varies greatly with the structure of the curriculum, and specifically with the number of discrete subjects/units offered to students. Indeed, the structure of the curriculum can be a more powerful driver of both academic workloads and the cost of teaching and learning than is the number of students enrolled.

This is an issue profoundly relevant to teaching and learning quality. For if costs and workloads vary significantly with curriculum structure, so, in the long run, will the quality of academic outcomes. In any review of teaching and learning it is therefore important to ask whether in the design and structure of the curriculum, appropriate account has been taken of the need to balance the *benefits of breadth of student choice* against the reality that the *costs of proliferation* can be very high.

The cost of profligacy in curriculum design can thus be remarkably high, and the potential enhancement in quality resulting from a judicious rationalisation of curriculum options is correspondingly immense. Over recent years in The University of Manchester, considerable attention has been given to this issue. But the scope for ongoing quality improvement through curriculum rationalisation nevertheless remains a key consideration for the Task Force reviewing curriculum design and development.

Task Force 4

Improving Curriculum Design and Development

A *Curriculum Design and Development Task Force* will be established to:

1. Consider and recommend a formal Statement of the Purposes and Outcomes of Higher Learning to inform undergraduate education generally in The University of Manchester;
2. Consider and advise on ways of ensuring this Statement, and an accompanying understanding of how desired educational outcomes will be secured, becomes a feature of all undergraduate programmes in the University;
3. Review curricula currently in place across the University to ask whether they are fit for purpose, and represent the best use of the human and financial resources available to the University to provide undergraduate education;
4. Consider whether a consolidation of the overall curriculum into fewer, better-designed, better-supported programmes would improve the quality of student learning and learning outcomes, and advise on the extent to which this may be possible;
5. Consider and make recommendations in relation to the objective of ensuring that the University provides all its graduates, irrespective of particular programme of professional orientation, with a broad and liberal education providing opportunities for personal, moral, social and cultural development; and
6. Consider whether, in relation to this general educational purpose, and to what extent, the Manchester Leadership Programme should be used as a preferred solution.

4. Benchmark 4: Richly Interactive Learning Communities

The idea of student *engagement* – the holistic student experience of higher education, not just the formal processes and content - has become a major preoccupation among those concerned about the current state of higher learning. *Creating a learning environment able to match international best practice in undergraduate education is perhaps the sternest of all the challenges confronting The University of Manchester if it is to achieve its teaching and learning goals.*

4.1 Informal learning through advising and mentoring

Richard Light's influential study, *Making the Most of College: Students Speak their Minds*, reported on the Harvard Assessment Project, an investigation based on more than 1600 in-depth interviews with students from Harvard and other leading US universities. While the findings are now seven or eight years old, the key findings remain salient. "I assumed", Light explained, setting out the first of his *key findings*, "that most important and memorable academic learning goes on inside the classroom, while outside activities provide a useful but modest supplement. The evidence shows that the opposite is true: learning outside of classes, especially in residential settings and extra-curricula activities such as the arts, is vital".

Engagement is also an important aid to academic learning in a more direct sense. The

Harvard Assessment Project highlighted the importance of student-to-student interaction in effective learning, and the efficacy of student study groups. Thus Light reports that "... a particular study habit shared by almost all students who are struggling academically [is that] they always study alone. Students point out that those who always study alone are isolating themselves from a key benefit of college – the opportunity to learn from fellow students".

All this leads to a compelling conclusion: "Good advising may be the single most underestimated characteristic of a successful college experience." (*Making the Most of College: Students Speak their Minds*). Reflecting on the significance of such informal mentoring, he concludes that "the single most important bit of advice" that it is possible to give to first year students "is to get to know one faculty member reasonably well this semester, and also to have that faculty member get to know you reasonably well".

More generally, a key lesson to be drawn from such findings is the superiority of *interactive learning* over *passive learning*. Indeed, Light's two most powerful findings are about the vital importance of (i) student-to-staff (or student-to-mentor) interactions, and (ii) student-to-student interactions.

4.2 Strategic challenges facing large comprehensive universities

The findings reported above indicate that large universities such as Manchester, with relatively high student: staff ratios, face problems in striving for best practice in undergraduate education. If personal mentoring and advising is a crucial hallmark of a superb learning environment, does that mean that The University of Manchester cannot aspire to the highest echelons of undergraduate learning?

There is little point in shooting the messenger. A university driven by the aspirations of our *2015 Agenda* has no alternative but to come to terms with the vital importance of advising, mentoring and informal nurturing in undergraduate learning. *The lesson from the world's most successful institutions is that informal, personal advising and mentoring have long been a key element in the finest undergraduate learning environments.*

This confronts large institutions such as The University of Manchester with a monumental challenge. Indeed, the fact that the world's finest centres of undergraduate learning tend to be relatively small and have very low *student:staff* ratios raises some fundamental questions. Is it simply a waste of time and effort for large universities such as Manchester to attempt to match the richness of the learning environments that their strongest competitors can create? Are largely impersonal teacher-student relationships virtually unavoidable in such circumstances – for most students and most teachers most of the time? Is it therefore inevitable that most Manchester graduates will receive a less than optimal higher education?

The **Personalised Learning Task Force** will, presumably, want to address such questions in more positive terms. Its remit will be to explore ways in which our very large institution might succeed in offering effective mentoring and promote highly interactive learning despite obvious countervailing tendencies towards large classes, high *student: staff* ratios and more depersonalised learning environments. Some of the issues, while highly problematic, are at least clear:

What kinds of innovative changes in teaching and learning practices, curricula or structures might be available to compensate for major disadvantages of size and/or relatively high student:staff ratios?

How much academic time might we release by reducing proliferation in curricula?

Are there examples of good practice upon which we might build?

Do postgraduate students and post-doctoral researchers represent an untapped (or under-utilised) resource that, properly mobilised and trained, might greatly enhance the advising and mentoring of undergraduates?

Task Force 5 Personalised Learning

An Personalised Learning Task Force will be established to:

1. *Identify the essential features of the richly interactive learning communities characteristic of the world's finest learning environments;*
2. *Consider and advise on initiatives available to The University of Manchester to ensure the creation of close-knit, highly interactive learning opportunities for all students, such as the innovative, systematic use of mentors drawn from the student population, particularly at postgraduate level.*

Note: Task Force 5 is expected to liaise closely with Task Force 6 in exploring on-line strategies for enhancing student learning through student-to-student, student-to-teacher and student-to-mentor interactions.

5. Benchmark 5: High quality on-line learning environments

For young people entering 21st Century universities, personal engagement and social interaction, even in relation to highly personal and complex associations, increasingly occurs on-line.

Whether, and, if so, how quickly and fully, virtual learning communities begin to rival the richly interactive learning opportunities found in face-to-face, and especially residential communities, is an important and intriguing question that will need to be asked and re-asked in the years ahead.

What is already obvious, however, is the need for the best undergraduate teaching to recognise and accommodate the rise and rise of on-line and other highly interactive technologies, and to understand and respect the transformational potency of the communications practices, social norms and personal information management preferences that are growing up around them. This *digital revolution* is having ever more far-reaching impacts on libraries, classrooms, private study practices and resources, student-to-student interactions and the role and function of the teacher in higher education.

There are particular reasons why large institutions such as The University of Manchester should be in the vanguard in developing on-line technologies, pedagogies and related support modalities.

Task Force 6
On-Line Learning

An On-Line Learning Task Force will be established to:

- 1. Review and recommend strategies for creating on-line learning environments to facilitate small group learning, high levels of student engagement through formal and informal interactions, and access to one-to-one advising and mentoring;*
- 2. Review and recommend strategies, structures and a business plan for accelerating the take up of on-line content, pedagogies and learning environments as a means of enhancing the quality and relevance to students of on-campus learning; and*
- 3. Consider and advise on scope for delivering high quality on-line programmes to off-campus students.*

6. Benchmark 6: Outstanding student support services

Support for student learning takes the form of *direct academic support services* of the kind provided by the John Rylands University Library and IT Services, and indirect but vital personal, social, residential, financial and career-related support provided largely (in the University proper) by the Academic Registry and the Sport, Trading and Residential Services (STARS) Directorate.

The proposal therefore is to establish two separate Task Forces to advise on student support services. The first, a **Library and Information Systems Task Force**, will focus primarily on the quality, scope and potential for improvement of support for undergraduate learning provided by the Library and IT Services, but will also ask whether enough is being made of the resources of the Museum and the Gallery. The second, a **Student Services Task Force**, will work closely with the Students' Union to review and make recommendations for the improvement of the wide array of vital non-academic support functions that all good universities provide for their students.

The **Library and Information Systems Task Force** will review current limits and constraints on both key services, and prioritise recommendations for improving service quality. It is also being asked to take a longer-term strategic view, however, and to consider whether profound changes in the nature and provenance of student learning over the next decade or so are likely to require a fundamental re-thinking of the role and function of a university library, including the space – and type of space – it will need, and its relationship to information management and information services more generally.

Task Force 7
Library and Information Services

A Library and Information Services Task Force will be established to review and make recommendations in relation to:

- 1. The quality, range and potential for improvement of the scholarly resources and academic services available for undergraduates;*
- 2. Likely changes over the next decade or so in the nature and provenance of a university Library as a provider of academic support and information services, and the impact such changes would have on the functions, plans and priorities of the Library; and*
- 3. The evolving relationship between library services and information services more generally, and the desirability of providing for greater interoperability between the two.*

In principle, the importance of high quality personal, social, recreational, financial, residential, health and career-development support for students is too obvious to need elaboration. In practice, however, there are important issues about the weighting of priorities and the best use of scarce resources.

Student demands vary widely with the make up of a student body, including changing ratios of home to international, part-time to full-time, undergraduate to higher degree, school leaver to mature-age and, most obviously, on-campus to off-campus student enrolment.

Residential student communities, well managed, certainly facilitate student engagement in rich, interactive learning; but it does not follow necessarily that high levels of engagement and interactivity cannot be realised in other kinds of learning communities. Yet while residence *per se* may not be a defining characteristic of superb undergraduate – and in future may become a less and less common accompanying characteristic – the kinds of multi-layered, close-knit, highly-interactive learning communities that good university colleges and halls of residence create are likely to remain among the hallmarks of any great undergraduate educational experience.

In relation to on-campus study, all good universities will offer multi-faceted student counselling services, provide a financial “safety net” for needy students and maintain effective student-focused health services, employment and careers advice and assistance with accommodation. It is difficult, moreover, to envisage a world class learning environment unsupported by a first rate recreational and cultural infrastructure and, in one form or another, a largely autonomous student association or union.

But it is nevertheless important to understand how, and with what consequences, the student experience is changing. Top-up fees and student debt are major issues, as is the impact of part-time work on the student experience. In relation to accommodation services, too, both supply and demand have changed rapidly over recent years. Demand for “traditional” halls appears to have declined, although those joining such communities continue to value them very highly; demand is strongest at the higher quality end of the market; the priorities informing international student demand are not

always the same as those motivating student; and provision by private suppliers has expanded to the point that a university failing to work closely with such providers is losing touch with the residential dimension of the student experience for a growing proportion of the student body.

The common goal is to ensure that the student experience is not impoverished, nor student learning impeded, by the exigencies of personal, financial, social, health-related or other problems. Non-academic student support is thus a vital enabling function. With it, the core purposes of teaching and learning may be pursued confidently; without it, many students of great potential will be unable fully to capitalise on the learning opportunities that the university provides. That is why the world's best universities give high priority to the breadth and quality of the student support services they offer. A Student Support Services Task Force will address this cluster of issues and report back to the Teaching and Learning Review.

Task Force 8
Student Support Services

An Student Support Service Task Force will be established to:

- 1. Evaluate the breadth, quality and relevance of student support services currently available in the University, and advise as to the efficacy of these services in ensuring that no Manchester student is prevented from achieving her/his full academic potential by lack of effective advice and support in relation to non-academic problems.*
- 2. Evaluate the efficacy of the University's residential halls and campuses in building effective learning communities, recommend strategies for improving their efficacy, and advise as to the practicality of working with private providers to extend best practice into student accommodation beyond the University-provided student accommodation.*
- 3. Recommend changes of priority and/or scope in the development, delivery and funding of residential accommodation and student support service that promise to improve the quality of the Manchester student experience.*

Alan Gilbert,
President and Vice-Chancellor
September 2007

Appendix One

The Purposes of Undergraduate Education

Undergraduate curricula in The University of Manchester should be designed, developed, accredited and assessed so as to:

- **Develop critical thinking and higher order conceptual, reasoning and analytical skills,**
- **Promote mastery of a discipline,**
- **Challenge and equip students to confront personal values and make ethical judgements,**
- **Prepare graduates for citizenship and leadership in diverse, global environments,**
- **Broaden intellectual and cultural interests,**
- **Prepare graduates for professional and vocational work, and**
- **Develop advanced skills of written and verbal communication.**

All students should understand at enrolment that these purposes will be pursued, by different means and with differing emphases, in all the courses and units they undertake, and that the University, in assessing the quality of the undergraduate education it offers, will seek evidence of educational value-adding in relation to each of the purposes to which it is committed.

Note: The above Statement follows, with some modification and re-ordering, an analysis proposed by Derek Bok in, *Our Underachieving Colleges* (Princeton, 2006).

Elaboration

Developing critical thinking and higher order conceptual, reasoning and analytical skills is in many ways *the* defining purpose of higher education. In the United States, for example, more than 90 per cent of teaching academics consider it the most important purpose of undergraduate education. Internationally, the finest environments for undergraduate learning all reflect the Socratic tradition of critical inquiry and independence of mind. The best higher learning is problem focussed, and teaching and learning alike are dialectic processes in which knowledge and epistemology are seen as contestable, not immutable. Teachers as well as the students are learners in such an environment.

The goal of such learning is to help students develop the “hyper-competencies” essential if they, as graduates, are to become creative thinkers and innovators, capable of

transcending received wisdom, developing independent ideas, challenging existing paradigms, conceptualising new ways of doing things, creating new knowledge, defining original problems and crafting innovative solutions.

In a 21st Century knowledge economy, an increasing proportion of the “knowledge workforce” is going to require conceptual and analytical skills of a high order. Employers and entrepreneurs are not going to applaud universities for producing graduates capable only of applying received wisdom, however complex, or of working competently with established paradigms, processes and systems, however advanced. The best universities will produce professionals capable of original thought, knowledge creation and innovation based on the critical analysis of first principles and the development of new paradigms.

Promoting mastery of a discipline remains a cardinal purpose of higher learning. A majority of people can get by merely with a good “working knowledge” of the social, economic and natural worlds - understanding *how* to make use, including sophisticated use, of immensely complex technologies, operating systems and information repositories. Excellent graduates, on the other hand, should be people with an informed interest in *why* things are as they are, and a *fundamental understanding* of at least one discipline of the epistemological basis upon which reality is interpreted and knowledge created. Even in the context of problem-based learning, the importance of in-depth, discipline-based mastery of a body of knowledge remains vital.

In The University of Manchester there may be good reasons for organising research around interdisciplinary themes and/or non-disciplinary research “problems”. But we should be extraordinarily wary of extending this organisational principle to the management of undergraduate education. A powerful case remains for continuing to organise teaching and learning around disciplines, and for continuing to emphasise mastery of a discipline as a defining purpose of higher learning.

Challenging and equipping students to confront personal values and make ethical judgements is a vital, if controversial, function of contemporary higher education. Whether in relation to ethical issues emerging from the medical and life sciences, the use of information technology, military applications of advances in science and engineering, the impacts of global business practices on the global poverty or the study of racial, cultural or social conflicts, higher education teachers should accept a professional and moral responsibility to confront students with the ethical dimensions of knowledge and professional engagement.

In some cases this purpose will best be served by tackling ethical issues within mainstream discipline-based programme; in others, discrete courses dealing with ethical issues may be more appropriate.

The key requirement, however, is for all disciplinary and professional areas within the undergraduate curriculum to acknowledge that undergraduate learning is not only about mastery of a body of knowledge and the acquisition of cognate analytical and conceptual skills, but also about the getting of wisdom. In the words of Derek Bok, a former Harvard President, “... students need to develop habits of thought that will help them to recognise moral problems when they arise and to reason about them carefully enough to arrive at thoughtful decisions on how to respond.” (*Our Underachieving*

Colleges, 71, footnote) It follows that the curriculum should be designed, developed and delivered with the acknowledged purpose of confronting students with questions about values arising from their growing mastery of a body of knowledge, and of helping them make sound value judgements based on considered personal value systems.

Preparing graduates for citizenship and leadership in diverse, global environments might readily be seen as a welcome “spin-off” benefit of offering a broad, liberal education. But there are good reasons for treating it as a discrete purpose of undergraduate education, to be tackled explicitly as well as being developed as part of broader educational functions. Among the most cogent, perhaps, is the need to remind university teachers that this is something that they can and should take seriously. For there has been a regrettable retreat in the modern, secular university from the idea of helping undergraduates prepare for their responsibilities as citizens. Thus in *A Larger Sense of Purpose: Higher Education and Society*, Harold Shapiro, a former President of both Michigan and Princeton (p. 92-3) regrets the fact that the contemporary university, with its modern, secular, scientific mindset, is poorer because, “over time the moral imperatives of education have been increasingly replaced by the single idea of objectivity ... which, whatever else its benefits, has lent great status to the disciplines and given them a great deal more independence from community views.”

Whatever the reason, as western democracies have become increasingly pluralistic, individualistic and privatised, universities have lost confidence in their once central purpose of socialising successive generations of graduates equipped for leadership roles in the key institutions of the civil societies they served. Yet the important truth is that among the greatest threats facing humankind in the 21st Century is the apparently increasing fragility of civil society around the world precisely at a time when massive global problems are placing a premium on the need for well-led, sustainable, innovative civil societies able to conceptualise, plan, develop and deliver solutions at a global level.

If universities (knowledge institutions *par excellence*) and their alumni (the leaders of successive 21st Century generations) do not confront these issues, the human future may well prove bleak. Without adducing quite so apocalyptic an argument, Derek Bok argues that, “Civic education is arguably no longer simply a matter of conveying the knowledge and skills to help students make enlightened judgements about politics and public affairs; colleges must consider whether there is anything they can do to imbue undergraduates with a stronger commitment to fulfil their civic responsibilities. (*Our Underachieving Colleges*, p. 73) He also stresses a conscious commitment to helping students **prepare to** “adapt and respond effectively to whatever international problems and opportunities may confront them in their later lives.” (p. 76)

In The University of Manchester, the Manchester Leadership Programme has been established to help students develop the knowledge, understanding and leadership skills to prepare them for citizenship – and professional and entrepreneurial success – in diverse, global environments. It is one of the essential purposes of undergraduate education in the 21st century that we would ignore at great peril.

Broadening intellectual and cultural interests is the broad, “liberal” educational purpose of higher learning. A profound conviction that higher learning should enrich the life of the mind has long been a lofty aspiration at the heart of the idea of a

university, to be pursued *rather than* (according John Henry Newman) or (more commonly in modern universities) *in addition to* the more prosaic tasks of readying graduates for professional work or civic responsibilities.

The ideals of broad, liberal education also help shape curricula in all authentic universities because they are regarded as being among the best means of honing the deep critical awareness and advanced analytical skills upon which all other purposes of higher learning depend. A liberal education, in Harold Shapiro's words, is about "the freeing of the individual from the authority of previous ideas, the disinterested search for truth, the pursuit of alternative ideas, and the development and integrity of the individual and his or her power of reasoning." (93) As such, it provides a superb foil to a more mundane focus on discipline-based or professional education, both of which may become narrow, conceptually and educationally, in the absence of broader intellectual purposes and awareness. Even Cardinal Newman, who wished to justify a *liberal education* as intrinsically valuable, needing neither sequel, nor aspiration nor purpose beyond itself, could not help observing that it also bequeathed inestimable benefits of heightened self-knowledge, wisdom and fine judgement.

The key practical question is how to ensure that broad, liberal educational aspirations continue to inform curricula in The University of Manchester in an increasingly utilitarian world of higher education policy makers bent upon having "industry-facing" universities? Can a liberal education be mediated through discipline-based curricula, with each particular programme tackling broader intellectual, philosophical, ethical and cultural themes in its own way? Might this approach be more effective in relation to some disciplines than to others? Is there a case for considering some form of "core curriculum", to be taken by all students, irrespective of disciplinary focus, introducing them to the mainstream of liberal education? Might the Manchester Leadership Programme be expanded to serve this broader educational purpose?

The answers may well vary, but finding effective answers is profoundly important.

Preparing graduates for professional and vocational work has always been a fundamental purpose of higher learning, although in the earliest medieval universities the focus was exclusively on ecclesiastical vocations. It is, of course, also the most important purpose in the minds of Government funding bodies and student fee-payers. It follows that all universities are profoundly informed by the needs of the professional workplace, and have among their essential purposes the education of graduates who will be highly employable.

In a University such as Manchester, where professional education is conducted primarily at the undergraduate level, this means producing graduates who are articulate, informed professionals, able to work collaboratively, contribute meaningfully and learn quickly and intelligently from day one in the professional workplace. Such people will have the potential to grow into leadership roles, and will have acquired a fundamental mastery of their profession that will allow them to address problems and develop solutions from first principles, to develop as well as assimilate new knowledge and innovation and to add value in the workplace strategically as well as operationally.

To achieve these purposes, world class professional education is driven by close interactions with relevant professional bodies and informed by current engagement with

professional employers and workplaces. Ideally, it provides students with a seamless transition from the learning to the working environment, offering them opportunities for engagement with prospective employers during their studies, providing them with employment advice and helping them develop the skills required in applying for employment. At the same time, a world class professional education transcends the current requirements and priorities of employers and and/or professional bodies, and prepares graduates for professional futures beyond the horizon of current professional thinking. “Preparing students for a career ... does not merely mean giving them the essential skills for their first or second jobs. Such a curriculum might have only temporary value and could easily crowd out the other important purposes of undergraduate education. Devising a more appropriate preparation, however, presents a number of problems. ... What is not justifiable – or even practical – is to reject ... the legitimacy of preparing students for productive, satisfying careers.” (Derek Bok, *Our Underachieving Colleges*, 70-90)

Developing advanced skills of written and verbal communication needs to be reinstated as a fundamental purpose of higher learning. During the 20th Century the formation of *communication skills* lost prominence, and even respect, as the “research culture” became dominant and the development, synthesis and inculcation of *knowledge* became the paramount. But like rhetoric within the Classical Trivium, the arts and skills of verbal and written communication should again become an essential aim of higher education.

Yet “poor communication skills” is consistently at or near the top of the list of deficiencies lamented by the employers of university graduates. Indeed, part of the premium value-adding of Oxbridge and the Ivy League is that, in these rich learning environments, no student, however introverted, is allowed the dubious option of leaving their views unexpressed or uncontested. The learning process depends on and therefore helps develop verbal and written communication skills.

Again, Derek Bok is adamant. “All undergraduates need to speak and write with confidence and style,” he insists, adding that these are eminently teachable. “Under competent guidance, almost every student can make substantial progress towards this goal. Indeed, few courses in the college curriculum have as much potential to offer lasting benefits to so many undergraduates.”

Appendix Two

Workload Costs and Class Size in Higher Education

The cost of delivering a higher education programme (or degree course) varies greatly with the structure of the curriculum, and specifically with the number of discrete subjects and/or units offered to students. Indeed, the structure of the curriculum can be a more powerful driver of both academic workloads and the cost of teaching and learning than is the number of students enrolled.

This is an issue profoundly relevant to teaching and learning quality. For if costs and workloads vary significantly with curriculum structure, so, in the long run, will the quality of academic outcomes. In any review of teaching and learning it is therefore important to ask whether in the design and structure of the curriculum, appropriate account has been taken of the need to balance the *benefits of breadth of student choice* against the reality that the *costs of proliferation* can be very high.

A single example, readily scaleable and/or easily modified, makes this point effectively.

For the purposes of the analysis, consider a cohort of 100 students requiring formal teaching based on two lectures per week together with one weekly tutorial in which groups of 10 students participate in a tutorial discussion. In one case these 100 students are enrolled in a single unit, thus requiring two discrete lectures per week and a single tutorial topic deal with 10 times in groups of 10. In the other case the students are enrolled in 10 different units, each requiring two discrete lectures per week and one discrete tutorial topic tutorial topic. The assumption in each case is that preparation time for academic staff averages four hours per lecture and three hours per tutorial topic.

The workload outcomes are very different in each case.

Case One

A Single Unit with 100 enrolled

Lecture time (two hours lecturing and 2 x 4 hours preparation)	10 hours
Tutorial (10 repeats) plus preparation time of three hours	<u>13 hours</u>
TOTAL	<u>23 hours</u>

Case Two

10 Discrete Units with 10 enrolments per Unit

Lecture time (20 hours lecturing and 20 x 4 hours preparation)	100 hours
Tutorial (10 topics each requiring 3 hours preparation)	<u>40 hours</u>
TOTAL	<u>140 hours</u>