Engagement as a Core Value for the University:

A Consultation Document

April 2001

A MESSAGE FROM THE SECRETARY GENERAL

The Association of Commonwealth Universities is a global network of universities that share a common language and an interest in learning from each other. This document reflects the hope that members may be able to move towards a common view about one particular challenge universities meet, namely that engagement with the wider society is a core value for the university.

Each institution is a unique part of its own regional and national community, but we have in common that our societies expect a great deal from us, perhaps more than ever before. This paper proposes that we shall be judged, and must learn to judge ourselves, by the variety and vitality of our interactions with the societies of which we are part. In particular, we must be responsive to the needs of our students and society at large and remember that we do not exist for our own benefit.

Every institution has already developed working connections with policy makers, industry and commerce, local communities and the wider society; none starts with a clean slate. The whole web of these interactions and the setting of university policy to foster them are what we term 'engagement'. This paper assumes that even the most sophisticated university seeks to deepen its engagement and make it more energetic. The paper therefore suggests how universities, diverse as they are across the Commonwealth and each in a different stage of engagement may progress towards a fuller commitment to society's needs and concerns.

The document has two elements. The main part sets out the case for engagement and how it is manifested in teaching, in research and in service to the community. The short section which follows, *Assessing Progress*, is a skeleton checklist against which institutions may compare their own experience. An important note about language: the use of 'we' in this document refers, for the most part, to a collective notion of the universities of the Commonwealth.

The document refers to learning from each other. This document is a draft for consultation; its raison d'être is to provide an introduction to a process and that process is to facilitate discussion around the nature of engagement. It will form the basis of a wider consultation process that will take place throughout the Commonwealth over the coming months. Two further elements in the wider consultation process include the commissioning of essays in response to the document, as well as the development of 'portraits' of institutions that exemplify an 'engaged university'. If you would like to contribute to any of these developments, or if you would like to respond in a less formal fashion, your input is welcome.

Michael Gibbons, Secretary General
Association of Commonwealth Universities
April 2001

Acknowledgement

Many people have contributed to the development of this consultative document and have given considerable time and effort in conceptualising, drafting, commenting, editing and in preparing the document for publication. The Association of Commonwealth Universities gratefully acknowledges their contribution:

Ronald Barnett
Bahram Bekhradnia
Svava Bjarnason
Paul Clark
Patrick Coldstream
John Fielden
Michael Gibbons
John Kirkland
Jennifer Maxwell
Robin Middlehurst
David Provan
Alison Rees
Marilyn Wedgwood
Cream Wright
Perri 6

CONTENTS

EXECUTIVE SUMMARY

Commonwealth universities face high expectations from the societies of which they are part. They will be judged, and learn to judge themselves, by the variety and vitality of their interactions with society. Those interactions, and university decision-making to foster them, are what we term 'engagement'. Twenty-first century academic life is no longer pursued in seclusion (if it ever was) but rather must champion reason and imagination in engagement with the wider society and its concerns.

A university's mission must thus be much wider than perpetuating the life of scholarship for its own sake. The world depends increasingly on universities for knowledge, prosperity, health and policy-thinking. Universities are thus required to become engines of development for people, institutions and democracy in general. Engagement defines the whole orientation and tone of a university's policy and practice. Mission-statements, strategic planning, teaching-and-learning policies and research directions must evince and encourage active respect for the concerns and challenges faced by society.

To maintain our essential freedoms, universities must show they are *useful*. The task is not so much to offer the world packages of freshly discovered knowledge as to set examples of rigorous, relevantly-focused and objective enquiry. Universities need to be part of the conscience of democratic society and students helped to gain skills not just for their working life but also to participate as citizens.

Increasingly, academics will accept that they share their territory with other knowledge professionals. The search for formal understanding itself, long central to the academic life, is moving rapidly beyond the borders of disciplines and their locations inside universities. Knowledge is being keenly pursued in the context of its application and in a dialogue of practice with theory through a network of policy-advisers, companies, consultants, think-tanks and brokers as well as academics and indeed the wider society.

Engagement implies strenuous, thoughtful, argumentative interaction with the non-university world in at least four spheres: setting universities' aims, purposes, and priorities; relating teaching and learning to the wider world; the back-and-forth dialogue between researchers and practitioners; and taking on wider responsibilities as neighbours and citizens.

Purposes and priorities - debate with society

Universities expect now to discuss their broad aims and purposes with governments, employers and other local stakeholders. Forums are needed to debate appropriate higher education strategy, national research policy and how to fund it, and universities' part in local and regional development.

Others are legitimately concerned with universities' priorities and seeing that they are achieved. Governments, industry and commerce look for flexible and adaptable workforces, the professions for people prepared for intellectual pressure, schools and colleges for a stream of well-prepared minds moving into teaching. Industrialists, and the medical profession especially, seek researchers trained in the newest science to widen their own range of technological options. Above all, students need their universities to have first-hand understanding of the world for which they are being prepared.

Commonwealth universities expect to engage regularly with government, industry, commerce, health and education leaders, administrators, planners and student representatives about overarching policy, advancing science and technology, how to make courses relevant to students' futures, and universities' local and regional contributions.

Discussion between researchers and research-users is the best way to settle science policy and the allocation of research funding. It is more likely to reassure a sceptical public about the usefulness and validity of academic effort and convince governments to leave academics to decide their own detailed priorities.

It is above all in planning courses that academics will want to promote earnest debate with the wider society. Both the student population at large, and the jobs that graduates do, are far more diverse than hitherto; input from others, including learners themselves, must provide lecturers with insights on how best to respond.

The world is our student

Engagement offers some uncomfortable messages. Students and employers ask universities to put teaching ahead of research in order to provide properly for so many learners from diverse starting-points, most of whom want their degrees as a passport to success at work.

Engagement with national economies demands that academics look to employers for changing insights about the future world of work and its demands on graduates who want to thrive in it.

Courses must widen, not narrow, students' choices. Higher education should give them more than an intellectual grasp of their subjects, vital though that still is. Research shows that graduates should emerge from universities both as effective men and women of action *and* simultaneously be self-critical and innovative. Competence with language, and understanding basic mathematical concepts and terms, skills in choosing and marshalling information, and having confidence in teamworking are primary requirements.

Many learners now carry the burden of family, work and education so their approach to learning is fundamentally instrumental; they want it accessible and immediately applicable. Lifelong curiosity must be the hallmark of the alumni of the truly engaged university.

Many future courses will need to be more ‘applied’; that is organised around the working world's ways of doing things. Simulations and case studies, (often with external practitioners as occasional teachers), as well as work placements, ‘sandwich’ courses and ‘professional years’, all are the basis of engagement for staff and students alike.

To ensure university education continues to command the respect of practitioners and students, three paths need to be followed. The first is to put some of the best intellectual energy to studying and improving the learning process itself; the second is to explore vigorously the potential of new technologies; and the third is to give exemplary university teachers better recognition and rewards.

The dialogue of theory with practice

Voters, taxpayers and industry want assurance that academic research is a deserving competitor for scarce funds with health, education, development and help for the disadvantaged and aged. Research must be seen to contribute to practical innovation for economic growth, industrial development and competitiveness and the quality of ordinary people's lives.

The best guarantee of research's usefulness is a continuing multisided "conversation" between researchers and practitioners and the wider society about possible lines of advance in theory and practice and how each may illuminate the other.

In priority-setting, industry insists that fundamental research should not be neglected in favour of the apparent immediate attractions of shorter-term applied work. Broad priorities need to be set not just by academics and their peers working on their own, as has been traditional. Academics need to argue their case with others who hope to make use of the findings. It is also crucial to convince the lay public of how research is valuable as a way of increasing human well-being and minimising risk.

Work not up to international standards is of declining use in global academia but not all Commonwealth universities are resourced to meet theses standards. There is both incentive and opportunity for collaboration between research teams from the developing and the developed world.

Academics may want to become experts and critics in those sectors of the practical world where ‘their’ graduates seek their occupations. Centres, institutes and special ‘units’ in universities have begun to focus academic attention on issues of special interest to external planners and decision-makers. Some universities are developing strong policies for regional links.

Exchange of thinking between academics and others moves knowledge creation beyond academy into an arena where knowledge producers, users, consultants, brokers and others mingle productively. The open and engaged climate of discussion favours joint industry-academic research partnerships, which a number of different strands of policy can help encourage.

Citizens

Universities' privileged position demands that they look beyond their immediate self-interest towards sharing facilities, energies, expertise and cultural ventures with the wider community of which they are part.

Colleges and continuing education departments have often led development of courses involving work and study with indigenous people or with individuals or groups in local communities. Canadian and US academics have proposed that the idea of academic scholarship should be seen to embrace 'service to the community' and 'academic citizenship'.

Universities may well be the largest economic power in their locality. As well as exemplifying excellence in employment practice, many expect to share in initiatives for planning, forecasting and local regeneration.

Universities can also aim to offer themselves as reservoirs of resources for local activity. Individual staff can be encouraged to take part in local initiatives or boards of governance; academic expertise may be made freely available to community not-for-profit ventures. Cultural energy and assets can be shared.

In many universities ‘volunteering schemes’ have helped students towards civic engagement by working with sick, disabled, unemployed or homeless people; now academic departments are beginning to build radically on that work by introducing real-life community-based projects as the means of learning ('service learning') in mainstream, credit-bearing undergraduate courses.

Finally, academics are beginning to recognise an obligation to expose their research thinking not just to peer review but also to the rough and tumble of lay public debate where concerns about health risks, genetic manipulation, climate change, economic policy, moral or educational philosophy and capability testing may all spark passionate challenge. The engaged university will learn to embrace such debates, uncomfortable at first, in the cause of true education-by-argument. As a result, knowledge will grow more robust in the process.

THE IMPERATIVE OF ENGAGEMENT

As universities, we are called to play a central role in the 'knowledge economy' by engaging with, not preaching to, the wider society. The academic qualities of independence, objectivity and care for students will serve us well in collegial, national and global engagement. Our interactions with stakeholders and the wider world, around teaching and research, and as good citizens, can allow universities and society to evolve together.

A central role

1. The members of the Association of Commonwealth Universities are a diverse group. We are all at very different stages of development. Some of us have been working out our missions and our relationship with society for six or seven centuries while many of us are mid-twentieth century creations. Some of us, but not many, are well endowed; more of us can depend on being regularly and adequately funded from a mixture of public and private sources while others are almost entirely dependent on hard-pressed government budgets and struggle to keep academic salaries at a tolerable level. Also, there is a great diversity in our interactions with our own local, regional and national economies and in our policy-making processes.

2. Nonetheless we all face a similar intellectual challenge. When the world fixes on such terms as 'knowledge society', 'knowledge economy', 'lifelong learning' and 'intellectual capital' in describing its future, all universities are invited to examine their calling. Whatever we may think of our own role, others are now asserting that as universities we are central to social and economic life.

3. Therefore, we are united in re-asserting that, as universities, it is no longer sufficient for us to see our mission simply as perpetuating the life of scholarship for its own sake. In a world that depends increasingly on universities for its knowledge, health and prosperity, we are required to become engines of development for people, institutions (including government) and for democracy in general.

4. If 'learning' is to be a life-long matter and higher education eventually an aspiration for all, universities will plainly need capacious revolving doors; our students will be varied as never before. If economic activity is to be increasingly knowledge-intensive, more and more people will look to universities to prepare them to join in it effectively. If government's policies are to be more 'evidence-based', as is often claimed, new demands are foreshadowed for university research. Finally, as universities, we must play our part in democratic processes and help our staff and students to participate as well.

Interaction as a goal

5. To undertake the roles outlined above, however, cannot mean standing apart to deliver 'our' knowledge from our academic seclusion to a grateful public. Academics need to interact with other citizens with their own different responsibilities to enlarge their understanding of how things in the world are developing. It is that joint enterprise of academics with other citizens that we call 'engagement'.

6. 'Engagement' defines the whole orientation and tone of a university's policy and practice. Piecemeal links with industry, adult education classes or programmes of community service may be partial manifestations of that policy and practice but they are far from its entirety. Intellectual imagination, energy and experience are a university's stock-in-trade; these are our biggest business assets and we are determined to focus these assets on the concerns of the world around us. Our mission statement, strategic planning, teaching and learning policies, the criteria we adopt for an individual's advancement, must all evidence and encourage engagement. They must reflect our active respect for the concerns and challenges faced by society.

7. That active respect, we wish to emphasise, implies a particular academic courage. The world at large is now demanding from us not just a hearing but a say in how we approach and tackle its concerns; we are pressed to weigh our present core values, the basis of the academic tradition, against those concerns. In particular others are keen to share in setting part of the academic agenda: what are the appropriate problems to tackle next, and what shall count as acceptable methods and helpful solutions. Fears, popular feeling and political priorities become considerations to be reckoned with. In short engagement means hazarding our view of our own role: society is evolving and we are evolving with it.

8. Engagement is more widely commended than properly understood. Some higher education institutions are already dynamically 'engaged', while others have yet to try seriously. Many may see engagement as simply one more initiative urged on their attention as a good cause among a host of others. We hope to show, however, that the university's *raison d'être* is what is in question here. Engagement is less an initiative than an orientation towards the future - a many-sided conversation that our fellow citizens are keen to have with us and which needs our best thinking.

> Some of the structural responses to the challenge of engagement can be substantial in scope; the creation of a private university subsidiary to handle teaching for corporate clients (as at Melbourne), the establishment of large research centres jointly with industrial clients, the development of a teaching college for the staff of a multinational corporation, and the development of a regional network of small community facilities offering the university's courses in the evenings and weekends. Thus, our institutional managers have to be willing to adopt innovative organisational and financial approaches.

Academic values and virtues

9. Universities need to continually bargain with society for their essential freedoms. In non-democratic societies the need is even greater. Our side of the bargain is to share the knowledge and skills we have and help our societies tackle the problems they face. In order to maintain our independence we need to show that we are useful and objective. Moreover, autonomous universities are best fitted to give the intellectual leadership required of us.

> *Professor Frank Newman, Director of The Futures Project at Brown University in the US has recently urged universities to be vigilant to maintain their tradition of attending to society's long-term needs and not merely their own immediate benefit. Against the strengthening forces of competition from profit-seeking institutions, the pressures to separate profitable from subsidised activity and the temptation to recruit students with the best conventional qualifications, they have special duties to society to fulfil. He focussed on three:*
>
> - *Socializing students so that they are ready to undertake their responsibilities in society. By 'socialize' universities mean the creation, through various university experiences, of those skills and attitudes necessary to be a contributing citizen.*
> - *Providing all citizens social mobility through the opportunity for access to higher education. As that access has become a requirement for full participation in society, it is especially important to provide this opportunity to the less advantaged.*
> - *Holding the university as the home of disinterested scholarship in the pursuit of truth as well as open and unfettered discussion of critical issues.*[i]

10. Academic freedom of thought and expression must be vigilantly defended. Attacks on our independence in the name of 'relevance', or of 'value-for-money', or, worst of all, of some political orthodoxy must be guarded against. One means by which we may endeavor to guard against interference of this kind is to earn public support for our work. In order to win that support we must, as outlined above, be valuable to society in a broad sense. This is especially relevant at a time when universities must compete for approval and resources with other pressing national priorities such as health, policing and primary and secondary education.

11. Making a commitment to engagement also challenges our own standards. Our true task is not so much to offer the world packages of freshly discovered knowledge as to set examples of rigorous, well-structured, inquiry. The standards we aspire to are not only relevant to academic work but also to business and policy-making.

12. In the network of relationships that comprise engagement there are many that hold out attractions such as funding, influence and enhanced public reputation. In the face of such attractions academics and institutions must maintain and be seen to maintain their independence. Our own rigour, self-criticism and objectivity have to be beyond question; without it engagement will be largely useless.

Shaping democracies

13. The scope of our engagement and our usefulness goes much wider than the economic sphere. Academic study of one's own nation's history and culture is central to developing sense of national continuity and identity. Critical thinking is a defence against the cruder nationalism that can fill a cultural vacuum. In the UK a recent report on the future of higher education invited universities to be "part of the conscience of a democratic society, founded on respect for the rights of the individual and the responsibilities of the individual and society as a whole" and to "play a major role in shaping a democratic, civilised, inclusive society".[ii] For universities which find themselves in a non-democratic society, these sentiments are even more true, but achieving them brings every kind of political and personal risk into their daily routines.

14. We shall not earn the right to criticise and help to forge society's values without wholehearted engagement in the national market-place for opinions. The moral and cultural debate is carried on far beyond our academic territory and journals. Think-tanks, consultants, politicians, civil servants, religious thinkers, special interest groups, governments, civil servants and the media are all reviewing the state of their nation, assessing old orthodoxies and venturing new thinking. In that arena academic training in objective analysis are still excellent weapons.

15. University study should enable students to acquire not only such skills as are useful in the working world but also those skills necessary to participate as citizens in society. In other words, we are far from recommending narrow, vocational courses but rather we support broadening programmes of study. As discussed below, we aim for university education to help students develop general personal attributes such as confidence, self-reliance and ease in working with others – attributes associated at least as much with notions of liberal education as with the vocational.

We agree with the World Bank's Task Force Report on *Higher Education in Developing Countries: Peril and Promise*, where it says:

"Higher Education has the additional role of reflecting and promoting an open and meritocratic civil society. Civil society is neither state nor market, but is a realm that links public and private purposes. Within this realm higher education promotes values than are more inclusive and more public than other civic venues, such as religious communities, households and families, or ethnic and linguistic groups. Higher education is expected to embody norms of social interaction such as open debate and argumentative reason; to emphasise the autonomy and self-reliance of its individual members; and to reject discrimination based on gender, ethnicity, religious belief or social class. The best higher education institution is a model and a source of pressure for creating a modern civil society. This is an ideal not often realised, but it is nevertheless a standard against which to measure national systems."[iii]

The widening territory of discovery

16. Arguably the pursuit of knowledge itself demands engagement. Increasingly, academics in many disciplines are realising that their own intellectual territory overlaps with that of other knowledge-professionals working outside the university sector. Where once we may have had a monopoly, we are now in a market-place. Enterprising academics, acknowledging the important role of communication between themselves and the world beyond the university, are actively seeking alliances with other knowledge-professionals.

17. A greater number of academics need to define their territory more widely and accept that they share much of it with other knowledge-professionals; engagement with those beyond the ivory tower may greatly enrich their own thinking. Increasingly, academics state that the search for formal understanding itself, long central to our mission, is moving rapidly beyond the borders of disciplines and their location inside universities. Knowledge is being keenly pursued in the context of its application and in a dialogue of practice with theory through a network of policy-advisers, companies, consultants, think-tanks and knowledge-brokers as well as academics. The density of the communication between those practitioners nourishes their different pursuits of truth and effectiveness. The world wide web is a powerful symbol of this networking and the opening up of huge wells of information to us and our students directly.

18. Some universities may believe it to be in their interest to stand apart and remain relatively impermeable to these transdisciplinary currents. But are these changes progress or heresy? To stand apart may be to risk intellectual isolation.

The spheres of engagement

19. Some individual academics, no doubt, will continue for their own reasons to keep their eyes narrowly fixed on the ground of a small specialism, plough a lonely furrow, and exclude outsiders from their view. We have explained why we think they will be a shrinking minority. However most of us will want to review our interactions with the public, the policy makers and our colleagues in our own and other disciplines who make up the global network of scholars who together foster and catalogue the academic world's overall stock of knowledge.

Engagement with colleagues

20. It has often been noted that the world's practical challenges are seldom organised to fit neatly into the structure of an academic discipline. In other words, technological advances often reflect combining new insights drawn from a variety of disciplines. Theoretical innovation too may arise in the same way. Indeed, existing knowledge seen afresh in a new practical context may often drive innovation as well as newly achieved research results.

21. We believe, therefore, that reflection on engagement as a core value will lead us to seek ways of countering the isolationist tendencies of individual disciplines. We must make sure that competition with others for funds, results, reputations and advancement does not tempt us to narrow our intellectual vision. Public and private sector policy makers can assist us in this goal by formulating specific policies, assessment and funding priorities that favour multi-disciplinary work.

National engagement

22. National engagement is a central purpose of many of our institutions - particularly in the developing world where the state often looks to the institution as almost its sole source of thinking and policy analysis. We believe that this level of engagement takes place in four areas:

- high level policy work performed from the objective, detached position of the analyst with links and connections to global trends and precedents;
- technical problem-oriented research which seeks to solve particular practical problems in the public service – cattle disease, housing construction etc.;
- analysis or external evaluation of policies and programmes undertaken at the behest of enlightened self critical governments (but sometimes carried out independently by the university); and finally
- the historian or recorder function in which the institution maintains the record of what has happened for future generations.

23. These engagements can take place at municipal, regional or national levels of government and can be summed up in the term ‘community service’. In fulfilling these functions effectively the university and its individual staff can often come into conflict with government, particularly where critical study of policy or programmes is concerned. In compact societies where there is only one university this problem can be particularly acute and it can become very difficult for an institution to retain its critical independence when government is the sole provider of funding.

Global engagement

24. In a knowledge-conscious age government, industrialists and other professionals must be kept constantly aware of intellectual developments and research results around the globe. Thinking about new developments in pedagogy needs increasingly to be shared as well. Academics, without major original research commitments can contribute powerfully by listening in to the global research conversation and scanning the moving frontiers of knowledge for insights that may help innovation in their own countries. Mechanisms such as the Community of Science data bases on the web can be crucial tools and enablers in that task.[iv]

25. Using the internet as a tool to facilitate engagement globally allows the networked scholar communities worldwide to contribute to global progress and to narrowing the gap between less developed and developed countries. It is a contribution in which those on both sides of the gap can share.

Diversified funding

26. Donor organisations are key intermediaries in the developed/developing gap globally and particularly through their financial contributions to universities in the developing world. Without their help many Commonwealth institutions would struggle to acquire a basic level of printed journals or scientific equipment. Yet they understandably shrink from becoming a permanent part of the funding solution and are sometimes nervous at influencing governments and institutions in the policy options they should adopt.

27. Engagement with donor bodies is an important element in the life of university managers in the developing world. It brings them several advantages: advice about higher education policies and practices elsewhere; support in conversations with government; a gateway to links and partnerships with better endowed institutions; and the chance of additional direct funding. Yet even in this relationship there are well-known dangers, financial dependency, cultural mismatches through importing and adopting inappropriate solutions and loss of strategic control over policy through responding to funding opportunities.

28. First among "*areas where immediate practical action is needed*" the World Bank Task Force has pointed to funding. It "*suggests a mixed funding model to maximise the financial input of the private sector, philanthropic individuals and institutions, and students,*" and calls for "*more consistent and productive public funding mechanisms.*"[v]

29. Active engagement is the natural stance for a university that wishes to diversify its funding sources. Success in this means that we can gain academic independence by being able to rely on several sources of funds and especially on some sources other than the state. Where we are used to identifying common interests with the private sector, we have the best chance of seeing commercial opportunities to attract donors. Without diversified funding universities have to rely on the effectiveness of their lobbying and other conversations with government to bring them the resources they require. Support for higher education has less appeal to politicians than primary education, health or social services, so that governmental allocations are falling in terms of spend per student over most of the world.

The implications of engagement

30. The rest of this paper sets out how we, the universities of the Commonwealth, see the implications of engagement. It means interacting at several levels strenuously, thoughtfully, often argumentatively with the world around us:

- In setting national priorities for the university sector as well as defining the aims, purposes and priorities of our own individual universities, we need to create forums where political, administrative, business and community leaders can contribute to our debates which affect much more than the academic world. We need to read the signs of the times. That is the engagement discussed in the next section, ***Purposes and Policies - Looking outwards*****.**

- Most of our students, as was not so true thirty years ago, expect higher education to equip them to succeed in the working world. To engage honestly with them commits us to explore the realities of that world and continually discuss with employers the demands its is likely to make on graduates in future. A different sort of education, strongly rooted in everyday working practice, is likely to be asked of us and with it a decisive raising of good teaching in our scale of priorities. This paper's third section ***The World is Our Student*** is about that engagement.

- Innovation in a fast-changing world demands that researchers and the possible users of their results are parts of a single network. A back-and-forth dialogue of theorists, often academic, with practitioners offers fertile ground for new technologies. The creation of useful new knowledge, processes, products, policies, healthcare advances and so on comes about increasingly through alliances, networks, contracts, collaborations and exchanges among thinkers and doers that spread far beyond universities. This is the basis of Section 4: ***Theory Engaged with Practice.***

- Beyond our professional pre-occupations we know that our status as privileged institutions gives universities responsibilities as neighbours and citizens. In sharing our intellectual and cultural capital, in sharing facilities, in joining in community initiatives, in trying to be thoughtful employers, in contributing to regional planning and regeneration, we hope to be useful. We hope that our students will find their university a context to develop their own sense of belonging. ***Citizens*** is the paper's last, brief, Section Five.

31. Those are the senses in which we believe we, as universities, must now consciously adopt 'engagement' as a core value. In exploring how engagement can inform every aspect of our work this paper refers both implicitly and explicitly to the conceptions of scholarship put forward by the US based Carnegie Foundation for the Advancement of Teaching and Learning. The report proposed a broader conception of the various kinds of 'scholarship' that forms the basis of academic activity, they are:[vi]

- *Discovery* which contributes both to the stock of human knowledge and to the intellectual climate of an institution. This is the closest to research in the classic sense;

- *Integration* or *synthesis* is the work which seeks to interpret, draw together and bring new insight to bear on original research, it reaches across disciplinary boundaries and brings information together in creative and innovative ways;

- The *application* or *practice* of the outcomes of discovery and integration enables the knowledge and understanding to be applied to problems of higher education itself and of society;

- *Teaching* includes not only transmitting, but transforming and extending knowledge on the basis both of appropriate knowledge of the discipline but also encompasses what it is that makes for effective teaching and learning in the discipline concerned.

Strategies and scholarships

Some universities in Australia and the UK are choosing to develop their institutional strategies explicitly drawing upon the inter-relationships among the four scholarships. For example, the strategic planning document of one Australian university suggests:

" . . . the University does aim to be a place where the practice of each scholarship is enriched and enhanced by its relationship with the others, and where the practice of each scholar is enhanced by its being exercised in practical relationships with people drawn from all four of the audiences principally associated with these scholarships. In such a way, the University aims to have each of its members contributing actively to a wider web of personal, practical and social relationships stretching beyond the 'small world' of the University itself."[vii]

PURPOSES AND POLICIES - LOOKING OUTWARDS

Universities expect to discuss their broad aims and purposes with governments, employers and other stakeholders. We must join other forums to debate appropriate higher education strategy, research policy and funding arrangements and their part in regional planning and development. We must sense trends in national opinion.

Our stakeholders

32. Others are legitimately concerned with our aims and priorities and in seeing that we achieve them effectively and efficiently. Governments, industry and commerce look for the creation of flexible and adaptable workforces; the professions for people prepared for practical and intellectual pressure; schools and colleges for a stream of good and well-prepared minds moving into teaching. Industrialists and the medical profession especially need researchers trained in the latest science to widen their own range of technological options. Above all students need their universities to have a real interaction with the working world for which they are being prepared.

33. It is highly desirable to include employers, from both public and private sectors, on the governing bodies of universities, contributing from their national, regional and local experience. In many of our countries business people are members of, and sometimes chair, the funding bodies; they may sit on committees charged with assuring the quality and standards of university courses. Business people can offer insights that academics may lack about the demands of the future working world that students must be equipped to meet.

34. Commonwealth universities also expect to engage regularly with government, industry, commerce, health and education leaders, administrators, planners and student representatives in a variety of contexts of discussion, including: overarching policy for higher education, advancing science and technology, planning relevant higher education, and regional (even local) planning and development.

35. With all of these stakeholders, we seek a partnership in debate about our future; what are to be the aims, purposes and priorities for which we claim public (and other private) funds on an increasing large scale. Through this partnership in debate we hope to find solutions to questions such as: how are we both to train our élites to whom we look for future leadership and innovation *and* simultaneously make college and university accessible to a wider range of students at different stages in their lives? What sort of partnership can universities build with employers and employees to turn ‘lifelong learning’ into more than a slogan? How is research funding to be allocated to promote the common good?

Overarching policy

36. Universities hope to see thoughtful business leaders, from both public and private sectors, around tables where national education priorities are hammered out. Overriding will be the appropriate balance, different and changing in each country, to be struck between primary, secondary and tertiary education. Closely interlocked with that are decisions about how to frame useful higher education, and maintain very high standards, as a growing proportion of our population expect access to higher education. University leaders face difficult questions. For example, how far is expansion of higher education to be justified as promoting economic growth and meeting qualified manpower needs, and how far as a motor for social mobility and individual fulfillment?

37. Already some Commonwealth countries have forums for such crucial debate; others will need to create them. Formal organisations with top-level membership from the private sector and the higher education community have been established in the United Kingdom (Council for Industry and Higher Education (CIHE)), in Australia (Higher Education Business Roundtable), and in Canada (Corporate – Higher Education Forum).

38. Countries without such formal structures may choose to include external stakeholders in their strategic planning committees. Such examples exist in New Zealand, where the government recently announced the establishment of two special committees: the Higher Education Taskforce and the Innovate New Zealand Committee; and in South Africa, where the National Advisory Council on Innovation has a membership comprised of individuals from the education, government and business sectors.

39. In these forums, leaders of corporations and universities meet regularly to mark out strategic areas of common interest and to provide a joint voice to their governments, industry and universities. *Towards a Partnership - Universities, Government, Industry*, an early paper from the CIHE, had the unanimous approval of some fifty chairmen and Vice-Chancellors, and has helped lead years of rapid university development and improving academic/business relations. We believe such bodies are, if that is practicable, best kept independent of governments, which they may need to lobby or criticise.

40. Beyond official forums, however, university policy-making will also be sensitive to currents of change in a changing society. From manifold connections with knowledge-professionals and opinion-formers outside academy, individual academics will gather insights to be fed into senates, councils and university committees.

Advancing science and technology

41. National science policy and the allocation of funds for scientific research are now too important to be left to scientists alone. Our engagement here addresses the question of what research projects have the best chance of contributing to national development, industrial growth and competitiveness, and to the quality of ordinary people's lives.

Strenuous discussion between researchers, research users and the public are more likely to re-assure a sceptical public that academic effort is useful and appropriate. Such engagement strengthens our claim to deploy public research funding with few strings attached.

Planning the 'right' higher education

42. The purposes of degree and diploma courses themselves will also be central to academics' earnest debate with stakeholders. The 'massification' of higher education in some countries and the prospect of it in others has widened our constituencies to cover increasing numbers of people including, actual or aspiring students and their families. Employers begin to seek graduates not just to fill a few senior manager jobs in future, but to fill whole flights of supporting professional roles throughout organisations.

43. We need others to engage with us in the business of planning and monitoring higher education. We need to encourage others, especially employers, to help with our broad agenda by engaging with us in addressing issues such as: How to strike the balance between narrow, vocationally focused courses and broad programmes designed to prepare students for their future life? How should the responsibility for funding students be shared between governments, employers and individual students? And how is the quality of higher education to be assessed and improved?

Regional development

44. Planning and priority-setting go on as much in regional forums as in national ones. In these regional forums, universities will also engage actively with employers, local and regional government, planners and developers, even though many universities define their roles, and indeed their 'catchment areas' less in regional, than in national, or international, terms.

THE WORLD IS OUR STUDENT

Students and employers ask universities to put teaching ahead of research so as to cater properly for a wide variety of students. More than a strictly academic education is needed to enable graduates to be both effective and reflective at work. The working world must become available as the raw material of lifelong learning. New pedagogy, new technologies, and better recognition of teaching excellence must be brought into play

The primacy of teaching

45. Engagement offers some uncomfortable messages. Listening to the voices of stakeholders, academics hear them unequivocally calling for a radical change in academic priorities. As universities we are explicitly and repeatedly asked to put the claims of our students first and see that first-class, useful, up-to-date learning takes precedence over our own research and subject development. It is plainly not a demand to be hurriedly accepted or rejected but equally it is a demand very much to be reckoned with.

46. Employers urge upon us the priority of first-class university teaching. That insistence is helpful at a time when younger academics are easily tempted, and sometimes advised, to devote most of their best energies to research. “We cannot emphasise too strongly”, wrote the Council for Industry and Higher Education, “that among universities' outputs, it is well taught, broadly grounded, appropriately skilled people that industry values most, and ahead of any research output. Industry looks to university laboratories, for example, first of all for properly trained and thoughtful researchers. It sees technology as being 'transferred' in the heads of well educated graduates, who can apply their knowledge systematically…"[viii]

47. The expansion of universities has transformed the expectations of their students. Instead of contributing to the academic education of a small elite of academically proven students, universities must now offer a broad preparation for an unpredictable world of work to a disparate and ever-growing number of students.

48. Most students look for their degree to be a passport to success at work. But as an engaged university, our curriculum planners will distinguish the very different steps they need to climb to get there. Adult students usually seek connections between their new academic understandings and the work they know - well-engaged courses will enable each to illuminate the other. By contrast, school-leavers look to gain the capabilities to contribute quickly to unfamiliar work.

49. Students' intellectual starting-points are very scattered. This has been by design as different routes to college have been plotted for different sorts of learner. More and more school-leavers enter university with certificates for occupationally-based courses instead of the traditional eighteen-year-old academic exam result which made for a smooth transition to very compatible degree courses. Older students, who have amply proved general ability displayed in their lives, may arrive with few academic credits. Others again will be grasping, by way of access courses, for opportunities they had always believed out of reach.

50. The systematic transmission, usually by lecture, of standard discipline-knowledge in orderly stages, has an honourable history; it is second nature to older academics and many younger ones as well. But it cannot offer nearly enough on its own to a huge range of students with starting-points, aspirations and destinations immensely varied but mostly well outside the confines of the theoretical discipline. New pedagogy is not a luxury for universities but becoming a condition of surviving with the respect of our stakeholders. (Boyer – [see paragraph 31] - carefully includes with his 'scholarship of teaching' the study of "what it is that makes for effective teaching and learning in the discipline concerned.")

51. There are pressures in the higher education system which, if left unchecked, threaten good education. Where degrees are seen by students as consumer goods for which they are customers in a mass market, some students will look for teachers to get them the maximum qualification for the minimum effort. Hard-pressed lecturers and their huge student audiences are tempted to collude so that lectures and examinations alike simply repeat predigested information circulated as notes. This sort of higher education is positively counter-productive in encouraging students to think for themselves and preparing them for a world where knowledge and technology alter and grow rapidly.

52. Expectations of teachers rise continually. Students, taught to think of themselves as 'customers' are quick to criticise teaching that fails to 'deliver life-skills' as well as exam marks. While at the same time, governments devise methods of assessing a university's quality and measure productivity, while discussing learners' progress in terms of 'value-added'. Employers are heard complaining, often unfairly, that graduates are not presented to them fully 'work-ready'.

53. Some of these demands ought to be resisted. Nonetheless in fixing on engagement as our theme, we mean to emphasise the pressing call to situate our university courses as far as possible in the context of students' experience at work and in the world they come from, go back to, and where they expect to exercise understanding and practical intelligence. To do that means rooting much of our teaching in our own engaged understanding of that world.

The working world's demands

54. To take our engagement with our own economies as a core value commits academics to a dialogue with employers about the nature of the future world of work and the demands it is likely to make on graduates. What useful qualities do we hope tomorrow's graduates will have developed in their time with us? What is the purpose of their education?

55. In an institution of teaching and learning, independent as we have described, the relation of teacher and student is paramount and sacrosanct. In that partnership, as with that of doctor and patient, the student's best interest is over-riding and the true development of the student's mind and capacities are not to be compromised by any sort of indoctrination. What governments, business leaders or heads of the professions may try to prescribe for the minds of students must be sceptically tested by teachers and students against the criterion of the individual's long-term intellectual growth and independence.

56. Education must not be undertaken to pre-form its students to some fairly detailed person-specification sent out by industry. Most younger students nowadays, and probably most of their lecturers too, see their higher education, at least in part, as a preparation for working life. But we must never suggest that the desired engagement of universities and employers is one of 'suppliers' (universities) of 'products' (graduates) to 'consumer-customers' (employers).

57. We cannot subscribe to a partnership of university with employers conceived in those terms. As teachers, our role is to widen students' choices, not narrow them. The economy of the future is not a mould into which future generations are to be poured but instead will be the product of their schooled imaginations. We engage more readily with individuals like the managing director of a multi-national corporation who suggested: "In a brain-power intensive marketplace we depend on the educated minds the universities can offer us; but don't give us what we say we want in those minds or we shall never get what we truly need."[ix]

58. Graduates are increasing in number and variety – that is variety in terms of the individuals themselves and the range of subjects that they study. There are already Commonwealth countries where 60 or 70 per cent of young people have a statistical expectation of formal higher education (most while young, but many later in life); such a large cohort must find a wide range of jobs across a wide spectrum of employers.[x] Recent research has shown that “The more graduates there are, the more graduate jobs they seem to fill.”[xi] Some will be fast-track management and professional trainees in what were once called ‘graduate jobs’; they may often be hired directly from élite institutions. Some will be doing more traditional work but with potential for innovation if graduate and employer together can realise it.

59. Notwithstanding the variety of occupations, there are things that can be said in general about the demands of the future working world and what our students may properly expect of their higher education to prepare them for it.

60. The first challenge to us of engagement with the future world of work is that our students will expect more than a purely academic training from us. A 1995 UK survey, equally relevant today, undertook to bring together employers' and graduates' views about the demands of the future working world and resulted in two important findings.[xii]

61. First, those graduates fared best who had the wit and sensibility to grasp the particular style and habits of their new organisation (strange as those sometimes seemed to be!), to fit in and get on with the job. By contrast a slightly haughty standing apart from the rough-and-tumble of work was not uncommon but rendered a graduate recruit ineffective. When one UK institution investigated what quality in its own graduates was most prized by their employers, "to get on with the job without supervision when the boss is away" came back at the top of the list."

62. A capacity for innovation, almost the mirror image of those everyday virtues of involvement, is looked for from the educated. The previously mentioned survey demonstrated this dichotomy and issued a warning: "Employers want people who see change as an opportunity not a threat. They want transformative agents who can help organisations to evolve; transformative attributes tend to include critique, synthesis, enabling leadership. Transformative agents by definition have ideas, they ' look outside the box' and 'look ahead' but transformative people can be seen as threatening, as rocking the boat, causing friction."[xiii]

63. Those replies, drawn from a wide and varied group, carry two powerful signals about the world's expectations of our graduates over the next decades. The first is that today's students already require from a degree course much more than an intellectual grasp of their subjects, though that grasp itself remains vital. They must emerge from universities somehow as men and women of action. Their degrees must enable them to be useful. As a Malaysian university has stated: "The old image of the university as an 'ivory tower' in the pursuit of knowledge purely for knowledge's sake, detached from the issues faced by the practitioners in the field, is no longer tenable, especially in a fast developing country."

64. But while 'personal effectiveness' is necessary, it will be far from sufficient. The working world with which we are to engage must be not merely organised, dynamic and efficient; but simultaneously self-critical and innovative. Innovation is the only way for many to stay in business against global competition; it is the only way for many developing countries to speed development.

65. The need for both effectiveness and innovation raises a difficult dilemma. Maintaining quality, raising efficiency and minimising risk demand the unimpeded sequencing of well-

defined processes, established control systems, experience and training. However, societies demand that institutions educate graduates to not only to commit themselves wholeheartedly and effectively to their tasks, but also simultaneously to take an innovative and critical approach so that they can both act and reflect on their actions. It may not be glib to say that people described as 'reflective practitioners' should be the alumni of the engaged university.

Generic skills

66. As we discussed earlier, an essential feature of the future for most of us will be forums where academics and people from the world of affairs can exchange ideas about the demands of the future working world. Funding councils, responsible for allocating most of the public funding to universities, increasingly invite universities to look to the employability of their students. Committees monitoring the standards and quality of offered courses do likewise. Employers' representative bodies stress graduates' need for 'transferable skills', though they are not always unanimous about what these are.

67. A strong lead was provided in the UK by a consortium of all such concerned bodies and some government departments. A manifesto of engagement was issued as a joint declaration of intent: "that within given time they would see that those in higher education are enabled to develop attributes of thought useful for success in employment and future life".[xiv] Dialogue between academics and the outside society should be permanent; it substitutes in part for the philosophical essays on the 'idea of the university', which helped to form opinions on academic aims and purposes fifty to a hundred years ago.

68. Our degree programmes can and ought to be reflecting the early conclusions about the needs of the working world of the future.

Language enables thinking

69. Australian employers have reported about recent graduates that one of the highest desired skills, oral business communications, was also the most lacking.[xv] However, we think that 'communications skills' is too narrow a phrase. It is not a mere matter of five-minute presentations, computer-made slides, flip-chart fluency or business report writing. Our task is more fundamental and worth serious academic attention: to enable our students in every discipline to pursue the stages of an argument within the language of a discipline. It means attentive listening and clear speech as well as precise writing, supporting generalisations with evidence, persuading and being persuaded by others or resisting them. Language shapes our world and our abilities to change it.

Measure where you should

70. Another characteristic of the working world for which we must ensure all our graduates are prepared is its measurability. Employers in every field are concerned to seek the

greatest precision they can to minimise the risks implied by vagueness. Verbal impression will seldom serve any longer where a degree of numerical precision is available. Graduates must be able to manipulate ideas demonstrably, and express them to others confidently in the best language of the time, which now includes mathematical concepts and terms. They must also learn to distinguish between those times when measurement is valid and when subjective or qualitative factors must prevail.

Asking the right questions

71. In the world today there is a profusion of data, much of it so ill sorted as barely to count as 'information'. Managers and professionals, as never before, (not just academics) will need the skills of choosing and marshalling resources that can help them. The ability to use a search engine to trawl the Internet will not supplant traditional research and analytical skills, as the calculator has not replaced the need for an understanding of mathematical concepts. Data appreciation is a much more worthwhile aim for our graduates than mere 'IT skills', which many children today begin to learn in primary school.

Lifelong learning

72. All of those qualities - of the reflective practitioner, of the trained language user-and-communicator, of numerical competence, of control of data-masses, of confidence in varied teams – are the equipment of the life-long learner. They are the qualities that will enable the graduate mind to engage intellectually with work and to use the working world continually as the raw material of learning. The obverse of innovation is obsolescence where the knowledge we transmit to students is going out of date at an accelerating speed. That reality changes the definition of educated people forever. They are no longer those with an attested level of achievement (knowledge, understanding, skills, capability, competence, syllabus coverage) but those who have learnt to pursue their lives and their work in a spirit of critical but humble questioning and learning.

73. Understanding the need of life-long learners is particularly important in meeting the needs of a growing diversity in learners. Increasingly, learners in higher education reflect a larger proportion of adults who are carrying the burden of family, work and education and are therefore fundamentally instrumental in their approach to learning. Their needs are more likely to be focused on learning that is easily accessible and can be applied to their world of work almost immediately. Learning that is 'just-in-time' and 'just-around-the-corner' is increasingly in demand. Learning in this context is seen as meeting the needs of a specific type of learner and not necessarily that of the familiar eighteen to twenty-one year old who is attending a university to gain not only knowledge but a more holistic educational and social experience.

74. A growing number of mature students (over 40 years of age) are undertaking first degrees, or returning to higher learning to pursue topics of personal interest and not always for accreditation. For this group the curriculum must be flexible and responsive both in the breadth of topics available for study and also in the accessibility of the learning opportunity through mode of study and location.

75. Career professionals seeking Continuing Professional Development are a growing market for many university departments. To be useful the teaching teams need in essence to relate individuals' actual experience to the latest thinking in the field. Employers, public and private, can partner universities in designing, teaching and assessment and even specify modules tailored to the work of a single employer. Academic expertise is absolutely necessary but cannot be sufficient - it is the closeness of engagement that determines success.

76. An attitude of life-long curiosity is what must distinguish the alumni of the truly 'engaged' university. They will give a lead in sharing with academics the questions provoked by their work, whatever it may be, and so help to further just that engagement which can be a context for the creation of new knowledge.

Rethinking first degrees

77. To understand working as in part learning, and learning as a central continuing human activity, has important implications for our programme planning. We are called to rethink our criteria for planning first degrees. The teacher's natural aim of covering as much ground as possible must give way to the aim of laying sound foundations, of giving learners the equipment and the spur for continued learning. First degrees should be judged successful not if they cram students with material, but if they widen horizons, and provide the basic 'grammar' of a subject as a versatile base for engaging with the world's problems later.

78. We hear employers telling us not so much that our graduates know too little as that often they are ill adapted to using what they do know. We think many of our courses may be overly comprehensive - a result of lecturers' understandable desire not to miss anything in a fast-expanding field. But life-long learning, if taken seriously, means that much material can be, indeed must be, left until later when reflection in the work place makes it relevant and pressing. The best academic qualifications might be more like membership of a club of those pledged to return to study at intervals in the future.

Applied education

79. We think that in this century tertiary education, as it expands, will become a less 'academic' business. In some Commonwealth countries vocational routes to qualify for university entry are taking their place alongside the traditional academic certificates.

Mature students are increasingly assessed as would-be university students on their own systematic analysis of what they have absorbed from their life and work experience (the Assessment of Prior Experiential Learning or APEL). Equally, institutions must resist any narrow vocationalism or any temptation to constrict learning to a range of defined tasks. Above all, an applied education must offer a breadth that encourages versatility for a changing world and widens the range of choices students are equipped to make.

80. As a result, we are called upon to devise styles of education that are themselves more directly and obviously engaged with economic activity. They will complement our more traditional courses, which will themselves need to adapt. The Council for Industry and Higher Education has argued:

81. *"To complement high quality discipline-based courses…industry hopes to see broadening education develop with a more applied bias in style. To convince students of the worthiness of rigorous study and the expenditure of their time and money, courses will often need to be organised around areas of the working world's concerns and ways of doing things. To appeal to more practical minds they will usually need to be grounded in actual tasks and projects, in the concrete here and now rather than in the speculative or abstract."*[xvi]

Applied education across the Commonwealth

The preceding ideas are already being reflected in initiatives across the Commonwealth which include:

Many medical schools in Australia and the UK[xvii] have now begun to adopt 'problem-based' learning, where students, from the beginning of their courses, work in groups to confront actual cases and then discuss what questions they need to answer and what discipline-knowledge they need to describe and tackle them. These reforms are to meet the criticism that medical students during their pre-clinical studies have traditionally been force-fed with the dry bones of science disciplines, anatomy, physiology and bio-chemistry, which have seemed at times irrelevant to the actual conditions of flesh and blood patients they meet in the later clinical parts of their degree programme.

In Canada, co-operative education (known as sandwich learning in the UK) is a popular form of combining professional and academic learning throughout a student's educational experience. This form of learning consists of alternating between periods of classroom learning and job placement, with each period usually lasting four months. The Canadian Association for Co-operative Education (CAFCE), with thirteen universities as members, argues that co-operative education provides active opportunities for partnership and feedback between universities and industry, and gives students the ability to apply theoretical learning to real-life situations.[xviii] The University of Waterloo, the Canadian pioneer in co-operative learning, now has over 9000 students in 80 co-op programs in partnership with 2500 employers.[xix]

The British government is experimenting with schemes of 'graduate apprenticeships' which have work-experience built in as an essential component. With working students the key question is how to ensure the work and the study are two aspects of the same learning process.

In certain UK institutions,[xx] degrees can be taken by the 'work-based route' with the degree described as a degree in Work-based Learning with reference to a particular field or discipline. (ie BA in Work-Based Learning [Personnel Management]). This nomenclature shows emphasis on what it means to reflect systematically on work and on how to do it. In the work-based learning degree programme the student must earn a high proportion of the required credits by critical reporting of his/her learning-from-experience, more commonly known as the 'assessment of prior and experiential learning' (APEL).

Life-long learning includes individuals, regardless of age or discipline, returning to the classroom throughout their career to improve their knowledge. For example, mid-career mechanical engineering graduates from the University of Warwick return to the university for periods of several months bringing engineering problems from their work for study with colleagues in the department.

Work as the raw material of learning

82. For younger students, with no first-hand knowledge of work, to be educated in an applied style as reflective practitioners implies that the working world make itself available as the raw material of learning. It must also contribute content to higher education courses. The latest technological equipment in industry needs to be shared with universities and colleges if students are to grasp its proper uses.

83. Work experience, sandwich and professional years can allow young people not merely to 'absorb workplace culture' (a pretty limited aim) but to learn to analyse, classify, discuss, comment on, set in context, compare the situations, decisions, people and things in the piece of the world they visit. Simulations and case studies can be made out of all business and professional lives; to create them is itself a most reflective exercise for post-graduates and lecturers keen to explore parts of the working-world, with which they are particularly concerned.

84. Universities' privileged standing between public and private sector obliges us to continue to introduce our students into wider realms of understanding and practice. We are to help them become fully participating (engaged) active citizens; we are also to initiate them into the special duties and understandings, many of them tacit, of professions and vocations.

85. Older students on the other hand, and especially part-timers, can contribute uniquely to courses from their day-to-day experience elsewhere - and often at work. They alert us to changes in working practice, and to feelings and constraints alongside facts and opportunities. Here engagement with the students' experience can be deeply humanising.

Some can lead, even teach, sessions themselves; more can bring us material. Their requirements as our clients, carefully listened to, give clues to adapting universities to changing trends.

Regulating bodies

86. We need a thorough understanding of life-time learning's true implications if we are to present its challenges forcefully to all those responsible for approving the learning we have on offer, namely to the bodies that validate, accredit, suggest equivalencies, propose competencies, and in general guard professional standards. These bodies are often tempted to follow the tried and tested, or to propose additions to already overloaded syllabuses (but seldom compensating subtractions) to take account of the new.

87. Regulating bodies have not found it easy to include in their criteria of approval that courses should help students towards flexibility and adaptability. Course specifications or quality 'benchmarks' based on course content can positively discourage those looking to their students' developing wider horizons, enquiring minds, reflective temperaments and collaborative natures.

A revolution in method

88. We propose three paths to follow to ensure that university education continues to command the respect of practitioners and students. The *first* is for universities to direct some of their best intellectual energy into studying and improving the learning process itself; the *second* is to explore vigorously the potential of new technologies; and the *third* is to improve the recognition and rewards offered to academics who are exemplary teachers.

Rethinking the learning process

89. To achieve the widening of post-18 education effectively and efficiently while raising its quality implies something of a revolution in teaching and learning methods. In future more students must learn more efficiently and for a broader range of achievement with the help of relatively fewer staff. The students will be more widely dispersed and will begin their studies from a wider range of starting-points. They will need their confidence building and only learning in small groups will teach them how to join discussion - a crucial skill for the higher educated.

90. Many universities and colleges have already increased productivity to a level believed to be at or near the limit of present education processes. The scale of expanded activity is putting strains on teachers as they struggle to accommodate growing numbers of students.

91. There are already thinkers, in universities and particularly in some smaller colleges, who have begun to analyse in detail the implications of aiming deliberately to improve learning with a much higher ratio of students to staff. They are concerned to discover in what circumstances the maximum is learnt, how to relieve lecturers of the burden of simply transmitting information. They are investigating how students can diagnose their own learning needs and manage much of their own learning, as well as building on the pedagogical lessons from distance-learning, and developing whole programmes around the concept of solving problems. They are experimenting with carefully and highly structured learning materials and improving efficiency by careful profiling of individuals' needs, prior knowledge, experience and aspirations.

92. Such experiments should be of the utmost concern to all of us since their purpose is above all to free academics for their proper activity of encouraging, advising, criticising, praising and assessing their students. It is personal interaction of academics who can most help to build the priceless confidence that enables students and graduates to risk questioning, risk contributing, risk raising their eyes from the computer-screen, risk making an original contribution to a group. It is in groups with staff that students learn to participate in a discussion and to explain; it is staff who lead the search for placements and projects with local employers and who plan, monitor and mostly assess.

93. Intellectual confidence will be central to what university education has to offer in a new century. A learning society generates its special anxiety - that what we learn may be already obsolete, that we may mistake the irrelevant for the relevant; ‘post-modern’ insights invite us to question even basic frameworks of thought, criteria for truth and traditional means of expression. Our academics are obliged to re-examine their teaching work to ensure they are educating humans to navigate in such uncharted waters. Their students must be readied to make sense of a world that can seem crazy in all its questionings.

94. The increasing development and wide-spread use of information and communications technology in teaching and learning bring new opportunities and challenges to both teacher and learner. Telecommunication via satellite or video is still widely used to facilitate learning in a variety of contexts – be it remote distance learning or to enhance classroom activities. However, the growth of new internet-based technologies (and increasingly wireless applications that do not require land-based connection) provide opportunities to develop interactive learning experiences that both support and enhance more traditional methods.

Technological opportunities

95. At the close of the twentieth century it could be said that use of most technology-based instruction was the domain primarily of an enthusiastic minority; it was hardly part of mainstream higher education. The proportion is shifting swiftly as newer technologies are developed and higher education begins to collaborate with new partners to make

technology ubiquitous. Enthusiasm for the 'brave new world' needs to be moderated by thoughtful selection; as the new technologies are generally at their most effective not used on their own but as elements in an integrated educational approach ('blended education').

96. The use of such technology provide a variety of opportunities for learners including more readily accessible information via the worldwide web and the chance to study from home or more remote locations at a distance from the university itself. It can enable academics to present knowledge and information in any variety of ways to enhance classroom based activities and reinforce learning.

97. The challenges are many. Most academics are only beginning to explore technology for teaching and they need much encouragement to discover pedagogically sound approaches. Many questions need answering: about students' willingness to learn in these ways, about cost, infrastructure and quality. Access to computer-based technologies is indeed increasing, but not at an equitable rate throughout the Commonwealth. The mobility of knowledge via the internet holds much promise but also poses the possibility of creating a digital divide as access to necessary hardware and connectivity is not equally available throughout the world.

98. Computer hardware and technically advanced software provide no magic solutions and absorb enormous funds. The British Open University, seen originally as the offspring of broadcasting technology at the start of the mass television era, turns out in practice to owe its success to close analysis of how adults can learn and the arrangement of step-by-step knowledge, material, tuition and support materials to match. Television has come to be seen as no more than one, and far from the most important of, delivery mechanisms. The internet is another delivery route for which much is claimed and which has yet to prove itself both educationally and financially. It does however come with the advantage that it encourages independent study and provides a gateway to a vast world of 'content' and academic information.

Economies of scale

99. The initial investment in designing useful learning programmes and software can be prohibitively expensive for most Commonwealth universities unless made with the prospect of intensive and very widespread use. Capital-intensive methods demand large markets and reliance either on commercial partners or alliances between providers. In short, lecturers spread across many institutions will need to agree on programmes, perhaps whole courses, which almost all of their students can use in common. That will be a break with our general traditions of departmental independence, but without such economies of scale our university staff cannot accomplish what they need to. Here is a field ripe for co-operation across the Commonwealth and examples are already emerging with networks such as the Global University Alliance (GUA), Worldwide University Network and Universitas 21. In many cases, these alliances are cross continental and cross-sectoral with leadership from the commercial sector.[xxi]

100. Partnerships with commercial organisations are likely to be a feature of web-based delivery of teaching in the developed world. This will bring the traditional cultures of the academic into contact with the customer-oriented, task-based, time-limited disciplines espoused by organisations such as the University of Phoenix. These disciplines have enabled that organisation to grow to an enrolment of nearly 85,000 students in a few years and to have earned the enthusiastic support of corporate customers. Some suggest that the traditional western university has much to learn from Phoenix in its rigorous approach to teaching. It has engaged with its clientele and is offering them what they want and it so happens that this is achieved by methods which are far removed from those of the conventional university.[xxii]

101. Our university colleagues may look warily at such examples. We have traditionally seen the student's best educational interests as stretching wider than the syllabus, as demanding more than mere cognitive progress, and (above all) as implying exploration and challenge well beyond the student's immediate desires. Whatever our competitors may offer, we risk betraying our students in stripping down a rich education experience to simple instruction for the job market.

Incentives

102. As for incentives, the intellectual content of pedagogy is now more firmly established, which will encourage reward and promotion of academics for their contribution to teaching as against their research effort. This would be a great gain. It will be easier to persuade our colleagues that teaching is a professional business in its own right for which academics need training and, probably, accreditation. And it is only such recognised professionalism in learning and teaching that will eventually justify the funds we will need to bring back into academia our proper share of the best minds.

103. Providing academics with the theoretical background in pedagogical practice that enables them to convey their knowledge in a manner more accessible to learners is an important step in repositioning the value of teaching. Bringing together the different notions of scholarship, including that of teaching, will enable academics to facilitate a more enriching educational experience that values knowledge gleaned from both within and beyond the academy.

104. Institutions and governmental funding bodies alike are beginning to redress the imbalances that have allowed excellent research to attract much better rewards than excellence in teaching. Good teaching is increasingly included among criteria for promotion and there are growing examples of schemes of national recognition for outstanding university teachers, most notably in Canada, Australia and the United Kingdom.

Subject associations

105. Engagement with society and the economy is the business not only of individual universities but also of the academic disciplines themselves. It is for experts in those disciplines to debate, nationally and internationally, the criteria necessary to produce an effective and useful education for their students.

106. The Royal Society of Chemistry in Britain recently led academic chemists in a study of the jobs done by graduate chemists and proposed directions for the development of new courses. Their report has much to say about how the dialogue and interaction between employers and university chemistry departments could be improved (ie get more regular and up-to-date feedback into course design and better student awareness of market needs).[xxiii]

107. We believe fairly small amounts of public money could most usefully be employed in many of our countries to strengthen the subject associations, which bring together academics from single disciplines or fields. Funding could reasonably be tied to an undertaking by such an association to pursue with its members in all their university departments how they might most fruitfully interact with 'their' part of the economy.

108. In the UK, the Learning and Teaching Support Network, a system of twenty-four subject centres, has been established to promote teaching and learning quality. The subject centres will be responsible for "knowledge brokerage, networking, promotion and sharing of good practice, and an advisory function" within their particular discipline.[xxiv]

THE DIALOGUE OF THEORY WITH PRACTICE

Multi-sided 'conversations' between academics and practitioners is the best guarantee that research contributes, as is required of it, to improvements in economies, industries, and the quality of life. Selecting priority areas of investigation and world-class research teams for support is a first step, which provides opportunities for developed-with-developing-country co-operation. University structures, often aided by 'technology foresight' initiatives, must encourage vigorous interaction and mutual re-appraisal between academics and practitioners.

Why research is worthwhile

109. Universities, and individual academics, however brilliant, can no longer assume any privileged right whatever to funds, public or private, to pursue research. The worth of any academic investigation cannot be taken at all for granted. On the contrary, academics expect to bargain for support with their own societies, governments, agencies and private organisations by demonstrating why such or such a research project is useful and appropriate to invest in. Voters and taxpayers expect assurances that academic research is a deserving competitor for funds with health, education, development or help for the disadvantaged. A concerned public often expects to argue the balance of risk against opportunity foreseen from new research.

110. The requirement on us is plain. It is that our research effort should, sooner or later, by one route or another, contribute to practical innovation otherwise unattainable - innovation, that is to say, to improve economic growth, industrial development and competitiveness, or the quality of ordinary people's lives. Within 'quality of life', of course, alongside better health, we greatly value cultural innovation - insights in history, language and the arts. But the case has to be made: that cultural fertility is worth working and paying for.

111. Useful innovation goes much wider than technical change in manufacturing processes and products or new means of diagnosis and treatment. All academic departments can contribute to it. Society can recognise great benefits from new understandings of (for example) economic management, of poverty and remedies for it, of new ways of organising transport, of new farming methods, of environmental understanding, of better legal or constitutional arrangements. All these arise in fields minutely studied in universities. In Boyer's terms (see paragraph 31) we are asked to see the separated scholarships of 'discovery', 'synthesis' and 'application' as closely related aspects of our input to innovation.

112. The relation of academic research to practical innovation is itself much debated. We are convinced by the central conclusion: to create at every level a multisided conversation (more than simply dialogue) between members of the research community with those of the practitioner community about possible lines of advance in theory and in practice. The understandings of each community need to illuminate each other. In particular academics need to give full weight to the values, insights methods and difficulties of practitioners - often very different from their own. This is at the heart of engagement.

113. ‘Conversation’ about usefulness must be encouraged in at least three arenas: those of *national priority-setting*, of *funding decisions* and of the interaction between individual *researcher and practitioner*.

National priority-setting

114. As we have discussed earlier, (*Purposes and Policies),* we expect our governments to ensure councils or committees are established where universities with industrial and public service partners can work together to agree national research priorities. Academic interest and the pursuit of ‘good’ science cannot alone be determining criteria: rather, those bodies must pick out research programmes which have the highest probability of promoting economic development, industrial competitiveness or a better quality of life.

115. Universities and industry must work together to ensure that fundamental, ‘blue skies’ research is not neglected in favour of the immediate, foreseeable results of applied research. As has been stated by the President of the Canadian Institute for Advanced Research: “[T]he wise dictates of balanced portfolio management that financial experts consistently advocate in the realm of retirement planning apply [heavily] to industrial research and development. Corporate R&D decision-makers will do well to frame the maxim that basic research involves the long-term and speculative investment without which no portfolio is balanced.”[xxv]

116. In the UK suggestions that university research be focussed towards more immediate applications has been unequivocally repudiated by a group dominated by business leaders (The Council for Industry and Higher Education): “*Companies have unanimously told the Council* (they said) *that they greatly value pure and curiosity-led research as the seed-bed from which their own applied work can develop marketable technologies. They wish to see neither a reduction in the overall science base nor any significant shift by the universities towards applied work which is easier to 'sell'.”*[xxvi]

117. Priority-setting needs to be done not by academics and their peers (ie the research community) working on their own, as has often been the tradition. They need to argue their case with other individuals, such as business people, who expect to make use of the research findings. That dialogue, linking research funding to an intense debate of researchers with users, is fundamental to the engagement of academic with societal purposes.

118. It remains an academic responsibility to convince the lay public how our research is a valuable way of widening human horizons and improving lives. This is a crucial aspect of promoting the academic enterprise as a whole to modern, popular democracies. We believe, however, that in our democracies, with the media playing a growing role, the challenge of explaining ourselves and our research work to the world at large has to be

central for our freedom and, indeed, for our funding. People are sensibly suspicious of what they do not understand and we must continue to help them even at risk of oversimplification of ideas that may sometimes seem to our colleagues be too subtle to share with the uninitiated.

119. But it is more than a matter of explanation and the 'public understanding of science'. Individual enthusiasts, some expert, some not, and interest groups may well claim to understand the directions of science and dislike, or fear what they see. Representatives of public concern are becoming third parties to the researcher-practitioner debate about the best ways ahead. That three-sided exchange is at the heart of engagement as we see it. Academic aims, choices, methods and risk assessment are no longer taken for granted but must be hazarded in public argument. The nature of the scientific enterprise is continually being redefined.

Funding decisions

120. Of course Commonwealth universities vary enormously in their ability to conduct basic scientific and advanced engineering research. In a global academia, there is decreasing usefulness in any work that falls below international standards and we believe that only rigorous selectivity and concentration of effort will make work of that class possible for us.

121. To have some place in the world research league, even a modest place, is a sensible ambition, since it gives academics a place in the continuing, global research conversation to which academics and industrialists need to listen. For departments that cannot be supported for original research there remains a crucial scholarly role of scanning the frontiers of knowledge and weighing the implication of new insights for policy, development or innovation in their own countries. That role of interpreter is central to engagement.

122. It is important for the world's basic research effort, expensive though it is, to be shared, at least in part, rather than being concentrated in a handful of developed countries. Developing countries in particular can contribute much from their own indigenous knowledge, experience and circumstances and extend the overall agenda to match their own cultures and concerns. An engaged higher education system facilitates and enables collaborative ventures that provide intellectual bridges and encouraged research teams from developing and developed countries to work together.

Researcher and practitioner

123. Practical understanding comes as researchers and practitioners explore each others' worlds and learn how the ‘whys’ of science can connect with the ‘hows’ of technology. To embrace engagement in general, and ‘applied education’ in particular, is to encourage academics to broaden the idea of research to include paying detailed attention to the fields of activity in which their students typically find their occupations - to become investigating, and critical, experts in those fields. Such expertise exemplifies a

'scholarship of application' and precisely the research which is undeniably essential to much good modern university teaching.

124. From such exploration university people can learn how better to value the insights, very different from academic ones, of practitioners in the field. They may see what some businessmen might contribute to courses by occasional part-time teaching. Managers they associate with may come to see opportunities for 'updating' that the university can offer. Organising work experience placements can often give university lecturers the entrée to companies; students who take them up can continue the exploration and build up the academic department's bank of information.

125. Those changing emphases must be reflected not simply in the behaviour of some individuals but in the whole structure of our institutions. Alongside academic departments arranged by (roughly) our traditional disciplines, we see springing up 'centres', 'institutes', and special 'units' where academics from a mix of disciplines can direct their joint attention to fields of special interest to policy-makers. So, for example, scholars of the built environment, economic and sociology might combine to study options for tackling 'social exclusion'. Geographers, chemists and engineers might jointly advise companies or governments about pollution. Such centres exemplify how the world's needs demand a scholarship of application (see paragraph 31) which relies in its turn in a scholarship of transdisciplinary synthesis.

126. In most developed countries as many as 90 per cent of businesses are small and medium enterprises (SMEs). The development of active partnerships between universities and SMEs offers important opportunities for valuable interactions, but first there are unique challenges to overcome. The obstacles – barriers of communication, cultural differences, lack of accessibility within the university structure, and time and fiscal restraints for both partners – have in the past been difficult to conquer. Many universities will want to make a 'sustained and integral commitment' to SME collaboration and must develop an entrepreneurial approach in all dealings with smaller firms.[xxvii] This may well call for the development of specialised skills among academic staff, an understanding of the cultures and working practices in the different categories of SME and possibly the creation of centres or units with a brief to establish fruitful links with the SME community.

127. To facilitate local interaction, some universities have pursued a strong policy of engagement with employers in their geographical region. For example, a regional office with a senior academic to direct it at the University of Sheffield has built up a wide bank of connections with employers of all sizes by inviting bids from any companies that would welcome a student to undertake a dissertation project on an aspect of their business.

128. We believe that the intensity of the interaction between the professional thinkers on the one hand and professional makers-and-doers on the other, the "liveliness of their conversation" as it were, is the single best guarantee that good ideas are put to use. It is vital that technical applications are discerned in academic discoveries and that theories increase productivity by short-cutting industrial trial-and-error.

129. Real engagement means that ongoing conversation becomes the natural mode of dissemination of new knowledge and the network of an ideas-exchange (which the internet of course embodies) becomes the natural driver of innovation.

Technology foresight

130. Programmes of technological forecasting have proved in some countries, such as the United Kingdom, Australia, New Zealand and South Africa, to be one successful way of encouraging the continuous conversation of researchers and research-users, of academics and industrialists. In these examples, panels of academics and industrial forward-thinkers were assembled to compare their thoughts on the future in particular fields of interest: new materials, health care, aerospace, biotechnology and so forth. Whatever the accuracy of their joint predictions, these inquiries have proved powerful means of communication, and have led to informal networking, sharing of interests, possibilities of collaboration and better mutual academic-industry understanding, which are the stuff of the engagement we seek.

Knowledge exploitation

Dr Marilyn Wedgwood, Pro-Vice-chancellor at the UK's Manchester Metropolitan University and an adviser to the British Government's Trade and Industry Department, characterises three types of 'knowledge competencies'. The first two are the more traditional competencies of knowledge production through research and the transfer or dissemination of that knowledge through publication and teaching.[xxviii]

She goes on to argue that there is a third knowledge competency that universities should begin to develop if they are to function in a setting where Mode 2 knowledge competes for value in the global marketplace. She suggests:

"However for universities to play a more substantial role in helping companies compete in the modern knowledge-driven economy, a third competence is required and that is knowledge exploitation. Competence in knowledge exploitation would focus thoughts and activities on applications which would provide economic utility in terms of innovations manifest in products, services and processes."[xxix]

The new production of knowledge

131. The exchange of ideas of academics with others helps to move the domain of knowledge creation into an arena much wider and less homogeneous than the academy. It destroys academic monopoly forever and with it our traditional definition of 'knowledge'. (see *The Imperative of Engagement,* above*)* In the book, *The New Production of Knowledge*, Gibbons and others describe a fundamental shift away from the more traditional,

university-based science (Mode 1), to ‘Mode 2’ knowledge production that is produced and distributed in a 'trans-disciplinary' manner involving creative alliances within and beyond academe.[xxx]

132. The authors describe Mode 1 as traditional science: theoretical work in universities or research laboratories that leads through a process of application and technology transfer to the eventual production of useful goods and services (whether in a commercial or social sense). Relatively closed communities of scientific ‘experts’ dominate Mode 1. Alongside Mode 1 they see emerging a new form of knowledge production they call ‘Mode 2’. This is an open system in which ‘producers’, ‘users’, ‘brokers’ and others mingle variously. Mode 2 has been described as "eclectic rather than reductionist, and interpenetrated by markets rather than being an autonomous space."[xxxi]

Joint research

133. An open and engaged climate of discussion is the most favourable for the joint research effort we all hope to encourage between individual companies and individual academics or departments. Such co-operation can rarely yield more than a very small percentage of academic research funding in any country but there are some fields, especially around bio-medicine and genetics, where that proportion could increase quite dramatically. In that case entirely proper commercial interests must never be allowed to threaten public confidence in scientists' commitment to the greatest objectivity they can achieve. Without that the universities' role as knowledgeable adviser, and part of the conscience of society, is entirely undermined.

134. In some countries charitable foundations are larger funders of research than business or industry; they must therefore be involved in our conversations. We can work with them to study their charitable objectives and to see how our research resources can be used to fulfil them.

135. The transparency of our arrangements with our research sponsors is our best safeguard. In our negotiations we must insist on new knowledge being fed into the public domain, as it traditionally has been, even if sponsors are given a modest right to privileged sight of it.

136. The university and its individual members are particularly called upon to bear the tension of both engaging with the world and standing back to criticise it. We can learn to get close to private sector business yet remain aloof enough to be ever-critical friends. Business easily understands this: it is after all our intellectual independence for which they are willing to pay.

137. Strands of policy to encourage joint research can include the following:

- It proves helpful to distinguish between collaborative research, where academics and sponsors jointly set the agenda, and contract research, where the sponsors pay the full price and set the terms of a defined task they require to be done.

- Useful joint ventures can founder through dispute about which partner should bear the fixed infrastructure costs of research. The attribution of rights to intellectual property, if any emerge, may also be an obstacle. Universities benefit from having clear conventions and rules about how these matters are to be handled and negotiated.

- Industrial liaison units have an important role as repositories of expertise on costing projects, negotiating contracts, patents, licensing, and royalties. However, these units can never substitute for direct contact between individual academics and/or their departments and the outside world.

Commonwealth collaborations

Across the Commonwealth, three-sided funding - government, university, industry – is being used as a helpful incentive for collaborative research. Some examples of the wide range of activities are listed below.

In Canada, the development of research centres and networks has provided an effective mechanism for university-industry interaction. With financial support from government, industry and university, the National Centres of Excellence (Canada) have been hugely successful in identifying research opportunities and accelerating knowledge transfer to all stakeholders in the innovation cycle.[xxxii] The nation-wide centres "connect excellent research with industrial know-how and practical investment" through formalised, issue-based networks, covering a diverse range of topics from forest management to protein engineering.[xxxiii]

In Australia, a similar initiative, the Cooperative Research Centres (CRC), has been a tremendous success. The Business- Higher Education Forum (B-HERT) has fully endorsed the Co-operative Research Centre scheme, stating that: "It can be said that the advent of the programme has changed the attitudes and approach to research management, and that the boundaries separating government, private and academic research have gradually changed and diminished."[xxxiv]

In South Africa, the Technology Innovation Promotion through the Transfer of People Programme (TIPTOP) offers human resources growth opportunities through the exchange of academic and company personnel, graduate placements, and the placement of industrial personnel in academic positions.[xxxv]

In the UK, a ‘teaching company’ scheme allows postgraduates to research a topic on an industrial company's own premises, approved jointly and later assessed by the company, the researcher and academic supervisor. This scheme is praised almost universally in Britain and exemplifies the intellectual engagement of university people directly with the industry's concerns.
Another UK programme, the LINK scheme, works to encourage pre-competitive research projects between groups of companies and academics. Government, through departments and research councils, contributes up to 50 per cent of research costs, with the remaining half funded by industrial partners.

In South Africa, programs such as the Technology and Human Resources for Industry Program (THRIP) and the Support Programme for Industrial Innovation (SPII) encourage collaboration through joint research funding between government, universities and industry.[xxxvi]

CITIZENS

Universities' privileged position requires them to look beyond their immediate self-interest and share facilities, energies, expertise and cultural ventures with the wider community of which they are a part. They may be able to offer services, in healthcare for example, as well as advice. A wider civic obligation, however, now lies on academics: to expose their research results, and their implications, not merely to peer review, but to debate by a concerned public.

The wider community

138. As Frank Newman has reminded us, "over the long history of higher education, universities and colleges - both state-owned and private - have held a privileged position because they have focused on the needs of society rather than self-gains."[xxxvii] Our privileges include primarily two special freedoms: first that of pursuing our chosen intellectual inquiries without interference or oversight even when our agenda may be unpopular or our conclusions inconvenient and, second, that of gathering together as students and faculty a disproportionate share of the intellectual talent available to society. In return we accept civic responsibilities which go beyond our immediate self-interest in teaching selected students or researching our chosen fields.

139. Some universities, such as the 'land grant' universities in Canada and the US, have as their mandate the aim to engage and contribute to the local community. Indeed, the 'notion of academic scholarship embracing 'service to community ' and 'academic citizenship' has been put forward as being explicit elements in academic activities. We think that in this century that understanding can be extended.

140. Opportunities to involve the wider community, including 'non-traditional' students and the business community are often facilitated through continuing education departments and community colleges. Courses, both credit and non-credit bearing, are developed which enable academics to work with indigenous peoples, individuals and groups within the community in areas such as human rights, business development or agricultural planning. Such activities help to break down traditional barriers of 'town and gown' and further the economic and social development of the surrounding community.[***xxxviii***] The demand of engagement, however, goes wider.

141. Universities are often the biggest economic power (sometimes by far) in their locality. The University of Cambridge, a striking example, is not only the largest employer in the city but also, as a focus for tourism, the biggest source of income. Universities can be the largest assemblages of real estate, information technology software and hardware, catering arrangements, cleaners and security staff, for example. They may generate a significant share in the local rail, air and road traffic. Beyond the obvious wish to set examples of excellent employment practice, universities expect to share, alongside Chambers of Commerce and major corporations, in initiatives for local planning, forecasting and regeneration.

Reservoirs of resources

142. Beyond that, however, universities can consciously aim to be recognised and approached as reservoirs of resources that can contribute to the whole range of local and community activity:

- Individual academics need every encouragement to join in local initiatives, task groups, steering groups, fundraising committees, and, particularly perhaps, boards of governance of schools, colleges and hospitals. In those experiences they may not only contribute but learn about vital aspects of the society they are preparing their students to live and work in.

- Universities' specific expertise - economic, sociological, historical, technological, cultural can be made freely available to community not-for profit ventures that can use it. It is a matter not only of responding to requests but of being aware of where such needs may arise. Universities may be able not only to advise, but to provide. South Africa is a useful example. "... 24-hour medical clinics are run in disadvantaged communities [as are] dental and legal clinics where free service is dispensed. The optometry department at one university runs a train in holiday periods to rural areas to diagnose eye problems and dispense medicine and spectacles. This service is funded by a local business conglomerate…"[xxxix]

- Universities have big reserves of cultural energy and cultural capital. As well as making facilities available to the surrounding community, they can promote joint artistic and cultural initiatives .

143. A commitment to engagement means that all these activities come to be central, not merely optional, in academic life. It is crucial, at a time of stringent approaches to university finances, that budgetary lines are not so tightly drawn as to squeeze the space available for them.

144. In many universities students themselves have for years been promoting the habit of civic engagement through schemes of volunteering; they have contributed to work with sick, disabled, unemployed and homeless people and have offered valuable energies to schemes in inner cities and poor rural areas. Now academic departments are seeking to build radically on that work by introducing real-life community-based projects as the means of study ('service learning') in mainstream discipline-based credit-bearing undergraduate courses.

145. Commonwealth universities hope to exchange ideas about such experiments with colleagues in the U.S. Elizabeth Hollander, Executive Director of the US Campus Compact, has recently written: "With service learning, as distinguished from community service, students engage in an organized activity that meets identified community needs and participate in structured reflection on the activity in the way that furthers understanding of the course content, a broader appreciation of a discipline (or disciplines), and an enhanced sense of civic responsibility." [xl] Here indeed is applied education, as we have described it, with the application and reflection aimed towards citizenship.

'Socially robust' knowledge

146. Academics, however, are beginning to grapple with obligations of civic participation which go far beyond willing involvement in local affairs. The newest, which will become pressing over the next decades, is to expose our research results and resulting policy and technology implications not just to traditional peer review but the rough and tumble of public debate. Concerns about health risks, genetic manipulation, climate change, historical method, economic policy, moral or educational philosophy, capability-testing all spark passionate challenge to academic conclusions. New knowledge, as ACU Secretary General Michael Gibbons has pointed out, has to have survived the test of debate in the arena everyday argument to achieve the robustness it needs to be useful.[xli]

147. Those debates, which often confront academic experts with non-experts or lobbyists, will be uncomfortable at first. The engaged university, however, will learn to embrace them confidently in the cause of true education-by-argument; it will look to find the intellectual, physical space (including cyberspace) where those debates can flourish safely. And taking the world with full seriousness - the essence of engagement - may change the way its members think and do things.

A metaphor for 'engagement'

"We were seeking an image to represent the mission of a university very conscious of its role and roots in the needs of an inner city community. We came up with the image of a tree. - a Banyan tree in the centre of a community, offering shade and shelter, a meeting place, a place where people gather and experience is exchanged, learning passes from old to young, from the wise to those wanting to learn. Sometimes it is the setting for rituals important to the community. Its life-span is greater that that of the people who come and go in its shade, it spreads slowly, overarching the people to put down new roots and points of growth. The community has to nurture it and protect it, yet its vigour and strength exceeds the individual…"[xlii]

CONCLUSION

148. This paper has described four areas in which we should seek engagement; with all our stakeholders when we think through our roles and mission; with the working world as part of our drive to ensure that our teaching is the best that our students can receive and to ensure their intellectual needs are being met; with a widening range of partners in our research activities; and with our communities and regions. It is a long agenda and, as stated earlier, is always relevant, however sophisticated we believe our present levels of engagement to be.

149. Governments everywhere are urging new policies and programmes on their universities, and in most cases expect these to be undertaken with little or no extra resources. Institutional managers are having to make hard decisions about priorities, particularly where the innovations being called for ask for changes in behaviour and staffing. Against this background it would be tempting to set aside the thoughts in this paper as a set of good ideas, but ones that can wait. To do so would be considered a great mistake. Since 'engagement' should be a core value, it cannot be set aside; it must be pursued despite distractions.

150. The ideas in this paper will challenge many aspects of the ways universities manage themselves:

- Many of the existing institutional processes and procedures will have to be reviewed in order to involve stakeholders in our planning, the participants in our decision making will be different, new consultative mechanisms may be needed to involve external communities in the dialogues and new communication systems required to keep colleagues informed throughout.

- Radical changes to the way we teach are very hard to achieve through a hierarchical management structure and require substantial investment in changing academic staff attitudes and approaches. Both the curriculum and the teaching method will require review and this will take considerable time; in view of the scale of extra effort that staff will be expected to devote to this, the initiative must have endorsement from the highest levels. It will be important to be patient both with colleagues internally and with those external partners who will not always give high priority to their participation in our reforms.

- The new models of engagement in research will not be relevant to all academics, and will vary according to the current research profiles and capacity. For those who need to change, the processes for reviewing their research strategies will have to be rethought to involve external partners in the discussions; issues of confidentiality and intellectual property may present difficulties, but ways have to

be found of involving informed members of the wider user community in decisions about our research plans and activities. We must also develop reliable ways of communicating our progress and our findings to those who need to know. For example, the University of Peredeniya in Sri Lanka holds an annual Open Day for Research in which its leading academic researchers present their latest findings to a specially selected audience from the ministries, industry and the community.

- Building a continuous engagement with communities and regions is a common thread to much of this report. However, we do not see it as a third leg or third strand of activity, but as one which is a core element in *all activities*. Achieving this will involve developing new processes for decision making and communications in many areas. It means finding effective ways of listening to, and understanding, community needs and concerns before we plan many of our internal actions.

151. Recent commentators have identified the increasing complexity in which the sector and society must currently function. Much of this complexity results from the impatience of our political masters in their wish to achieve change and the consequential flood of innovative funding programmes and policies which pour down upon institutional leaders. Our message is that effective engagement will enable the university to survive these pressures; if all four levels are adopted and integrated into the life of the institution, they will have provided the tools – and the working partnerships - for responding to almost any challenge that politicians can devise. But as universities and the 'outside' world become more 'permeable' to each other, our own values will be under constant review.

PART II: ASSESSING PROGRESS

The following section provides a brief 'check list' of questions that institutional leaders might ask in order to gauge the institution's level and location of engagement. It is not meant to be exhaustive, but rather more indicative to facilitate further discussion and exploration.

The imperative of engagement

1. In its mission statement or strategic plan, how does the university recognise its responsibilities to its city and region, to the local and national economy and to society (voters, taxpayers) at large?

2. What mechanisms or fora does the university have to engage with learners and the community at large to identify their needs and to have input into university programmes?

3. By what means do academics explain to the lay public the special value of the academic enterprise and what it contributes to the society that supports it?

4. What form does the university's engagement with industry and the public services take? Is it clear who is responsible for promoting engagement activities?

5. How can we learn from other academics' experiences of 'engagement'?

6. How do we evaluate whether we have achieved what we intended?

Purposes and policies

7. Can our universities look to an independent national forum at the highest level where academics, key stakeholders/beneficiaries and business people can mark out areas of common interest, agree policy priorities and offer a joint voice about university development to government, universities and employers, public and private?

8. How to we ensure that we make the best use of those employers and other lay people who sit on the university's own governing bodies?

9. In what way do those who allocate funds to us encourage and guide the university in making strategic plans that take account of our wider responsibilities?

10. What relationships does the university have with the various professional bodies and how are these relationships reflected in our programmes?

11. Are there appropriate regional fora that provide opportunities for local communities and other stakeholders to share in and contribute to the activities of the university?

The world is our student

12. Is first-class teaching promoted, recognised and rewarded in the university on a level with research? Are we confident that the incentive system encourages different levels of engagement?

13. How aware are the academic departments of what sort of employment most of their graduates are destined for?

14. What means have lecturers for seeking feedback from employers on how well prepared they think graduates are? How does such information inform the design and updating of degree courses?

15. Is there a policy on what attributes, including generic personal and intellectual capabilities we help our students to develop that will enable them to make the best of their personal and working lives? (Those might include, for example, competence with language and communication, numeracy or appreciation of the arts)

16. What national debate is there in which we can participate about how students can best be prepared to contribute effectively to the future working world? How are such matters addressed within the university?
17. How do we ensure that students leave us able and eager to continue learning?

18. How do work-based learning (mainly for employed graduates or students) and structured work experience (mainly for young first degree students) figure in the learning we offer?

19. How can we work with employers and professional bodies to offer employees regular opportunities of updating themselves and, above all, for reflecting with their peers on the real-life challenges they face?

20. How far do public bodies, charged with allocating funds to universities and/or overseeing quality and standards, encourage the university to help students develop 'attributes for employability and citizenship'?

The dialogue of theory with practice

21. What mechanisms does our country have to allow academics and other key stakeholders to share in setting broad national research priorities?

22. How do research-users have a proper say in the selection of research proposals for funding?

23. What efforts are made to help the community gain a true appreciation of the value of academic research?

24. What government, or other, schemes and incentives are there to encourage industry and academics to co-operative research between academics and (for example) industry, community groups, the professions, government agencies, artists and traders?

25. How does this university aim to get promising discoveries exploited? How is our bank of specialised knowledge made available to other people or organisations which could benefit from it?
26. Does the university have the balance right between central and devolved structures for promoting and forging links with industry and public service organisations?

Citizens

27. Does the university have specific policies and programmes that provide an incentive for faculty to become engaged with the local community?

28. What mechanisms are in place to promote an open dialogue between university and community leaders?

29. What role(s) do the students and academics play in engaging with the community through avenues such as volunteerism or the arts?

30. Does the university undertake projects (through course syllabus or on an ad hoc or organised basis) that respond to community needs and development?

31. Are there open fora to facilitate discussion between 'town and gown' that enables the community and industry to share their views and to challenge the priorities of the university?

END NOTES

[i] Newman, F (2000) *A Faustian Bargain: How Does the University Save its Soul in the Entrepreneurial Age?* Paper given at the OECD/IMHE conference, Paris, September 2000.

[ii] NCIHE (1997) Higher Education in the Learning Society [the Dearing Report] National Committee of Inquiry into Higher Education

[iii] World Bank (2000) Higher Education in Developing Countries: Peril and Promise, Task Force on Higher Education and Society

[iv] See the web site of the Community of Science at www.cos.com for a mechanism by which university researchers can contact their colleagues globally and access sources of funding.

[v] World Bank ibid

[vi] Boyer, E (1990) *Scholarship Reconsidered: priorities of the professoriate*, Carnegie Foundation for Advancement of Teaching, Princeton.

[vii] University of Ballarat, "Developing Scholarship, Research and Student Life", Council Strategy Workshop Working Party

[viii] *CIHE (1995) A Wider Spectrum of Opportunities. Sec 5. P15*

[ix] Coldstream, Patrick (1998) *A Responsible conversation . . . What have universities and industry to say to each other?* pp 10 Institute of Education, University of London

[x] Smithers, A and Robinson, P (1995) *Post-18 Education Growth, Change, Prospect: Executive Briefing,* Council for Industry and Higher Education, London.

[xi] Bekhradnia, B (2000) "New research findings on benefits of widening participation", *HEFCE Council Briefing*, February 2000.

[xii] Harvey. Lee (1997) *Graduates' Work: Organisational Change and Students,* Centre for Research into Quality, University of Central England

[xiii] Smithers and Robinson, ibid

[xiv] CVCP, CBI and CIHE (1996) *Helping Students towards Success at Work: A Declaration of Intent,* CVCP, CBI, CIHE, London.

[xv] AC Nielsen Research Services (2000) *Employer Satisfaction with Graduate Skills*, DETYA, Commonwealth of Australia.

[xvi] The Council for Industry and Higher Education (1995) *A Wider Spectrum of Opportunities*

[xvii] University of Liverpool, University of Glasgow, University of Manchester are particular examples.

[xviii] http://www.coop.uvic.ca/cafce/english/index.html, as of 2000-02-23.

[xix] http://www.cecs.uwaterloo.ca/aboutcecs.html, as of 2000-02-23.

[xx] ie Middlesex University

[xxi] The Global University Alliance is led by a commercial organisation called NextEd. See www.nexted.com

[xxii] CVCP (2000) *The Business of Borderless education: the UK Experience.*

[xxiii] Mason, G (1998) *Change and Diversity: The Challenges facing Chemistry Higher Education,* Royal Society of Chemistry, London.

[xxiv] http://www.ilt.ac.uk/ltsn/public/about.htm, as of 2000-02-17.

[xxv] Dupre, S. (1998) *Universities as Knowledge Institutions: Future Unlimited and Future Indefinite*, Corporate – Higher Education Forum, www.cheforum.ca as of 2000-02-18.

[xxvi] The Council for Industry and Higher Education *Towards a Partnership: Higher Education - Government - Industry 1987 London.*

[xxvii] Tilley, F and Johnson, D. (1999) "Modernization of universities through greater interaction with small firms" *Industry and Higher Education*, London, 119-126.

[xxviii] Wedgwood, M. (1999) "Stimulating Regional Competitiveness: the Role of Higher Education", unpublished paper

[xxix] Wedgwood ibid

[xxx] Gibbons, M et al (1994) *The New Production of Knowledge*, Sage Publications Ltd., London.

[xxxi] Gibbons Ibid.

[xxxii] AUCC (1999) *Trends*, Association of Universities and Colleges in Canada, Ottawa, 86.

[xxxiii] http://www.nce.gc.ca/en/netseng.htm as of 2000-02-18.

[xxxiv] B-HERT (1998) *The Development of Cooperative Research Centres: A Policy Statement,* www.bhert.uts.edu.au/frameset.html?info=policy.html, as of 2000-02-16.

[xxxv] Van der Walt, T and Blankley, W (1999) "South African strategies for the promotion of research and technology innovation" *Industry and Higher Education*, February 1999

[xxxvi] Van der Walt and Blankley, ibid

[xxxvii] Newman ibid

[xxxviii] Paulsen and Feldman (1995) "Toward a Reconceptualization of Scholarship", *Journal of Higher Education,* 66 6, London.

[xxxix] ACU Yearbook 1999/2000

[xl] Academe July-August 2000

[xli] Gibbons, M. (1999) 'Science's new social contract with society', Nature vol 402

[xlii] source: personal correspondence with a facilitator of institutional change