MINERALS COUNCIL OF AUSTRALIA

2008 – HIGHER EDUCATION REVIEW SUBMISSION

July 2008

The Minerals Council of Australia (MCA)

The Minerals Council of Australia's mandate is to represent Australia's exploration, mining and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society.

- The MCA is a member company-funded industry association operating as an incorporated private company limited by guarantee.
- The organisation's governance structure is as for a corporate entity - Full Council; Board of Directors; Standing Committees; and Secretariat.
- Mineral product coverage is base metals, precious metals, coal (thermal, metallurgical, lignite), iron ore, uranium, mineral sands, diamonds and light metals - to first stage of primary transformation.

The MCA is, in essence, the corporate affairs division of the Australian minerals industry. It acts as a collective of companies with a common purpose in:

- Advocating pre-competitive or generic public policy for a socio-economic environment conducive to growth and prosperity;
- Identifying and promoting leading operation principles and practices that companies agree they will not compromise for competitive advantage;
- Engaging with opinion leaders and other stakeholders, and in advocating public policy and operational practice for a world-class industry that is safe, profitable, innovative, environmentally and socially responsible and attuned to community needs and expectations.

Executive Summary

It is critical that the institutional and intellectual capacity of the education sector – schools, vocational education and higher education – be an ongoing priority of the Government. The MCA is pleased that it is able to contribute to this review of Higher Education as it gives the minerals industry the opportunity to put forward a number of points based on experience gained over nine years working with the sector to sustain and build capacity.

Key among these points is the need for matching co-investment from governments in disciplines and institutions where industry has chosen to invest in educational programs.

The failure of past governments to index higher education funding to inflation has resulted in a growing inability of university departments to be viable under the student numbers-based funding system, especially in mineral-related departments that traditionally have small student numbers. This is aggravated further by current shortages of skilled academic staff at our universities and compounded by the ageing profile of academics especially in the minerals disciplines.

A significant rethink of the current higher education arrangements are required if the sector is to meet the future skill and research demands of Australian industry, and particularly for the MCA, the Australian minerals industry.

The MCA advocates that universities be encouraged to adopt governing boards, structures, remuneration and management processes that align to their agreed mission and with the identified needs of industry and society. This would require:

- governments to resource and reward high quality science and mathematics teaching and teachers in our primary and secondary schools to ensure good students are given the best opportunities to fulfil their learning potential when undertaking higher education;
- universities to have the capacity to attract and retain high quality teachers and researchers;
- universities to have the capacity to play key roles in delivering on the national innovation agenda;
- universities to establish formal, discipline-based industry or community advisory panels/boards/committees as appropriate for guidance and governance of educational and research programs;
- governments to encourage, reward and resource multi-university collaborative teaching programs that allow students access to the best courses delivered by the best teachers unhindered by where they are enrolled. Initiatives could include:
  - establishment of *a national framework of peer universities* in key fields of national significance. These would allow better concentration of scarce resources such as experienced university lecturers, quality students, capital infrastructure, visiting industry lecturers and industry investments. This framework should build on existing collaborative structures.
  - support for undergraduate programs of *national economic priority* as core government investments. Industry has demonstrated its willingness to co-invest and prefers to do so where it adds value to governments' existing investments, rather than as life-support for high-cost/low student number programs.
- governments to encourage and reward institutional diversity, and
- universities to provide undergraduate programs that deliver broad-based degrees in sustainable development to educate people with the specific skills our industry and our nation need to improve our business practices to deal with reducing carbon emissions, improving metals and product recycling and re-use, managing water and dealing with climate change. Importantly, such courses must equip students with the capacity to make informed decisions that take account of the social, environmental and financial aspects of development in ways that account for the rights and interests of both current and future generations.

Specific details are identified against the relevant discussion questions in our submission.

1 Introduction

The Australian Minerals Sector

Australia's minerals sector is performing strongly. The strength and scale of global demand for Australian mineral commodities is robust and is expected to continue to expand, driven by vigorous growth in demand from new markets in China and India as well as from traditional markets like Japan, Korea and Taiwan.

The sector accounted for more than 30 per cent of new capital expenditure in Australia in 2006-07. Employment in the sector has grown by 54,000 or 66 percent in the last 5 years. Company tax paid by the mineral sector has increased from $600 million in 2002-3 to $5.2 billion in 2006-7.[1] Overall, direct and indirect tax contributions to the Federal and State governments totalled $9 billion in 2006-7, an increase of 17.4 per cent on the previous year.[2] The economy wide impact of the current expansion is substantial. Access Economics has estimated that in the 2008-9 Budget, more than $15 billion in Commonwealth revenues will be directly attributable to the commodity expansion.

The strength of the minerals sector's growth has contributed substantially to the Australian economy and Australia is well positioned to capitalise on the strongest global market growth in a generation provided we can address the constraints to supply. Foremost among these constraints are skills shortages and the adverse impact these are having on the minerals sector. Despite a 66 percent growth in employment, skilled vacancies in the sector have grown five-fold since 2003.

A recent study conducted for the MCA has revealed that an additional 8952 site-based professionals will be required by 2020 to meet projected mineral commodity output, an increase of 68 percent from 2008 (13,219 to 22,171 professionals).[3] After years of decline, undergraduate enrolments have only recently begun to grow in key minerals-related disciplines, but these increases are still inadequate to meet demand. A significant gap has opened up between the requirements of the economy (including the minerals sector) for skilled and semi-skilled labour and the capacity of Australia's education sector to deliver.

Australia's higher education sector has struggled to provide the human and intellectual capital the minerals industry needs to remain globally competitive and this situation will continue into the future unless significant government effort and resources are expended to address key market failures.

The Education Sector

In order to meet the skills requirements of the broader Australian economy, and the minerals sector in particular, Governments and industry must work together to develop an effective national education and training system. The MCA believes that the national education and training system should:

- possess the requisite institutional and intellectual capacity to deliver quality educational outcomes at all levels, schools, vocational education and training and higher education;
- be market driven;
  - market pull, not supply push - a system that can identify and respond to the needs of the community and of industry, rather than simply accommodating the needs of the institutional providers;

[1] Minerals Council of Australia and PricewaterhouseCoopers, *Minerals Industry Survey Report 2007*, December 2007
[2] Ibid.
[3] National Institute of Labour Studies, *The Labour Force Outlook in the Australian Minerals Resources Sector: 2008 to 2020*, June 2008

- be flexible enough to cater for divergent demands of the Australian economy, and ranging from school-based learning through trades and vocational training to postgraduate research with:
  - provision of quality higher education in areas directly relevant to Australia's comparative advantage in minerals resources, particularly earth sciences, mining engineering and metallurgy;
  - a strong focus on improving work readiness skills, most particularly the literacy and numeracy of all school leavers, while also addressing the 'fitness for work' issues (e.g. drug and alcohol free, physically able, punctuality etc) that currently prevent many disengaged young people from being capable of working in the minerals industry;
  - provision of schools based apprenticeships and the specific requirements of various and varying workplaces;
  - capability of fast tracking those with pre-qualifications and/or quick learners there being a strong business case for bringing them on quickly and competently; and
  - provision of a range of delivery modes (e.g. online, short course, workplace based, skills sets) and locations – this is especially vital for the minerals industry characterised by small numbers of employees, working in remote locations, in small regional communities, and often in specialist disciplines.

The minerals industry is frustrated by governments' past inabilities to adequately resource and restructure education to deliver educational outcomes the industry and Australia need. In response, and since 1996, the minerals sector has been forced to fill this capacity gap at all levels by:

- building science teaching capacity within primary and secondary schools;
- relying on privately-provided training because the publicly funded VET sector (TAFE) is unresponsive to the needs of the minerals industry;
- cross-subsidising minerals-related higher education programs and courses, and
- providing career awareness through national and state-based initiatives.

The Higher Education Sector

A higher education sector with the institutional capacity to ensure an ongoing supply of minerals industry professionals is critical to the future of the industry and to the prosperity of Australia. The minerals sector is concerned at the decline in sector-specific higher education funding as first reported in the MCA's *'Back from the Brink'* report of 1998[4]. The Minerals Tertiary Education Council (MTEC) was established in 2000 specifically to address this capacity constraint. MTEC is funded by voluntary levy from MCA member companies and its efforts are directed towards teaching programs that are:

- collaborative in nature;
- national in scope;
- tap sources of recognised teaching and research expertise in universities; and
- delivered by institutions with robust links to industry.

Total MTEC expenditure has exceeded $18 million, has averaged more than $2 million pa since 2000 and has been as high as $3.4 million pa.

The minerals industry further supports higher education by:

- providing paid vacation work and structured practical experience to more than 600 undergraduates from a wide range of disciplines each year at an annual cost that exceeds $6 million in wages alone;

[4] Minerals Council of Australia, Discussion Paper, *Back From the Brink – Reshaping Minerals Tertiary Education,* February 1998

- funding professorial chairs and other academic positions and programs at universities. The University of Queensland has eleven research and academic professorial chairs that are part funded by the minerals industry/companies to the tune of more than $1.5 million pa;
- providing a large number of undergraduate scholarships and bursaries *(the MCA is unable to determine accurate numbers, but the minerals departments of two universities have approximately half of their students on industry scholarships*), and
- sponsorships for student site visits, field trips and other academic and social events.

The minerals industry has demonstrated it is prepared to invest in higher education, but sees the level of cost shifting to the private sector growing and unsustainable.

A significant rethink of the current higher education arrangements is required if the sector is to be able to meet the skill demands of Australian industry, and specifically the Australian minerals industry, into the future.

2 Responses to discussion questions

Introduction:

Constant innovation has provided the Australian minerals industry with the ability to grow new markets and respond quickly to changing markets. Australia's ability to respond to the recent growth in demand for commodities has been achieved by remarkable innovations in technology and process improvements.

The innovations that underpin this growth have been augmented by equally impressive changes in the industry's management and workplace cultures and practices with respect to health, safety, environment and community relations – especially with indigenous communities – and the broader issues of sustainability. In these areas, the Australian minerals industry is a global leader and industry professionals wear this leadership mantle proudly. A great many of these professionals are products of the Australian higher education system, having received either or both their undergraduate and postgraduate training as well as much of their career experience in Australia.

A robust higher education sector requires a high-level of local student participation and cannot exist only or largely to provide higher education to international students. The local market provides necessary education relevance in the context of the Australian society and the Australian economy. If they are to get maximum value from their university education, Australian students must be adequately prepared by the state-based primary and secondary school systems to enable them to:

a.) make informed choices about their future study and career paths, and

b.) qualify to enrol in science and engineering degree programs in university should they so choose.

The current "skills shortage" faced by the minerals industry in the professional area is a shortage of qualified people as well as a shortage of relevant skills in the pool of people from which the industry recruits. The higher education sector is capable of addressing both; firstly by attracting more undergraduates in key disciplines such as science and engineering and secondly by ensuring the education provided is relevant and contemporary.

The MCA has responded only to those discussion questions where it has had enough experience with the sector to make informed comment.

QUESTION 1. How adequate is the statement of functions and characteristics of higher education in modern Australia?

Definition: Is higher education delivered by "..universities and other institutions of post-secondary education regardless of their source of finance or legal status"? If so the OECD definition of the higher education sector will suffice. However, this definition is too similar to the general-use expression "tertiary education", a comprehensive yet non-specific term that refers to education obtained after or post, compulsory secondary school education.

Are the terms 'tertiary education' and 'higher education' interchangeable?

The Australian Qualifications Framework (AQF) groups educational qualifications according to the education sector which is responsible for their accreditation. This can be confusing because some qualifications can be delivered and/or accredited by either the VET or higher education sectors.

For the purpose of developing practical policy outcomes that have wide community understanding and endorsement, "higher education" needs to be clearly defined.

*The **MCA advocates** that any discussion on the functions of higher education would benefit by adopting a consistent and robust definition and understanding of what is meant by higher education.*

Adequacy:

Assuming the definition of higher education is restricted in its application to institutions that deliver qualifications consistent with the AQF Framework and that also undertake research, then the MCA believes the functions and characteristics of higher education in modern Australia as described are adequate for the purpose of this discussion.

QUESTION 2. Are there impediments to the higher education sector being able to innovate in the development of courses and programs? What are these impediments and how could they be removed?

The MCA through the Minerals Tertiary Education Council (MTEC) has been working closely with a number of Australian universities since 2000 in the development of collaborative undergraduate and postgraduate teaching programs. Over this period it has become obvious that most academics in disciplines that cater for the minerals industry:

a.) are severely time constrained, having to teach undergraduate courses, conduct research, supervise postgraduate students, deal with grant proposals, student and departmental administration as well as having responsibilities to university and external committees, journal editorial boards, conference committees and professional societies, and

b.) are further stretched as many of the minerals departments are small and teaching demands and costs are universally high.

However, the universities MTEC has worked with in mining engineering (UNSW, Curtin and UQ) have shown vision and commitment in building the collaborative undergraduate Mining Education Australia (MEA) program that commenced in 2007 with financial support from CASR and the MCA.

MEA is innovative.

MEA is a national solution to a national problem and owes its success to the efforts of the heads of the mining departments and the senior executives of the three partner universities and the support of the Australian mining industry.

Similar programs in extractive metallurgy and earth science are being introduced this year. These initiatives demonstrate that innovation in course development and delivery is achievable within the existing sector.

The key impediments to innovation are structural. Innovation resides in the minds of people and the MCA advocates that major structural changes are required in the way universities are funded and organised to allow academics more time to pursue the core functions of teaching and research.

QUESTION 3. What are the appropriate mechanisms at the national and local level for ensuring higher education meets national and local needs for high-level skills? What is the role of state and territory governments in this area?

Disciplines of *national economic priority* should receive core government funding. These may include mining and metallurgical engineering, earth science and other related science and technology curricula.

To ensure the priorities are appropriate there could be a formal process established, that regularly seeks input from the States and Territories, to review the disciplines of *national economic priority* and ensure they are satisfactorily aligned with the National Research Priorities.

At the local level, each discipline of national economic priority should be guided by an industry and/or community advisory panel in respect of subject material taught and departmental research focus.

*The **MCA advocates:***

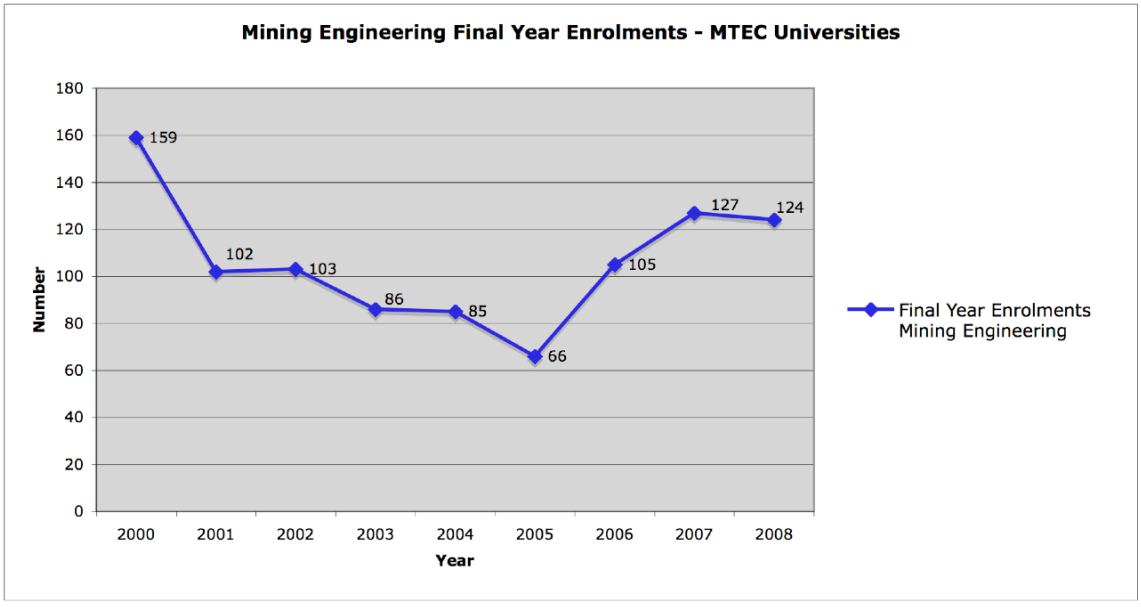
- *that the Australian Government establish a process similar to and perhaps based upon, the National Research Priorities in order to set disciplines of national economic priority, and*
- *that universities be required to establish formal, discipline-based industry or community advisory panels/boards/committees as appropriate for guidance and governance of educational and research programs.*

QUESTION 4. How adequate are the mechanisms for aligning supply and demand of graduates? How do pricing and labour market signals impact on student choices?

There are currently no formal mechanisms for aligning supply and demand of graduates for the minerals industry. Student choices about what to study have been the primary determinant of what type of higher education is provided, and MTEC's experience has been that those choices appear to be governed largely by external influences such as labour market signals.

Part of MTEC's role is to engage with the relevant universities and encourage and cajole them to understand and respond to those labour market signals.

The current resources boom, which started late in 2002, is a "labour market signal". Despite MTEC's efforts since 2000, only now is the minerals industry starting to see increased numbers of graduates, indicating the slow response time of what is a complex system.



Mining engineering year 4 enrolments from UNSW, Curtin/WASM and UQ. The enrolment increases are due to both market signals and the minerals industry formal engagement with the sector. 2002 was the start of the "minerals boom".

*The **MCA advocates** that universities be required to establish formal, discipline-based industry or community advisory panels/boards/committees as appropriate for guidance and governance of educational and research programs.*

QUESTION 5. Are there particular examples of good practice where you can demonstrate either rapid response to skill shortages or successful initiatives to improve generic skills?

The MCA established MTEC in 2000 as an initiative to help secure the capacity of Australia's higher education system to continue to provide the skilled professionals the minerals industry needs to remain globally competitive. MTEC provides funding for collaborative programs that are targeted at:

- delivering more graduates;
- imparting in graduates the skills (traditional and contemporary) needed by the minerals industry, and
- contributing to the viability of small yet key, university departments.

Over the past nine years, key MTEC achievements have included:

- The Industry Experience for Undergraduates Program (IEU) - a coordinated program for undergraduate students seeking to develop their careers in the industry;
- The cross-institutional development and delivery of new undergraduate and postgraduate courses and modules. This is supported by *PATHWAYS* - a postgraduate coursework program to assist industry professionals with skills development and/or re-training;
- Employment of new academic staff. Twelve mostly industry experienced academic staff have been employed at participating universities to assist with course development and delivery;
- Establish and contribute funding to centres of excellence - including the National Centre for Mine Ventilation; Centre for Ore Deposit Research (CODES) as well as specific Cooperative Research Centres (CRC for Landscape Environments and Mineral Exploration, Predictive Mineral Discovery CRC and the Centre for Sustainable Resource Processing);
- Development of a collaborative social competencies postgraduate course to provide formalised training for community relations practitioners working in the industry. The course builds core competencies in cultural studies, community consultation and engagement, and community sustainability and development;
- Establishment of Mining Education Australia; a joint venture with the Universities of NSW, Curtin/WASM, and Queensland, in which the teaching resources of the three partner universities are combined to deliver nationally consistent third and fourth years of a mining engineering degree;
- Development of a formal partnership for collaborative teaching of extractive metallurgy (Metallurgy Education Partnership) for final year undergraduate students of the only three universities in Australia that teach this discipline - UQ, Curtin/WASM and Murdoch;
- Development of a collaborative, national senior undergraduate (Honours) program in earth sciences (Minerals Geoscience Honours) delivering industry-relevant skills to final-year students at eight participating universities - UTas, UWA, James Cook University, Melbourne University, Monash University, ANU, Curtin/WASM and Adelaide, and
- Development of a collaborative national geoscience Masters by coursework program (Minerals Geoscience Masters) for practising professionals to up skill using the collective resources of UWA, UTas, Curtin/WASM and James Cook University.

The teaching programs owe their success to the institutional collaboration that was made a fundamental precondition to receiving MTEC funding.

*The **MCA advocates** that governments encourage, reward and resource multi-university collaborative teaching programs that allow students access to the best courses delivered by the best teachers unhindered by where they are enrolled.*

QUESTION 6. How effectively are Australian higher education institutions responding to demographic change, especially in providing lifelong learning to meet the challenge of the ageing population and the need for upgrading of skills and re-training?

The minerals industry has recognised the threat that this issue poses and has acted.

MTEC and its university partners are providing postgraduate options to meet the needs of lifelong learning through the *PATHWAYS* initiative (www.mi-pathways.com) mentioned in response to QUESTION 5. *PATHWAYS* has been designed for people who work in the minerals industry and for people who are interested in switching careers to this progressive industry. The site provides information on, and access to courses for individuals seeking to further develop their careers.

Other industry sectors similarly could engage with the higher education sector.

Another issue of major concern to the minerals industry is the ageing of the academic workforce. The sustainability of the sector depends on its ability to renew itself and in minerals disciplines, there have been significant and long term declines in the numbers of postgraduate research students; the feedstock for future academics.

*The **MCA advocates***

- *Governments encourage other industry groups to engage with the higher education sector as the MCA has done to help secure capacity in professional development education;*
- *the introduction of appropriate mechanisms to financially and differentially reward academics in order to recreate an attractive career path for them and to encourage others to train for an academic career.*

QUESTION 7. What is the relevance and applicability of the findings and approaches proposed in the United Kingdom paper, Higher Education at Work, for increasing skills levels in the workforce to Australia?

The "Higher Education at Work: High Skills, High Value" report referred to in the discussion paper captures many of the issues and subsequent responses that have informed the work of MTEC over the past nine years. It is in fact pleasing to see the MCA's approach supported by independent opinion.

While it is important to involve industry in higher education, it is difficult in times like these of high employment and skills shortages, to arrange bilateral secondments. As MTEC has found, industry can still be effectively involved:

- in the development of curricula through contributions on advisory panels/boards, and
- by providing of foundation support funding to secure teaching capacity while new collaborative programs are developed.

Industry would be greatly encouraged if its financial support was matched by co-investment from governments.

*The **MCA advocates**:*

- *Industry involvement in higher education to increase appropriate skill levels in the workforce; and*
- *Government provide incentives to universities to engage with industry in teaching initiatives.*

QUESTION 8. Should there be a national approach to improving Indigenous and low SES participation and success in higher education?

Participation and success in higher education for many Indigenous people is constrained by a number of complex barriers. These barriers often prevent them from taking up education and employment opportunities and require systemic long term change to overcome. For example improvement is needed in:

- Primary and secondary education, including literacy and numeracy through appropriate delivery of curriculum for the cohort,
- Family support, childcare, mentors and counselling,
- support for access to appropriate housing, and
- improved health and welfare services.

Consideration also needs to be given to flexible/innovative approaches to the delivery of education especially to remote and regional Indigenous communities, eg, mobile delivery of education.

*The **MCA supports** a national approach to improving Indigenous participation and success in higher education through an increased focus on the systemic issues which act as obstacles for Indigenous peoples participation in the education system.*

QUESTION 9. If you support a national approach to improving Indigenous and low SES participation and success how do you see it being structured, resourced, monitored and evaluated?

We appreciate that efforts to address issues/obstacles to greater Indigenous participation and success in education cannot be achieved solely within the purvey of any one party. This will require a coordinated program of reform, greater collaboration between State and Federal governments, together with communities working in partnership with schools, vocational education and training and higher education sectors. A coordinated, cooperative, well resourced, locally focussed approach from all levels of government is required.

*The **MCA advocates** greater collaboration of governments, communities and the education sector to address the systemic issues constraining Indigenous participation in the education system, with effort directed in the first instance to those Indigenous communities identified as most in need.*

QUESTION 10. What institutional initiatives have proved successful in increasing low SES or Indigenous participation and success? (Please provide information about outcomes as well as activities.)

Within the minerals industry there are numerous initiatives being pursued at the company level. The MCA is also pursuing a number of initiatives at an industry level. The MCA is currently working in partnership with the Australian Government and five member companies with operations in the Northern Territory, to review and identify opportunities to training young Indigenous people from neighbouring communities for potential employment through apprenticeships at the mining operations.

In addition, the MCA sponsors and is involved in the Indigenous Australian Engineering Summer School that provides mentoring and capacity building opportunities for Indigenous Australians considering a career in engineering, including but not limited to mining engineering.

Mining companies operating in remote and regional Australia have a growing number of successful Indigenous employees at all levels of the organisation. The foundation for this trend has been a strong investment in literacy, numeracy and technical skills. These employability skills are the critical area for success.

QUESTION 15. To what extent should vocational education and training and higher education continue to have distinctive missions and how should these missions be defined?

Universities deliver education in an environment that is underpinned by a research culture and university educated people are trained to work with high levels of uncertainty. By its nature research is risky as outcomes will never be known with certainty.

On the other hand, the vocational education sector is about training people to minimise and even remove uncertainty and risk in the practical application of skills.

The two sectors are fundamentally and inherently different and should be funded and managed separately.

*The **MCA advocates** that higher education and vocational education must continue to have distinctive and different missions.*

QUESTION 21. Do you believe there is a place in Australia's higher education system for universities that are predominantly 'teaching only' universities? If so, why?

While there is no consistent view from industry, there is general affirmation that universities make a greater contribution when teaching activity is informed by research endeavour.

However, there is a great deal of support for the concept of career-track, teaching-only positions within universities and for good teachers to be properly recognised and rewarded within the university system.

The committed university departments will ensure that effective mechanisms are in place to allow teaching-only academics to interact with their research-intensive colleagues so improving the quality of the educational experience.

*The **MCA endorses** the definition of universities in Section 1.2 of the June 2008 Discussion Paper and **advocates** support for setting up teaching-only positions within universities that reward and recognise good teachers.*

QUESTION 22. Are there any unintended consequences of the current approach to internationalisation of higher education in Australia?

International student fees now comprise 15 percent on average of total university funding.

Australian universities that are highly dependent on international income may be at risk of currency exchange and other trade-related or geopolitical eventualities that could severely effect their contingent income streams and negatively impact viability.

*The **MCA advocates** that a robust higher education sector requires a high-level of local student participation and cannot exist only or largely to provide higher education to international students. The local market is important as it provides necessary education and research relevance in the context of Australian society and the Australian economy.*

QUESTION 29. To what extent are the current funding models adequate to secure the future of Australia's higher education sector? If there are better models, what are they?

The MCA is of the view that the current core funding model is not adequate to secure the future of Australia's higher education sector. Consequences of the current model are that it:

- provides a financial incentive for universities to deliver undergraduate programs that are inexpensive to run and attract many students;
- threatens the survival of small university departments which require significant university cross-subsidisation or industry support to be viable;
- does not reflect actual delivery costs, especially for science and engineering courses and is overgenerous to agriculture;
- does not reward universities for attracting external (industry) support for undergraduate teaching;
- does not provide funds for teaching in disciplines of *national economic priority,* and
- does not promote or reward collaboration between higher education providers (the Diversity and Structural Adjustment fund is a non-core funding component)

*The **MCA advocates** that the higher education funding model should be modified so that it:*

- *more closely reflects actual costs of course delivery;*
- *identifies disciplines of national economic priority;*
- *provides core funding to undergraduate programs of deemed national economic priority;*
- *provides universities with financial rewards/incentives for attracting industry support by way of:*
  - *matching funds to the value of industry-funded undergraduate student scholarships, and*
  - *matching funds to the value of industry funds provided specifically for undergraduate and postgraduate teaching programs;*
- *promotes and rewards collaboration and diversity between institutions*

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