

Public Hearing - Review of the Department of Education, Science and
Training's Annual Report 2006-07

Questions on Notice

Decline in enrolments in the hard sciences:

• **Question**

Can you provide the research findings regarding whether differential HECS has had an effect on choices of courses?

Question asked by:

Committee member name: *The Chair (Ms Bird)*

Hansard page number: 4-5

Answer

Following the introduction of differential HECS bands in 1997, the Department conducted the following research examining the impact on course choices:

Andrews (1997), *The Effect of HECS on Interest in Undertaking Higher Education*, tested the relationship between the HECS Band of a discipline and the change in the number of applications between 1996 and 1997 but found no relationship. Demand for Band 3 (higher cost) courses generally increased, but demand for some courses in Bands 1 and 2 (lower cost) increased while demand for other courses in those bands decreased.

A study undertaken by researchers in the Department of Education Science and Training (DEST) and published in 2003, titled *HECS and Opportunities in Higher Education: A paper investigating the impact of the Higher Education Contributions Scheme (HECS) on the higher education system*, found no significant effect on demand by field of education, except that the share of males from a low SES background in HECS Band 3 courses (the most expensive) declined by 38% (between 1996 and 1997). In absolute terms, the change in the number of commencing students was very small (around 100). The report is available at http://www.dest.gov.au/sectors/higher_education/publications_resources/profiles/hecs_and_opportunities_in_higher_education_investigating.htm

Note that the DEST (2003) paper had some methodological limitations. Due to lack of data, it is difficult to isolate the impact of the changes to student contribution from other factors that may have impacted on the demand for higher education.

It should be noted that the above research investigated the impact of a particular major, comprehensive change to student contributions that affected all fields of education, and included significant (though varying) increases in fees for all students. These changes were quite different from targeted initiatives in a particular field of study (for example the maths and science initiative, of which reducing student contributions is only one component, along with promotion of study and careers in the field, HECS remissions for graduates working in relevant fields and improving provision of relevant pathway subjects at the school level).

- **Question**

Is a geologist's qualification delivered at diploma level?

Question asked by:

Committee member name: Dr Southcott

Hansard page number: 7

Answer

The Australian and New Zealand Standard Classification of Occupations released in 2006 defines the occupation of geologist as professional and indicates that most occupations in this unit group have a level of skill commensurate with a bachelor degree or higher qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification.

While some diploma level qualifications include aspects of geological work there is no vocational education outcome of geologist.

- **Question**

From 2001 to 2004 enrolments increased in all narrow fields within the broad field of education 'Natural and Physical Sciences'. But from 2004 to 2006 everything dropped. Is something significant there?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 12

Answer

Domestic undergraduate enrolments in Natural and Physical Sciences declined in the period 2004 to 2006, but these declines were slight (1.0%). Enrolments in many fields of education fluctuate from year to year.

Between 2004 and 2006, domestic undergraduate enrolments declined in all narrow fields identified as 'enabling sciences'. However, enrolment statistics for science should be regarded as indicative at the narrow field level. A majority of enrolments in the broad field Natural and Physical Sciences are not coded to any particular narrow field (over 70% of domestic undergraduate enrolments in 2006). While this may be a coding issue in some cases, classification of courses at a broad level only does reflect the structure of many university science courses, which may include units from different narrow fields. Thus, data on numbers of enrolments in narrow fields identified as 'enabling sciences' understate the numbers of students actually studying the enabling sciences.

- **Question**

What is the percentage against total enrolments year by year of Science, Engineering and Technology enrolments?

Question asked by:

Committee member name: Mr Irons

Hansard page number: 13

Answer

In 2006, Science, Engineering and Technology made up approximately 21.4% of total domestic undergraduate enrolments. The Natural and Physical Sciences accounted for 10.0% of the total.

The number of Science, Engineering and Technology enrolments as a percentage of total domestic undergraduate enrolments has decreased by four percentage points since 2001 (Table 1). This decline is mainly due to a significant decline in Information Technology enrolments, though there has also been a slight decline in the Natural and Physical Sciences.

A similar pattern is visible in domestic postgraduate enrolments. As a proportion of all domestic postgraduate enrolments, Natural and Physical Science has declined by about 1.2 percentage points, while Science, Engineering and Technology has declined by about five percentage points.

Table 1

Percentage share of total domestic undergraduate and postgraduate enrolments						
	2001	2002	2003	2004	2005	2006
Domestic Undergraduate Enrolments						
Enabling Sciences	3.0%	2.9%	2.9%	3.1%	2.9%	2.8%
Natural & Physical Sciences	10.7%	9.9%	10.1%	10.4%	10.2%	10.0%
Science, Engineering and Technology	25.5%	24.3%	24.2%	23.7%	22.4%	21.4%
Domestic Postgraduate Enrolments						
Enabling Sciences	4.94%	3.85%	3.79%	3.96%	3.67%	3.70%
Natural & Physical Sciences	7.08%	5.63%	5.58%	5.79%	5.83%	5.89%
Science, Engineering and Technology	18.80%	16.70%	15.62%	15.24%	14.52%	13.90%
Total Domestic Enrolments						
Enabling Sciences	3.35%	3.12%	3.15%	3.34%	3.09%	3.01%
Natural & Physical Sciences	9.97%	8.89%	8.98%	9.23%	9.12%	8.98%
Science, Engineering and Technology	24.16%	22.55%	22.11%	21.64%	20.48%	19.54%

Issues affecting Mature-age apprentices:

- **Question**

Of the 7,000 Support for Mid-Career recipients indicated at 6 May 2008, how many recipients;

- were already in existing jobs and are upgrading their skills;
- (of those upgrading their skills) how many were unemployed?

Question asked by:

Committee member name Ms Collins

Hansard page number: 15

Answer

As at 8 July 2008 there are now 7,494 Support for Mid-Career recipients. Of the 7,494 recipients, 2,306 are existing workers upgrading their skills. 5,188 recipients are new Australian Apprenticeship commencements but were not necessarily unemployed prior to commencing. The Department does not collect this information at commencement of an Australian Apprenticeship.

Source: TYIMS Hyperion database (current as at 8/7/08)

- **Question**

Of the 7,000 Support for Mid-Career recipients indicated at 6 May 2008, what is the breakdown by

- area of Australian Apprenticeship; and
- gender

Question asked by:

Committee member name: Dr Southcott

Hansard page number: 15

Answer

The following table contains the number of Australian Apprenticeships that are in receipt of Support for Mid-Career payments, broken down by trade occupation groups and gender. All occupations listed are defined as in skills shortage.

Occupation Group	Australian Apprenticeships Number		
	Female	Male	Total
Shearing		16	16
Aeroskills		23	23
Locksmithing	1	13	14
Boat Building	1	21	22
Tree Surgery	1	44	45
Meat Processing	10	60	70
Bricklaying		55	55
Printing	8	76	84
Painting	14	65	79
Refrigeration Mech	2	139	141
Electrical Powerline	1	217	218
Furnishing	6	62	68
Construction	5	150	155
Hairdressing	307	14	321
Hospitality	369	462	831
Automotive	22	730	752
Carpentry	25	884	909
Plumbing	8	678	686
Metal Fabricating	8	731	739
Engineering	14	809	823
Electrical	32	1,411	1,443
TOTAL	834	6,660	7,494

* Note: Occupation groups have been derived by grouping specific qualifications together into potential trades. Some qualifications may lead to several trade occupations, therefore the groupings in this list should be used as an indication only.

Source: TYIMS Hyperion database (current as at 8/7/08)

- **Question**

Of the 7,000 Support for Mid-Career recipients, what is the breakdown by State, occupation, gender etc on;

- Changing composition of apprentices in training; and
- Projected demand in terms of skills shortage in the different vocational areas

Question asked by:

Committee member name: Dr Jensen, Mrs D'Ath

Hansard page number: 16, 17 and 18

Answer

The following table contains the number of Australian Apprenticeships that are in receipt of Support for Mid-Career payments, broken down by State.

In response to question 6 the Department has provided a breakdown of the number of Australian Apprenticeships that are in receipt of Support for Mid-Career payments, broken done by trade occupation groups and gender.

State/Territory	Australian Apprenticeships Number
ACT	117
NSW	1,392
NT	130
QLD	2,257
SA	590
TAS	368
VIC	1,722
WA	918
TOTAL	7,494

Source: TYIMS Hyperion database (current as at 8/7/08)

In relation to projected demands for skills shortages in the different vocational areas, the Australian Government has established Skills Australia through its *Skilling Australia for the Future* policy. Skills Australia is a new independent statutory body which has been established to provide advice on current and future demand for skills.

- **Question**

Issues concerning mature-age apprenticeships

Can you please provide updated national apprenticeship statistics with details of commencements, completions and in-training numbers for mature-age apprentices?

Question asked by:

Committee member name: Dr Southcott

Hansard page number: 15

Answer

The Department of Education, Employment and Workplace Relations provides the following response:

Australian Apprenticeships

The table below outlines the commencements, completions and in-training numbers for mature-age apprentices in receipt of Support for Mid-Career payments for the period 1 July 2007 – 8 July 2009.

Contract status		Mature Age Apprentices	1 July 2007 – 8 July 2009
Commencement –			
Total Recipients	Age 30 or over		7,494
In-training	Age 30 or over		6,606
Completed Successfully	Age 30 or over		296
Cancelled	Age 30 or over		592

Where an Australian Apprentice has unsuccessfully completed their Support for Mid-Career eligible Australian Apprenticeship, the Department, through its network of contracted Australian Apprenticeships Centres, undertakes a survey of both the employer and Australian Apprentice to determine the reason for cancellation. The Department will have results from the first round of surveys in late 2008.

Source: TYIMS Hyperion database (current as at 8/7/08)

- **Question**

Can you provide raw data on inquires regarding mature-age apprenticeships and what percentage are followed up on?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 19

Answer

Since 1 July 2007 the Department's Skilling Australia National enquiry line has received 1,279 calls regarding Support for Mid-Career Apprenticeships. All of these inquiries were actioned either by enquiry line staff members or by referral to an Australian Apprenticeships Centre.

Source: Skilling Australia National enquiry line 3 July 2008

- **Question**

Can you please provide data on the impediments to mature age people taking up apprenticeships and provide research at a national level on why employers do not want to employ mature age apprentices.

Question asked by:

Committee member name: Mrs D'Ath

Hansard page number: 20

Answer

The National Centre for Vocational Education Research (NCVER) has published several papers relating to mature age workers and apprenticeships. Listed below are links to three NCVER papers released since June 2005, including discussion of factors which act as barriers or facilitators to key outcomes for mature age apprentices.

Older workers in apprenticeships and traineeships

<http://www.ncver.edu.au/publications/1707.html>

The mature-aged and skill development activities: A systematic review of research - An update

<http://www.ncver.edu.au/publications/1663.html>

The mature-aged and skill development activities: A systematic review of research

<http://www.ncver.edu.au/publications/1574.html>

Education of children with special needs (including gifted students):

- **Question**

What are the requirements for a preschool age child to be eligible for special needs funding?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 21

Answer

The Inclusion Subsidy Support (ISS) assists eligible child care services to improve their capacity to include children with ongoing high support needs in quality child care.

Child care services that are eligible to access ISS are:

Australian Government approved child care services including both private and community centre based long day care, outside schools hours care (including vacation care), occasional care, family day care and in home care.

Australian Government non-mainstream services (non-child care benefit) such as flexible/innovative services multifunctional Aboriginal children's services, non mainstream outside school hours care, non formula occasional care (100 per cent Australian Government funded) and mobile child care services.

Preschools however are not eligible to access ISS funding.

- **Question**

a) Provide information on the commonality of challenging behaviours in the preschool age group and identification of these behaviours between behavioural environmental issues vs identified disability and:

b) Provide data on whether support is linked to any other government payments?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 21

Answer

a) The Department does not collect information or data on this.

b) The ISS is linked to the Child Care Benefit (CCB) payment which assists families with the cost of child care. To receive ISS, the child care service needs to be an Australian Government CCB approved service. Australian Government approved child care services include both private and community based long day care, outside school hours care including vacation care, family day care, occasional care and in-home care services.

Other services also eligible are Australian Government non-mainstream services (non-child care benefit) such as flexible/innovative services multifunctional Aboriginal children's services, non mainstream outside school hours care, non formula occasional care (100 per cent Australian Government funded) and mobile child care services.

- **Question**

Is the Inclusion Subsidy Support (ISS) funding cap reached each year and how quickly is it reached?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 21

Answer

The ISS was established in 2006 and is limited to an annual capped allocation available under the Australian Government Child Care Services Support Program.

In 2006-2007 the annual funding cap was reached in April 2007; and in 2007-2008 it was reached in November 2007.

- **Question**

Has there been any matching done with the ISAs?

Question asked by:

Committee member name: The Chair (Ms Bird)

Hansard page number: 22

Answer

Inclusion Support Agencies (ISAs) provide support to mainstream eligible child care services to assist them develop the knowledge and skill to successfully include children with additional needs into a quality child care environment. They do this through a network of skilled workers called Inclusion Support Facilitators (ISFs) who work directly with child care services. ISFs are required to have a working knowledge of local community and government programs and services.

ISA regions were developed using Statistical Local Areas (SLAs). The distribution of funding to ISAs was based on a number of factors including the number of Child Care Benefit approved child care services and places, the Child Care Census data (for example the number of children from culturally and linguistically diverse and Indigenous backgrounds, the number of children with a disability), and where the SLA is located (using the Australian Standard Geographical Classifications for remoteness).

- **Question**

The education of children with special needs (including gifted students) Students with a disability

a) Are the details and figures kept on unmet need?

b) Is there a waiting list for those schools and centre applications not able to be met?

Question asked by:

Committee member name: Ms Bird (Chair)

Hansard page number: 27

Answer

a) The Department does not collect data on unmet need.

b) There are no current waiting lists for eligible Australian Government mainstream funded child care centres.

- **Question**

a) Is there any evidence that those types of blended classrooms are providing a benefit for children that are coming to that school as local community children?

b) last query would be: what impact does it have on a neighbouring high school when potentially some of the brighter young children in the neighbourhood are applying to go to the selective school and therefore diminishing the variety of students in that high school?

Question asked by:

Committee member name: Mr Clare

Hansard page number: 36

Answer

Background

State and territory education systems may vary in their approach to the education of gifted and talented students. Generally, selective schools and classes aim to address the learning needs of gifted and high potential students who are capable of working at a significantly faster pace and in greater depth than their age peers. Learning in core subjects is accelerated for students in these programs, and opportunities for in depth study are provided.

More than mere grade-skipping, acceleration is an educational response based on the idea that competence, and not age, should determine how children should access curricula. Accelerated learning programs are mostly offered in fully selective or partially selective (blended) schools. Partially selective schools typically 'stream' high achieving and gifted students into specialised classes for core subjects away from their age peers. Depending on the school, these high achieving students may or may not join mainstream classes for extra curricula subjects. The removal of high achieving students from the mainstream classroom, either to a separate class or another school, is sometimes called 'creaming off'.

Response to (a)

Most research into the education of gifted and talented children focuses on the needs and outcomes of the gifted and talented student rather than on average ability students. Australian research does show that 'creaming off' gifted students from regular classes will not have a detrimental effect on less able students because average ability students do not view gifted students as role models (Carrington, 1993). Often when gifted students are removed from a class, a new set of able students rise to the top and become the more able group in the class (Fiedler et al, 1992).

Response to (b)

There is no evidence available on the impact of the removal of gifted children from a school.

References

Carrington, N. (1993). "Australian adolescent attitudes towards academic brilliance." *Australasian Journal of Gifted Education*, 2(2), 10-15.

Fiedler, E. D., Lange, R. E. and Winebrenner, S. (1992). "In search of reality: Unravelling the myths about tracking, ability grouping and the gifted." *Roeper Review*, 16 (1), 4-7.

Skills requirements to meet emerging trade demands:

- **Question**

When were the draft guidelines for the Productivity Places Program approved by the legal department? When will the legally approved guidelines be available on the website?

Question asked by:

Committee member name: Dr Southcott

Hansard page number: 43

Answer

Draft guidelines were made available on the DEEWR website prior to the commencement of Phase I on 7 March 2008. Comments on the draft guidelines were received from the legal department on 28 March 2008. These comments, a number of non-legal anomalies and changes to the program announced in the budget were subsequently incorporated into the draft guidelines.

The delegate approved guidelines were made available on the website on 12 June 2008.

Additional Background information

Comments on the draft guidelines for Phase I of the Productivity Places Program were received from the legal area on 28 March 2008. These comments were assessed and subsequently incorporated into the draft guidelines in May 2008.

Concurrently, a number of other non-legal anomalies were identified, changes to the program were announced in the budget, and further program management issues became apparent. Some of these included:

- defining and developing referral pathways for participants from Employment Service Providers to Registered Training Organisations;
- the time delay for IT enhancements to be completed to match amendments to the guidelines;
- improving access for Indigenous participants. This included the development of strategies to maximise the use of other support programs to assist them in accessing the program and providing support during the program; and
- refining eligibility criteria to remove unintended consequences that could potentially exclude participants from enrolling in the program because of the other support programs being undertaken.

The Department took the opportunity to further refine the guidelines to address these issues before seeking delegate approval and making them available on the website.

- **Question**

Have any providers offered qualifications in drilling?

Question asked by:

Committee member name: Dr Southcott

Hansard page number: 46

Answer

Yes. The Australian Drilling Industry Training Committee Ltd is approved to deliver nine drilling qualifications nationally under the Productivity Places Program.

- **Question**

Has there been any research on the merits, in terms of multiple pathways, of solely institutional based training compared with other methods of training?

Question asked by:

Committee member name: Mrs D'Ath

Hansard page number: 48

Answer

The following research papers contain relevant information:

Working Paper 6: Pathways. High level review of Training Packages. Kaye Schofield, Rod McDonald, Cheryl Leary. ANTA, 2004. See for example pages 2, 4 and 5.

This document can be accessed on the VOCED web site at:

http://www.voced.edu.au/docs/dest/TD_ANTA_78_10.pdf

Working Paper 3: Training Package. Design High level review of Training Packages: Kaye Schofield, Rod McDonald, Cheryl Leary. ANTA, 2004. See for example page 7.

This document can be accessed on the VOCED web site at:

http://www.voced.edu.au/docs/dest/TD_ANTA_78_07.pdf

National Strategic Audit of the Hospitality Industry, 2005 - Report to the National Quality Council, Western Australia Training Accreditation Council coordinated the national strategic audit. See for example page 29.

This document can be accessed at:

<http://www.dest.gov.au/NR/rduonlyres/22B9D5F1-7483-498B-97E3-98C8589472A2/14488/StrategicAuditofTrainingintheHospitalityIndustry.pdf>