

A background pattern of interconnected orange lines forming a network of triangles and polygons. A red triangle is in the top right corner.

Policy Insights

THE TEACHER WORKFORCE IN AUSTRALIA: SUPPLY, DEMAND AND DATA ISSUES

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THE TEACHER WORKFORCE IN AUSTRALIA: SUPPLY, DEMAND AND DATA ISSUES

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INTRODUCTION

This paper provides a brief overview of the current teacher workforce situation in Australia. It highlights workforce trends and projected growth, and areas where the collection and analysis of additional data may assist in the targeting of effective policy.

THE REPORT IN A NUTSHELL

Demand for teachers is on the rise. The population of primary students is set to increase dramatically over the next ten years. Secondary schools will start to see the increase flow through from 2018. Part-time employment of teachers is becoming more prevalent and the proportion of male teachers in secondary school continues to decline.

Teacher supply varies across Australian states and territories. Most states have a current, and in some cases considerable, oversupply of generalist primary teachers. The secondary workforce is more variable in terms of the availability of teachers by subject areas as well as across states. Regional and remote areas tend to experience greater difficulty attracting and retaining teachers at all levels than do their metropolitan counterparts.

THE RISING DEMAND FOR TEACHERS

Demand for teachers is largely a result of the number of children in the population. In most states, the primary school student population has been declining slowly since 2001: only Queensland and Western Australia saw any real growth from 2001-2010, as the chart in Figure 1 shows. The current Australian Bureau of Statistics (ABS) population projections are clear, however: even the most conservative projection shows high levels of growth in the population of primary school-aged children in the next five to ten years, particularly in the four most populous states, and growth in all states and territories except Tasmania (see figures 1–9).

For example, in the ten years from 2001-2010 the population of children in New South Wales primary schools fell by about 9000 students.¹ In the ten years from 2011-2020 that population is forecast to rise by over 92000 students, based on the mid-range ABS projections Series B.² If an average primary class is 24 students,³ New South Wales primary schools will need to find space and

1 ABS NSSC Table 43a, 2014

2 ABS 3222.0 Population Projections, Time Series B

3 McKenzie et al (2014), p. 54.

PRIMARY F-6 GROWTH FROM 2011-2020



BASED ON ABS SERIES B PROJECTIONS

resources for about 385 additional classes of primary children each year. In the same ten years, Victoria is likely to see growth of over 100000 primary students, or over 448 additional primary classes each year. Queensland (443 classes per year) and Western Australia (351 classes per year) are also likely to see high growth. Details of primary school student numbers in each state and territory, projected out to 2025, are presented in figures 2–9 on pages 4–5.

The current population boom began in about 2008 so the three ABS projections are partly based on known figures and do not really begin to diverge until after 2020. Secondary schools will remain unaffected by the current growth until about 2018.

There is little data available to enable a clear examination of likely pressure points and there is the potential for further research to answer questions such as:

- ▶ Will the population growth be even or will some areas be affected more than others?
- ▶ To what extent will regional and rural areas be affected?

- ▶ Will outer metropolitan growth corridors see higher levels of growth than elsewhere?

The addition in some states of 400 extra classes of primary-aged students every year until at least 2020 suggests that some schools will need new buildings while in some areas new schools will need to be built.

The non-government sector accounts for between one-quarter to one-third of all schools.⁴ The Catholic sector and independent schools may not have the infrastructure to maintain their current share of students and cope with the resulting high demand in the short to medium term. This may lead to a rise in the proportion of students entering government schools, at least in some areas.

Beyond bricks and mortar, the most significant issue raised by the growth in the student population is the demand for teachers.

4 ABS NSSC Table 31a, 2014

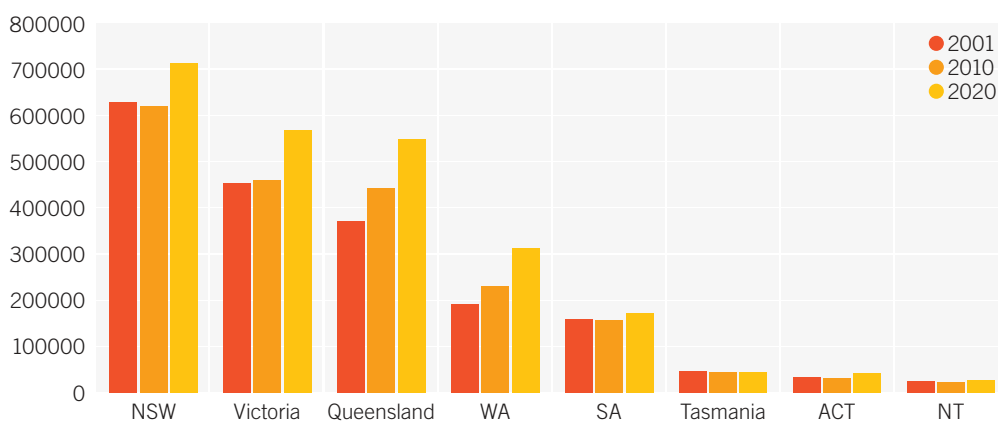


Figure 1 Primary school student population 2001, 2010 and forecast to 2020

STUDENTS IN PRIMARY SCHOOL: PROJECTED NUMBERS BY STATE AND TERRITORY TO 2025

NEW SOUTH WALES

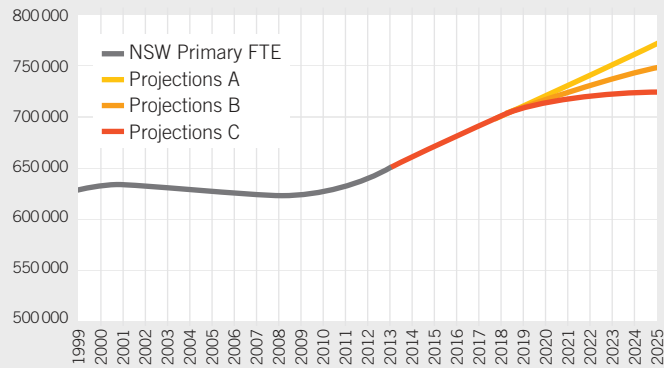


Figure 2 Number of children in primary schools in New South Wales, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in NSW primary schools is likely to increase by about 1.3% per year for the next decade (compared to a decline of 0.1% per year in the previous decade). In 2001, there were 630 387 children in primary school in NSW. In 2010, that number had fallen to 621 311. By 2020 there could be as many as 713 773 children in primary school in NSW, an increase of about 15% on 2010 figures, or 385 additional classes each year for 10 years.

QUEENSLAND

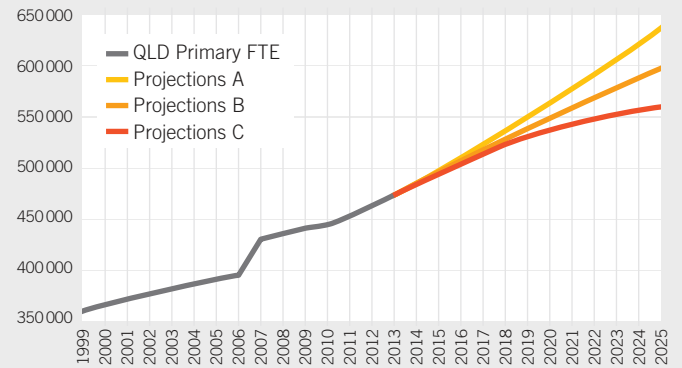


Figure 4 Number of children in primary schools in Queensland, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in Queensland primary schools is likely to increase by about 2.2% per year for the next decade (compared to a growth of 2.0% per year in the previous decade). In 2001, there were 372 631 children in primary school in Queensland. In 2010, that number had risen to 443 955. By 2020 there could be as many as 550 504 children in primary school in Queensland, an increase of about 24% on 2010 figures, or 444 additional classes each year for 10 years.

VICTORIA

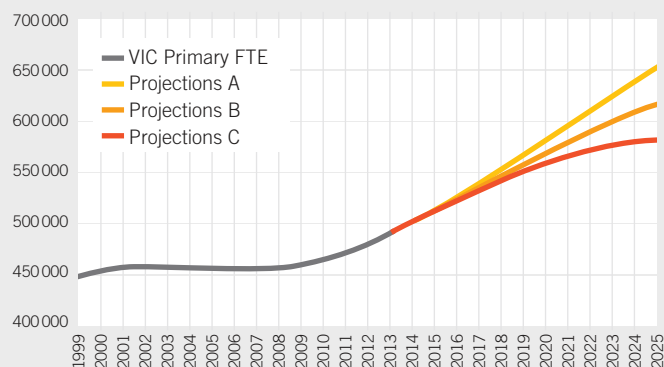


Figure 3 Number of children in primary schools in Victoria, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in Victorian primary schools is likely to increase by about 2.1% per year for the next decade (compared to a growth of 0.2% per year in the previous decade). In 2001, there were 454 126 children in primary school in Victoria. In 2010, that number had risen to 461 732. By 2020 there could be as many as 569 406 children in primary school in Victoria, an increase of about 23% on 2010 figures, or 449 additional classes each year for 10 years.

WESTERN AUSTRALIA

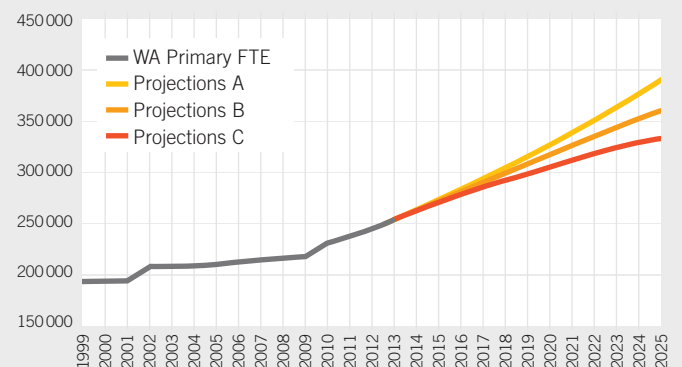


Figure 5 Number of children in primary schools in Western Australia, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in Western Australian primary schools is likely to increase by about 3.2% per year for the next decade (compared to a growth of 1.8% per year in the previous decade). In 2001, there were 191 647 children in primary school in WA. In 2010, that number had risen to 229 910. By 2020 there could be as many as 314 154 children in primary school in WA, an increase of about 37% on 2010 figures, or 351 additional classes each year for 10 years.

The projections provided below are based on ABS population projections, Series A, B and C, for children aged 5-12 (including only a proportion of children aged 5 and aged 12, as a proportion of these children are not in primary school). Age is used here as a proxy for year levels and is based on primary school being Foundation to Year 6.

SOUTH AUSTRALIA

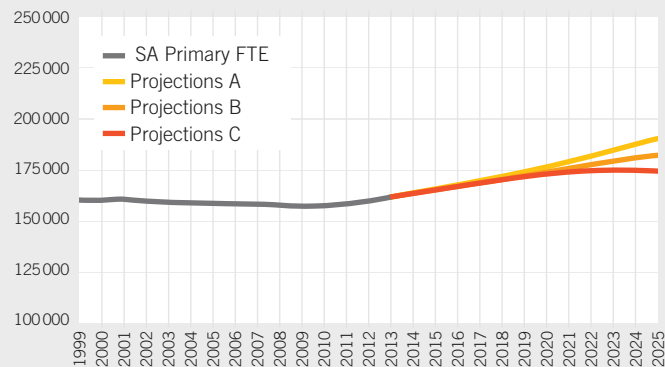


Figure 6 Number of children in primary schools (to Year 6) in South Australia, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in South Australian primary schools is likely to increase by about 1.3% per year for the next decade (compared to a decline of 0.2% per year in the previous decade). In 2001, there were 159 475 children in primary school in SA. In 2010, that number had fallen to 156 177. By 2020 there could be about 173 408 children (up to Year 6) in primary school in SA, an increase of about 11% on 2010 figures, or 72 additional classes each year for 10 years.

AUSTRALIAN CAPITAL TERRITORY

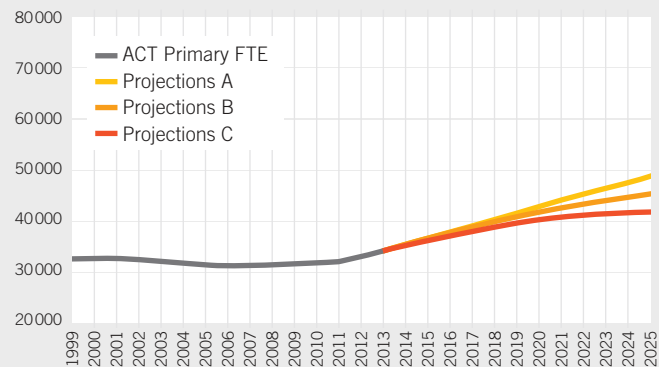


Figure 8 Number of children in primary schools in the ACT, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in ACT primary schools is likely to increase by about 2.7% per year for the next decade (compared to a decline of 0.3% per year in the previous decade). In 2001, there were 32 604 children in primary school in the ACT. In 2010, that number had fallen to 31 572. By 2020 there could be as many as 41 328 children in primary school in the ACT, an increase of about 31% on 2010 figures, or 41 additional classes each year for 10 years.

TASMANIA

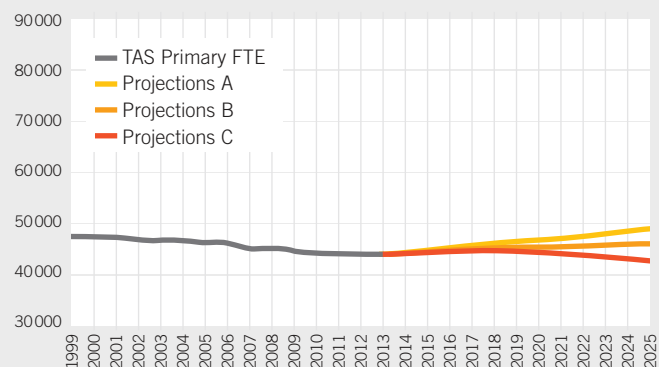


Figure 7 Number of children in primary schools in Tasmania, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in Tasmanian primary schools is likely to increase by about 0.3% per year for the next decade (compared to a decline of 0.7% per year in the previous decade). In 2001, there were 46 915 children in primary school in Tasmania. In 2010, that number had fallen to 43 923. By 2020 there could be about 45 190 children in primary school in Tasmania, an increase of about 3% on 2010 figures, or five additional classes each year for 10 years.

NORTHERN TERRITORY

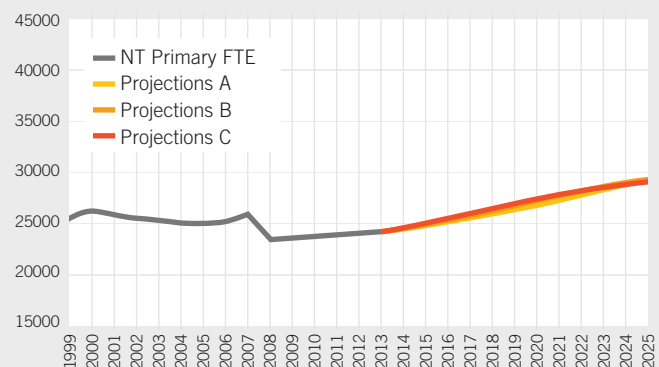


Figure 9 Number of children in primary schools in the Northern Territory, 1999-2013 and projected numbers, 2014-2025

Based on ABS Series B projections, the number of children in Northern Territory primary schools is likely to increase by about 1.4% per year for the next decade (compared to a decline of 1.0% per year in the previous decade). In 2001, there were 25 830 children in primary school in the NT. In 2010, that number had fallen to 23 618. By 2020 there could be about 27 021 children in primary school in the NT, an increase of about 14% on 2010 figures, or 14 additional classes each year for 10 years.

WHAT IS KNOWN ABOUT THE TEACHER WORKFORCE

The demand for teachers is about more than the number of students. The ratio of students to teachers has been falling steadily for many years.⁵ This increases demand even with no growth in student numbers. The ratio of women to men, of part-time to full-time employees, and the replacement of those who leave the profession also impacts upon the number of teachers required.

THE GENDER IMBALANCE

In primary schools eight out of every ten teachers are female. This has not changed in over ten years, suggesting that a threshold has been reached.⁶

At the secondary level, ABS data suggests that the ratio of men to women is falling and has been for some time. Figure 10 shows that in 1981 there were more male teachers (55%) than female: 30 years later, just 42% of secondary teachers are men.⁷

The picture is more complex than that, however. The teacher workforce at the secondary level comprises quite different labour markets as a result of different policies and different employment opportunities. For example, core curriculum requirements mean there is always greater demand for English and mathematics teachers. Graduates in

Information Technology (IT) may be in demand and therefore able to command higher salaries outside teaching than would, say, teachers in physical education.

The gender balance differs by subject. About three quarters of physics teachers are male and over 40% of them are aged over 50, as shown in Figure 11.⁸ Chemistry, computing and IT, and mathematics all have more men teaching in the area than women. Nearly half of the men teaching mathematics are aged over 50. Conversely, only about one-third of English teachers and less than one-quarter of language teachers are men.

This suggests that physics, computing and IT, mathematics and chemistry remain largely male dominated subjects and are more likely to suffer a shortage of teachers as men teaching these subjects retire.

GENDER AND SALARY

Starting salaries for teachers are considered to be reasonably competitive compared to the graduate market generally.⁹ Figure 12 shows that teachers who choose to stay in the classroom can expect to reach the top of the pay scale in 10-15 years, based on data from the Staff in Australia's Schools (SiAS) Survey 2013.¹⁰ According to figures published by the Organisation for Economic Cooperation and Development (OECD), teachers in Australia reach the top of the pay scale in just 9 years,

5 ABS NSSC Table 53a, 2014

6 ABS NSSC Table 51a, 2014; SiAS 2013, p. 26.

7 ABS 4202.0 Table 7, 1981; ABS 4221.0 Table 20, 1991; ABS 4221.0 Table 63, 2001; ABS NSSC Table 51a, 2013

8 Weldon et al (2014), Tables 3.4 and 3.6.

9 GCA (2013), Tables 3 & 4, pp. 8-9.

10 Figure 12 is based on an analysis of SiAS 2013 data undertaken by the author for this report.

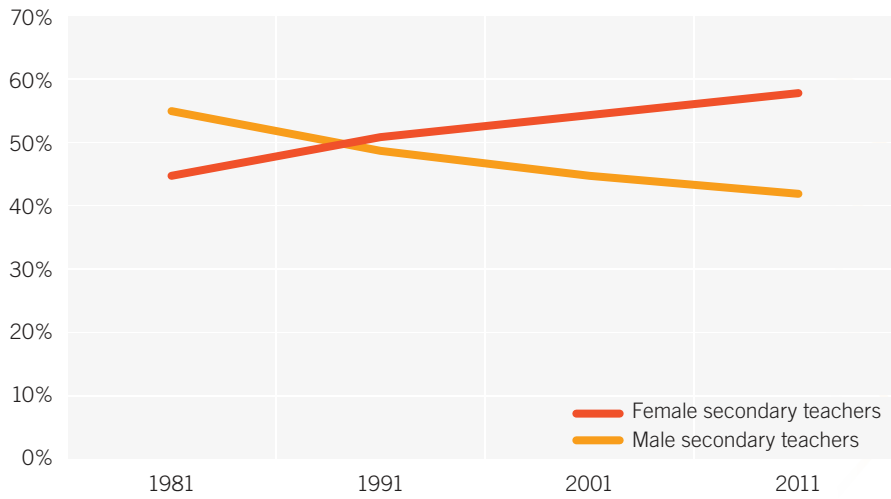


Figure 10 Proportion of teachers in secondary schools by gender, 1981-2011

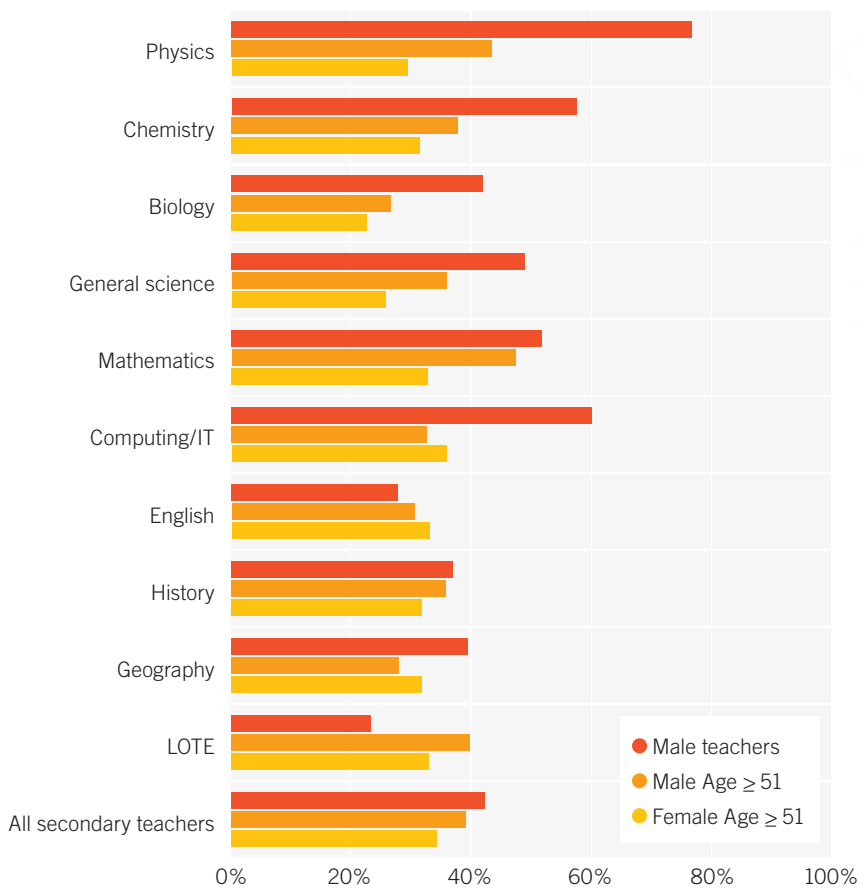


Figure 11 Proportion of male teachers, and proportion of teachers aged 51 and over, by gender, in selected subjects, Australia, 2013

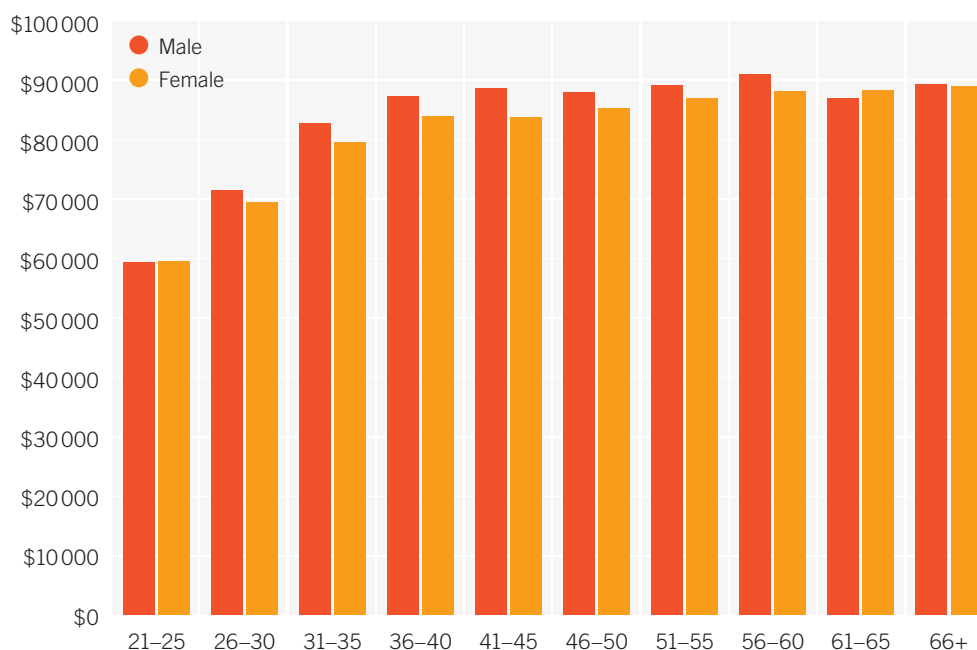


Figure 12 Average secondary teacher full-time salary by age and gender, Australia 2013

compared to the OECD average of 25 years for teachers.¹¹ In addition, the ratio of the salary at the top of the scale to the starting salary is 1.4 compared to the OECD average of 1.56 (26th out of 36 countries).

The Workplace Gender Equality Agency (WGEA) reported a 12% pay gap in the education and training sector in 2014.¹² The gender pay gap tends to be neutralised when pay is set by an award¹³ which suggests that other factors are at play in teaching. Figure 4 shows a salary disparity of \$2000-\$3000 in favour of men across age brackets from 26-60. However, more women tend to work part-time or flexibly because, as the WGEA puts it, 'they still undertake most of society's unpaid caring work'¹⁴ and the price of such flexibility is fewer opportunities to gain loading for additional responsibilities or to take on more senior roles. When experience (years

teaching) is taken into account in the SiAS 2013 data, salary imbalance by gender disappears.

OUT-OF-FIELD TEACHING AND THE UNDER-UTILISATION OF TEACHERS

The only data currently available about the extent of out-of-field teaching comes from the Staff in Australia's Schools survey (SiAS), which ACER ran for the Australian Government for the third time in 2013. SiAS does not collect data on whether teachers have satisfied the qualification requirements of registration bodies in different curriculum areas. Teachers are therefore assumed to be notionally qualified if they have studied a subject for at least one semester at second year tertiary or have trained at tertiary level in teaching methodology in the subject concerned.¹⁵ On the basis of this definition, Figure 13 shows that out-of-field teaching appears to have dropped since the 2010 SiAS survey.

¹¹ OECD (2014), Table D3.3 (based on 2012 figures, for lower secondary).

¹² WGEA (2014), p.5.

¹³ Ibid, p.9.

¹⁴ Ibid, p.2.

¹⁵ Weldon et al (2014), p.25.

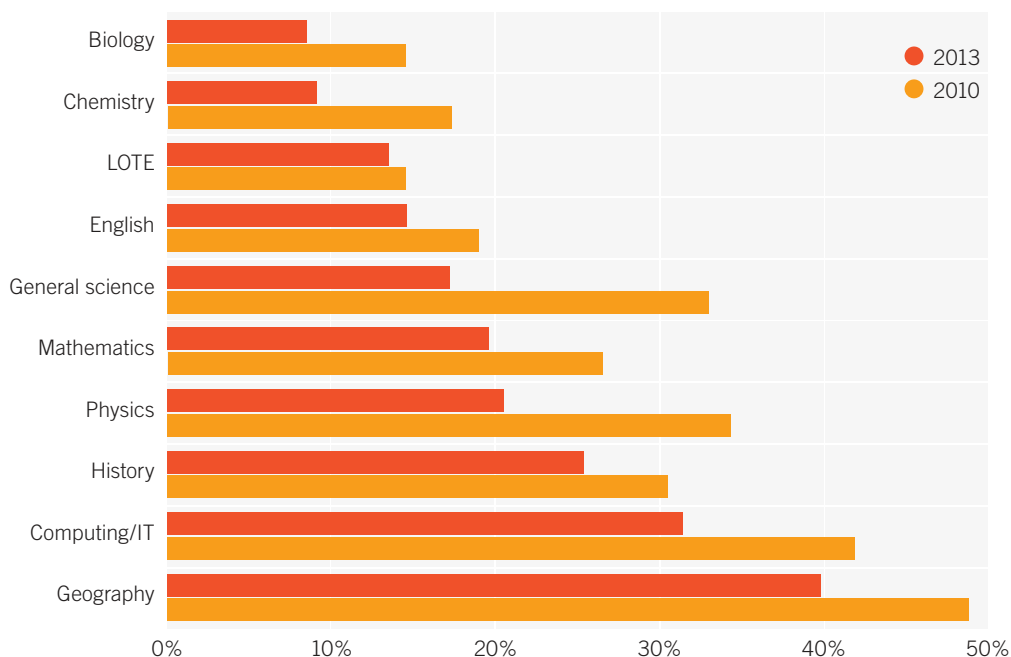


Figure 13 Out-of-field teaching in selected secondary subjects, Australia, 2010 and 2013

Nevertheless, out-of-field teaching remains a concern. Currently, about 20% of mathematics and physics teachers are teaching out-of-field. Out-of-field teaching in history (25%), computing/IT (30%) and geography (40%), while lower than in 2010, remains reasonably high.¹⁶ Out-of-field teaching in some subjects is likely to become more acute over the next ten years if the forecasted rising demand for teachers is not addressed on the supply side.

Part of the reason for out-of-field teaching, and one of the reasons the ratio of students to teachers (about 15 to 1) is much lower than average class-size, has to do with the size of schools in Australia. About 35% of secondary schools enrol fewer than 400 students (including the total enrolment of combined primary and secondary schools), and this is more common outside the major urban centres. Schools are generally expected to teach a diverse curriculum, regardless of size or location. Thus each school needs to have the teaching staff to cover that range of subjects,

even if the classes are very small. Small schools and small classes require more teachers. This is particularly the case at the senior level, where the average class size across Australia drops from about 23 students in years 7-10 to 14-17 students in years 11-12.¹⁷

In addition, the importance of good results at Year 12 puts pressure on schools to ensure that the most competent and experienced teachers are placed with the senior students. This means out-of-field teaching is more likely to occur at the lower year levels.

The size of Australian schools is in part an outcome of the population distribution, and larger schools are not necessarily the answer. As examples of alternatives, it is not unusual for students to attend another nearby school for certain subjects not available at their own school, and technology is enabling greater use of forms of 'distance education' such as remote students sitting in on a class via video-link.

¹⁶ Ibid, p.26; Weldon et al (2011), p.25.

¹⁷ McKenzie et al (2014), Table 5.23, p.58.

TEACHING: A PART-TIME PROFESSION

Teaching is increasingly a part-time profession. According to the SiAS 2013 survey, about 27% of primary teachers are part-time and 20% of secondary teachers (31% of female primary teachers and 27% of female secondary teachers).¹⁸

A breakdown of teachers working part-time by age (Figure 14) shows higher proportions of those aged 35-44 are working part-time (about 40% of women), rising again from about age 55.¹⁹ Older teachers are remaining in the workforce longer, with a high proportion in part-time roles.

Employment flexibility has advantages. It allows people with young families or aging parents scope to manage their family commitments and still participate in the workforce, and older people are also continuing to work but at reduced hours. Job-sharing may make it easier to cover illness and holidays. On the other hand, additional administration is likely to be required to manage timetables and job-sharing, and part-time teachers may have fewer opportunities to access professional development, to innovate, redesign and plan lessons, to collaborate with colleagues or team-teach, or to find new resources. The maintenance of relationships is paramount: collaboration and continuity are required to ensure a subject is taught successfully, that teachers are aware of student progress and any day-to-day issues as they arise.

¹⁸ Ibid, p. 44.

¹⁹ Figure 14 is based on an analysis of SiAS 2013 data undertaken by the author. Primary male figures are not included as there were too few respondents to disaggregate by age.

In addition, it is likely that some part-time positions are filled by teachers who would prefer full-time work. As part-time roles increase, the number of teachers required to fill positions will also increase. This trend is continuing, as shown by the full-time-equivalent (FTE) numbers and the headcount of teachers over the last 14 years (Figure 15).²⁰

THE SUPPLY OF TEACHERS: WHAT IS KNOWN

A lot more is known about the current teacher workforce and the likely demand for teachers than is known about the pool of teachers available to work or the likely future supply of teachers. In part, this is currently due to significant changes occurring in the higher education sector, potentially with more to come.

A high quality teacher workforce is a necessary component of the provision of high quality education for all students in Australia. All teachers in Australia are required to be registered and must have obtained the requisite tertiary qualification, for which the minimum requirement is a four year tertiary degree.

CHANGES IN HIGHER EDUCATION AND INITIAL TEACHER EDUCATION (ITE) COURSES

From 2012, the number of undergraduate course places supported by funding from the Australian government was uncapped.

²⁰ ABS NSSC Tables 50a, 51a, 2014

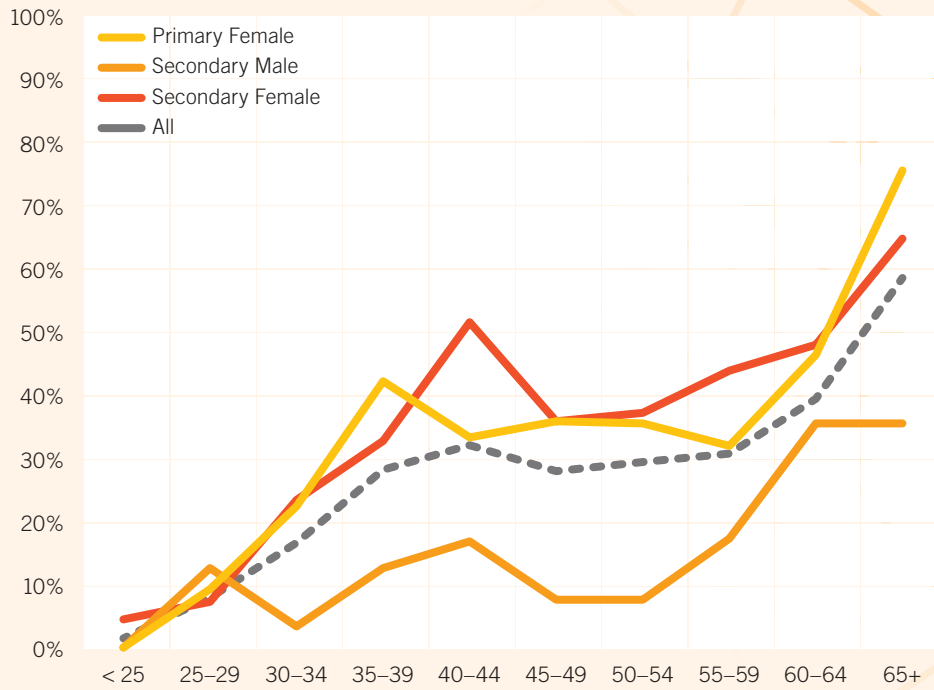


Figure 14 Proportion of teachers working part-time, by age and gender, Australia, 2013

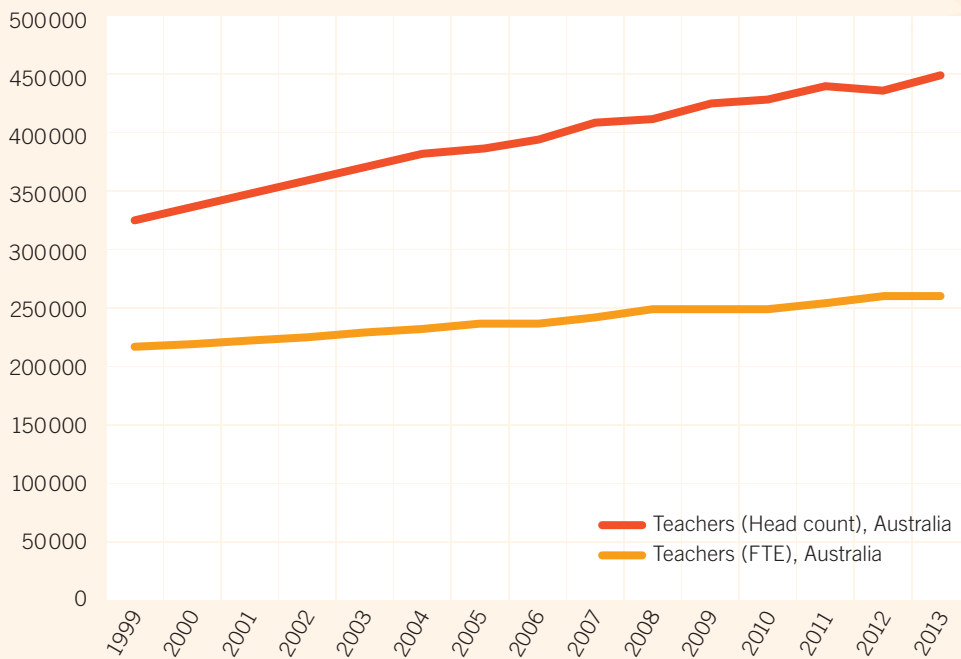


Figure 15 Teachers in Australia by full-time equivalent and headcount, Australia, 1999-2013

The government no longer controls the maximum number of funded places in undergraduate initial teacher education (ITE) courses, allowing course providers to enrol as few or as many students as they want, or can attract. There has been strong recent growth in undergraduate enrolments in initial teacher education courses.

The 2014 ITE Data Report produced by the Australian Institute for Teaching and School Leadership (AITSL) noted that entrants to ITE courses from secondary education are a minority (29% of entrants in 2012).²¹ Of those whose ATAR was recorded, 36% had an ATAR of 51-70, compared to 23% across all fields. Eight per cent had an ATAR of 91-100, compared to 27% across all fields.²² The report also noted that an increasing percentage of students over the period 2005-2012 were in lower ATAR bands,²³ and lower ATARs were associated with lower retention rates.²⁴

The Australian government, in its 2014-15 budget, signalled the intent to remove the cap on the maximum student contribution to Commonwealth Supported Places (CSP). The current maximum student contribution for education courses (per one year full-time student load, or EFTSL) is \$6,044 per student.²⁵ The government also signalled a cut in its contribution per student from \$9974²⁶ to \$9033.²⁷ It is unclear at this point whether the payment cap will be removed.

The consequences are equally unclear but are likely to be governed by the extent to which providers raise their fees, the availability of scholarships and loans, their terms, and student willingness to undertake debt.

In 2011, a national approach to the accreditation of ITE programs was endorsed by the Ministerial Council for Education, Early Childhood and Youth Affairs.²⁸ This new standard required postgraduate ITE courses to be of two year duration.²⁹ The new accreditation process is ongoing and one year postgraduate courses are still widely available. At this stage it is not known what impact the move to two year postgraduate ITE courses will have on enrolments.

ENTRY TO AND ATTRITION FROM ITE COURSES

Data from Victoria show that undergraduate offers and acceptances have seen high growth, while first preference applications to teaching courses are about the same as they were a decade ago (Figure 16).³⁰ These data suggest that the pool from which additional offers are drawn is either of those for whom teaching was not a first preference, or those with a lower level of academic achievement than has previously been the case. On this basis, the present rates of growth may be unsustainable, given that the pool from which candidates are

21 AITSL (2014), p. 30.

22 Ibid. p. 31.

23 Ibid. p. 33.

24 Ibid. p. 38.

25 DIICSRTE (2014)

26 Ibid.

27 DOE (2014) Public universities (website)

28 MCEECDYA, see the AITSL website: <http://www.aitsl.edu.au/initial-teacher-education/national-approach-to-accreditation>

29 (2 years EFTSL – equivalent full time student load, not calendar duration) AITSL (2011), p.12

30 VTAC course indices and data archive: <http://www.vtac.edu.au/reports/>

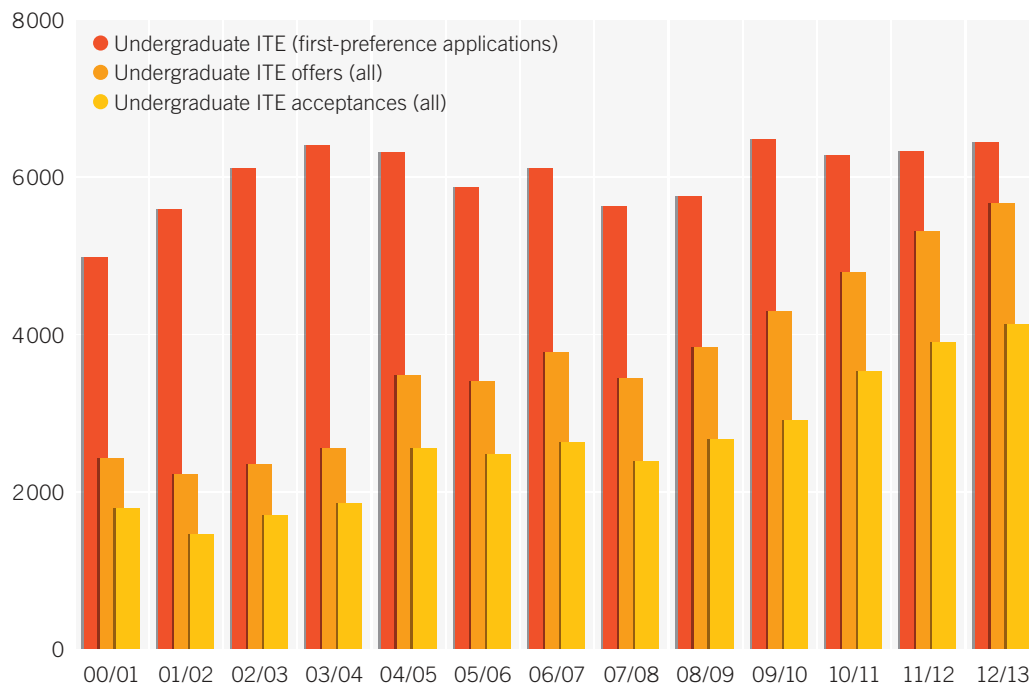


Figure 16 Applications, offers and acceptances for Initial Teacher Education courses in Victoria, 2000-01 to 2012-13

drawn does not seem to be showing the same levels of growth.

The overall attrition rate from undergraduate ITE degrees after the first year was about 23%, varying by provider and course (similar to the attrition rates in other fields).³¹ In addition, data suggests that up to 20% of ITE graduates are unavailable for employment.³² This could be due to some international graduates returning overseas and other graduates choosing to travel, or finding employment outside teaching.

SUBJECT AREAS

As noted earlier, the teacher workforce is not homogenous. ITE course providers can supply

data on the number of graduates in different subject areas.³³ Most secondary graduates, however, graduate with two or more subject areas. It would be interesting to determine what subjects are commonly associated with each other and how schools choose to deploy their teaching staff, given that assigning one staff member primarily to one subject renders them unavailable in other subject(s). A better understanding of this area may assist better targeting of potential teachers in shortage areas.

A further area for research is the extent to which in-service teachers obtain the necessary qualification to enable them to teach an additional subject. What courses are offered in this space, what incentives are available for current teachers to undertake additional

³¹ AITSL (2014), p. 38.

³² Mayer et al (2014).

³³ Ibid.

education, and what impact would (or does) obtaining additional subject qualifications have on teachers, schools, and the wider workforce supply and demand parameters?

The registration process for teachers requires a recognised qualification but does not endorse a registrant for a given level or subject. That is, a registered teacher is a registered teacher, not a registered primary teacher or a registered secondary teacher specialising in history and economics, or a registered teacher (F-10) or a registered teacher (middle years). From a data perspective this represents an enormous gap in our understanding of the teacher workforce, as much of these data are not collected.³⁴ For example, an estimated 10-20% of graduate teachers do not enter the profession. It is not known what proportion of these graduates are primary or secondary qualified, nor what subjects they are qualified in. A proportion of teachers leave teaching early in their careers but again, there is no data on what schooling level or subjects are more or less affected. Attrition rates are themselves uncertain and may also be overestimated due to movement between the government and non-government sectors.

DUAL QUALIFICATIONS

The Australia-wide source of initial teacher education (ITE) data comes from the Higher Education Statistics (HES) Collection, currently managed within the Australian Government Department of Education. The accuracy of this dataset is difficult to determine. For example, ITE courses that provide a qualification in

more than one area (e.g. early childhood and primary) are not always specifically categorised so it is not possible to categorise accurately all graduates with a primary qualification, or all graduates with a dual qualification.

Graduates with a qualification at more than one level of schooling (i.e. early childhood and primary, primary and secondary, middle years) are becoming more common, with Victorian data suggesting the figure is about 15% of all ITE graduates. Most early childhood qualifications form part of a dual qualification with primary education.³⁵ Research suggests that graduates with an early childhood and primary qualification are likely to prefer employment at the primary level, for reasons such as better pay and conditions.³⁶ While preferences and influences on preferences are known to a limited extent, there are no data on the actual destinations of graduates with a dual qualification.

EXTERNAL MODE (ONLINE) ITE COURSES

The 2014 AITSL ITE data report, based on the HES collection, indicated that 22% (6698) of pre-service teachers in Australia were studying through external (off-campus) courses in 2012, an increase of four percentage points from 2011.³⁷ Any state-based analysis of teacher supply based on data from local providers risks underestimating actual supply, as a proportion of pre-service teachers undertaking external courses will be enrolled

³⁴ Willett et al (2014).

³⁵ Rowley et al (2011).

³⁶ See for example: Nolan & Rouse (2013); Productivity Commission (2011).

³⁷ AITSL (2014) Table 5a, p.14.

with interstate providers. It may be possible to gauge proportions of external students in each state if the HES collection includes a variable for students' current home state.

SUPPLY OF PRIMARY TEACHERS

There has been an oversupply of generalist primary teachers for some time, at least in Victoria, South Australia and New South Wales.³⁸ This oversupply seems likely to continue in some metropolitan areas despite the forecast high demand; however supply will remain uncertain until the possibility of higher course fees is resolved. Even then, if fees are uncapped, it may take some years for the impact of such a change to clarify.

SUPPLY OF SECONDARY TEACHERS

Teachers in subjects like languages, mathematics, physics, chemistry, geography and IT are already in short supply in some areas. There has been an oversupply of secondary teachers in some subjects, however once the rising numbers of students enter secondary schools (from about 2018) it is likely that shortages in some subjects will become acute unless supply can be enhanced. This could potentially be achieved through growth in the number of people undertaking ITE courses, higher rates of ITE graduates choosing to enter a teaching career, and higher retention rates of early career teachers.

WHERE TO FROM HERE?

In summary, the demand for teachers is currently strong and trending upwards, and is forecast to remain high in most states for at least the next ten years. In addition, the workforce is becoming increasingly part-time and the gender imbalance is increasing, with fewer men choosing to teach. Retiring teachers are being replaced, however certain male-dominated subjects such as mathematics and physics are still seeing an aging workforce and, in these subjects at least, supply does not appear to be increasing.

Supply generally has outstripped demand, particularly for generalist primary teachers, and in some secondary subjects. Supply has also increased considerably over the last four years. The extent to which supply has to be maintained at current levels will depend in part on how many of those graduates who have qualified over the last few years, and have not managed to obtain regular work as a teacher, remain in the pool of prospective teachers.

It would be helpful to undertake a more in-depth analysis of population growth, in order to identify locations where teacher shortages are likely to occur. Further study of the experience of graduates in the first five years of their career may assist to identify subject areas and locations experiencing higher levels of attrition, and may assist the creation of policies to increase the retention of early career teachers.

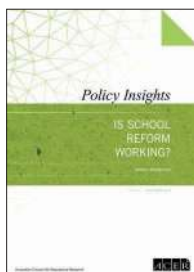
³⁸ See for example SATET (2012), p.6; DEECD (2012), p.46; DEC (2014), p.14.

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