## Data quality information — Child care, education and training sector overview B

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| Data quality information |
| Data quality information (DQI) provides information against the seven ABS data quality framework dimensions, for a selection of measures from performance indicators in the Child care, education and training sector overview. DQI for additional indicators will be progressively introduced in future reports.  Where RoGS indicators align with National Agreement indicators, DQI has been sourced from the Steering Committee’s reports on National Agreements to the COAG Reform Council.  Technical DQI has been supplied or agreed by relevant data providers. Additional Steering Committee commentary does not necessarily reflect the views of data providers. |
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DQI are available for the following performance measures:

Transition to primary school 2

Early learning 3

Participation in Child care, education and training by sector 5

School leaver participation in full time post school education and training 9

School leaver destination by sector 13

Full time participation in employment, education and training by (at certificate III or above, by Indigenous status and SES) 17

Level of highest qualification completed 22

Completion of year 12 or equivalent, or certificate level II or above 26

Population who have qualifications at or above Certificate level III (by Indigenous status and low SES) 30

Completion of year 12 or equivalent, or certificate level III or above 35

Achievement of foundation skills (literacy, numeracy, and technology) 39

### Transition to primary school

Data quality information for this indicator has been drafted by the Secretariat along with the Department of Education with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | School readiness |
| **Measure (computation)** | Definition  Transition to primary school defined as the proportion of children developmentally on track on four or more domains (by Indigenous status). Supplementary data are also reported against children developmentally on track on: no domains; one or more domains; two or more domains; three or more domains; and five domains)  Numerator  The number of children with a valid domain score who are developmentally on track on four or more domains.  Denominator  The number of children with a valid domain score who were assessed.  Computation  The number of children with a valid domain score who are developmentally on track on four or more domains divided by the number of children with a valid domain score who were assessed. |
| **Data source/s** | Department of Education, *Australian Early Development Index.* |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | AEDI data are reported by teachers in the first year of full time school. It is a national collection of all children in the first year of primary school. |
| **Relevance** | Data is available on the basis of a specific AEDI local communities and communities, as well as state. |
| **Timeliness** | Data were collected between May and July 2012. |
| **Accuracy** | Teachers completed a checklist for each child in the first year of school. This was a census, which assessed almost 290 000 children. |
| **Coherence** | The numerator and denominator are from the same collection. |
| **Accessibility** | Unpublished data can be requested from the AEDI Data Manager, as long as requests meet the requirements of the AEDI data protocol. This is on a fee for service basis.  The AEDI data protocol details the requirements for public release of data. |
| **Interpretability** | User guides and explanatory material are available on the AEDI website. |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * The five AEDI domains include: language and cognitive skills; physical health and well‑being; social competence; emotional maturity and communication skills and general knowledge. These domains are all inter‑related aspects of school readiness |

### Early learning

Data quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Element** | Child care, education and training sector overview performance indicator framework |
| **Indicator** | School readiness |
| **Measure (computation)** | Definition:  Early learning (home-based), is defined as the number of days per week that a parent/guardian told stories, read to a child or listened to a child read, for children aged 3-8 years.  Numerator:  Number of children involved in home-based reading activities.  Denominator:  Estimated residential population of 3-8 year olds.  Computation:  Expressed as a percentage. Calculation is: (Numerator ÷ Denominator) x 100. |
| **Data source/s** | Numerator/Denominator  ABS (unpublished) *Childhood Education and Care Survey 2011*, Cat. no. 4402.0, Canberra |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | Data are collected and compiled by the ABS through the Childhood Education and Care Survey (CEaCS), conducted throughout Australia in June 2011. Information was obtained through interviews conducted over a two-week period between 5‑18 June 2011.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, which cover this collection, please see ABS Institutional Environment (http://abs.gov.au/Ausstats/abs@.nsf/Latestproducts/4402.0Quality%20Declaration0June%202011?opendocument&tabname=Notes&prodno=4402.0&issue=June%202011&num=&view=). |
| **Relevance** | A supportive home learning environment, including shared learning activities between the parent/carer and the young child, such as reading to children on a regular basis, is a key requirement to assist young children to reach cognitive development milestones. Home literacy activities have been found to improve children’s reading, vocabulary, general information and letter recognition skills when entering school. Early learning (home-based) data provide an insight regarding the extent to which Australian households with children 3-8 years old are engaging in these important early learning activities.  These data are available by state/territory disaggregation.  All data are collected to standard classifications as stated in the CEaCS see ABS Explanatory notes (http://abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4402.0Explanatory%20Notes1June%202011?OpenDocument) |
| **Timeliness** | The reference period for the 2011 CEaCS data is June 2011 and was published in May 2012. From 1969 to 2005 the ABS conducted 12 Child Care Surveys (CCS) and from 1993 the survey has been run every three years. The ABS plans to conduct this survey again in June 2014. |
| **Accuracy** | Survey information was obtained through interviews with occupants of 5670 dwellings across Australia. The survey sample size for each jurisdiction was: NSW: 1332; Vic: 1143; Qld: 1010; SA: 641; WA: 768; Tas: 345; NT: 194 and the ACT: 237.  Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey.  Data that have relative standard errors above 25 per cent are indicated (by italics), and need to be used with caution. Data with relative standard errors greater than 50 per cent are considered too unreliable for general use and are not published. See section 2.5 of chapter 2 for more information on relative standard errors.  The survey was conducted in both urban and rural areas in all states and territories, but excluded persons living in very remote parts of Australia who would otherwise have been within scope of the survey. The exclusion of these persons will have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the Northern Territory where such persons account for around 23 per cent of the population.  Non-sampling errors include inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient processing procedures |
| **Coherence** | The survey excluded people living in very remote parts of Australia which may impact on data from the Northern Territory where this accounts for approximately 23 per cent of the total population. |
| **Accessibility** | Predominantly national level information are published in the CEaCS (Cat. no. 4220.0) on the ABS website. A range of data cubes, with a focus on state/territory level information, is also available on the ABS website. Additional data can be accessed from the ABS. Costs are associated with additional data and vary depending on the type of request. |
| **Interpretability** | CEaCS (Cat. no. 4402.0) includes Explanatory notes (http://abs.gov.au/ausstats/abs@.nsf/Latestproducts/4402.0Explanatory%20Notes1June%202011?opendocument&tabname=Notes&prodno=4402.0&issue=June%202011&num=&view=) and a Glossary available on the ABS website. |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Excludes persons living in very remote parts of Australia who would otherwise have been within scope of the survey. This affects the comparability of the Northern Territory results where such persons account for around 23 per cent of the population. * Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. |

### Participation in Child care, education and training by sector

Data quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| **Indicator definition and description** | | |
| **Indicator** | | Participation |
| **Measure (computation)** | | Definition  Participation in education and training by sector (school education, TAFE, Higher Education, other education and training), defined as the proportion of population aged 15-24 years participating in education and training by sector.  Numerator  Number of persons aged 15-24 years participating in education and/or training by sector (school education, TAFE, Higher Education, other education and training)  Denominator  Number of persons aged 15-24 years.  Computation  The number of people aged 15-24 years participating in education and training by sector divided by the number of persons aged 15-24 years. (Calculated separately for each sector). |
| **Data source/s** | | Numerator and denominator – ABS Survey of Education and Work (SEW). Data are available annually. 2012 SEW data are being used for this reporting. |
| **Data Quality Framework Dimensions** | | |
| **Institutional environment** | | The Survey of Education and Work is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (www.abs.gov.au/websitedbs/d3310114.nsf/  4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae001  97b65!OpenDocument) |
| **Relevance** | | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non-school qualification. The classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/  0/F501C031BD9AC9C5CA256AAF001FCA33?opendocument (ASCED) (Cat. No. 1272.0).  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. |
| **Timeliness** | | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). |
| **Accuracy** | | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. |
| **Coherence** | | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  For the 2012 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The Australian Standard Classification of Education (ASCED) (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and the Survey of Learning and Work (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. |
| **Accessibility** | | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6227.0Main+Features1May%202012?OpenDocument)  This measure is also released as part of a SEW detailed education data cube.  Additional data are available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/web  sitedbs/D3310114.nsf/home/National+Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2001, most recently 2011.  In the future, it is planned to release further data via the Survey TableBuilder Product. For more details refer to Microdata: Education and Work Australia (http://www.abs.gov.au/ausstats/abs@.nsf/mf/6227.0.30.001). |
| **Interpretability** | | Information on how to interpret and use the data appropriately is available  on the ABS website; see Explanatory Notes (http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6227.0Explanatory%20Notes1May%202012?OpenDocument) in Education and Work, Australia, (Cat. no. 6227.0).  ABS SEIFA indexes are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measure of socioeconomic status can be found on the ABS website: www.abs.gov.au. |
| **Data Gaps/Issues Analysis** | | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * The level of participation in education and training varies across jurisdictions for many reasons. These include different age/grade structures, starting ages at school, minimum leaving age and the level of service provision. In addition, there are influences beyond the direct control of governments, such as labour market changes, population movements, urbanisation and socioeconomic status. | |

### School leaver participation in full time post school education and training

Data quality information for this indicator has been sourced from the Steering Committee’s report to the COAG Reform Council on the National Education Agreement (data supplied by ABS) with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Participation |
| **Measure (computation)** | Definition  Young people (school leavers aged 15–19 years), by level of schooling completed and engagement in post-school education, training and/or employment.  Numerator/s  Number of persons aged 15–19 years who have left school, by highest level of schooling completed.  Denominator/s  Number of persons aged 15–19 years who have left school, are fully-engaged in employment, education and/or training, by highest level of schooling completed.  (Excludes persons whose highest level of schooling completed is not stated - only applicable to Census data). These data will be separately reported to provide additional information for this measure. Fully engaged is defined as full time employment, full time education or training, or a mixture of part time/full time employment and part time/full time education or training.  Computation/s:  The number of people aged 15-19 years who have left school that are fully engaged in employment, education and/or training divided by the number of people who have left school by highest level of schooling completed. Calculated separately for each level of highest schooling and for education and/or training, and education and/or training and/or employment. |
| **Data source/s** | Numerator and denominator – ABS Survey of Education and Work (SEW). Data are available annually. 2012 SEW data are being used for this reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (www.abs.gov.au/websitedbs/d3310114.nsf/  4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae001  97b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non-school qualification. The classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/  0/F501C031BD9AC9C5CA256AAF001FCA33?opendocument (ASCED) (Cat. No. 1272.0).  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied in a personal interview. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. |
| **Coherence** | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  The Australian Standard Classification of Education (ASCED) (www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and the Survey of Learning and  Work (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0)  also provide information on educational attainment. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue  /556A439CD3D7E8A8CA257242007B3F32?OpenDocument)  (Cat. No. 6227.0). This measure is also released as part of a SEW detailed education data cube. Additional data are available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/web  sitedbs/D3310114.nsf/home/National+Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2001, most recently 2011. |
| **Interpretability** | Information on how to interpret and use the data appropriately is available  on the ABS website; see Explanatory Notes (www.abs.gov.au/  AUSSTATS/abs@.nsf/allprimarymainfeatures/556A439CD3D7E8A8CA25  7242007B3F32?opendocument) in Education and Work, Australia  (Cat. no. 6227.0). |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Disaggregation of this indicator by Indigenous status remains a priority. Further development work is required to identify a suitable method for providing comparative estimates for the Indigenous population. * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * The size of the RSEs affects the ability to identify small year to year movements. Although the full sample for the SEW was reinstated in 2010 and generally resulted in lower RSEs for the 2010 data compared with the 2009 data, the decreases in RSEs were generally small and varied by jurisdiction. |

### School leaver destination by sector

Data quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Participation |
| **Measure (computation)** | Definition  School leaver destination by sector, defined as the proportion of school leavers (by early school leavers; Year 12 leavers and all school leavers) who have left school by destination (higher education, TAFE or other study, not enrolled).  Numerator  The number of school leavers aged 15-19 years who have left school by destination  Denominator  The number of school leavers aged 15-19 years who have left school.  Computation  The number of school leavers aged 15-19 years who have left school by destination divided by the number of school leavers aged 15-19 years who have left school. |
| **Data source/s** | Numerator and denominator – ABS Survey of Education and Work (SEW). Data are available annually. 2012 SEW data are being used for this reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (www.abs.gov.au/websitedbs/d3310114.nsf/  4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae001  97b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non-school qualification. The classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/  0/F501C031BD9AC9C5CA256AAF001FCA33?opendocument (ASCED) (Cat. No. 1272.0).  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied in a personal interview. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. |
| **Coherence** | Both the numerator and denominator come from the SEW. Measures based on the 2012 SEW are consistent with data from SEW reporting.  Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  The Australian Standard Classification of Education (ASCED) (www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and the Survey of Learning and  Work (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0)  also provide information on educational attainment. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue  /556A439CD3D7E8A8CA257242007B3F32?OpenDocument)  (Cat. No. 6227.0). Additional data are available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/web  sitedbs/D3310114.nsf/home/National+Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2001, most recently 2011. |
| **Interpretability** | Data include all people aged 15-19 years who have left school at any time. Early school leavers include those who have completed year 11 or below as their highest year of schooling. Data include school leavers participating in non-school education/or training on either a full time or part time basis, including apprenticeships or traineeships.  Information on how to interpret and use the data appropriately is available on the ABS website; see Explanatory Notes (www.abs.gov.au/  AUSSTATS/abs@.nsf/allprimarymainfeatures/556A439CD3D7E8A8CA25  7242007B3F32?opendocument) in Education and Work, Australia (Cat. no. 6227.0). |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * The level of participation in education and training varies across jurisdictions for many reasons. These include different age/grade structures, starting ages at school, minimum leaving age and the level of service provision. In addition, there are influences beyond the direct control of governments, such as labour market changes, population movements, urbanisation and socioeconomic status. |

### Full time participation in employment, education and training by (at certificate III or above, by Indigenous status and SES)

Data quality information for this indicator has been sourced from the Steering Committee’s report to the COAG Reform Council on the National Education Agreement (data supplied by ABS) with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Participation |
| **Measure (computation)** | Definition  Full time participation in employment, education or training by Indigenous status, defined as the proportion of the relevant population  Numerator/s   1. Number of persons fully engaged in employment, education and/or training (18-24; years); (By Indigenous and SES) 2. Persons fully engaged in employment, education and/or training at or above AQF Certificate III (aged 18-24; years); (By SES)   Denominator/s  Number of persons in the relevant population in age group.  Fully engaged is defined as full time employment, full time education or training, or a mixture of part time/full time employment and part time/full time education or training.  ‘Certificate III or above’ comprises Certificate III, Certificate IV, Certificate III/IV not further defined, Diploma, Advanced Diploma, Bachelor’s degree and above. It excludes Certificate not further defined and people who have not identified the level of qualification they are working towards.  Computation/s:  The number of people who are fully engaged in employment, education and training (at or above AQF Certificate III) divided by the number of persons aged 18 to 24 years in the relevant populations. |
| **Data source/s** | Numerator and denominator: (Non-Indigenous, Total population by SES) Survey of Education and Work (SEW). Data are collected annually.  Numerator and denominator: (Indigenous) National Aboriginal and Torres Strait Islander Social Survey (NATSISS). Data are collected every six-years. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work (SEW) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS) are collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (http://www.abs.gov.au/websitedbs/d3310114.nsf/4a2563  53001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae  00197b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. Data are available by socioeconomic status. For further information on the Index of Relative Social Disadvantage (CD-based), see ABS Socio-Economic Indexes for Areas.  Indigenous output for this indicator comes from the National Aboriginal and Torres Strait Islander Social Survey (NATSISS) (http://abs.gov.au/AUSSTATS/abs@.nsf/mf/4714.0/) (Cat. No. 4714.0)  The SEW and NATSISS collect information on participation in education and the labour force. The standard classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0).  While the SEW collects information on the level of current study, the NATSISS only collects information on whether or not a person is studying but not by level. To maximise consistency where Indigenous and non‑Indigenous data are compared in the one table, the measures derived from both surveys were based on all students, not just those studying for a Certificate III or above. In all other tables for the total population (i.e. based on SEW only) the table is restricted to students studying at Certificate III or above.  In the SEW, information may have been supplied by one household resident on behalf of another person. The person reporting may not know all the details of the educational or labour force participation of the other. In the SEW and NATSISS answers to some questions were not supplied. Hence, judgement may be required in classifying people for this measure. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). NATSISS is conducted every six years. The 2008 survey was conducted from August 2008 to April 2009 and results were released in October 2009. |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews. The 2011 response rate was consistent with that in previous years.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed.   The NATSISS is conducted in all states and territories and includes remote and non-remote areas. The 2008 sample was 13 300 persons/6 900 households, with a response rate of 82 per cent of households.  In the 2008 NATSISS there was a relatively large level of undercoverage when compared to other ABS surveys. As a consequence, the analysis undertaken to ensure that results from the survey were consistent with other data sources was more extensive than usual. Potential bias due to undercoverage was addressed by the application of a number of adjustments to the initial weights and an adjustment to geographical areas based on the density of the Indigenous population. As undercoverage can result in variances across population characteristics, as well as across data items, caution should be exercised when interpreting the survey results. For more information see the 2008 NATSISS Quality Declaration (http://www.abs.gov.au/Ausstats/abs@.nsf/0/899037D72D9CA0CD  CA25765E0015A794?OpenDocument) (Cat. No. 4714.0)  Data with a RSE of between 25 per cent and 50 per cent should be used with caution while data with a RSE greater than 50 per cent is considered too unreliable for general use. |
| **Coherence** | Both the numerator and denominator come from the relevant survey (SEW or NATSISS). Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards SEW has a slightly wider scope, and excludes only persons in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  While there are a range of differences between the scope, coverage, timing and collection methodologies of the collections, these issues do not affect their broad comparability for this measure.  The 2008 NATSISS, 2008, 2009 and 2010 SEW consider people who participate in Community Development Employment Projects (CDEP) as employed. All CDEP participants are in scope of these collections, but only the NATSISS identifies CDEP participation as a separate category of employment for the total Indigenous population. Possible future changes to the classification of CDEP participation to reflect changes in the administration of this program would have a considerable impact on the labour force characteristics of the Indigenous population and therefore affect the estimates of Indigenous people considered to be fully engaged in education or work according to this indicator.  The Australian Standard Classification of Education (ASCED) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared  The Census of Population and Housing also provide information on educational participation and attainment, and labour force status. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue/  556A439CD3D7E8A8CA257242007B3F32?OpenDocument) (Cat. No. 6227.0). This measure is also released as part of a SEW detailed education datacube.  Data from NATSISS are available in National Aboriginal and Torres Strait Islander Social Survey (http://abs.gov.au/AUSSTATS/abs@.nsf/mf/4714.0/) (Cat. No. 4714.0)  Additional data are available at cost upon request through the National Information Referral Service (NIRS)  (http://www.abs.gov.au/websitedbs/D3310114.nsf/home/National+  Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been provided for every second cycle of the SEW since 2001, most recently 2011. |
| **Interpretability** | Information on how to interpret and use the data appropriately is available on the ABS website; see Explanatory Notes (www.abs.gov.au/  AUSSTATS/abs@.nsf/Lookup/6227.0Explanatory%20Notes1May%20201  1?OpenDocument) in Education and Work, Australia (Cat. no. 6227.0).  ABS SEIFA indexes are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measure of socioeconomic status can be found on the ABS website: www.abs.gov.au. |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Although the full sample for the SEW was reinstated in 2010 and generally resulted in lower RSEs for the 2010 data compared with the 2009 data, the decreases in RSEs were generally small and varied by jurisdiction. * The SEW is generally able to measure small changes in performance measures at the national level. The ABS has advised that it is not designed to measure changes at the jurisdictional level with the same level of accuracy. The reinstatement of the full sample for the SEW in 2010 generally resulted in lower RSEs in the 2010 data compared with the 2009 data. * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * Data from the 2008 NATSISS should not be compared with data from the 2006 Census. The second set of survey estimates for Indigenous people for NEA reporting will be sourced from the 2011 NATSIHS. |

### Level of highest qualification completed

Data quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Attainment |
| **Measure (computation)** | Definition  Level of highest qualification completed.  Numerator  Number of people aged 15-64 years by highest qualification completed.  Denominator  Population aged 15-64 years.  Computation  Number of people aged 15-64 years by highest qualification completed, divided by population aged 15-64 years. |
| **Data source/s** | Numerator and denominator – ABS Survey of Education and Work (SEW). Data are available annually. 2012 SEW data are being used for this reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (www.abs.gov.au/websitedbs/d3310114.nsf/  4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae001  97b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non-school qualification. The classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/  0/F501C031BD9AC9C5CA256AAF001FCA33?opendocument (ASCED) (Cat. No. 1272.0).  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied in a personal interview. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. |
| **Coherence** | Both the numerator and denominator come from the SEW. Data for 2010 have been revised due to amendments to the population benchmarks for the 2010 SEW.  Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  The Australian Standard Classification of Education (ASCED) (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and the Survey of Learning and  Work (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0)  also provide information on educational attainment. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue  /556A439CD3D7E8A8CA257242007B3F32?OpenDocument)  (Cat. No. 6227.0).  This measure is also released as part of a SEW detailed education data cube.  Additional data are available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/web  sitedbs/D3310114.nsf/home/National+Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2011, most recently 2011. |
| **Interpretability** | Information on how to interpret and use the data appropriately is available  on the ABS website; see Explanatory Notes (www.abs.gov.au/  AUSSTATS/abs@.nsf/Lookup/6227.0Explanatory%20Notes1May%20201  1?OpenDocument) in Education and Work, Australia (Cat. no. 6227.0). |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Educational attainment is used as a proxy indicator for the stock of skills. Holding other factors constant, a higher or increasing attainment level indicates an improvement in educational outcomes. * However, attainment should be interpreted with caution. It understates the skill base because it does not capture skills acquired through partially completed courses, courses not leading to a formal qualification, or informal learning (including training and experience gained at work). Industry endorsed skill sets are also an important consideration for industry in course design. Skill sets recognise part qualifications and groups of competencies, but data on skill sets are not available for this Report. * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. |

### Completion of year 12 or equivalent, or certificate level II or above

Data quality information for this indicator has been sourced from the Steering Committee’s report to the COAG Reform Council on the National Education Agreement (data supplied by ABS) with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Attainment |
| **Measure (computation)** | Completion of year 12 or equivalent, or certificate level II or above.  Numerator:  Number of persons aged 20–24 years who state they have completed Year 12 or attained a formal qualification at Certificate Level II or above (excluding Certificate nfd, and Certificate I/II nfd), by Indigenous status and SES  Denominator:  Total population of persons aged 20-24 years, by Indigenous status and SES.  Excludes people whose educational attainment is not stated (only applicable to census data).  Computation:  The number of 20-24 year olds with a year 12 Certificate Level II or above divided by the number of 20-24 year olds in the population. Calculated separately for All people, Indigenous people, non-Indigenous people and SES. |
| **Data source/s** | Numerator and denominator: (Non-Indigenous, Total population by SES) Survey of Education and Work (SEW). Data are collected annually.  Numerator and denominator: (Indigenous) National Aboriginal and Torres Strait Islander Social Survey (NATSISS). Data are collected every six years. 2008 NATSISS data are being used for this cycle of reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work (SEW) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS) are collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment. |
| **Relevance** | SEW data are available by state/territory. Data are available by socioeconomic status. For further information on the Index of Relative Social Disadvantage (CD-based), see: Socio-Economic Indexes for Areas. (http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Seifa\_entry\_page)  Data on Indigenous status is available to facilitate non-Indigenous but not Indigenous output. Indigenous output for this indicator comes from National Aboriginal and Torres Strait Islander Social Survey (http://abs.gov.au/AUSSTATS/abs@.nsf/mf/4714.0/) (NATSISS).  The SEW and NATSISS collect information on Year 12 completion and qualifications. The standard classification of qualifications used is see Australian Standard Classification of Education (ASCED) (http://www.abs.gov.au/AUSSTATS/  ABS@.NSF/0/F501C031BD9AC9C5CA256AAF001FCA33?open  document) (Cat. No. 1272.0)  In the SEW, information may have been supplied by one household resident on behalf of another person. The person reporting may not know all the details of the educational attainment of the other. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS).  2008 NATSISS data are being used for this cycle of reporting. The 2008 survey was conducted from August 2008 to April 2009 and results were released in October 2009. |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews. The 2011 response rate was consistent with that in previous years.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed.   The NATSISS is conducted in all states and territories and includes remote and non-remote areas. The 2008 sample was 13 300 persons/6 900 households, with a response rate of 82 per cent of households.  In the 2008 NATSISS there was a relatively large level of undercoverage when compared to other ABS surveys. As a consequence, the analysis undertaken to ensure that results from the survey were consistent with other data sources was more extensive than usual. Potential bias due to undercoverage was addressed by the application of a number of adjustments to the initial weights and an adjustment to geographical areas based on the density of the Indigenous population. As undercoverage can result in variances across population characteristics, as well as across data items, caution should be exercised when interpreting the survey results. For more information see the 2008 NATSISS Quality Declaration (http://www.abs.gov.au/Ausstats/abs@.nsf/0/899037D72D9CA0CD  CA25765E0015A794?OpenDocument) (Cat. No. 4714.0) |
| **Coherence** | Both the numerator and denominator come from the relevant survey (SEW or NATSISS).  Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards SEW has a slightly wider scope, and excludes only persons in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  While there are a range of differences between the scope, coverage, timing and collection methodologies of the collections, these issues do not affect their broad comparability for this measure.  The Australian Standard Classification of Education (ASCED) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared. |
| **Accessibility** | The data for SEW are available via the ABS website in the publication Education and Work, Australia (Cat. No. 6227.0). This measure is also released as part of a SEW Detailed Education Datacube.  Data from NATSISS are available in National Aboriginal and Torres Strait Islander Social Survey (http://abs.gov.au/AUSSTATS/abs@.nsf/mf/4714.0) (Cat. No. 4714.0) (Cat. No. 4714.0)  Additional data is available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/websitedbs/D3310114.nsf/home/National+Information  +and+Referral+Service). |
| **Interpretability** | Information on how to interpret and use the data appropriately is available on the ABS website, see Explanatory Notes in Education and Work, Australia (Cat. No. 6227.0), and the National Aboriginal and Torres Strait Islander Social Survey Explanatory Notes (Cat. No. 4714.0).  Information on the SEIFA measure of socioeconomic status can also be found on the ABS website: www.abs.gov.au |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * The size of the RSEs affects the ability to identify small year to year movements. Although the full sample for the SEW was reinstated in 2010 and generally resulted in lower RSEs for the 2010 data compared with the 2009 data, the decreases in RSEs were generally small and varied by jurisdiction. Data are available by Indigenous status and socioeconomic status (SES) by State and Territory. Data by SES are available annually. Data by Indigenous status are available every five years from the Census, and every three years on a rotating basis from the NATSISS/NATSIHS (Indigenous population, with the annual SEW data providing a non-Indigenous comparator) with the most recent data for 2008. |

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### Population who have qualifications at or above Certificate level III (by Indigenous status and low SES)

Data quality information for this indicator has been sourced from the Steering Committee’s report to the COAG Reform Council on the National Agreement for Skills and Workforce Development (data supplied by ABS) with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Attainment |
| **Measure (computation)** | Definition  Proportion of Indigenous and low SES working age population with higher level qualifications (Certificate III and above), defined as persons aged 20-64 years with a formal qualification at Certificate level III or above (by Indigenous status and low SES).  Numerator/s  Number of Indigenous and low SES persons aged 20–64 years with a formal qualification at Certificate III, by Indigenous status and SES.  Denominator/s  Total population of people aged 20–64 years, by Indigenous status and SES (‘Certificate III or above’ includes Certificate III, Certificate IV, Certificate III/IV not further defined, Diploma, Advanced Diploma, Bachelors degree and above. It excludes Certificate not further defined. For SEW data it excludes people who have not identified the level of qualification they are working towards. For Census data, this category excludes people whose educational attainment is not stated.  Computation/s:  The number of people aged 20-64 years who have attained a post school qualification at or above AQF Certificate III divided by the total population aged 20-64 years. Calculated separately for total population, Indigenous, non‑Indigenous and SES. |
| **Data source/s** | Numerator and denominator: (Non-Indigenous, Total population by SES) Survey of Education and Work (SEW). Data are collected annually.  Numerator and denominator: (Indigenous) National Aboriginal and Torres Strait Islander Social Survey (NATSISS). NATSISS is conducted every six years. 2008 NATSISS data are being used for this cycle of reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work (SEW) and National Aboriginal and Torres Strait Islander Social Survey (NATSISS) are collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment. (http://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b  2562bb00121564/10ca14cb967e5b83ca2573ae00197b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. The SEW does not collect data from people in Indigenous communities in very remote areas.  The SEW collects information on educational participation and attainment.  The classification of qualifications used is the Australian Standard Classification of Education (ASCED) (Cat. no. 1272.0)  [www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9AC9C5CA256A  AF001FCA33?opendocument]  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied in a personal interview. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). NATSISS is conducted every six years. The 2008 survey was conducted from August 2008 to April 2009 and results were released in October 2009. |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by 20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator. |
|  | Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed.   The NATSISS is conducted in all states and territories and includes remote and non-remote areas. The 2008 sample was 13 300 persons/6 900 households, with a response rate of 82 per cent of households. |
|  | In the 2008 NATSISS there was a relatively large level of undercoverage when compared to other ABS surveys. As a consequence, the analysis undertaken to ensure that results from the survey were consistent with other data sources was more extensive than usual. Potential bias due to undercoverage was addressed by the application of a number of adjustments to the initial weights and an adjustment to geographical areas based on the density of the Indigenous population. As undercoverage can result in variances across population characteristics, as well as across data items, caution should be exercised when interpreting the survey results. For more information see the 2008 NATSISS Quality Declaration. The data from SEW and NATSISS are event data that can be used to measure year to year changes provided that the changes are large enough to be detected in the context of the Relative Standard Errors (RSE) of estimates. |
| **Coherence** | Both the numerator and denominator come from the relevant survey (SEW or NATSISS). Measures based on the 2012 SEW are consistent with data from the previously reported data from this survey.  Prior to 2009, all persons in very remote areas were excluded from the SEW. Very remote areas represent about 2% of the total Australian population and 20% of the Northern Territory population. From 2009 onwards, the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such people account for about 15 per cent of the population. These differences are relatively minor and should not affect comparisons over time.  The Australian Standard Classification of Education (ASCED) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication  Education and Work, Australia (Cat. no. 6227.0) [www.abs.gov.au  /AUSSTATS/abs@.nsf/ProductsbyCatalogue/556A439CD3D7E8A8CA25724  2007B3F32?OpenDocument]. This measure is also released as part of a  SEW detailed education data cube (Cat. no. 6227.0.55.003).  Data from NATSISS are available in National Aboriginal and Torres Strait Islander Social Survey (cat. no. 4714.0)  Additional data is available at cost upon request through the National Information Referral Service (NIRS) and specialised data tables and Confidentialised Unit Record Files (CURFs) are also available on request |
| **Interpretability** | Information on how to interpret and use the data appropriately is available on  the ABS website; see Explanatory Notes [www.abs.gov.au/AUSSTATS/abs  @.nsf/Lookup/6227.0Explanatory%20Notes1May%202009?OpenDocument]  in Education and Work, Australia (Cat. no. 6227.0).  National Aboriginal and Torres Strait Islander Social Survey Explanatory Notes (cat. no. 4714.0).  ABS SEIFA indexes are based on data from the Census and measure the  socioeconomic status of the area in which a person lives. They do not directly  measure the socioeconomic status of individuals or their households.  More information on the SEIFA measure of socioeconomic status can be found on the ABS website: www.abs.gov.auInformation on the SEIFA measure of socioeconomic status can also be found on the ABS website: www.abs.gov.au. |

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| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * The SEW is generally able to measure small changes in performance measures at the national level. The ABS has advised that it is not designed to measure changes at the jurisdictional level with the same level of accuracy. The reinstatement of the full sample for the SEW in 2010 generally resulted in lower RSEs in the 2010 data compared with the 2009 data. * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. * Data from the 2008 NATSISS should not be compared with Indigenous data from the 2006 Census. The second set of survey estimates for Indigenous people for National Agreement reporting will be sourced from the 2011 NATSISS. |

Completion of year 12 or equivalent, or certificate level III or aboveData quality information for this indicator has been drafted by the Secretariat in consultation with the ABS, with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Attainment |
| **Measure (computation)** | The proportion of 20-24 year old population who have achieved year 12 or equivalent or certificate III or above.  Numerator:  Number of people aged 20-24 years who have achieved year 12 or equivalent or certificate III or above.  Denominator:  Population aged 20-24 years.  Computation:  The number of people aged 20-24 years who have achieved year 12 or equivalent or certificate III or above divided by the population aged 20-24 years. |
| **Data source/s** | ABS Survey of Education and Work (SEW). Data are available annually. 2011 SEW data are being used for this reporting. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | The Survey of Education and Work is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment (www.abs.gov.au/websitedbs/d3310114.nsf/  4a256353001af3ed4b2562bb00121564/10ca14cb967e5b83ca2573ae001  97b65!OpenDocument) |
| **Relevance** | SEW data are available by State/Territory. Prior to 2009 all persons in very remote areas were excluded from SEW. The SEW collects information on the highest year of school completed and highest level of non-school qualification. The classification of qualifications used is the Australian Standard Classification of Education (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/  0/F501C031BD9AC9C5CA256AAF001FCA33?opendocument (ASCED) (Cat. No. 1272.0).  For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied in a personal interview. |
| **Timeliness** | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). |
| **Accuracy** | The 2012 SEW response rate was 95 per cent which constituted 39 500 completed interviews.  The data for the SEW are collected from an ARA (Any Responsible Adult) on behalf of other members of the household and are weighted for non-response.  The data are event data that can be used to measure year to year changes provided that the changes are significant enough to account for the Relative Standard Error (RSE) of estimates. The LFS sample was reduced by  20 per cent in 2009, but the full sample was reinstated from 2010 onwards.  The sampling error of an estimate is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed. Since the indicators produced from the Survey of Education and Work (SEW) are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE). There are about two chances in three that a sample estimate will differ by less than one SE from the figure that would have been obtained if all dwellings had been included, and about 19 chances in 20 that the difference will be less than two SEs.  The interval of two SEs about an estimate is referred to as the 95 per cent confidence interval (CI). Small SEs are associated with small CIs and large SEs with large CIs. The CI is a useful measure of reliability as it measures percentage point variability around the indicator.  Another measure of the likely difference between a sample estimate and the actual population result, is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and thus avoids the need to refer also to the size of the estimate.  The smaller the estimate the higher is the RSE. Likewise, the smaller the underlying sample size on which an estimate is based, the higher the SE and therefore the higher the corresponding RSE. Very small estimates and those based on very small samples are subject to such high SEs (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In general, the ABS considers that only estimates with RSEs less than 25 per cent are sufficiently reliable for most purposes. Estimates with larger RSEs, between 25 per cent and less than 50 per cent should be used with caution and estimates with RSEs of 50 per cent or more are considered unreliable for most purposes. In the attachment tables in this Report, estimates based on the SEW with RSEs between 25 per cent and less that 50 per cent are indicated in italics. Estimates of RSEs of 50 per cent or more are generally identified as ‘np’ (not published).  The RSEs associated with SEW and other survey estimates can be large, especially for the smaller jurisdictions and/or when focusing on small subpopulations, such as 20-24 year olds.  Where an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:   * 1(g) a three-pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:   + Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;   + Survey of Education and Work data as the key source for measuring annual performance at the national level between census years; and   + Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. |
| **Coherence** | Both the numerator and denominator come from the SEW.  Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the Northern Territory population. From 2009 onwards SEW has a slightly wider scope, and excludes only persons in Indigenous communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the Northern Territory where such persons account for about 15 per cent of the population.  The Australian Standard Classification of Education (ASCED) (http://www.abs.gov.au/AUSSTATS/ABS@.NSF/0/F501C031BD9A  C9C5CA256AAF001FCA33?opendocument) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and the Survey of Learning and Work (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. |
| **Accessibility** | The data for the SEW are available via the ABS website in the publication Education and Work, Australia  (http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue  /556A439CD3D7E8A8CA257242007B3F32?OpenDocument)  (Cat. No. 6227.0).  This measure is also released as part of a SEW detailed education data cube.  Additional data are available at cost upon request through the National Information Referral Service (NIRS) (http://www.abs.gov.au/web  sitedbs/D3310114.nsf/home/National+Information+and+Referral+Service).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2011, most recently 2011. |
| **Interpretability** | Information on how to interpret and use the data appropriately is available  on the ABS website; see Explanatory Notes (www.abs.gov.au/  AUSSTATS/abs@.nsf/Lookup/6227.0Explanatory%20Notes1May%20201  1?OpenDocument) in Education and Work, Australia (Cat. no. 6227.0). |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Educational attainment is used as a proxy indicator for the stock of skills. Holding other factors constant, a higher or increasing attainment level indicates an improvement in educational outcomes. * However, attainment should be interpreted with caution. It understates the skill base because it does not capture skills acquired through partially completed courses, courses not leading to a formal qualification, or informal learning (including training and experience gained at work). Industry endorsed skill sets are also an important consideration for industry in course design. Skill sets recognise part qualifications and groups of competencies, but data on skill sets are not available for this Report. * The limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work. * The development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment. |

### Achievement of foundation skills (literacy, numeracy, and technology)

Data quality information for this indicator has been sourced from the Steering Committee’s report to the COAG Reform Council on the National Agreement for Skills and Workforce Development (data supplied by ABS) with additional Steering Committee comments.

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| **Indicator definition and description** | |
| **Indicator** | Participation |
| **Measure (computation)** | Definition  The proportion of 20-64 year olds across all PIAAC skill levels, 2011-12 (literacy, numeracy, and technology).  Numerator  The number of 20-64 year olds across all PIAAC skill levels, 2011-12 (literacy, numeracy, and technology).  Denominator  Population aged 20-64 years.  Computation  The number of 20-64 year olds across all PIAAC skill levels, 2011-12 (literacy, numeracy, and technology), divided by the population aged 20-64 years. |
| **Data source/s** | ABS, *Programme for the International Assessment of Adult Competencies (PIAAC),* Cat. no. 4228.0, Canberra. |
| **Data Quality Framework Dimensions** | |
| **Institutional environment** | For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment. (http://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b  2562bb00121564/10ca14cb967e5b83ca2573ae00197b65!OpenDocument) |
| **Relevance** | The Programme for the International Assessment of Adult Competencies (PIAAC) is conducted in 24 countries around the world. The PIAAC survey was enumerated throughout Australia from October 2011 to March 2012 with funding provided by the Australian Government Department of Education, Employment and Workplace Relations (DEEWR). PIAAC is an international survey coordinated by the Organisation for Economic Co-operation and Development (OECD). PIAAC provides information on skills and competencies for people aged 15 to 74 years in the three domains of:   * literacy * numeracy * problem solving in technology-rich environments (PSTRE). |
| **Timeliness** | PIAAC data for 2011-12 were available for this Report. The OECD proposes to conduct the PIAAC survey internationally every ten years. The next PIAAC survey is therefore proposed to be conducted in 2021. |
| **Accuracy** | PIAAC was designed to provide reliable estimates at the national level and for each state and territory.  Dwellings in each state and territory were selected at random using a multi-stage area sample. The sample included only private dwellings from the geographic areas covered by the survey.  The initial sample for PIAAC consisted of 14 442 private dwellings. Of the 11 532 households that remained in the survey after sample loss, 8 446  (73 per cent) were fully responding or provided sufficient detail for scores to be determined.  Data were collected by trained ABS interviewers who conducted computer-assisted personal interviews. An in-scope household respondent was randomly selected to be interviewed and asked background information before undertaking a self-enumeration exercise on their literacy, numeracy and problem solving skills in technology-rich environments. Respondents either completed the exercise on the notebook computer or on paper. Respondents who passed the core stage proceeded to the main exercise. Those who failed the core stage were directed to the Reading Components booklet, which was designed to measure basic reading skills.  To minimise respondent burden, respondents completed exercise tasks in only one or two of the skill domains. PIAAC then used multiple imputation methodology to obtain proficiency scores for each respondent for the skill domains for which the respondent was not required to do an exercise.  Two initial weighting adjustment factors were applied:   * a literacy-related non-response adjustment to ensure that people who could not complete the questionnaire for a literacy or language reason. * a non-literacy-related non-response adjustment to adjust for people who were not able to complete the questionnaire for other reasons.   The weights were then adjusted to align with independent estimates of the population.  Data with a relative standard error of between 25 per cent and 50 per cent should be used with caution while data with a relative standard error greater than 50 per cent is considered too unreliable for general use.  PIAAC estimates include significant imputation variability, due to the use of multiple possible assessment modules and the complex literacy scaling procedures. The effect of the plausible scoring methodology on the estimation is included in the calculated RSEs. For more detail see the technical note on data quality statement in the PIAAC publication (cat. no. 4228.0). |
| **Coherence** | Both the numerator and denominator come from PIAAC. The literacy and numeracy scores for the earlier surveys, the 1996 Survey of Aspects of Literacy (SAL) and the 2006 Adult Literacy and Lifeskills Survey (ALLS) are to be remodelled to allow comparisons with scores from PIAAC. |
| **Accessibility** | Information is available to aid interpretation of the data at the ABS website. See: (http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4228.0Main+Features12011-12?OpenDocument). Data are available on the ABS website (cat. no. 4228.0). |
| **Interpretability** | The publication and standard data are available on the ABS website at: http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4228.0Main+Features12011-12?OpenDocument. |
| **Data Gaps/Issues Analysis** | |
| **Key data gaps/ issues** | The Steering Committee notes the following key data gaps/issues:   * Educational attainment is used as a proxy indicator for the stock of skills. Holding other factors constant, a higher or increasing attainment level indicates an improvement in educational outcomes. * However, attainment should be interpreted with caution. It understates the skill base because it does not capture skills acquired through partially completed courses, courses not leading to a formal qualification, or informal learning (including training and experience gained at work). |