## 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 Australian Bureau of Statistics (ABS) data quality framework dimensions, for a selection of performance indicators and/or measures in the Child care, education and training sector overview.  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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### School readiness

#### Transition to primary school

Data quality information for this indicator has been developed by the Secretariat in consultation with the Australian Government Department of Education and Training, with additional Steering Committee comments.

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| Indicator definition and description | |  |
| Indicator | School readiness | |
| Measure/s (computation) | Definition  The proportion of children developmentally on track on four or more (of five) domains of the Australian Early Childhood Census (AEDC) by Indigenous status.  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| Data source/s | Australian Government Department of Education and Training (unpublished) *Australian Early Development Census 2012.* | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | AEDC 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 are available on the basis of a specific AEDC local communities and communities, as well as state and territory | |
| Timeliness | Data were collected between May and July in 2012 and 2009. | |
| 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| Accessibility | Unpublished data can be requested from the AEDC Data Manager, as long as requests meet the requirements of the AEDC data protocol. This is on a fee for service basis.  The AEDC data protocol details the requirements for public release of data. | |
| Interpretability | User guides and explanatory material are available on the AEDC website. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the five AEDC 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 (home based)

Data quality information for this indicator has been developed by the Secretariat in consultation with the Australian Bureau of Statistics (ABS), with additional Steering Committee comments.

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| **Indicator definition and description** | |  |
| **Indicator** | School readiness | |
| **Measure/s (computation)** | Definition  The proportion of children aged 3–8 years who are involved in home‑based reading activities (based on the number of days per week that a parent told stories, read to a child or listened to a child read)  Numerator  Number of children involved in home‑based reading activities by number of days each week.  Denominator  Number of 3–8 year olds.  Computation  The number of children involved in home‑based reading activities by number of days each week divided by the number of 3–8 year olds. | |
| **Data source/s** | Numerator/Denominator  ABS (unpublished) *Microdata:* *Childhood Education and Care, Australia, June 2014*, Cat. no. 4402.0.55.001. | |
| **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 2014 as a supplement to the ABS monthly Labour Force Survey. Information was obtained through interviews conducted over a two‑week period between 8‑21 June 2014, with some additional follow up of just over 500 outstanding households to increase sample numbers conducted in September 2014.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, which cover this collection, please see the ABS website. | |
| **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 on the ABS website. | |
| **Timeliness** | The reference period for the 2014 CEaCS data is June 2014 and was published in April 2015. From 1969 to 2005 the ABS conducted 12 Child Care Surveys and from 1993 the survey has been run every three years. | |
| **Accuracy** | Approximately 83 per cent of selected households were fully responding to the CEaCS in 2014, resulting in 4635 household records and 7126 children records.  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 a relative standard error (RSE) above 25 per cent are indicated (by italics), and need to be used with caution. Data with a RSE 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 RSEs.  The survey is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15-74 years.  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** | Both the numerator and denominator are from CEaCS.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from CEACS in 2011 whereas in 2014 only people living in Aboriginal and Torres Strait Islander communities were excluded. | |
| **Accessibility** | A range of national and state and territory level information are published in the CEaCS (cat. no. 4402.0) on the ABS website. The ABS also offers users a for‑fee TableBuilder product which is used for compilation of RoGS data. Additional data can also be requested 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 and a Glossary on the ABS website. | |
| **Data Gaps/Issues Analysis** | |  |
| **Key data gaps /issues** | The Steering Committee notes the following issues:   * this measure is only a proxy measure of school readiness * the survey excludes people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. * 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

#### Participation in education and training by level of study

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

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| Indicator definition and description | |  |
| Indicator | Participation | |
| Measure/s (computation) | Definition  The proportion of 15–24 year olds participating in education and training by level of study and age groups 15–19 and 20–24 year olds  Numerator  Number of 15–19, 20–24 and 15–24 year olds participating in education and training by level of study. Level of study includes the following categories: Bachelor degree or above; Diploma or advanced diploma; Certificate III or IV; Certificate I or II or n.f.d; School level study; Not enrolled.  Denominator  Number of 15–19, 20–24 and 15–24 year olds  Computation  The number of people aged 15–19, 20–24 and 15–24 years participating in education and training by level of study divided by the number of persons aged 15–19, 20–24 and 15–24 years. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Microdata:* *Education and Work, Australia, May 2014,* Cat. no. 6227.0.30.001. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Forumla   RSE% = ( SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the National Information Referral Service (NIRS).  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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * 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. * 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### Full time participation in education and training and/or employment

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

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| Indicator definition and description | |  |
| Indicator | Participation | |
| Measure/s (computation) | Definition  The proportion of 15–19, 20–24, 15–24, 17–24 and 15–64 year olds participating in full time education and training and/or employment  Numerator  Number of 15–19, 20–24, 15–24, 17–24 and 15–64 year olds participating in full time education and training and/or employment  Denominator  Number of 15–19, 20–24, 15–24, 17–24 and 15–64 year olds  Computation  The number 15–19, 20–24, 15–24, 17–24 and 15–64 of year olds participating in full time education and training and/or employment divided by the number of 15–19, 20–24, 15–24, 17–24 and 15–64 year olds | |
| Data source/s | Numerator/Denominator  ABS (unpublished) Microdata: *Education and Work, Australia, May 2014,* Cat. no. 6227.0.30.001. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the level of participation in full time education and training and/or employment 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. * 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### School leaver full time participation in education and training and/or employment

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

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| Indicator definition and description | |  |
| Indicator | Participation | |
| Measure/s (computation) | Definition  The proportion of 17–24 year old school leavers participating in full time education and training and/or employment  Numerator  Number of 17–24 year old school leavers participating in full time education and training and/or employment  Denominator  Number of 17–24 year old school leavers.  Computation  The number of 17–24 year old school leavers participating in full time education and training and/or employment divided by the number 17–24 year old school leavers. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Microdata:* *Education and Work, Australia, May 2014,* Cat. no. 6227.0.30.001. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the level of school leaver participation in full time education and training and/or employment 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. * 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

### Attainment

#### Level of highest non‑school qualification completed

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 15–64 year olds with a non‑school qualification by level of highest non‑school qualification.  Numerator  Number of 15–64 year olds with a non‑school qualification by level of highest non‑school qualification.  Denominator  Number of 15–64 year olds.  Computation  The number of 15–64 year olds with a non‑school qualification by level of highest non‑school qualification divided by the number of 15–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Microdata:* *Education and Work, Australia, May 2014,* Cat. no. 6227.0.30.001. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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 size of the RSEs affects the ability to identify small year to year movements. | |

#### Population with or working towards a non‑school qualification

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 20–64 year olds with or working towards a non‑school qualification  Numerator  Number of 20–64 year olds with or working towards a non‑school qualification  Denominator  Number of 20–64 year olds.  Computation  The number of 20–64 year olds with or working towards a non‑school qualification divided by the number of 20–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Microdata:* *Education and Work, Australia, May 2014,* Cat. no. 6227.0.30.001. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### Completion of year 12 (or equivalent) or Certificate II level or above

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 20–24 and 20–64 year olds who have completed year 12 (or equivalent) or Certificate II level or above. This is also reported by Indigenous status for 20–24 year olds.  Numerator  Number of 20–24 and 20–64 year olds who have completed year 12 (or equivalent) or Certificate II level or above.  Denominator  Number of 20–24 and 20–64 year olds.  Computation  The number of 20–24 and 20–64 year olds who have completed year 12 (or equivalent) or Certificate II level or above divided by the number of 20–24 and 20–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, May 2014,* Cat. no. 6227.0. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### Completion of year 12 (or equivalent) or Certificate level III or above

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 20–24 year olds who have completed year 12 (or equivalent) or Certificate level III or above. This is also reported by Indigenous status.  Numerator  Number of 20–24 year olds who have completed year 12 (or equivalent) or Certificate level III or above.  Denominator  Number of 20–24 year olds.  Computation  The number of 20–24 year olds who have completed year 12 (or equivalent) or Certificate level III or above divided by the number of 20–24 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, May 2014,* Cat. no. 6227.0. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### Population with qualifications at Certificate III level or above

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 20–64 year olds with qualifications at Certificate III level or above. This is also reported by Indigenous status.  Numerator  The number of 20–64 year olds with qualifications at Certificate III level or above.  Denominator  Number of 20–64 year olds.  Computation  The number of 20–64 year olds with qualifications at Certificate III level or above divided by the number of 20–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, May 2014,* Cat. no. 6227.0. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS collected 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 on the ABS website. | |
| Relevance | SEW data are available by state/territory. The SEW collects information on the highest year of school completed and level of highest non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education (ASCED). 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.  In 2014, persons who are identified in the LFS as currently studying a school level qualification were asked in SEW whether they are currently studying for any non‑school qualifications. If the respondent was still attending school, their level of study was recorded as their current year of schooling, not their level of study for non‑school qualification. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. Data from the survey are released approximately six months after they have been collected. | |
| Accuracy | The LFS is primarily designed to provide estimates for the whole of Australia and, second, for each state and territory. The LFS is based on a sample of private dwellings and non‑private dwellings, such as hotels and motels. The number of completed interviews for the 2014 SEW (after taking into account scope and coverage exclusions) was 39 122. The sample size was achieved by obtaining a response rate of 92 per cent.  The data for the SEW are collected from Any Responsible Adult (ARA) 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 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 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 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.  Formula  RSE%=(SE/estimate) x 100  More details can be found within the text surrounding this image.  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 the RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  SEW is conducted in both urban and rural areas in all states and territories but excluded people living in Aboriginal and Torres Strait Islander communities. The exclusion of people living in these areas is unlikely to impact on state and territory estimates, except in the NT where they account for approximately 15 per cent of the total population aged 15–74 years. | |
| Coherence | Both the numerator and denominator come from the SEW.  Revisions were made to the in‑scope population in 2013 which affect this measure, in particular, persons who were permanently unable to work were included. Caution should be used when comparing data from 2013 to previous years.  People living in Aboriginal and Torres Strait Islander communities or in very remote parts of Australia were excluded from SEW prior to 2009; since then only people living in Aboriginal and Torres Strait Islander communities have been excluded.  The *Australian Standard Classification of Education (ASCED)* (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 May 2013 SEW was the first supplementary survey to incorporate an online data collection method, where the option was offered to just over one‑quarter of the SEW sample. The May 2014 SEW is the first time this option has been offered to all respondents. Respondents who took up the online option represented 26 per cent of the total SEW sample. While those respondents who chose to complete the survey online may have different characteristics to those who undertake the survey via face‑to‑face or telephone interview, the ABS has not detected any significant impacts due to the introduction of online collection. However, the ABS will continue to monitor any impacts through a measurement strategy and report these in the *Labour Force, Australia* (cat. no. 6202.0). | |
| Accessibility | The data for the SEW are available via the ABS website in the publication *Education and Work, Australia*. Further data are available by the licensed Microdata (TableBuilder) product.  Additional data are available at cost upon request through the NIRS.  A 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 in *Education and Work, Australia* (cat. no. 6227.0). | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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 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 * the size of the RSEs affects the ability to identify small year to year movements. | |

#### Achievement of foundation skills (literacy, numeracy and problem solving in technology‑rich environments [PSTRE])

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

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| Indicator definition and description | |  |
| Indicator | Attainment | |
| Measure/s (computation) | Definition  The proportion of 20–64 year olds who have achieved literacy, numeracy and PSTRE competencies (according to the Programme for International Assessment of Adult Competencies (PIAAC).  Numerator  Number of 20–64 year olds by each PIAAC skill level (literacy, numeracy and PSTRE).  Denominator  Number of 20–64 year olds.  Computation  The number of 20–64 year olds by each PIAAC skill level divided by the number of  20–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Programme for the International Assessment of Adult Competencies, Australia, 2011‑12,* 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 on the ABS website. | |
| Relevance | The PIAAC is conducted in 24 countries. The PIAAC survey was enumerated throughout Australia from October 2011 to March 2012 with funding provided by the Australian Government Department of Education. PIAAC is 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 * 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, 8446  (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 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.  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. | |
| Accessibility | Information is available to aid interpretation of the data at the ABS website. | |
| Interpretability | The publication and standard data are available on the ABS website. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following 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). | |