## 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. DQI for additional indicators will be progressively introduced in future reports.  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, with additional Steering Committee comments

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| Indicator definition and description | |  |
| Indicator | School readiness | |
| Measure/s (computation) | MEASURE  Definition  Transition to primary school defined as the proportion of children on track on four or more domains of the Australian Early Childhood Census (AEDC) (by Indigenous status). Supplementary measures are also reported for the proportion of children developmentally at risk on one or more domains and developmentally vulnerable on one or more domains.  Numerator  The number of children with a valid domain score who are developmentally on track on four or more domains.  Denominator  The number of children with a valid domain score who were assessed.  Computation  The number of children with a valid domain score who are developmentally on track on four or more domains divided by the number of children with a valid domain score who were assessed.  SUPPLEMENTARY MEASURE 1  Definition  Transition to primary school defined as the proportion of children developmentally at risk on one or more domains (by Indigenous status). Supplementary data are also reported against children developmentally at risk on: no domains; two or more domains; three or more domains; four or more domains; and five domains).  Numerator  The number of children with a valid domain score who are developmentally at risk on one 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 at risk on one or more domains divided by the number of children with a valid domain score who were assessed.  SUPPLEMENTARY MEASURE 2  Definition  Transition to primary school defined as the proportion of children developmentally vulnerable on one or more domains (by Indigenous status). Supplementary data are also reported against children developmentally vulnerable on: no domains; two or more domains; three or more domains; four or more domains; and five domains)  Numerator  The number of children with a valid domain score who are developmentally vulnerable on one 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 vulnerable on one 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 (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

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  Early learning (home‑based), is defined as the number of days per week that a parent/guardian told stories, read to a child or listened to a child read, for children aged 3–8 years.  Numerator  Number of children involved in home‑based reading activities.  Denominator  Estimated resident population of 3–8 year olds.  Computation  Expressed as a percentage. Calculation is: (Numerator ÷ Denominator) x 100. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Childhood Education and Care, Australia, 2011*, Cat. no. 4402.0, Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | Data are collected and compiled by the ABS through the Childhood Education and Care Survey (CEaCS), conducted throughout Australia in June 2011. Information was obtained through interviews conducted over a two‑week period between 5‑18 June 2011.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, which cover this collection, please see ABS Institutional Environment on 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 2011 CEaCS data is June 2011 and was published in May 2012. From 1969 to 2005 the ABS conducted 12 CCS and from 1993 the survey has been run every three years. Data from the 2014 CEaCS will be available for the 2016 Report. | |
| Accuracy | Survey information was obtained through interviews with occupants of 5670 dwellings across Australia. The survey sample size for each jurisdiction was: NSW: 1332; Victoria: 1143; Queensland: 1010; WA: 768; SA: 641; Tasmania: 345; ACT: 237 and the NT: 194.  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 was conducted in both urban and rural areas in all states and territories, but excluded persons living in very remote parts of Australia who would otherwise have been within scope of the survey. The exclusion of these persons will have only a minor impact on any aggregate estimates that are produced for individual states and territories, except in the NT where such persons account for around 23 per cent of the population.  Non‑sampling errors include inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration whether it be a full count or a sample. Every effort is made to reduce the non‑sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and efficient processing procedures. | |
| Coherence | The survey excluded people living in remote parts of Australia which may impact on data from the NT where this accounts for approximately 23 per cent of the total population. | |
| Accessibility | Predominantly national level information are published in the CEaCS (Cat. no. 4220.0) on the ABS website. A range of data cubes, with a focus on state/territory level information, is also available on the ABS website. Additional data can be accessed from the ABS. Costs are associated with additional data and vary depending on the type of request. | |
| Interpretability | CEaCS (Cat. no. 4402.0) includes Explanatory notes and a Glossary on the ABS website. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * excludes persons living in very remote parts of Australia who would otherwise have been within scope of the survey. This affects the comparability of the NT results where such persons account for around 23 per cent of the population * Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings, they are subject to sampling variability. | |

### Participation

#### Participation in education and training by institution type

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 institution type (school, technical and further education [TAFE], higher education and other institution).  Numerator  Number of 15–24 year olds participating in education and training by institution type (school, TAFE, higher education and other institution).  Denominator  Number of 15–24 year olds  Computation  The number of people aged 15–24 years participating in education and training by institution type divided by the number of persons aged 15–24 years. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The Survey of Education and Work (SEW) is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly Labour Force Survey (LFS). | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  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.  Indicator definition and description  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. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The Australian Standard Classification of Education (ASCED) (Cat. No. 1272.0) has been used in all surveys with education items since 2001 and allows the education and training items between different surveys to be compared.  The Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  Additional data are available at cost upon request through the National Information Referral Service (NIRS).  A Confidentialised Unit Record File (CURF) has been produced for every second cycle of the SEW since 2001, most recently 2011.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS Socio-Economic Indexes for Areas (SEIFA) are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the limitations of SEW data in precisely measuring change in Year 12 attainment at the state and territory level also apply to the measurement of the engagement of young people in education and work * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the level of participation in education and training varies across jurisdictions for many reasons. These include different age/grade structures, starting ages at school, minimum leaving age and the level of service provision. In addition, there are influences beyond the direct control of governments, such as labour market changes, population movements, urbanisation and socioeconomic status. | |

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

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.  Numerator  Number of 17–24 year old school leavers participating in full time education and training.  Denominator  Number of 17–24 year old school leavers.  Computation  The number of people aged 17–24 year old school leavers participating in full time education and training divided by the number 17–24 year old school leavers. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * disaggregation of this measure by Indigenous status remains a priority. Further development work is required to identify a suitable method for providing comparative estimates for the Aboriginal and Torres Strait Islander population * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements. | |

#### School leaver destination by institution type

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 destination of 15–19 year old school leavers by institution type.  Numerator  Number of 15–19 year old school leavers by destination (institution type).  Denominator  Number of 15–19 year old school leavers.  Computation  The number of people aged 15–19 year old school leavers by institution type destination divided by the number 15–19 year old school leavers. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| Interpretability | Higher education institutions may also deliver TAFE or other vocational education courses. Students enrolled in TAFE and other courses at higher education institutions are included under higher education institutions in these data.  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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements * the level of participation in education and training varies across jurisdictions for many reasons. These include different age/grade structures, starting ages at school, minimum leaving age and the level of service provision. In addition, there are influences beyond the direct control of governments, such as labour market changes, population movements, urbanisation and socioeconomic status. | |

#### Full time participation in 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 olds participating in full time education and training and/or employment  Numerator  Number of 17–24 year olds participating in full time education and training and/or employment  Denominator  Number of 17–24 year olds  Computation  The number of 17–24 year olds participating in full time education and training and/or employment divided by the number of 17–24 year olds | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements. | |

### 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) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, Council of Australian Governments (COAG) endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:  1(g) a three‑pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:  Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;  SEW data as the key source for measuring annual performance at the national level between census years; and  Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements * 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. | |

#### Completion of year 12 (or equivalent), or Certificate level II 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 level II or above.  Numerator  Number of 20–24 and 20–64 year olds who have completed year 12 (or equivalent), or Certificate level II 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 level II 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, 2013,* Cat. no. 4402.0,Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:  1(g) a three‑pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:  Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;  SEW data as the key source for measuring annual performance at the national level between census years; and  Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements * 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. | |

#### 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.  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, 2013,* Cat. no. 4402.0,Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:  1(g) a three‑pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:  Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;  SEW data as the key source for measuring annual performance at the national level between census years; and  Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements * 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. | |

#### Population who have qualifications at 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 20–64 year olds who have qualifications at or above Certificate level III.  Numerator  The number of 20–64 year olds who have qualifications at or above Certificate level III.  Denominator  Number of 20–64 year olds.  Computation  The number of 20–64 year olds who have qualifications at or above Certificate level III divided by the number of 20–64 year olds. | |
| Data source/s | Numerator/Denominator  ABS (unpublished) *Education and Work, Australia, 2013,* Cat. no. 4402.0,Canberra. | |
| Data Quality Framework Dimensions | |  |
| Institutional environment | The SEW is collected by the ABS under the Census and Statistics Act 1905.  For information on the institutional environment of the ABS, including the legislative obligations of the ABS, financing and government arrangements, and mechanisms for scrutiny of ABS operations, see ABS Institutional Environment on the ABS website. | |
| Relevance | SEW data are available by State/Territory. The SEW collects information on the highest year of school completed and highest level of non‑school qualification. The classification of qualifications used is the Australian Standard Classification of Education. For some respondents, information is supplied by another household resident, such as a parent, partner or unrelated adult (Any Responsible Adult). While this is a standard survey methodology, answers to some questions may occasionally differ from those that would have been supplied directly by the selected respondent. | |
| Timeliness | The SEW is conducted annually in May as a supplement to the monthly LFS. | |
| Accuracy | The SEW has a response rate of 95 per cent (39 500 completed interviews).  The data for the SEW are collected from 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 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 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.  Indicator definition and description  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 an RSE is large, the unreliability of the estimate should be considered when comparing the performance of states and territories.  In December 2011, the ABS recommended that the SEW data not be used as the primary source for assessing achievement against the Year 12 attainment targets in the National Partnership Agreement on Youth Attainment and Transitions. This was because the survey estimates of the indicator at state and territory level were not reliable enough for this purpose.  On 25 July 2012, COAG endorsed the recommendations in the *Review of the National Education Agreement Performance Framework*, including the recommendation that:  1(g) a three‑pronged approach be used to monitor progress towards the achievement of the COAG Year 12 or equivalent attainment targets and indicators 7 and 9 comprising the use of:  Census of Population and Housing data as the key source for monitoring state and territory performance by equity group where relevant and appropriate;  SEW data as the key source for measuring annual performance at the national level between census years; and  Administrative data to provide annual progress measures of state and territory performance (including, vocational education outcomes, and Year 12 attainment and completion) once national definitions have been agreed and jurisdictions collections are able to be assessed. | |
| Coherence | Both the numerator and denominator come from the SEW. Prior to 2009 all persons in very remote areas were excluded from SEW. Very remote areas represent about 2 per cent of the total Australian and 20 per cent of the NT population. From 2009 onwards the SEW has a slightly wider scope. It includes people in very remote areas but excludes people in Aboriginal and Torres Strait Islander communities in very remote areas. The current exclusion has only a minor impact on national estimates or estimates by State/Territory except for the NT where such persons account for about 15 per cent of the population.  For the 2013 SEW, a small number of households provided data via a web based collection instrument, rather than through telephone or personal interview. This is not expected to significantly impact of the coherence of the data between the current and previous collection cycles.  The 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 Census of Population and Housing and publication Learning and Work, Australia (www.abs.gov.au/ausstats/abs@.nsf/mf/4235.0) (Cat. no. 4235.0) also provide information on educational attainment. | |
| Accessibility | The data for the SEW are available via the ABS website in the publication Education and Work, Australia.  This measure is also released as part of a SEW detailed education data cube.  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.  Further data are available by the licensed Survey TableBuilder product. | |
| 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).  ABS SEIFA are based on data from the Census and measure the socioeconomic status of the area in which a person lives. They do not directly measure the socioeconomic status of individuals or their households. More information on the SEIFA measures of socioeconomic status can be found on the ABS website: www.abs.gov.au. | |
| Data Gaps/Issues Analysis | |  |
| Key data gaps /issues | The Steering Committee notes the following issues:   * the development of nationally consistent measures of young peoples’ participation and attainment in education and training based on administrative data is a high priority for Education Ministers. As a first step, states and territories are working together with the Australian Government to develop a nationally agreed measure of Year 12 school attainment * the size of the RSEs affects the ability to identify small year to year movements * 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. | |

#### 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 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). | |