

National Survey of Adult Skills in Wales, 2010

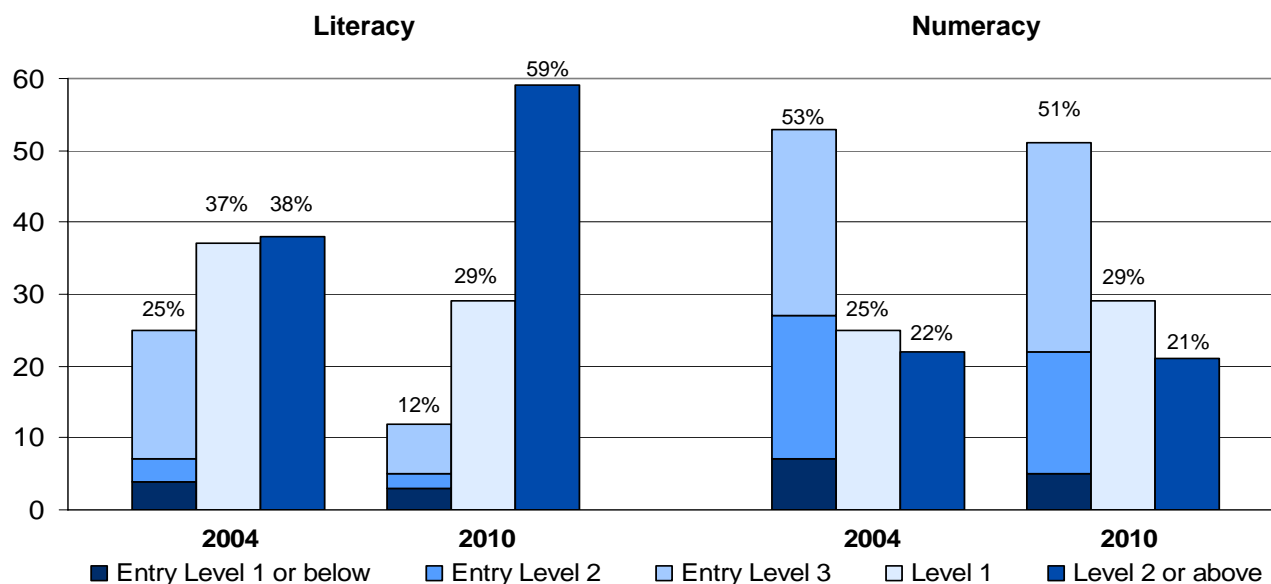
This Statistical First Release presents summary information from The National Survey of Adult Skills in Wales, which was commissioned by the Welsh Government to provide updated data on literacy and numeracy. The survey was carried out during 2010, and assessed overall literacy and numeracy skills of adults (aged 16-65) in Wales (through English medium), and Welsh medium literacy skills of Welsh-speaking adults in Wales. The surveys were designed as far as was practically possible to replicate similar surveys carried out in 2004/05, in order to consider changes in skills levels.

Literacy and numeracy skills are assessed at 5 national standards: Entry Level 1, Entry Level 2, Entry Level 3, Level 1 and Level 2. See Definitions for more information on these standards. The overall literacy and numeracy survey results, from the English medium survey are presented first in this release, with the Welsh medium information following. A more detailed report of analysis will be published later in the year.

Overall results (from English medium survey):

- *There has been improvement in literacy levels:* 12 per cent of adults were assessed to have Entry Level literacy or below, a decrease from 25 per cent in 2004. 29 per cent of adults were assessed at Level 1 (37 per cent in 2004) and 59 per cent at Level 2 or above (an increase from 38 per cent in 2004).
- *There is little change in numeracy levels:* 51 per cent of adults were assessed to have Entry Level numeracy or below, similar to the 53 per cent in 2004. 29 per cent were assessed at Level 1 (25 per cent in 2004) and 21 per cent at Level 2 or above (22 per cent in 2004).
- *Literacy and numeracy levels were higher amongst the employed, those with higher levels of household income, those with higher qualifications, and amongst the older age groups.*

Chart 1: Percentage of adults assessed at each Literacy and Numeracy level



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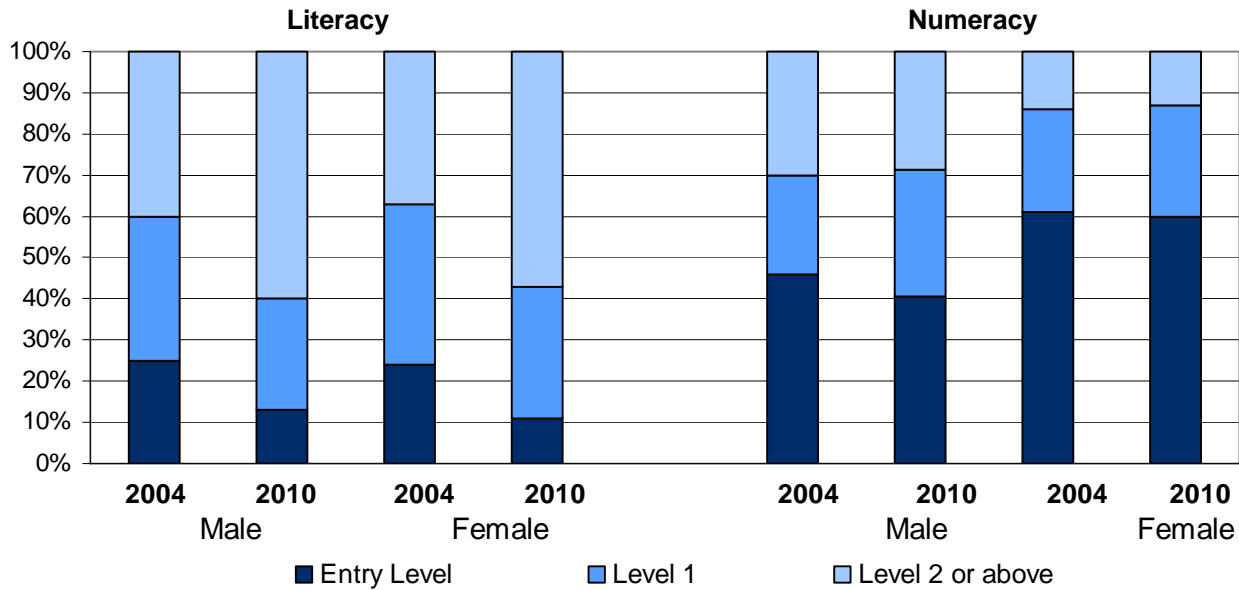
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Gender

- A slightly higher proportion of males (13 per cent) than females (11 per cent) were assessed with Entry Level literacy or below. However, males were more likely to achieve Level 2 or above (60 per cent, compared with 57 per cent of females).
- Males were assessed as having higher numeracy skills than females. 60 per cent of females were assessed at Entry Level or below compared with 41 per cent of males. 29 per cent of males were qualified to Level 2 or above compared with 13 per cent of females.
- In comparison with 2004, literacy levels have improved for both males and females, but numeracy levels have shown little change.

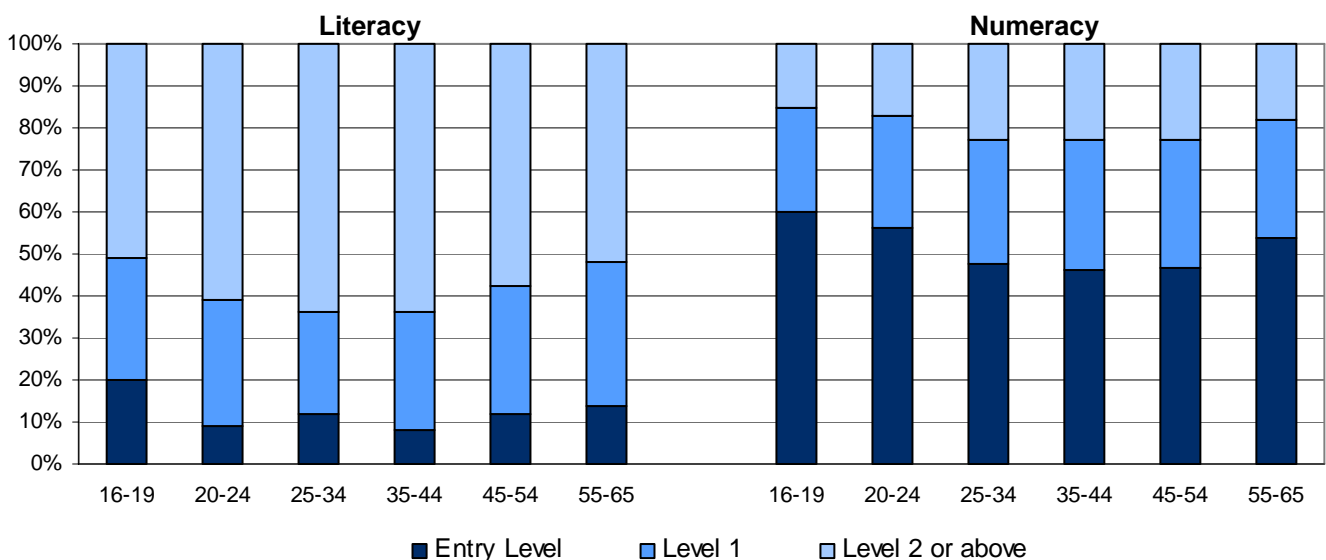
Chart 2: Percentage of adults assessed at each Literacy and Numeracy level, by gender



Age Groups

- 16-19 year olds were most likely to have Entry Level literacy skills or below, with 20 per cent of the age group assessed at this level. The proportion assessed at Level 2 or above was highest amongst those aged 25-44 (64 per cent).
- 16-24 year olds were most likely to have Entry Level numeracy skills or below, (60 per cent of 16-19 year olds and 56 per cent of 20-24 year olds assessed at this level.) The proportion assessed at Level 2 or above was highest amongst 25-54 year olds (23 per cent).

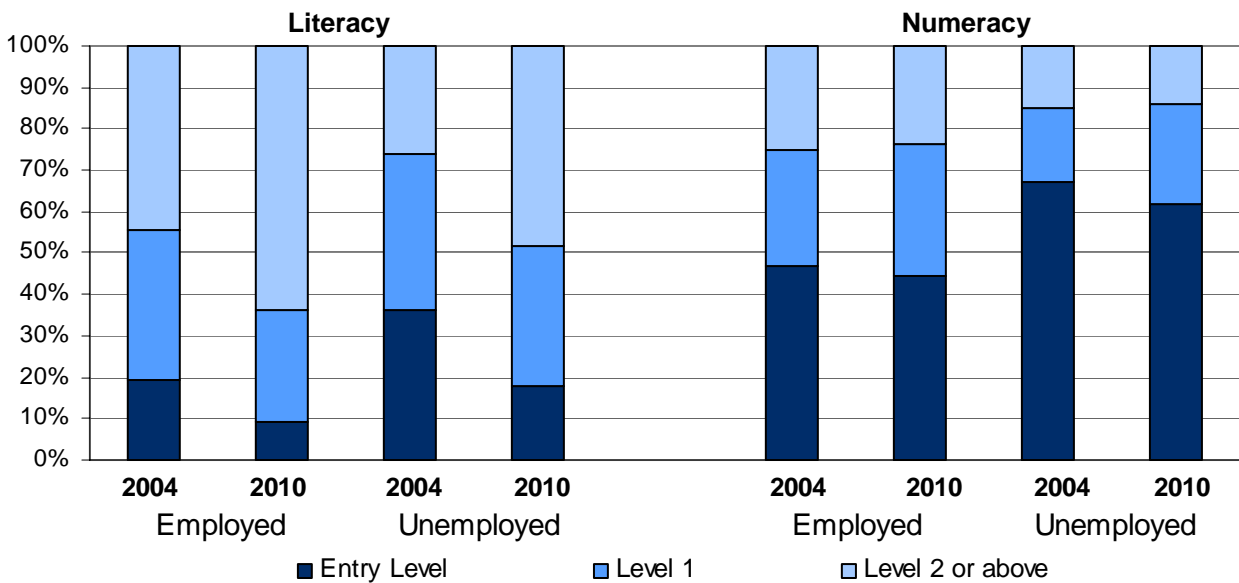
Chart 3: Percentage of adults assessed at each Literacy and Numeracy level, by age group



Employment

- Unemployed adults were more likely to have Entry Level literacy and numeracy skills or below than those in employment.
- Literacy levels for both employed and unemployed have improved in comparison with 2004. The proportion of unemployed adults assessed with Entry Level literacy skills has decreased from 36 per cent in 2004 to 18 per cent in 2010, whilst that for employed adults has decreased from 19 per cent in 2004 to 9 per cent in 2010.
- Numeracy skills for both employed and unemployed show little change from 2004. The proportion of unemployed adults assessed with Entry Level skills has decreased from 67 per cent in 2004 to 62 per cent in 2010.

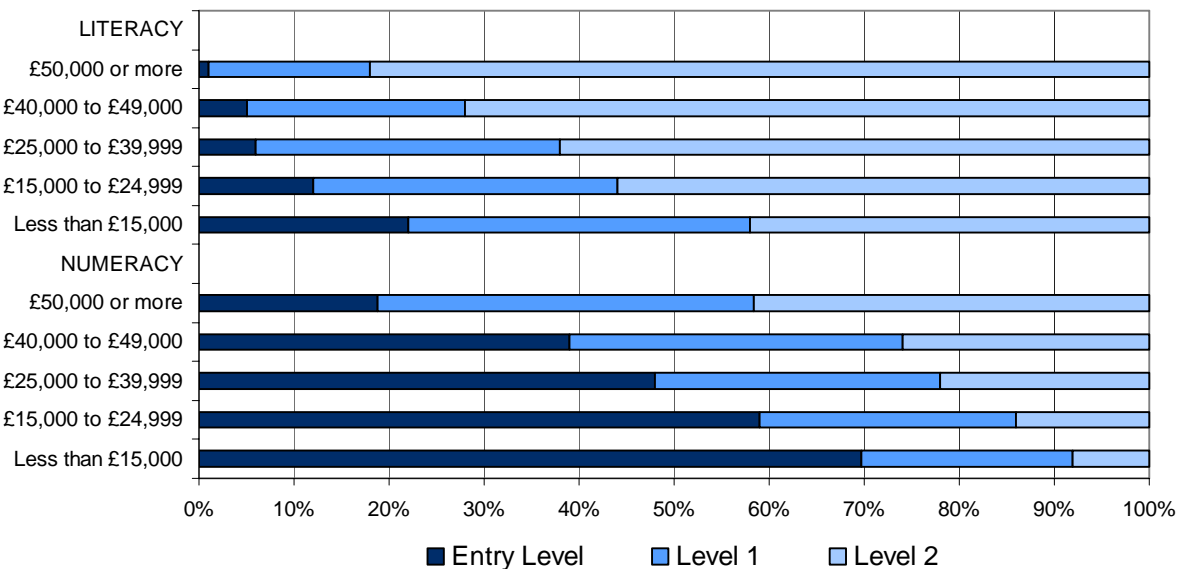
Chart 4: Percentage of adults assessed at each Literacy and Numeracy level, by employment status



Household Income

- Those with lower levels of household income were more likely to have lower literacy and numeracy skills.
- 22 per cent of those assessed with a household income of less than £15,000 had literacy skills at Entry level or below, compared with just 1 per cent of those with an income of £50,000 or more.
- 69 per cent of those assessed with a household income of less than £15,000 had numeracy skills at Entry level or below.

Chart 5: Percentage of adults assessed at each Literacy and Numeracy level, by household income before tax



Qualification Level

- Those with higher qualification levels were more likely to have higher literacy and numeracy Skills.
- At all qualification levels, literacy levels were above those in numeracy.
- 82 per cent of those with a highest qualification at degree level had literacy skills at Level 2 or above, compared with 36 per cent for numeracy.

Chart 6: Percentage of adults assessed at each Literacy level, by highest qualification

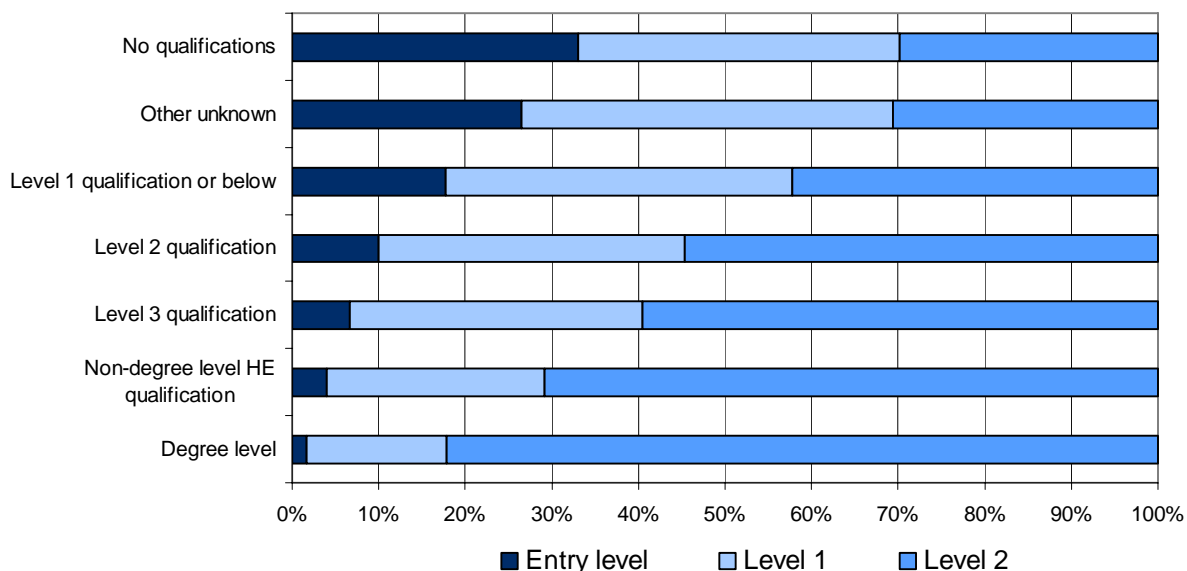
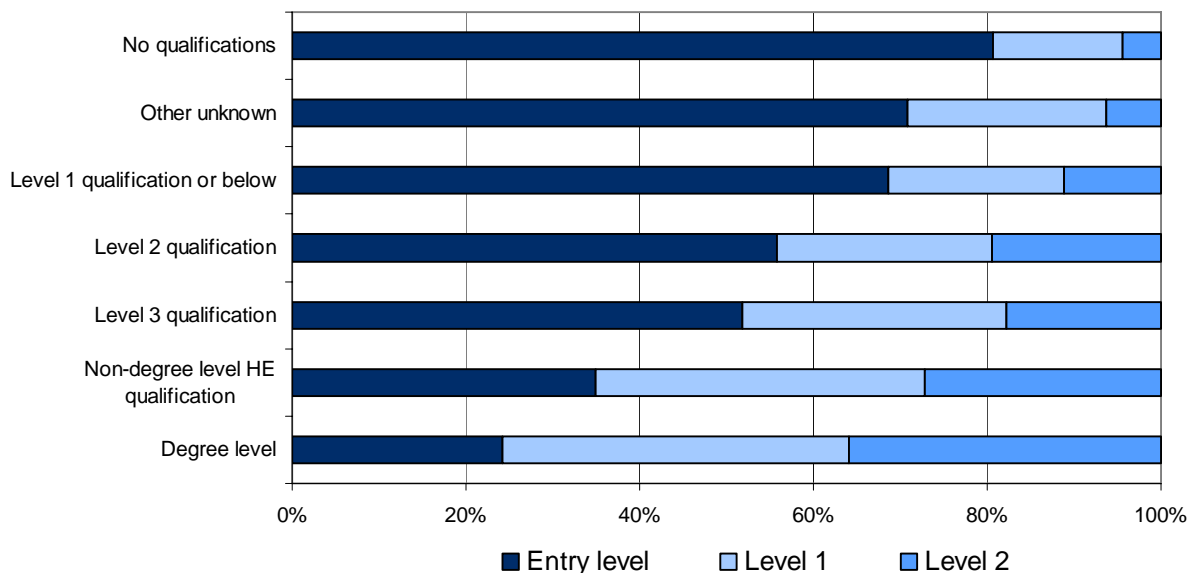


Chart 7: Percentage of adults assessed at each Numeracy level, by highest qualification



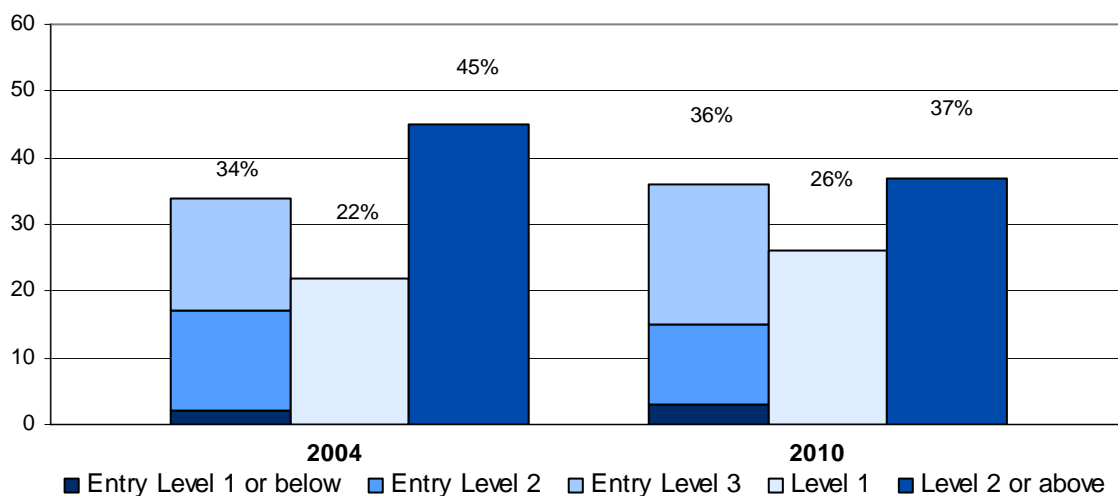
Welsh Medium Literacy skills

In addition to assessing literacy and numeracy levels through the medium of English, the National Survey of Adult Skills in Wales assessed the Welsh medium literacy skills of Welsh speaking adults in Wales. The Welsh medium literacy assessment should be considered in isolation from that of overall (English medium) literacy. The two were entirely separate and distinct assessments, and given the vast differences in the language structure and use of English and Welsh, there is not necessarily a direct read across from the Welsh to the English literacy levels. Further differences in methodology between the two surveys are highlighted in the Quality Statement.

The 2010 Welsh medium literacy survey was completed by those who reported themselves as speaking Welsh fluently or fairly well, whilst the 2004 survey also included those reporting themselves as speaking some Welsh. Aside from this slight definitional difference it also needs to be considered that Welsh speaking ability is not consistent, and is also unavoidably subjective as individuals self classify their level of Welsh speaking fluency. Comparable figures from the 2004 survey are shown, but we cannot be certain that levels of Welsh speaking ability are consistent between the two samples, and this may have an impact on the level of change seen.

- In 2010, 36 per cent of those undertaking the Welsh literacy assessment were classified at Entry Level or below, (34 per cent in 2004.)
- 37 per cent were classified at level 2 or above (45 per cent in 2004).

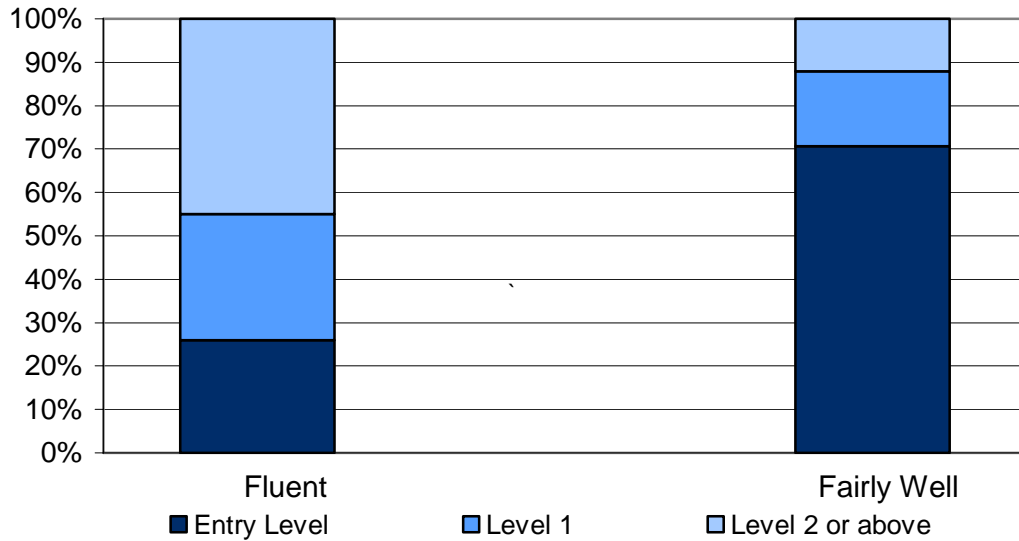
Chart 8: Percentage of Welsh speakers assessed at each Literacy level



Level of Welsh speaking ability

- Amongst those who considered themselves as fluent Welsh speakers, 25 per cent were assessed at Entry level or below (14 per cent in 2004.) 45 per cent of fluent Welsh speakers were assessed at Level 2 or above (61 per cent in 2004).
- Amongst those who considered themselves as able to speak Welsh fairly well, 70 per cent were assessed at Entry level or below.

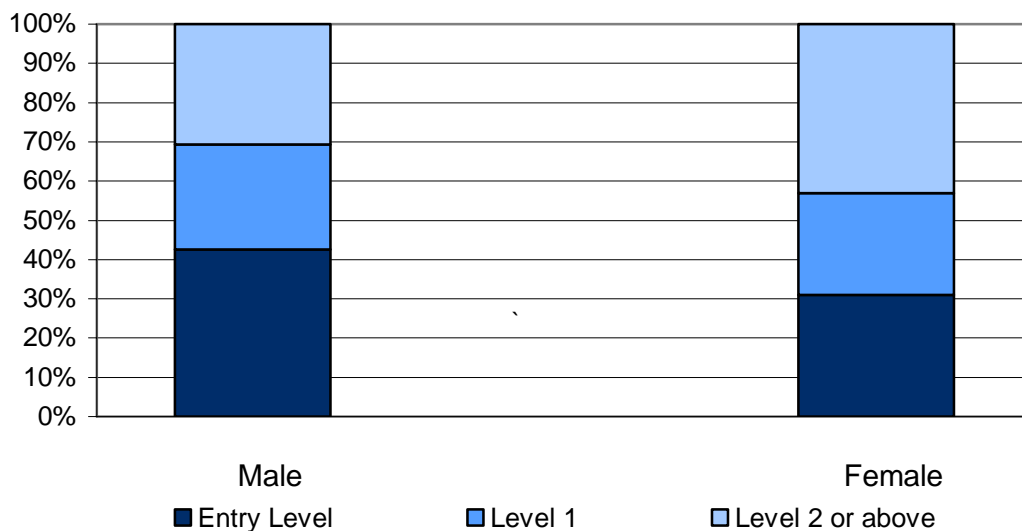
Chart 9: Percentage of Welsh speakers assessed at each Literacy level, by ability to speak Welsh



Gender

- Females were assessed as having higher Welsh medium literacy skills than males.
- 42 per cent of males compared with 31 per cent of females who undertook the Welsh literacy assessment were classified at Entry Level or below.
- 43 per cent of females were assessed at Level 2 or above, compared with 31 per cent of males.

Chart 10: Percentage of Welsh speakers assessed at each Literacy level, by gender



Age Groups

- 16-19 year olds were most likely to have Entry Level Welsh medium literacy skills or below, with 46 per cent of the age group assessed at this level. The proportion assessed at Level 2 or above was highest amongst those aged 35-44 (44 per cent).

Chart 11: Percentage of Welsh speakers assessed at each Literacy level, by age group

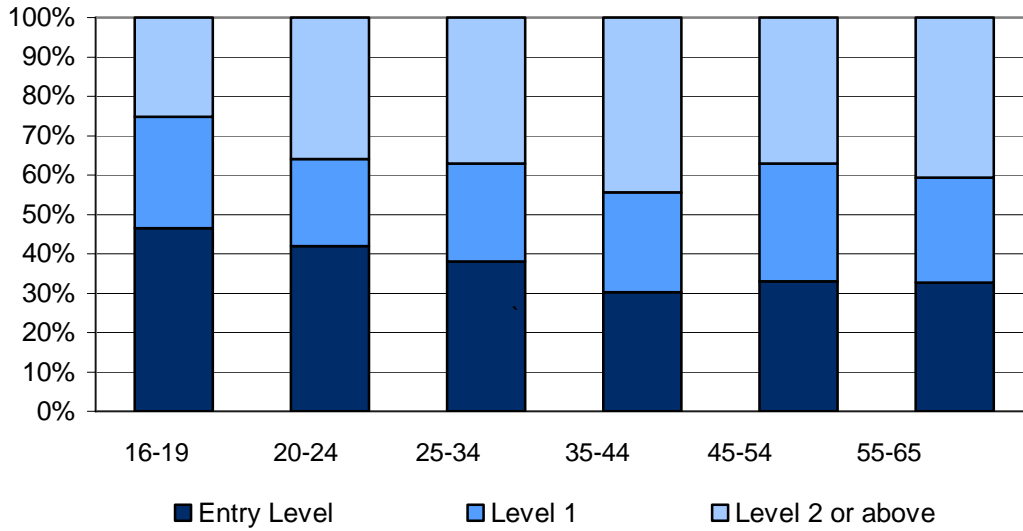


Table 1: Percentage of adults assessed at each Literacy and Numeracy level

	Literacy		Numeracy	
	2010	2004	2010	2004
Entry Level 1 or below	3	4	5	7
Entry Level 2	2	3	17	20
Entry Level 3	7	18	29	26
Total Entry Level	12	25	51	53
Level 1	29	37	29	25
Level 2 or above	59	38	21	22
Weighted base	2115	2555	2119	2555
Unweighted base	2116	2555	2117	2555

Table 2: Percentage of adults assessed at each Literacy level, by gender

	All		Male		Female	
	2010	2004	2010	2004	2010	2004
Entry Level	12	25	13	25	11	24
Level 1	29	37	27	35	32	39
Level 2 or above	59	38	60	40	57	37
Weighted base	2115	2555	1041	1257	1075	1298
Unweighted base	2116	2555	882	1092	1234	1463

Table 3: Percentage of adults assessed at each Numeracy level, by gender

	All		Male		Female	
	2010	2004	2010	2004	2010	2004
Entry Level	51	53	41	46	60	61
Level 1	29	25	31	24	27	25
Level 2 or above	21	22	29	30	13	14
Weighted base	2119	2555	1043	1257	1075	1298
Unweighted base	2117	2555	884	1092	1233	1463

Table 4: Percentage of adults assessed at each Literacy level, by age group

	2010					
	16-19	20-24	25-34	35-44	45-54	55-65
Entry Level	20	9	12	8	11	15
Level 1	29	30	24	28	31	34
Level 2 or above	51	61	64	64	58	52
Weighted base	216	147	358	443	416	535
Unweighted base	181	212	361	440	438	480

Table 5: Percentage of adults assessed at each Numeracy level, by age group

	2010					
	16-19	20-24	25-34	35-44	45-54	55-65
Entry Level	60	56	47	46	47	54
Level 1	25	27	30	31	31	28
Level 2 or above	15	17	23	23	23	18
Weighted base	213	146	358	443	416	540
Unweighted base	178	212	362	441	438	485

Table 6: Percentage of adults assessed at each Literacy level, by employment status

	Employed		Unemployed	
	2010	2004	2010	2004
Entry Level	9	19	18	36
Level 1	27	36	34	38
Level 2 or above	63	44	49	26
Weighted base	1417	1718	698	837
Unweighted base	1292	1586	824	969

Table 7: Percentage of adults assessed at each Numeracy level, by employment status

	Employed		Unemployed	
	2010	2004	2010	2004
Entry Level	45	47	62	67
Level 1	32	28	24	18
Level 2 or above	24	25	14	15
Weighted base	1415	1718	704	837
Unweighted base	1288	1586	829	969

Table 8: Percentage of adults assessed at each Literacy level by household income before tax

	2010				
	Less than £15,000	£15,000 to £24,999	£25,000 to £39,999	£40,000 to £49,000	£50,000 or more
Entry Level	22	12	6	5	1
Level 1	36	32	32	23	17
Level 2 or above	42	56	62	72	82
Weighted base	398	263	391	165	256

Table 9: Percentage of adults assessed at each Numeracy level by household income before tax

	2010				
	Less than £15,000	£15,000 to £24,999	£25,000 to £39,999	£40,000 to £49,000	£50,000 or more
Entry Level	69	59	48	39	19
Level 1	22	27	30	35	40
Level 2 or above	8	14	22	26	42
Weighted base	398	263	391	165	256

Table 10: Percentage of adults assessed at each Literacy level by highest qualification

	2010						
	Degree level	Non-degree level HE qualification	Level 3 qualification	Level 2 qualification	Level 1 qualification or below	Other unknown	No qualifications
Entry Level	2	4	7	10	18	27 (r)	33
Level 1	16	25	34	36	40	44 (r)	37
Level 2 or above	82	71	59	55	42	30 (r)	30
Weighted base	478	271	316	245	205	47	364

Table 11: Percentage of adults assessed at each Numeracy level by highest qualification

	2010						
	Degree level	Non-degree level HE qualification	Level 3 qualification	Level 2 qualification	Level 1 qualification or below	Other unknown	No qualifications
Entry Level	24	35	52	56	69	70 (r)	81
Level 1	40	38	30	25	20	23 (r)	15
Level 2 or above	36	27	18	19	11	6 (r)	4
Weighted base	476	272	320	246	206	48	363

(r) revised on 25 August 2011

Table 12: Percentage of Welsh speaking adults assessed at each Literacy level

	Literacy	
	2010	2004
Entry Level 1 or below	3	2
Entry Level 2	12	15
Entry Level 3	21	17
Total Entry Level	36	34
Level 1	26	22
Level 2 or above	37	45
Weighted base	1000	1363
Unweighted base	1001	1363

Table 13: Percentage of Welsh speaking adults assessed at each Literacy level, by ability to speak Welsh

	Fluent		Fairly Well	Fairly Well / Some
	2010	2004	2010	2004
Entry Level	26	14	70	66
Level 1	29	25	17	17
Level 2 or above	45	61	12	18
Weighted base	772	845	229	518
Unweighted base	784	772	216	591

Table 14: Percentage of Welsh speaking adults assessed at each Literacy level, by gender

	All	Male	Female
	2010	2010	2010
Entry Level	36	43	31
Level 1	26	27	26
Level 2 or above	37	31	43
Weighted base	1001	453	547
Unweighted base	1000	415	585

Table 15: Percentage of Welsh speaking adults assessed at each Literacy level, by age group

	16-19	20-24	25-34	35-44	45-54	55-65
Entry Level	46	42	38	30	33	33
Level 1	28	22	25	25	30	27
Level 2 or above	25	36	37	44	37	41
Weighted base	150	104	163	195	164	220
Unweighted base	108	83	156	182	148	320

Quality Statement

This summarises key aspects of the data quality of the National Survey of Adult Skills in Wales 2010

A. Accuracy

The National Survey of Adult Skills in Wales 2010 involved two components:

- A survey to assess literacy and numeracy skills of a nationally representative sample of adults (aged 16-65) in Wales, through the medium of English; and
- A survey to assess literacy skills of Welsh-speaking adults (aged 16-65) in Wales through the medium of Welsh.

The two components were entirely separate and distinct from one another, due to the nature of the assessments undertaken.

There were two separate elements to be undertaken by the respondent within each of the above surveys:

- A contextual questionnaire, including attitudinal and demographic questions posed to the respondent by an interviewer; and
- Either one or two self-completion assessments completed by the respondent with interviewer supervision, assessing literacy and numeracy levels.

Respondents undertaking the English medium survey were required to complete two computer-based assessments, one of literacy and one of numeracy through the medium of English. Whilst respondents undertaking the Welsh medium survey were required to complete one paper-based assessment, through the medium of Welsh, assisted by listening to pre-recorded Welsh audio files providing instructions. There is a clear difference between these completion methods, which highlights that the English and Welsh medium literacy assessments should be considered in isolation from one another.

The two surveys were conducted using differing sampling methodologies. The English medium survey constituted a probability sample of adults aged 16-65 resident in Wales, whilst the Welsh medium survey constituted a hybrid probability/quota sample from the population of individuals aged 16-65 who say they can speak Welsh 'fluently' or 'fairly well'. Note that Welsh speaking ability is self-classified and is therefore unavoidably subjective. This needs to be considered in any analysis of the results, and comparison with the previous survey.

For the English medium survey, there was a two-stage design for the probability sample, sampling a set of (medium layer) Census Super Output areas (MSOAs) and secondly, sampling a set of addresses in each one from the Postal Address File. Data were weighted in two steps i) to compensate for any variation in sampling probability and ii) to compensate for identified variation in response probability.

For the Welsh medium survey, a probability sample of small areas was drawn but within each sampled area, the interviewer was free to recruit as he/she saw fit, provided that certain quotas were filled and that he/she worked a range of days. Data were weighted in two steps i) a propensity score weight to ensure that the sample distributions for a wide variety of variables matches the Welsh-speakers identified in the probability sample and ii) a calibration weight to Annual Population Survey age and region distributions among those who speak Welsh 'daily' or 'weekly'.

The achieved sample size for the overall (English medium) literacy and numeracy assessments was just over 2,000 and 1,000 for the Welsh medium literacy survey.

As the data come from a survey, the results are sample-based estimates and are therefore subject to differing degrees of sampling variability, i.e. the true value for any measure lies in a differing range about the estimated value. This range of sampling variability increases as the detail in the data increases. For the English medium survey it is possible to construct 95 per cent confidence intervals around the

estimates. For example, the 95 per cent confidence interval around the estimate of 59 per cent at Level 2 or above literacy is 55.8 to 61.4 per cent. The confidence interval around the estimate of 21 per cent at Level 2 or above for numeracy is 18.3 to 22.9 per cent. Due to the sampling methodology it is not possible to construct confidence intervals for the Welsh medium literacy results.

Full detail on the survey methodology will be published in a technical report alongside the full analysis report in Autumn 2011.

B. Relevance

In 2009 the Department for Children, Education, Lifelong Learning and Skills (now the Department for Education and Skills) of the Welsh Government commissioned a consortium of Miller Research and BMRB (now TNS-BMRB) to undertake a survey of the extent of Basic Skills Needs amongst adults aged 16 to 65 in Wales, the National Survey of Adult Skills in Wales 2010. Literacy and numeracy skills in Wales were first surveyed in 2004/05 when the (then) Basic Skills Agency commissioned separate surveys to assess basic skills amongst the working age population. The first survey conducted in 2004 assessed literacy and numeracy skills through the medium of English amongst adults aged 16 to 65 in Wales. A further, separate, survey was conducted in 2004 assessing proficiency in reading and writing in Welsh amongst Welsh speaking adults aged 16 to 65 in Wales.

The survey results will provide policy makers and Basic Skills practitioners with data to assess the current levels of literacy (English and Welsh medium) and numeracy amongst adults of working age, including within sub-groups of the population such as age groups, gender and employment status. Comparisons can be made with the 2004 survey, which will allow users to consider the level of change by sub-group and assess the impact of policy interventions over that period. The data will provide a key contribution to the evidence base for the evaluation of the Basic Skills Strategy *Words Talk, Numbers Count*, which will report in September 2011. The data are also relevant to the emerging Youth Employment and Engagement Action Plan, the National Literacy Plan and Welsh Medium Education Strategy as well as Adult Education and the Skills agenda in general.

C. Comparability

The 2010 survey was designed as far as was practically possible to replicate the 2004 surveys in order to detect any major changes in skills levels since the previous surveys.

The assessments used for the 2010 survey were the same assessments that had been used in the 2004 surveys. The only change being that the extended writing task was removed for Welsh medium literacy in 2010, a decision having been made that the writing task was not essential to the assessment of literacy levels. In order to aid comparison between the two surveys, data have been re-presented from 2004 excluding the writing task. Therefore the two surveys are comparable, but data presented here for 2004 will differ from the original analysis.

Additionally, the 2004 assessments were completed by those who identified themselves as speaking Welsh, either fluently, fairly well or some. For the 2010 survey it was agreed that only those who identified themselves as speaking Welsh fluently or fairly well should complete the assessments. Aside from this slight definitional difference it also needs to be considered that Welsh speaking ability is not consistent, and is also unavoidably subjective as individuals self classify their level of Welsh speaking fluency. Comparable figures from the 2004 survey are shown, but we cannot be certain that levels of Welsh speaking ability are consistent between the two samples, and this may have an impact on the level of change seen

D. Timeliness

Fieldwork for the survey took place between March and November 2010.

E. Accessibility

This Statistical Release and all further reports will be accessible via the Welsh Government website as pdf documents. Supporting data will also be presented in Excel spreadsheets and in due course as StatsWales tables.

F. Burden

The achieved sample size for the overall (English medium) literacy and numeracy assessments was just over 2,000 and 1,000 for the Welsh medium literacy survey. The total average time for the English medium survey was 65 minutes (including the literacy and numeracy assessments) and 56 minutes for the Welsh medium survey interview (including the literacy assessment). Respondents were provided with an incentive for taking part in this survey, given the length of time involved. The overall estimated compliance cost was 3,120 hours (see [Cost of responding to our surveys](#) for further information.)

G. Confidentiality

The researchers who carried out the survey are experienced in working in accordance with strict data management protocols within the education data field and adhere to the best possible standards of data protection, privacy and ethical practice. Much of their survey work involves the validation and management of personal level data from large scale surveys.

The researchers are compliant with and certified to ISO 27001:2005 the Information Security Management Standard, and are compliant with the 1998 Data Protection Act (Z2413668). They also abide by professional codes of conduct established by the Market Research Society and Social Research Association, to ensure that all data is kept strictly confidential.

All interviewer laptops have full hard drive encryption ensuring the security of both address and interview data stored on the interviewing laptops. In addition to this, access to the operating system is protected by two password controls which both offer further protection against unauthorised access to any data file on the interviewing laptop. Data transfer for this project was carried out using an encrypted tunnel, access to which was authenticated by two layers of security. Interviewer laptops do not have internet access or email, therefore all transmissions were made by directly dialling into the host organisation, thus ensuring the security of the data transmission.

Once the data was received it was processed and stored on access restricted drives with address information stored separately from the interview data. TNS-BMRB maintains robust physical, electronic and procedural safeguards to store and secure information from unauthorised access and use, alteration and destruction. Our own policies and procedures have been developed to ensure all data is stored and managed in a secure and controlled way. All confidential data and documents are destroyed when no longer required.

Participation in the surveys was based on the informed consent of survey respondents. The voluntary nature of the survey was emphasised and potential respondents given the opportunity to refuse to take part. Those who agreed to participate were made aware that they were entitled to refuse to answer any question and to withdraw completely from the survey at any stage (including post-interview requests that their data be destroyed). Likewise, informed consent was also obtained for the literacy and/or numeracy assessments and the same principles were upheld for that part of the research.

Respondents were asked for their consent to be re-contacted by TNS-BMRB for additional information if necessary. They were also asked if they would be willing for TNS-BMRB to pass their contact details to other research organisations conducting research on behalf of the Welsh Government. The researchers have extensive experience obtaining consent for re-contact on a range of social surveys and where respondents withheld consent, their wishes were respected.

Terms and Definitions

2004 surveys:

National Survey of Adult Basic Skills in Wales, 2004, conducted by BMRB

Survey of Literacy Levels in Welsh of Welsh Speaking Adults, 2004, conducted by Beaufort Research

Adult: An adult within this report is defined as a person aged between 16 years and 65 years

Level thresholds represent a volume, or ‘size’ of qualifications at a specific level on the National Qualifications Framework. Three thresholds have been established:

- Level 1 – a volume of qualifications at Level 1 equivalent to the volume of 5 GCSEs at Grade D-G
- Level 2 – a volume of qualifications at Level 2 equivalent to the volume of 5 GCSEs at Grade A*-C
- Level 3 – a volume of qualifications at Level 3 equivalent to the volume of 2 A-Levels

National Standards for literacy and numeracy: Entry Level 1, Entry Level 2, Entry Level 3, Level 1 and Level 2. The standards for Level 1 and Level 2 are equivalent to those demanded for Level One and Level Two qualifications, respectively in the National Qualifications Framework. Given the vast differences in the assessments used, and in the language structure and use of English and Welsh, there is not necessarily a direct read across from the Welsh to the English literacy levels.

Welsh speaking: For the 2010 survey this includes those who identified themselves as speaking Welsh fluently or fairly well. The 2004 survey additionally included those speaking some Welsh.