



Estyn

Rhagoriaeth i bawb – Excellence for all

Arolygiaeth Ei Mawrhydi dros Addysg
a Hyfforddiant yng Nghymru

Her Majesty's Inspectorate
for Education and Training in Wales

School size and educational effectiveness

December 2013

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- ▲ independent schools;
- ▲ further education;
- ▲ independent specialist colleges;
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- ▲ teacher education and training;
- ▲ Welsh for adults;
- ▲ work-based learning; and
- ▲ learning in the justice sector.

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Introduction

This report is published in response to a request for advice from the Welsh Government in the annual remit letter to Estyn for 2012-2013 from the Minister for Education and Skills. Estyn has previously reported to the Welsh Government on small primary schools, in a report which was published in 2006. This report updates the findings in that report and has a broader scope.

The report looks at the educational effectiveness of small, medium-sized and large schools based on inspection findings from the current cycle of inspections (2010-2013) and on examination and assessment results. It looks at the outcomes, provision and leadership of schools of different sizes and focuses on the inspection quality indicators relating to standards, wellbeing, learning experiences, teaching, leadership and quality improvement.

There are several factors that can influence school performance in addition to school size. Deprivation is one important factor that can affect school performance and we consider its impact in this report.

The report is intended for the Welsh Government, headteachers and staff in schools and local authorities. The report draws on the range of evidence noted in Appendix 1.

Background

There are a number of definitions of small schools, but few definitions of medium-sized or large schools. For the purpose of this report, small primary schools are defined as those with 100 or fewer children of statutory school age according to the Pupil Level Annual School Census (PLASC) return. Around 30% of primary schools in Wales are small according to this definition. Small primary schools are mainly located in rural areas and there are few in urban regions. Around 10% of primary school pupils are taught in small primary schools. Very small schools are schools with fewer than 30 pupils. In nearly all cases, very small schools have no more than two teachers and one of these is a headteacher with teaching responsibility.

Medium-sized primary schools are defined as those with between 101 and 300 pupils and large primary schools have 301 pupils and above. About 15% of primary schools in Wales are large and about a third of primary school pupils are taught in these large primary schools.

Small secondary schools are defined as those with 600 pupils or fewer, medium-sized secondary schools have between 601 and 1,100 pupils, and large secondary schools 1,101 or more pupils. Just over 20% of secondary schools in Wales are small and around 10% of secondary school pupils are taught in these schools. About 25% of secondary schools are large and 37% of secondary school pupils are taught in these schools.

More details on the number of schools and the number of pupils in each size category are provided at Appendix 2.

Previous Estyn work

The main findings of Estyn's 2006 report¹ on Small schools in Wales were that:

- there is little difference in the standards achieved by pupils or in the quality of education provided by small schools when compared with other schools; small schools generally do not do so well as other schools in the areas of leadership and management, staff development and curriculum planning;
- in particular, in small schools, when the headteacher has a substantial teaching commitment, there is less time for leadership and management tasks;
- there are few differences in the quality of teaching between small and other schools. However, the smaller the school, the more challenging it often is for the teacher to match work to all pupils' learning needs. This is because, in these schools, teachers have to teach pupils of widely different ages and stages of development in the same class;
- many small schools, regardless of their size, have a good or very good ethos. In most small schools, staff work with a clear sense of purpose; and
- the partnership between parents and small schools is generally good. The quality and extent of parents' contribution to school life are best in the smallest schools. Often a special closeness develops between the smallest schools and parents, which contributes positively to school life.

In 2008, Estyn submitted evidence to the Welsh Governments' Rural Development Sub-Committee, which noted that:

- overall, there is no advantage to pupils in relation to the standards achieved in small primary or secondary schools when compared with other schools. While there is variation in performance between individual schools, there is no evidence to support the view that size is a significant factor. The quality of leadership and teaching is a more important factor than the overall size of a school; and
- small schools, generally, face greater pressures in areas of leadership and management, staff development and curriculum planning.

¹ Small primary schools in Wales, 2006

Main findings

- 1 The report identifies differences in the performance of small, medium-sized and large schools in terms of inspection judgements, and examination and assessment results. The differences are generally small and represent trends that do not determine the performance of all individual schools. Schools of all sizes can perform well or badly.
- 2 The report shows that large primary and secondary schools tend to perform better than small and medium-sized schools. There is strong evidence² that secondary schools in advantaged areas tend to perform better than schools in disadvantaged areas, but the impact of disadvantage is weaker for primary schools. Statistical analysis of inspection, examination and assessment data suggests that the reason why large secondary schools perform better on average than small and medium-sized secondary schools is because they tend to be more advantaged. Factors relating to disadvantage do not explain why large primary schools perform better than small and medium-sized primary schools.
- 3 A common feature of successful schools is good leadership. All schools, irrespective of size, can perform well where the quality of leadership is good or excellent. Where schools' overall performance is adequate or unsatisfactory, there are nearly always weaknesses in the quality of leadership.

Primary schools

- 4 Large primary schools tend to need less follow-up activity after inspection than small or medium-sized schools. The proportion of primary schools in the two most serious categories of follow-up (significant improvement and special measures) is similar for small and medium-sized primary schools, but it is lower for large primary schools.
- 5 Inspection outcomes are good or better in a greater proportion of large primary schools than small or medium-sized primary schools. Small and medium-sized primary schools are more likely to have more areas requiring improvement than large primary schools.
- 6 Pupils' standards are good or better in a higher proportion of large primary schools than they are in small and medium-sized primary schools. There is generally little difference in the percentage of pupils achieving the expected level in the Foundation Phase or end of key stage 2 teacher assessments for different sizes of schools.
- 7 Most primary schools have good or better standards of wellbeing. Pupils achieve good standards of wellbeing in all very small primary schools (those with 30 pupils or less). Small primary schools generally have better attendance levels than medium-sized and large primary schools.

² Tackling poverty and disadvantage in schools: working with the community and other services, Estyn, 2011
Tackling child poverty and disadvantage in schools, Estyn, 2010
Academic Achievement and Entitlement to Free School Meals in Wales, 2012, SB 32/2013, Welsh Government

- 8 Curriculum provision is better in large primary schools. In small schools, there tends to be shortcomings in the provision of foundation subjects at key stage 2. These shortcomings differ from school to school, but are often linked to gaps in the expertise of staff.
- 9 The quality of teaching is good or better in 80% of primary schools overall, but 72% of very small primary schools have teaching that is good or better. In these schools, there are three or more age groups in each class and teachers have to plan and deliver lessons that meet the needs of pupils from a wide age and ability range.
- 10 Leadership and processes to improve quality are usually better developed in large primary schools. In small primary schools, many headteachers have a significant teaching responsibility that limits the time they can devote to leading and managing and they have fewer opportunities to evaluate standards and to drive improvement.

Secondary schools

- 11 Large secondary schools need less follow-up activity after inspection than small and medium-sized secondary schools. About 4% of large secondary schools need significant improvement or special measures, compared to around 20% of small and medium-sized schools.
- 12 Examination results for large secondary schools are better than those for small and medium-sized secondary schools for nearly all measures.
- 13 Wellbeing is excellent in 33% of large secondary schools compared with 14% of medium-sized and 4% of small secondary schools. Attendance is similar for small and medium-sized secondary schools, but better in large secondary schools. Large secondary schools tend to have more comprehensive procedures for monitoring attendance and for tackling persistent absences.
- 14 The quality of teaching in small and medium-sized secondary schools is broadly similar. It is stronger in large secondary schools. Large schools tend to have better arrangements for professional development and quality assurance, while these systems are less well developed in small and medium-sized schools. Teachers in small schools are less likely only to teach their specialist subject.
- 15 In general, curriculum provision is broader and better balanced in large secondary schools. Nearly all large secondary schools provide good or better learning experiences for their pupils, while learning experiences are good or better in the majority of small schools and many medium-sized schools. Large secondary schools are able to offer a wider range of options due to economies of scale. Small and medium-sized schools are more dependent on 14-19 partnerships to provide a suitable range of courses.
- 16 Leadership is good or better in nearly all the large secondary schools inspected. Leadership is good or better in the majority of medium-sized schools and in many small schools. In all schools where performance is strong, leadership is good or better. In small and medium-sized secondary schools, succession planning may be weak and, when key members of staff leave the school, there can be too long a delay before their skill-set is replaced.

Primary schools

Primary schools in follow-up for 2010-2013

- 17 Since September 2010, when inspectors have identified that a school has important areas for improvement, they have placed the school in one of four types of 'follow-up':
- local authority monitoring;
 - Estyn monitoring;
 - significant improvement; or
 - special measures.
- 18 The level of follow-up inspection is dependent on the number, weight and significance of the shortcomings identified. The table below shows the percentage of primary schools in each follow-up category according to school size.

Figure 1: Primary schools in follow-up for 2010-2013

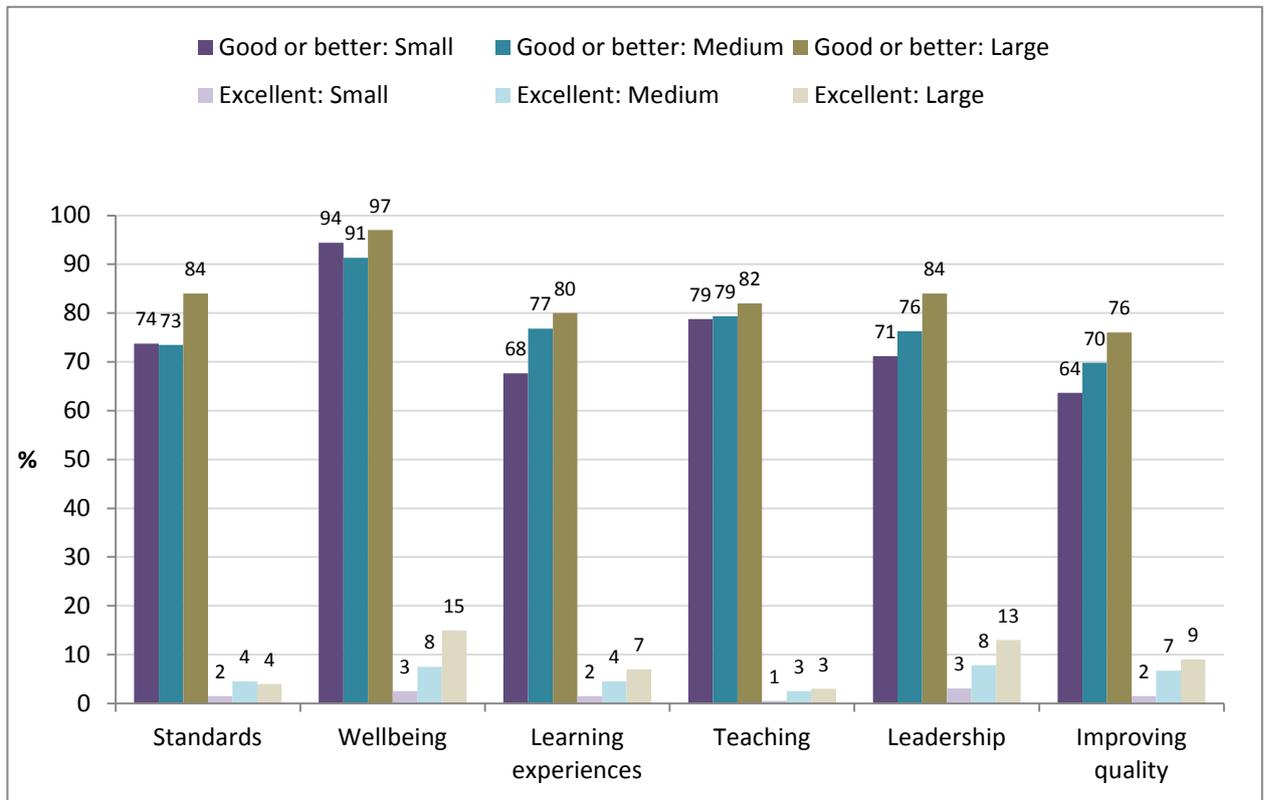
Size of school / pupils numbers	Estyn or local authority monitoring	Special measures or significant improvement	Total in follow-up
Small – 100 or less	46%	6%	53%
Medium – 101 to 300	37%	6%	43%
Large – more than 300	32%	1%	33%

- 19 The proportion of schools requiring follow-up increases as size decreases. The proportion of schools in need of the more serious level of follow-up (because they are in need of significant improvement or special measures) is similar in small and medium-sized schools, but is lower in large schools.
- 20 When schools require these levels of follow up, there are usually important shortcomings in the quality of leadership, the impact that leaders have on standards and provision and shortcomings in their ability to promote improvement.

Primary school inspection findings for 2010-2013

- 21 Findings from the current cycle of inspections in the table below show that there is little difference in standards, wellbeing or quality of teaching between small and medium-sized primary schools, though small schools do not do as well in some aspects of learning experiences, leadership and improving quality.
- 22 Large primary schools have better inspection outcomes for all quality indicators than for other schools. Small and medium-sized schools are more likely to have important areas requiring improvement than large schools.

Figure 2: Primary school inspection findings for 2010-2013

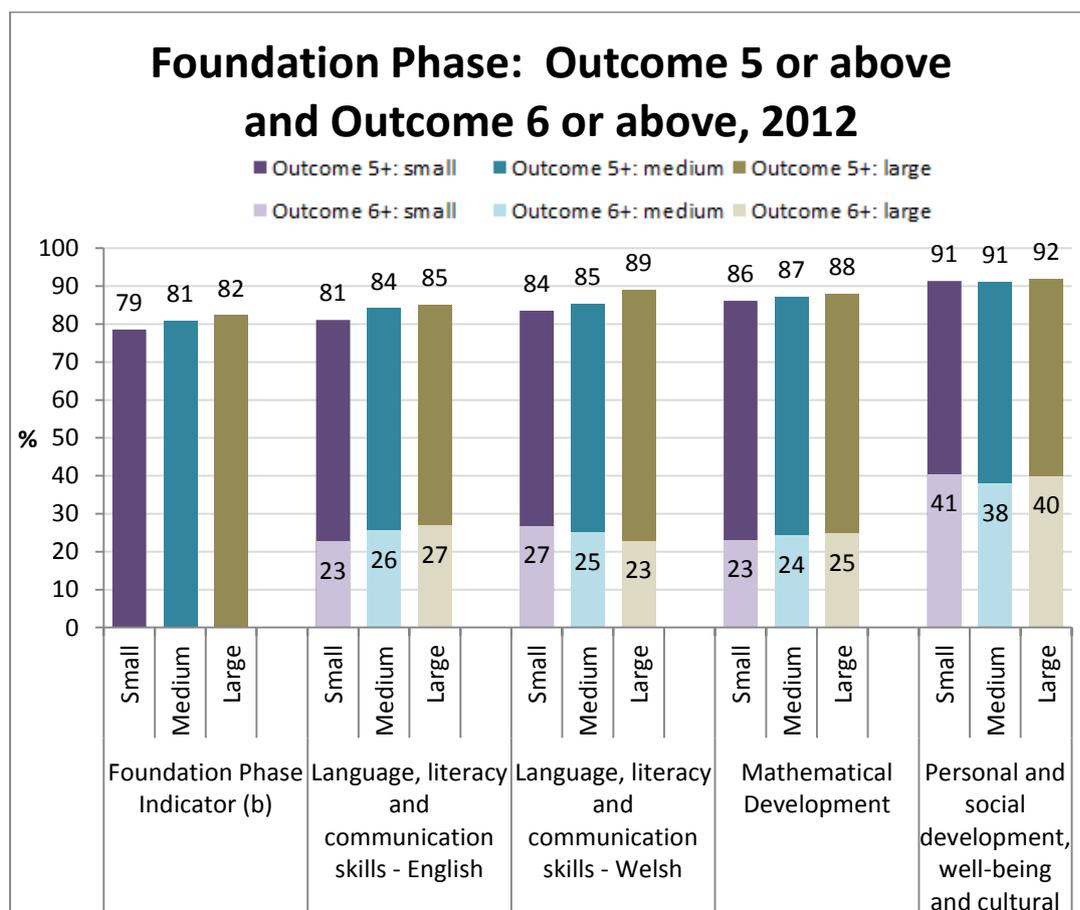


Outcomes: standards and wellbeing

Standards

- 23 Pupils’ standards are good or better in a higher proportion of large primary schools than small and medium-sized primary schools. This may be because large schools tend to have more expertise and capacity to address the needs of more vulnerable pupils and the more able and talented pupils.
- 24 Foundation Phase assessment outcomes improve with school size for language, literacy and communication skills. There is little difference between schools of different sizes in terms of mathematical and personal and social development, wellbeing and cultural diversity. The differences between schools of different sizes at the higher-than-expected level are also minimal.

Figure 3: Foundation Phase outcomes level 5 and above or level 6 or above for the Foundation Phase Indicator, language, literacy and communication skills in English and Welsh, mathematical development and personal and social development, wellbeing and cultural diversity (a)

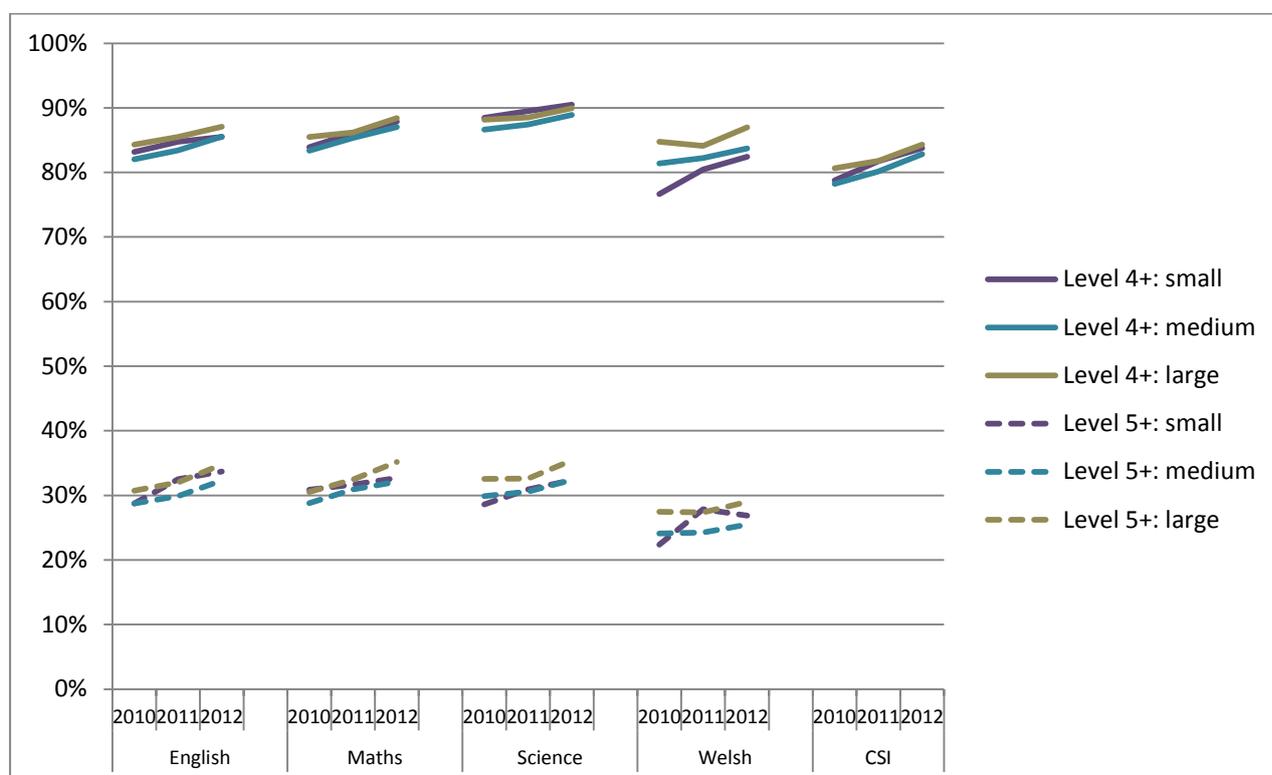


Notes:

- (a) Classification of school size is based on the 2012 PLASC return; 1,336 out of 1,412 primary schools in the 2012 PLASC had data on outcomes for the Foundation Phase.
- (b) The Foundation Phase indicator represents the percentage of pupils attaining outcome 5 or above in PSD, LCE/LCW and MDT in combination.

- 25 Similarly at key stage 2, there is little difference in the percentage of pupils achieving the expected level 4 in the core subjects of English, mathematics and science at the end of key stage 2 in all sizes of schools. The percentage of pupils achieving the expected level in Welsh is higher in large schools.
- 26 Generally, a slightly greater proportion of pupils achieve the higher than expected level (level 5+) in English, mathematics and science in large schools compared to medium-sized and small schools. A higher proportion of pupils in small and large schools attain level 5+ in Welsh than in medium-sized schools.

Figure 4: Key stage 2 results at level 4+ and level 5+ for English, Welsh first language, mathematics and science and the core subject indicator (CSI) between 2010- 2012 for small, medium-sized and large primary schools (a)



Notes:

(a) Classification of school size is based on the 2012 PLASC return.

Wellbeing

- 27 Pupils' wellbeing is good or better in around 95% of all primary schools and in all very small schools (30 pupils or less). This may reflect the strong nurturing and pastoral emphasis that is a feature of very small schools.
- 28 Wellbeing is judged excellent in 15% of large primary schools compared to 8% of medium-sized schools and 3% of small schools. The excellent features are usually high attendance, exceptional good behaviour, pupils being involved in initiatives that promote healthy life styles, pupils' attitudes to learning, their social and life skills, and their ability to make decisions. One of the most notable features is the emphasis

given to pupil voice and how pupils influence the life of the school. In general, the larger the school, the greater is the capacity of staff to enable these practices to be developed, formalised and embedded.

- 29 Nearly all primary schools promote pupils' understanding of healthy lifestyles and the importance of physical exercise. Inspection findings show little difference in pupil behaviour across different school sizes and nearly all pupils feel safe in school.

Provision: learning experiences and teaching

Learning experiences

- 30 Curriculum provision is good or better in a higher proportion of large and medium-sized primary schools than in small primary schools. About 7% of large primary schools provide excellent learning experiences compared with 4% of medium-sized primary schools and 2% of small primary schools.
- 31 In many large and medium-sized primary schools and the majority of small schools, the curriculum is well planned and develops pupils' skills, knowledge and understanding systematically throughout their time in the school. Pupils are taught to develop their research and practical skills well.
- 32 In large and medium-sized primary schools, it may be more likely that staff have a wider range of expertise and knowledge of specific themes, topics and subjects that can enrich the curriculum for the pupils. There may also be more opportunities to share good practice between classes. Large and medium-sized primary schools are also better able to identify pupils' additional learning needs at an early stage and make the necessary adjustments in the provision for those pupils. This is because they often have teachers with specific additional needs knowledge and understanding either working with these pupils directly or providing guidance and support to other teachers and support staff.
- 33 Most of the small primary schools that have only adequate care, support and guidance have shortcomings in support for pupils with additional learning needs. The main weaknesses in these small primary schools are that they do not identify pupils' needs early enough and targets in individual education plans are too generic.
- 34 Many small primary schools tend to focus their provision on developing pupils' skills in the core areas of language, mathematics and science. As a result, pupils' standards are usually good or better in these areas. However, in a minority of small primary schools, planning does not always ensure that pupils acquire knowledge and understanding at an appropriate level in the foundation subjects, or that they develop their literacy, numeracy and ICT skills across the curriculum effectively. In these schools, planning is not adapted well enough to meet the needs of all pupils, particularly more able pupils in key stage 2. This is most evident in very small primary schools, where curriculum provision is judged adequate or worse in over half of the schools with 30 pupils or less.

Teaching

- 35 The quality of teaching is good or better in around 80% of primary schools of all sizes, except in very small primary schools (with 30 or fewer pupils) where the quality of teaching is good or better in 72% of the schools inspected. This may reflect the greater challenge facing teachers in these very small schools as they have to teach a wide range of ages and abilities in the same class. In some instances, teachers in small primary schools teach three or four year groups in one class and it is difficult to ensure that the work meets the needs of each and every pupil. In some instances, teachers have overcome these challenges well, especially in the Foundation Phase classes, where there is a focus on developing pupils' skills through a curriculum where pupils learn through first-hand experiences. In these classes, there are often teaching assistants who can support pupils with differing needs.

Leadership and management: leadership and quality improvement

Quality of leadership

- 36 Around 13% of large primary schools have excellent leadership compared to 8% of medium-sized primary schools and 3% of small primary schools.
- 37 Leadership is adequate or unsatisfactory in around a quarter of small and medium-sized primary schools. This is mainly due to shortcomings in strategic planning. Leaders are unclear about their schools' priorities and the staff often lack a sense of common purpose and direction. Also, staff roles are not defined clearly enough and responsibilities are not shared out appropriately to ensure that all staff have achievable and balanced workloads.
- 38 Leadership is adequate or worse in 47% of schools with 30 pupils or less. In schools with 31 to 60 pupils this figure falls to 29% and falls again to 22% in schools with between 61 and 100 pupils. At present, there is no systematic and comprehensive training pathway to develop school leaders' understanding of leadership and management issues once they are in post.
- 39 In small schools, headteachers usually have a significant teaching responsibility. This limits the time they can devote to developing their understanding of leadership and management issues and to build on the knowledge they have acquired in following the National Professional Qualification for Headship prior to appointment. They have too little time to reflect on practice and consider better ways of working. This can have a negative effect on leadership, the quality and impact of self-evaluation and planning for improvement.
- 40 Leadership may be better in large schools because headteachers of large schools have often previously been headteachers in small schools or headteachers or deputies in medium-sized schools. This wide leadership experience has given them an opportunity to develop a broad repertoire of leadership approaches which they can call upon to tackle various issues in their present roles. As a result, they are better equipped to understand the challenges of leading large complex organisations and getting the right processes in place to ensure the best outcomes for the pupils in their schools.

- 41 In small primary schools, where the numbers of pupils in each year group is frequently in single figures, meaningful comparisons about comparative performance can be more challenging, and governing bodies' understanding of performance issues is often less secure.
- 42 In the very few small schools where leadership is excellent, the headteachers have succeeded in overcoming some of the hurdles that limit the effectiveness and the impact of leadership in small and very small primary schools. Team-work among staff is very strong and staff have a clear joint understanding and ownership of plans and policies. In these primary schools, there is a strong emphasis on providing opportunities for pupils to share their views and raise issues about improving school life and these views are taken on board and acted upon. These primary schools also usually work in partnerships with other schools to extend the expertise of staff and to improve the quality of the provision for pupils. In a few cases, the headteachers are responsible for more than one small school or are leaders of a federation of schools. These arrangements enable headteachers to focus on leadership and improving quality in order to identify and implement strategies to raise standards. They are able to act in a more strategic leadership role than they would otherwise if they had a teaching responsibility.

Quality improvement

- 43 In general, there are better processes for improving quality in large and medium-sized primary schools than in small schools. This is because these primary schools tend to have more systematic self-evaluation procedures. The involvement of senior and middle leadership teams in this quality assurance process is more developed and there tends to be a more effective use of data to identify areas for improvement. In these primary schools, staff meetings focus on the process of school improvement and outcomes lead to action points to improve practice. Also, decisions made in previous meetings are reviewed regularly to inform progress.
- 44 Nearly 40% of small primary schools have adequate or worse systems for improving quality compared with 30% of medium-sized primary schools. Improving quality is adequate or worse in half of the very small primary schools (with 30 pupils or fewer) inspected.
- 45 The main shortcoming in small primary schools where they are only adequate in improving quality is a failure to establish self-evaluation processes fully. In many of these cases, the quality assurance arrangements are not sufficiently formalised and meetings are not held systematically to review targets and monitor progress. These small primary schools do not know their strengths and areas for improvement and the school development plans do not link clearly enough to improving pupil standards. Often these small primary schools do not have a good track record of securing improvements, for example through addressing the recommendations from previous inspections.

Secondary schools

Secondary schools in follow-up for 2010-2013

- 46 Large secondary schools require less follow-up activity than small or medium-sized schools. Only one large secondary school has been placed in a statutory category (significant improvement or special measures) following an inspection since 2010. The figures for follow up indicate that small and medium-sized secondary schools are more likely to have areas for improvement than large secondary schools.
- 47 A large proportion of small secondary schools need local authority monitoring. This may be because, although performance is good overall, these small schools tend to have more relatively minor issues to address.

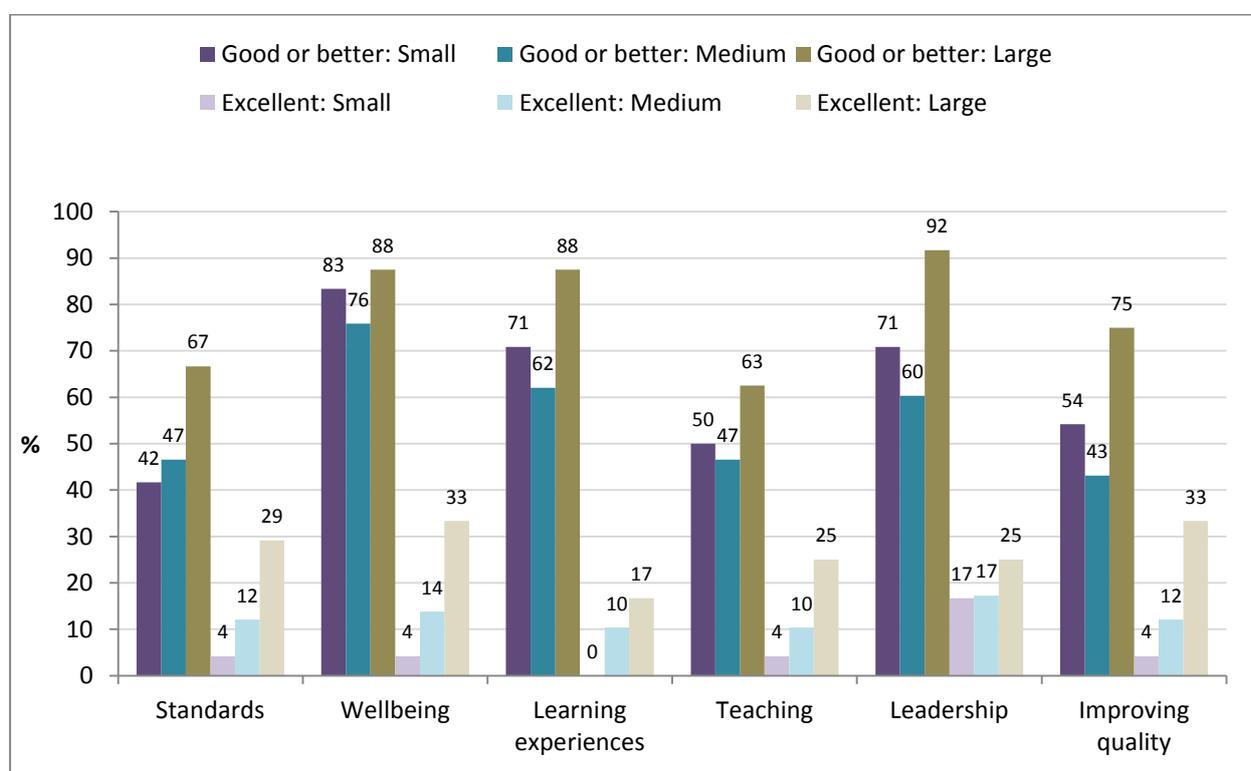
Figure 5: Secondary schools in follow-up for 2010-2013

Size of school / Pupil numbers	Estyn or local authority monitoring	Special measures or significant improvement	Total in follow-up
Small – 600 pupils or less	50%	21%	71%
Medium – 601 – 1,100	40%	22%	62%
Large – Greater than 1,100	42%	4%	46%

Secondary school inspection findings for 2010-2013

- 48 Generally, large secondary schools are judged better than small and medium-sized secondary schools on all inspection quality indicators. The biggest differences are in leadership and learning experiences, where large secondary schools are significantly stronger. Apart from one small secondary school, all the secondary schools judged excellent are medium-sized or large.
- 49 Inspection findings show that a higher proportion of large secondary schools are awarded good or better for all the quality indicators included in this study compared to small and medium-sized secondary schools. The gap is largest for standards, learning experiences, leadership and quality improvement.

Figure 6: Secondary school inspection findings from 2010-2013



- 50 A common characteristic of successful secondary schools is strong leadership. Where leadership is good or better, secondary schools of all sizes can succeed well. However, there are factors relating to economies of scale which make it more challenging for small secondary schools to perform well in some aspects of their work. However, where leaders in small secondary schools are innovative and focus on improving performance, they can overcome these hurdles and small secondary schools can and do also succeed.

Outcomes: standards and wellbeing

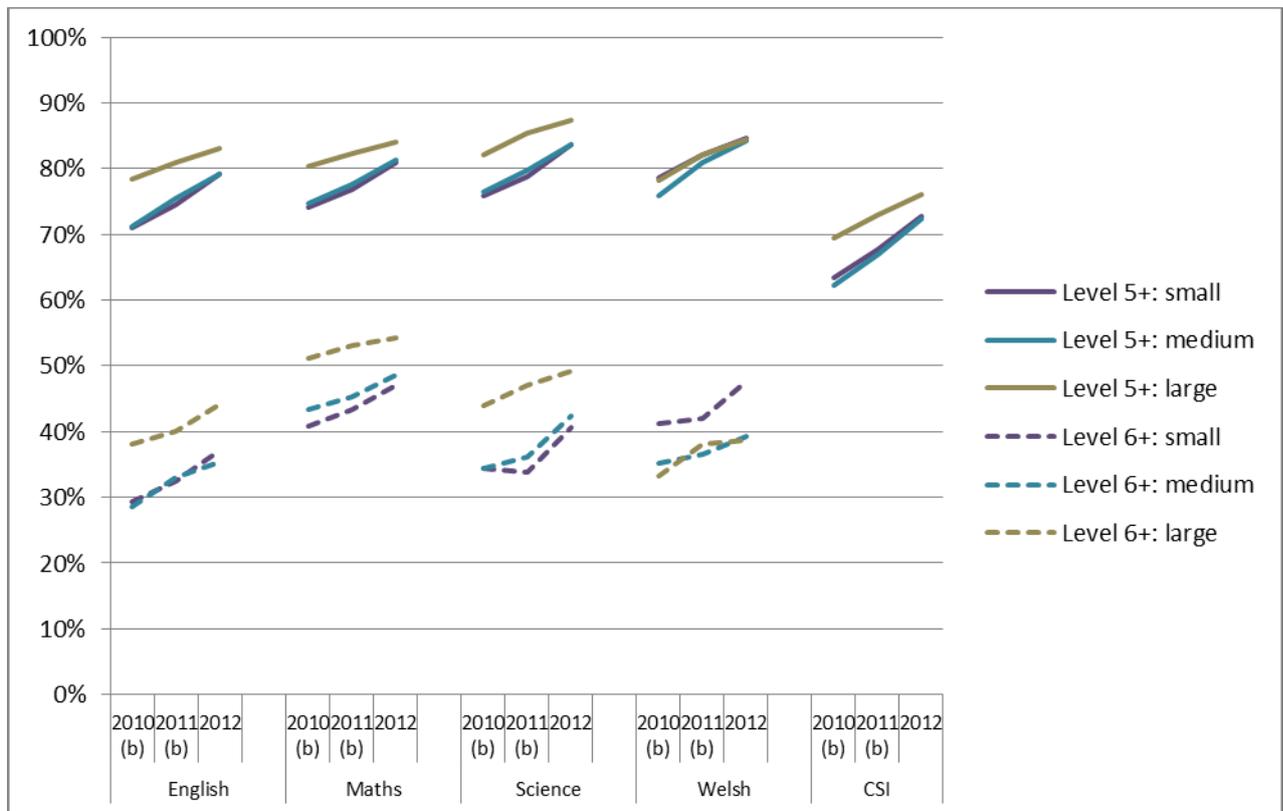
Standards

- 51 When judging standards, inspectors consider the schools' performance in terms of data, and how pupils are acquiring the skills and knowledge they need to move on to

the next stage of learning. Inspection outcomes indicate that, in general, these are better in large secondary schools.

- 52 Performance is better in large secondary schools for nearly all examination and assessment indicators. Welsh Government data indicates that the percentage of pupils achieving the core subject indicator at key stage 3 is better in large secondary schools compared with small and medium-sized secondary schools (figure 8). The gap in performance between the small and medium-sized secondary schools and the large schools has reduced slightly over the last three years for English, mathematics and science, while there is no difference in the performance gap in Welsh.
- 53 The gap between the large secondary schools and the small and medium-sized secondary schools is greater for level 6 than the level 5 for English, mathematics and science. This means that the large secondary schools provide a more appropriate level of challenge and support to the more able pupils and enable them to achieve the higher than expected levels.
- 54 A higher proportion of pupils attain level 6 in Welsh first language in small secondary schools. This is may be because most of these schools are located in rural areas, where a higher proportion of pupils are first language Welsh-speakers.

Figure 7: Percentage of pupils achieving the expected level and the expected level plus one at key stage 3 according to school size in 2010-2012 (a)

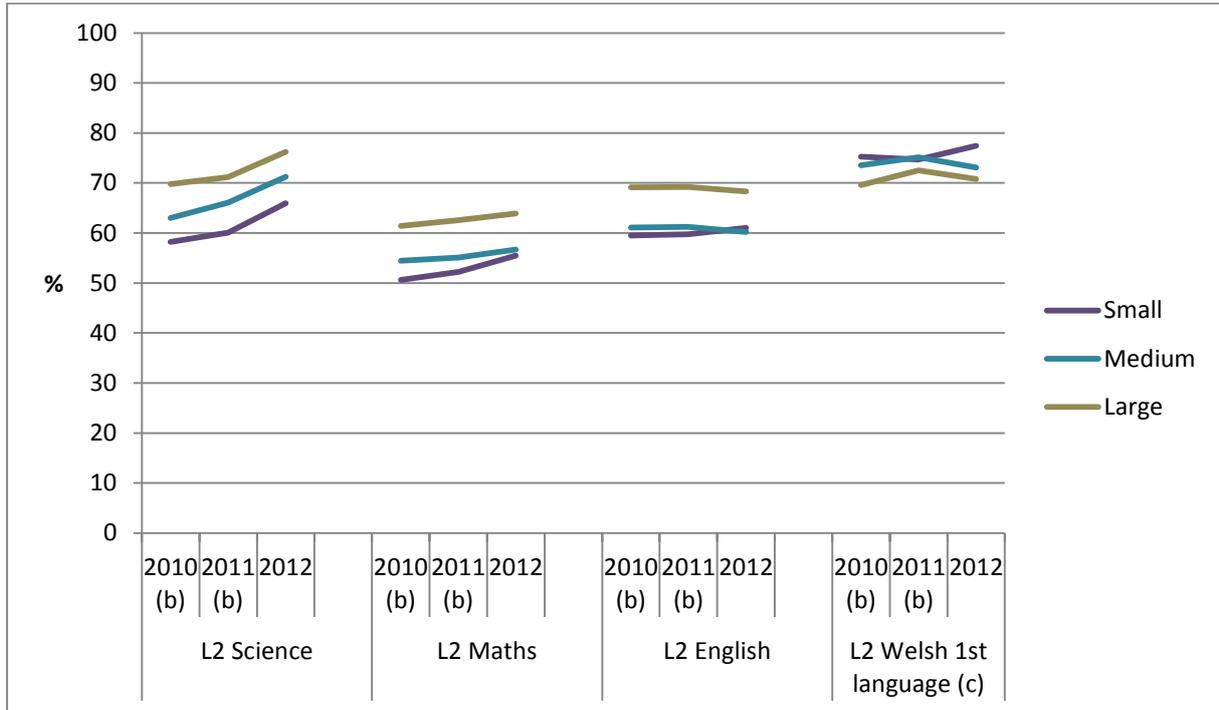


Notes:

- (a) Maintained secondary schools. Classification of school size is based on the 2012 PLASC return.
- (b) Three schools which did not appear on the 2012 PLASC return (i.e. now closed) are excluded from the analysis for 2010, 2011 and 2012.

- 55 At key stage 4, the performance of pupils in the core subjects is better in large secondary schools compared to small and medium-sized secondary schools. The exception is in Welsh first language, where small and medium-sized secondary schools perform better than large secondary schools.

Figure 8: Percentage of pupils achieving the expected level at key stage 4 in the individual core subjects in 2010-2013 according to school size (a)



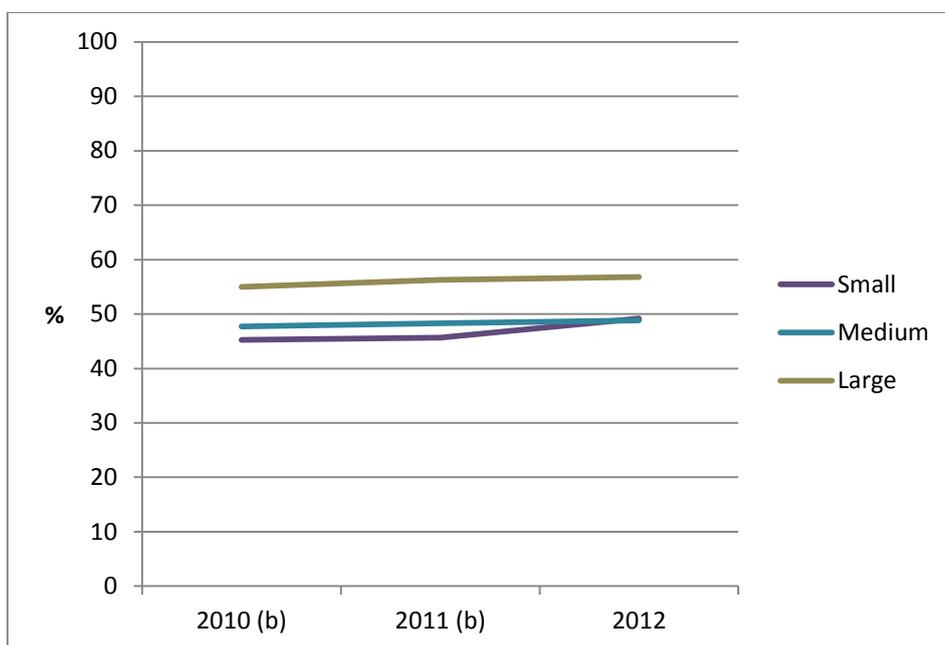
Notes:

- (a) Maintained secondary schools. Classification of school size is based on the 2012 PLASC return.
- (b) Three schools which did not appear on the 2012 PLASC return (i.e. now closed) are excluded from the analysis for 2010, 2011 and 2012.
- (c) Level 2 threshold figures use the denominator 'the number of pupils aged 15 at the start of the academic year' (**except** Level 2 Welsh, which uses the denominator 'the number of pupils entering GCSE Welsh 1st language').

- 56 There is a similar picture with the percentage of pupils' achieving the level 2 threshold including English or Welsh and mathematics. This indicator is around eight percentage points higher in large secondary schools compared to small and medium-sized secondary schools.

Figure 9: Percentage of pupils achieving the level 2 threshold including English or Welsh and mathematics by school size in 2010-2012 (a)

This includes GCSE qualifications and a range of equivalent non-GCSE qualifications, including vocational qualifications. It represents a volume of qualifications at level 2 equivalent to the volume of five GCSEs at grades A*-C, but also includes GCSEs in English or Welsh first language and mathematics at grades A*-C.



Notes:

- (a) Maintained secondary schools. Classification of school size is based on the 2012 PLASC return.
 (b) Three schools which did not appear on the 2012 PLASC return (i.e. now closed) are excluded from the analysis for 2010, 2011 and 2012.
 (c) Level 2 threshold figures use the denominator 'the number of pupils aged 15 at the start of the academic year'.

Wellbeing

- 57 Wellbeing is good or better in most large secondary schools and in many small and medium-sized secondary schools.
- 58 In nearly all secondary schools where wellbeing is judged as only adequate, there are shortcomings in attendance. Where wellbeing is unsatisfactory there are also issues with pupils' behaviour and exclusion rates are high. In these schools, the poor standard of wellbeing has a detrimental effect on the outcomes for pupils.

Provision: learning experiences and teaching

Learning experiences

- 59 Curriculum provision tends to be broader and more balanced in large secondary schools. Nearly all large secondary schools are judged to provide good or better learning experiences for their pupils while learning experiences are good or better in the majority of small secondary schools and many medium-sized secondary schools.
- 60 Secondary schools with good or better curriculum provision offer a rich range of courses and have responded well to the requirements of Learning Pathways 14-19 through purposeful joint planning with other institutions. They offer comprehensive provision that enables pupils to gain a range of qualifications. Where numbers wishing to follow a particular course are not viable in one setting, schools can work together to offer the options.
- 61 Small and medium-sized secondary schools tend to be more dependent on the support of the 14-19 partnerships to provide a suitable range of courses for their pupils. Where these partnerships are weak, small and medium-sized secondary schools are less likely to have the range of options available. Large secondary schools are more autonomous and less dependent on partnerships to provide curriculum options. They are able to access a wider range of options due to their economies of scale.

Teaching

- 62 Teaching and assessment are good or better in 63% of large secondary schools, but in just under half of small and medium-sized secondary schools. Teaching is excellent in 25% of the large secondary schools, but only excellent in 10% of medium-sized secondary schools and 4% of small secondary schools.
- 63 In large secondary schools, subject departments usually have more than one teacher, which enables teachers to share good practice and develop their curriculum planning and delivery. Also, quality assurance tends to be stronger and school leaders have developed better systems to address poor teaching. In large secondary schools, teachers are more likely to be teaching in their own specialist area, whereas in small and medium-sized schools teachers occasionally teach in areas outside their specialist subject. In a few instances, small secondary school departments work effectively with departments within their school and similar departments in neighbouring schools to share good practice and to benefit from economies of scale.
- 64 Assessment procedures tend to be stronger in large secondary schools. This is mainly because school leaders in these schools are more effective at ensuring a consistent whole-school approach to assessment, which is monitored and evaluated systematically. Over time, these approaches become embedded, improved and developed across each subject area. In a minority of small and medium-sized secondary schools, assessment procedures are not effective enough. There is often too much variation between departments. These schools lack a whole-school focus and approach to implementing assessment procedures and school policies are not understood, implemented, monitored or evaluated well enough.

Leadership and management: leadership and quality improvement

Leadership

- 65 Leadership is at least good in nearly all large secondary schools inspected. Headteachers in large secondary schools often have a good track record in previous leadership roles as deputy heads or headteachers of smaller schools. Large secondary schools tend to have well-embedded, highly-organised and consistent leadership structures and processes, and effective performance management arrangements.
- 66 In small secondary schools, a large proportion of staff have a subject responsibility and a whole-school responsibility. In many of these small secondary schools, there are good professional development opportunities focusing on developing generic leadership skills. This professional development can have a strong influence on many aspects of school life. For example, middle leaders often lead working groups focusing on specific areas of the curriculum within their schools thus developing their skills in analysing and evaluating standards and provision. They develop effective processes for tracking pupils' progress and analysing data, which they use to inform teaching and learning and to motivate pupils to succeed. However, when these roles are not supported by good professional development, there are nearly always shortcomings in the effectiveness of middle leadership in these small secondary schools.
- 67 A significant issue relevant to small secondary schools and to a lesser extent to medium-sized secondary schools is that succession planning is often weak. When key members of staff leave the school, there is usually too long a delay before their skills are replaced. Large secondary schools can usually make interim short-term arrangements to address this issue but, because subject departments in small and medium-sized schools consist of a few teachers, one or two teachers leaving can have a detrimental effect on the outcomes for pupils in the subject areas taught by these staff. This is compounded for shortage subject areas, such as science, and is a particular issue in rural and Welsh-medium schools.

Improving quality

- 68 Improving quality and securing improvement are good or better in many large secondary schools, in around a half of small secondary schools and in a minority of medium-sized secondary schools.
- 69 In small and medium-sized secondary schools where improving quality is adequate or worse, senior leaders do not focus sufficiently on standards and provision. The schools' self-evaluation processes have only a partial influence on strategic planning and there is limited evidence of the impact of these processes on improving pupil outcomes. Often data analysis does not focus on how well the school is performing in comparison to similar schools and staff do not analyse the core data sets thoroughly enough to evaluate the performance of all groups of pupils, particularly pupils eligible for free school meals. As a result, the school leaders do not take specific action to improve standards for this group of learners.

- 70 Where there are shortcomings in quality assurance in small and medium-sized schools, it is often because there is a lack of evidence to identify what needs to improve. This is because middle leaders' skills in self-evaluation are underdeveloped, especially their skills in observing and analysing the effectiveness of teaching. There is often a lack of consistency and too much variation in the quality of lesson observations and scrutiny of pupils' work. Evaluations of the quality of teaching and its impact on learning are often too brief and too positive and areas for improvement in teaching and learning are not prioritised well enough in department plans. As a result, there are important shortcomings in the overall quality of teaching in half of these schools. Also there is too much variation in the quality of improvement planning at middle leadership level.
- 71 Even in large secondary schools, the impact of quality assurance on teaching is not as strong as it is in other areas. Where quality assurance is excellent, school leaders focus clearly on tackling poor teaching through rigorous lesson observations and clear targets for improvement. In nearly all schools judged to have excellent teaching, there are also excellent quality assurance processes in place.

School size and deprivation

- 72 The evidence in previous chapters suggest that large schools tend to perform better than small and medium-sized schools. However, there are several factors that can influence school performance in addition to school size. Deprivation is another factor that can affect school performance. In fact, there is strong evidence³ that secondary schools in advantaged areas tend to perform better than schools in disadvantaged areas. The impact of deprivation on performance is weaker in primary schools.
- 73 The commonly used measure of deprivation is the percentage of pupils eligible for free school meals (FSM). The average percentage of pupils eligible for free school meals for the primary schools inspected in this cycle is shown in the table below for different sized schools:

	Pupils eligible for FSM
Small primary schools	17.2 %
Medium-sized primary schools	22.9 %
Large primary schools	20.2%

- 74 These figures suggest that factors related to deprivation are not the reason that large primary schools tend to perform better than small primary schools. Large primary schools have a higher FSM levels than small primary schools but their overall performance is better for all quality indicators.

³ Tackling poverty and disadvantage in schools: working with the community and other services, Estyn, 2011
 Tackling child poverty and disadvantage in schools, Estyn, 2010
 Academic Achievement and Entitlement to Free School Meals in Wales, 2012, SB 32/2013, Welsh Government

- 75 The percentage of pupils eligible for free school meals for the secondary schools inspected in this cycle is shown in the table below for different sized schools:

	Pupils eligible for FSM
Small secondary schools	20.2 %
Medium-sized secondary schools	20.3%
Large secondary schools	16.4 %

- 76 These figures suggest that lower levels of deprivation may explain why large secondary schools tend to perform better than small and medium-sized secondary schools. On average, large secondary schools have fewer pupils eligible for free school meals than small and medium-sized secondary schools. Statistical regression analysis also confirms that large secondary schools may do better than small and medium-sized schools on average because they tend to be more advantaged.

Appendix 1: Evidence base

The findings in this report draw on:

- evidence from a large sample of primary and secondary reports for the period from September 2010 to July 2013, which represents half of the schools in Wales;
- local authority inspection reports and evidence from remit reports; and
- a review of the relevant literature, including that listed below.

Estyn publications

Her Majesty's Chief Inspector of Education and Training in Wales Annual Reports 2010-2011 and 2011-2012

Report to the Welsh Governments' Rural Development Sub Committee on small schools (2008)

Small primary schools in Wales (2006)

Other publications

Cost of small primary schools in Wales – Review of evidence, Cambridge Policy Consultants (2010)

School Funding Analysis, Wales Audit Office (2006)

Appendix 2: Number of schools and school sizes

Very small primary school	fewer than 30 pupils
Small primary school	100 or fewer pupils
Medium-sized primary school	101- 300 pupils
Large primary school	301+ pupils
Small secondary school	600 or fewer pupils
Medium sized secondary school	601-1,100 pupils
Large secondary school	1,100+ pupils

Figure 10: The number of maintained primary schools by size in 2011-2012:

Pupils on register (full time equivalent)	Size category	Number of schools	Percentage of all primary schools
Up to 30 pupils	Small	80	6%
31-60		158	11%
61-100		197	14%
Up to 100 pupils	Small	435	31%
101-300	Medium	763	54%
301+	Large	214	15%
Total	All sizes	1,412	100%

Figure 11: The number of maintained secondary schools by size 2011-2012

Pupils on register	Size category	Number of schools	Percentage of all secondary schools
Up to 600 pupils	Small	49	22%
601-1,100	Medium	120	54%
1,100+	Large	52	23%
Total	All sizes	221	100%

Figure 12: Number of inspections in maintained primary schools by size, 2010-2013

Pupils on register (full time equivalent)	Size category	Number of schools	Percentage of inspections
Up to 30 pupils	Small	32	5%
31-60		68	10%
61-100		98	15%
Up to 100 pupils	Small	198	30%
101-300	Medium	358	55%
301+	Large	100	15%
Total	All sizes	656	100%

Figure 13: Number of inspections in maintained secondary schools by size, 2010-2013

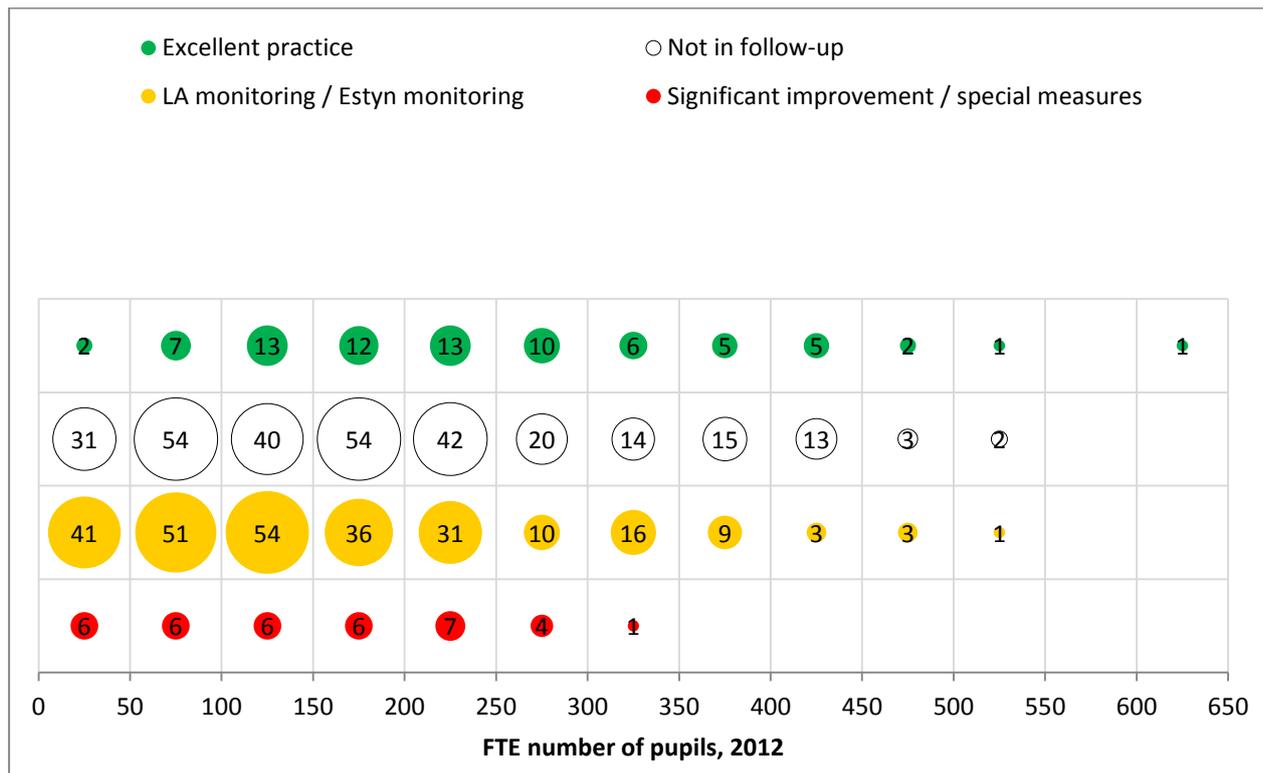
Pupils on register	Size category	Number of schools	Percentage of inspections
Up to 600 pupils	Small	24	23%
601-1,100	Medium	58	55%
1,100+	Large	24	23%
Total	All sizes	106	100%

Appendix 3: Follow-up activity 2010-2013

The bubble charts below indicate the levels of follow up for all schools inspected during the first three years of the present inspection cycle. The chart includes the number of schools identified as having excellent practice and the schools requiring no level of follow up (schools which have been awarded good judgements for all quality indicators).

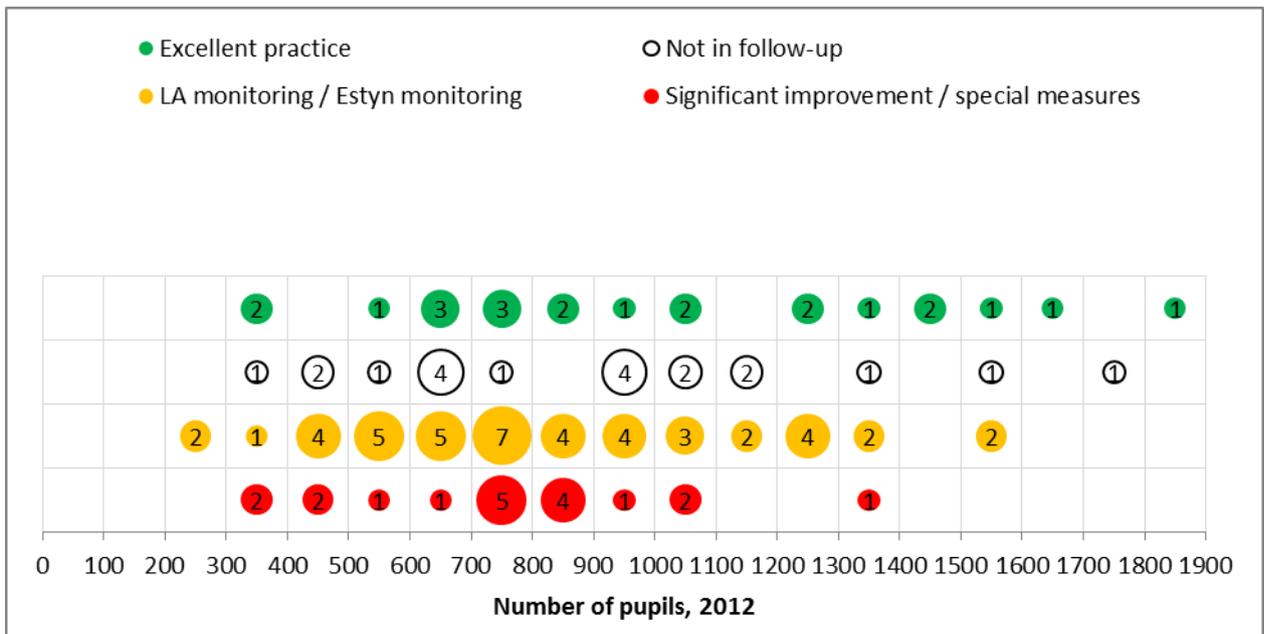
The first chart shows that there is excellent practice in primary schools of all sizes, but that in general, the proportion of excellent practice increases with school size. It also shows that there are no schools with over 350 pupils in the most serious categories of follow-up of significant improvement or special measures. The highest proportion of schools requiring follow-up are those with 50 pupils or less. The highest proportion of schools requiring no follow-up or have excellent practice are those with over 350 pupils, although this sample is relatively small.

Figure 14: Follow-up category for primary schools inspected between 2010 and 2013 by school size



The second chart shows the levels of follow-up for secondary schools. Generally, the larger the school, the greater the proportion of excellent practice and the less likely the incidence of a serious level of follow up (significant improvement or special measures) and schools with 900 pupils or less are more likely to require follow up than schools with more than 900 pupils.

Figure 15: Follow-up category of all secondary schools inspected between 2010 and 2013 by school size

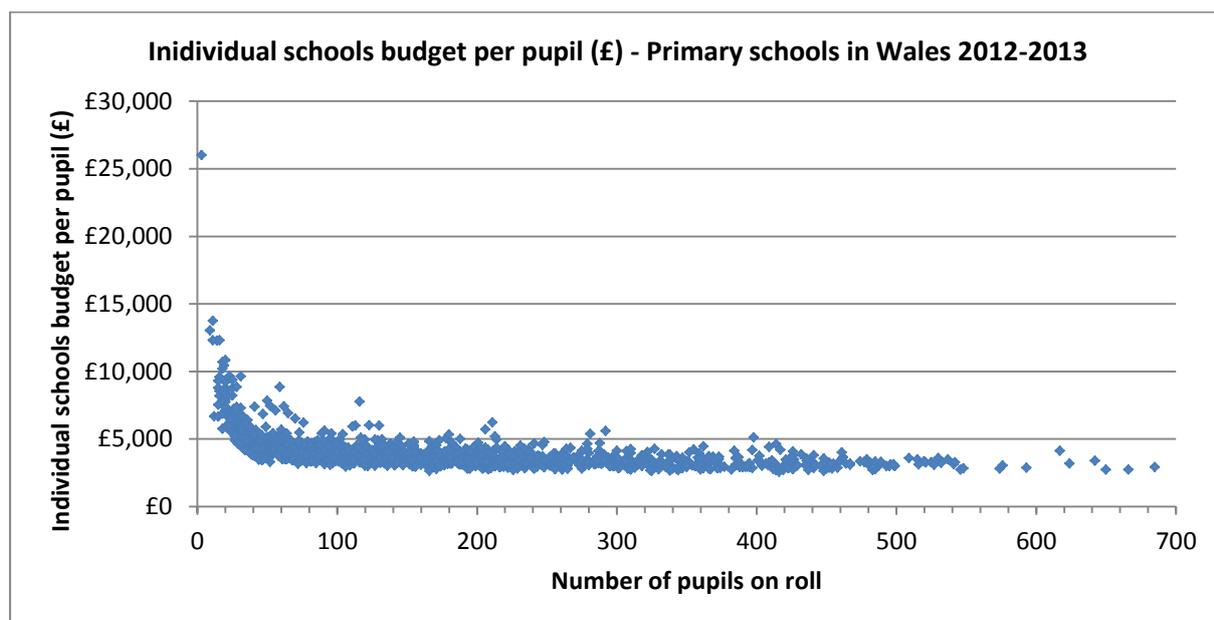


Appendix 4: Value for money

Since 2010, each school inspection report quotes the individual school budget (ISB) as part of the contextual information. Local authorities provide schools with budgets according to locally agreed formula. Comparing the ISB of one school with another in a different local authority is a relatively crude indicator of the resources available to a particular school because differing services may be provided to schools by different local authorities.

In May 2010, Cambridge Policy Consultants published a report⁴ on the cost of small primary schools in Wales. Their analysis shows that unit costs of primary schools increase as school size gets smaller. Unit costs are fairly steady until the school size falls to about 90-100 pupils when unit costs gradually start to rise. The increase accelerates when the school size drops below 30. On average, a school with fewer than 30 pupils has a unit cost which is roughly double the unit cost of a school with more than 90 pupils. The more recent data in the charts below also reflects this.

Figure 16: Cost per pupil by school size (primary schools in Wales, 2012-2013)



Source: Stats Wales, Delegated school budgets per pupil, by school (2012-2013). A total of 1,412 primary schools were included in the analysis.

In secondary schools, the individual schools budget per pupil rises steeply for schools with fewer than 400 pupils (Figure 13). Generally, the ISB is between £3,500 and £5,000 per pupil.

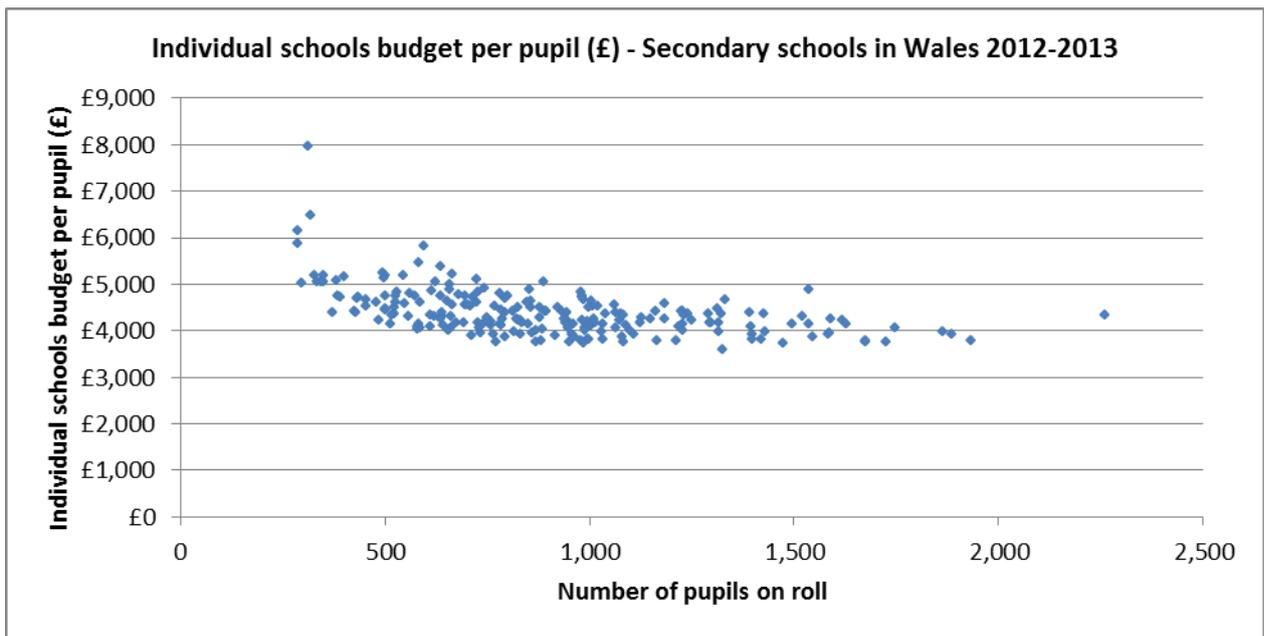
When inspecting value for money, inspectors take into account the effectiveness of the school in securing appropriate outcomes for pupils overall.

⁴ Cost of small primary schools in Wales – Review of evidence, Cambridge Policy Consultants (2010)

Inspectors focus on the extent to which the school’s spending decisions and broad financial planning are based on priorities for expenditure on improvement over time. Inspectors also consider the extent to which leaders and managers know the costs of existing programmes and activities, keep them under review and question whether they are cost-effective. Inspectors also consider whether the school has identified priorities and areas for development and allocated resources appropriately and according to clear criteria to reflect the school’s agreed objectives. Other issues, such as budgeting arrangements, including appropriate arrangements for contingencies, and the balance between the responsibilities undertaken by governors and those delegated to the headteacher and staff, are also considered and evaluated.

The judgement awarded by inspection teams for value for money closely aligns with the judgement for standards. It follows therefore that a higher proportion of large schools are judged to be giving good or better value for money than small and medium-sized schools, particularly in the secondary sector. But it is also the case that unit costs are lower in larger schools

Figure 17: Cost per pupil by school size (secondary schools in Wales, 2012-2013)



Source: Stats Wales, Delegated school budgets per pupil, by school (2012-2013). A total of 220 secondary schools were included in the analysis.

There are factors relating to the different criteria used by individual authorities to allocate their funding which makes general judgments on value for money in relation to school size less secure. For example, transport costs, which can be very high for small rural schools, are included in the ISB for some local authorities and not others.

Appendix 5: Glossary

Judgement descriptions:

- Excellent** – Many strengths, including significant examples of sector-leading practice
- Good** – Many strengths and no important areas requiring significant improvement
- Adequate** – Strengths outweigh areas for improvement
- Unsatisfactory** – Important areas for improvement outweigh strengths

Proportions as used in Estyn reports:

Terms	Proportions
Nearly all	With very few exceptions
Most	90% or more
Many	70% or more
a majority	Over 60%
Half	50%
Around half	Close to 50%
A minority	Below 40%
Few	Below 20%
A very few	Less than 10%

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