

Chapter 2. Schools as learning organisations in Wales: A general assessment

This chapter explores the question of to what extent the key characteristics of learning organisations already exist in schools in Wales. It uses Wales' schools as learning organisations (SLO) model as point of reference for this. The chapter starts with a description of the model and its place in the curriculum reform. This is followed by an overall assessment of the extent to which schools in Wales have put into practice the dimensions of a learning organisation, identifying strengths and areas for further development.

This Schools as Learning Organisations Assessment suggests that the majority of schools in Wales are well on their way towards developing as SLOs. A considerable proportion of schools is however still far removed from realising this objective. Secondary schools clearly face more challenges in this, compared to primary schools. More critical reflections seem to be needed for deep learning and sustained progress to take place.

Introduction

Wales has formulated the ambition that all schools should develop as learning organisations, as they have the capacity to adapt more quickly and explore new approaches to improve learning and outcomes for all their students (Welsh Government, 2017^[1]). The development of schools as learning organisations (SLOs) aims to support schools in putting the new curriculum into practice.

This study aims to support Wales in this effort. Drawing from multiple data sources, this chapter explores the question of to what extent the key characteristics of learning organisations already exist in schools in Wales. It uses Wales' schools as learning organisations model as point of reference for this (Welsh Government, 2017^[2]).

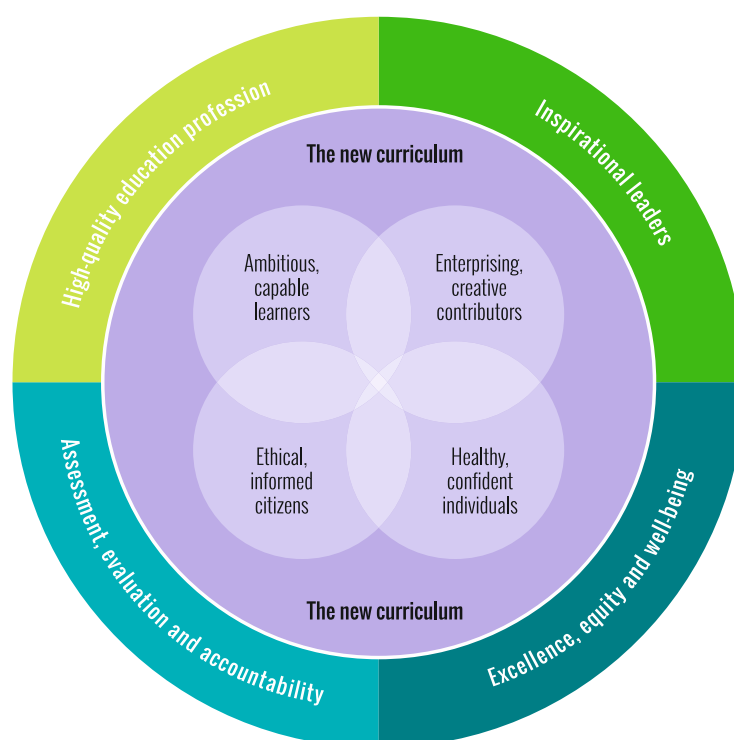
The chapter starts with a description of the SLO model and its place in the education reform effort the country has embarked on. It follows with an overall assessment of the extent to which schools in Wales have put in practice the dimensions of the model, looking at strengths and challenges and areas for further development.

The school as learning organisation: A key component of education reform in Wales

The strategic education plan, *Education in Wales: Our National Mission* (2017–2021) (Welsh Government, 2017^[1]) presents Wales' national vision for education and outlines how it aims to realise this in the years to come. Informed by an extensive review of the school curriculum and assessment and evaluation arrangements (Donaldson, 2015^[3]), the vision calls for all children and young people to have access to a new, 21st century curriculum.

To be able to realise the curriculum's "four purposes" (see Chapter 1, Box 1.1), the vision suggests that children and young people in Wales will need to be highly literate and numerate, be increasingly bilingual, and be confident users of digital technology that will deepen their learning in all fields. The successful realisation of the new curriculum – the primary objective of the education strategy – requires a focus on four key enabling objectives:

1. developing a high-quality education profession
2. inspirational leaders working collaboratively to raise standards
3. strong and inclusive schools committed to excellence, equity and well-being
4. robust assessment, evaluation and accountability arrangements supporting a self-improving system (see).

Figure 2.1. Four key enabling objectives for delivering the new curriculum

Source: Welsh Government (2017^[1]), *Education in Wales: Our National Mission*, <http://gov.wales/docs/dcells/publications/170926-education-in-wales-en.pdf>.

Why develop schools in Wales into learning organisations?

The Welsh Government considers the development of SLOs (see Box 2.1) as vital for realising these four enabling objectives and supporting schools to put the new curriculum into practice. A growing body of research evidence shows that schools that operate as learning organisations can react more quickly to changing external environments and embrace changes and innovations in their internal organisation (Senge et al., 2012^[4]; Silins, Zarins and Mulford, 2002^[5]; Watkins and Marsick, 1999^[6]).

The evidence furthermore shows a positive relationship between the development of a school as a learning organisation and a range of staff outcomes like job satisfaction, self-efficacy, readiness for change and experimentation (Schechter, 2008^[7]; Silins, Mulford and Zarins, 2002^[8]; Schechter and Qadach, 2012^[9]; Erdem, İlğan and Uçar, 2014^[10]; Razali, Amira and Shobri, 2013^[11]).

Although this is an area for further research, some studies also show the SLO is positively associated with student outcomes (Caprara et al., 2006^[12]; Klassen and Chiu, 2010^[13]; Silins and Mulford, 2004^[14]). More elaborate is the research evidence on the underlying dimensions that make up a SLO and their relationship with student outcomes. For example, there is a growing body of evidence that shows that teachers' and school leaders' professional learning (which are central to a SLO) can have a positive impact on student performance and their practice (Timperley et al., 2007^[15]). Other studies have found evidence of a positive relationship between student outcomes and the development of a shared vision and directing teaching and learning in a school in line with this vision

(Leithwood and Day, 2007^[16]; Silins and Mulford, 2004^[14]), while other studies have shown how school leaders that focus on the development of the school culture can positively influence student outcomes (Leithwood and Day, 2007^[16]; Robinson, 2007^[17]). Kools and Stoll (2016^[18]) drew heavily from these and other (school effectiveness) studies when proposing their SLO model – that in turn informed the development of Wales’ SLO model.

Wales recognises it will require concerted effort to put the new curriculum into practice and in many cases the teachers, learning support workers (i.e. higher level teaching assistants, teaching assistants, foreign language assistants, special needs support staff), school leaders and many others involved will need to expand their skills (Donaldson, 2015^[3]; Welsh Government, 2017^[1]).

Previous OECD reviews and other reports have pointed to several challenges in this regard, including those relating to the capacity of teaching staff to conduct quality assessments and differentiated teaching approaches, as well as challenges in terms of the quality of some school leaders and leaders at other parts of the system (OECD, 2014^[19]; OECD, 2017^[20]; Estyn, 2018^[21]). As such, the development of a thriving learning culture in schools and other parts of the education system is expected to play a pivotal role in putting the curriculum into practice in schools throughout Wales. To this end, Wales has developed an SLO model for Wales (Box 2.1).

Co-constructing the schools as learning organisations model in Wales

The Welsh Government aims for all reforms and policies in education – from the classroom to the system level – to be geared towards supporting the realisation of the curriculum. “Policy coherence” and “co-construction” of policies are key phrases characterising the national approach to reform (Welsh Government, 2017^[1]). For example, guided by the four purposes of the new curriculum, the new teaching and leadership standards were developed by the education profession and other key stakeholders. The standards are aligned with Wales’ ambitions for the new school curriculum.

Box 2.1. The schools as learning organisations model for Wales

The SLO model for Wales focuses the efforts of school leaders, teachers, support staff, parents, (local) policy makers and all others involved into realising seven dimensions in its schools (see Figure 2.2). These seven action-oriented dimensions and their underlying elements highlight both what a school should aspire to and the processes it goes through as it transforms itself into a learning organisation. All seven dimensions need to be implemented for this transformation to be complete and sustainable.

Figure 2.2. The schools as learning organisations model for Wales



The realisation of the “four purposes” of the new school curriculum is placed at the heart of the model. These refer to developing children and young people into “ambitious capable and lifelong learners, enterprising and creative, informed citizens and healthy and confident individuals”.

Source: Welsh Government (2017_[21]), “Schools in Wales as learning organisations”, <https://beta.gov.wales/schools-learning-organisations>.

Wales’ SLO model has been designed through a similar process of co-construction and deliberate efforts to ensure policy coherence, with particular reference to the new teacher and leadership standards. The model has been developed by a specifically established Schools as Learning Organisations Pilot Group, which is part of the Professional Development and Learning Pioneer Schools Network (see Chapter 1, Box 1.2) that is supporting the development and implementation of the new school curriculum. Pilot group members consisted of representatives of 24 Pioneer Schools, the regional consortia, Estyn, the National Academy for Educational Leadership, the Education Directorate of

the Welsh Government and the OECD. Informed by the OECD Education Working Paper “What makes a school a learning organisation?” (Kools and Stoll, 2016^[18]), the developmental work was shaped through a series of workshops and meetings that were facilitated by the OECD between November 2016 and July 2017.

The result of this collective effort is the SLO model for Wales; a model intended to stimulate thinking and offer practical guidance on how school staff can individually and collectively learn together to transform their schools into a learning organisation (Welsh Government, 2017^[2]). The model offers an approach where schools can self-evaluate against seven dimensions as an integrated part of their self-evaluations and use the results to inform school development planning (see Chapter 4).

Schools as learning organisations in Wales: Overall assessment

To what extent do the characteristics of learning organisations already exist in schools in Wales?

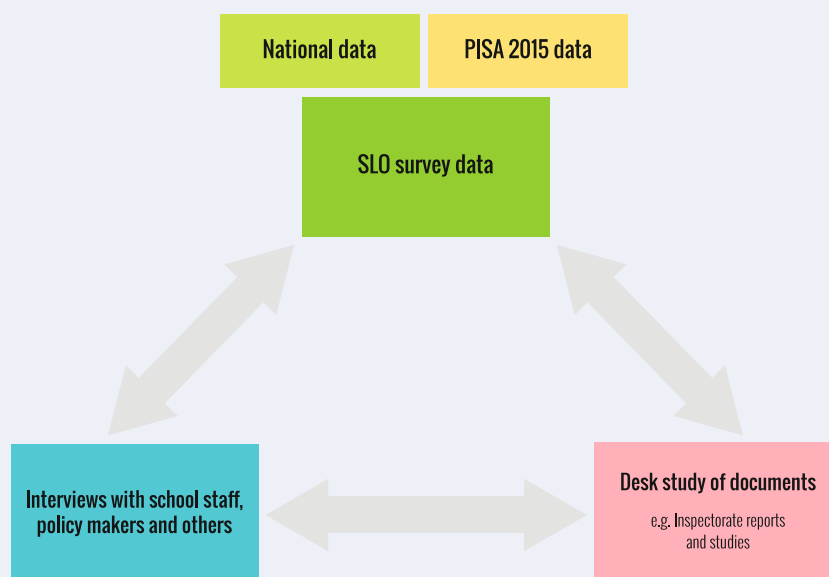
The starting point for getting an insight into the answer to this question was the SLO survey data – which were enriched and triangulated with multiple sources of data and information (see Box 2.2). The SLO survey data were analysed at both the individual level and school level (see Annex 2.A), with particular reference to the latter in this chapter. This is because the SLO is an organisational concept and ideally should be analysed to get an insight into the extent to which a school – in the eyes of its staff – has already put in practice the SLO dimensions. Annex 2.A explains how the responses by school leaders, teachers and learning support staff were aggregated and weighted to define an average school score for each of the SLO dimensions.

Following discussions with the SLO Pilot Group in Wales (see above), no threshold for the minimal number of dimensions was defined to be put in practice for a school to be considered a learning organisation. For the purpose of discussing the SLO survey data and getting an insight into the question raised above, however, the OECD team found it necessary to define a threshold for when a school could be considered to have put a SLO dimension into practice. The discussions with the SLO Pilot Group resulted in a threshold of an average school score of 4 or more across the survey items that make up the dimension (see Box 2.2 and Annex 2.B). In other words, school staff on average had to “agree” or “strongly agree” that their school has put in practice the SLO dimension.

Whether school-level or individual-level data are used is explained in the text and the notes below the figures also make this explicit.

Box 2.2. How was the Schools as Learning Organisation Assessment conducted?

To examine the question to what extent schools in Wales have realised the key characteristics of learning organisations, the team used various quantitative and qualitative data sources, allowing the analysis to be deepened and to triangulate the findings (see Figure 2.3).

Figure 2.3. Main sources of data and information

Eight schools across Wales were visited by the OECD team in June and July 2017. More than 80 school leaders, teachers and learning support workers were interviewed through semi-structured interviews, and the OECD team were able to speak to a large number of students. Two schools were visited in each of the four regions of Wales; one primary school and one secondary school in each. Other selection criteria concerned the variance in school performance, meaning a range of “stronger” and “weaker” performing schools according to Estyn inspections or the national school categorisation system (see Chapter 1).

In addition, the Schools as Learning Organisations Survey (see Annex 2.B) was used to collect the views of school leaders, teachers and teaching support staff on a number of statements that correspond to Wales’ SLO model. The SLO survey items were phrased as statements, and asked school staff to reflect on the situation in their school in the 12 months prior to the survey, using a five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. In addition, an open question gave respondents the option to highlight anything they considered important for the OECD team to know.

Staff from a random sample of 571 schools (38% of primary, middle and secondary schools in Wales in 2017) were asked to complete the online SLO survey. A total of 1 703 school staff – 194 head teachers, 87 deputy head teachers, 55 assistant head teachers, 811 teachers and 382 learning support workers – from 178 different schools throughout Wales did so, thereby providing valuable insights on the extent to which their

schools have put the dimensions of a learning organisation into practice, and the challenges and opportunities they faced in this.

Furthermore, the team linked administrative data available on the My Local School website (<http://mylocalschool.wales.gov.uk/?lang=cy>) to the SLO survey data to deepen and extend the analysis, including by exploring some of the factors believed to influence schools developing as learning organisations (e.g. school size and school type).

In addition, the analysis was enriched with interviews with school staff, policy makers and other stakeholders the OECD team spoke to during several visits to Wales, a desk research of documents and data, such as Estyn reports and studies, and data from OECD's Programme for International Student Assessment (PISA) 2015, which allowed for triangulation of research findings.

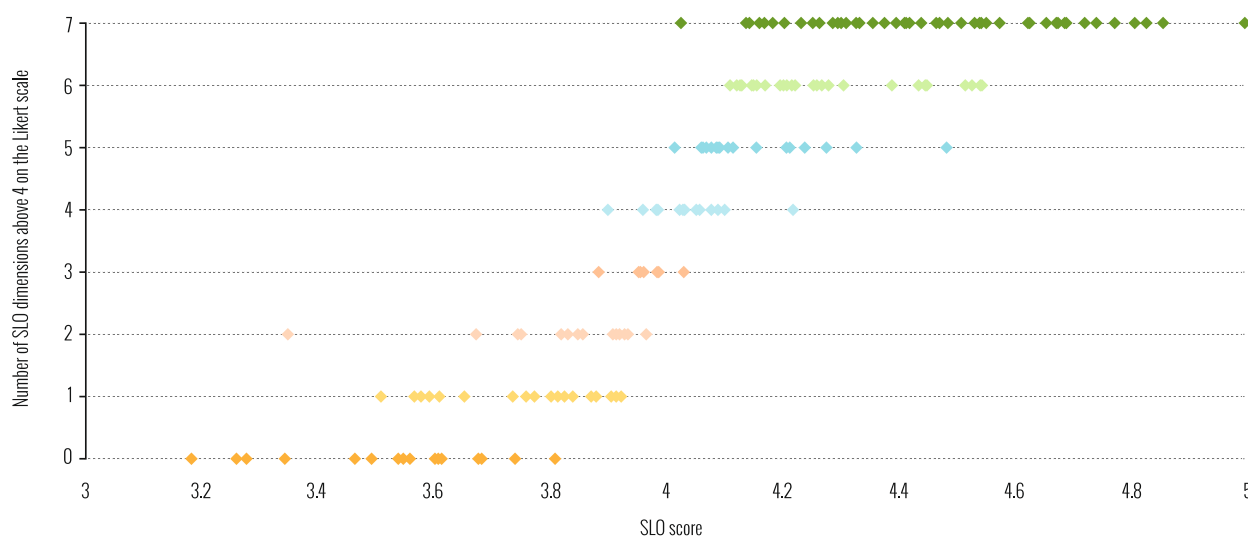
The preliminary findings of the Schools as Learning Organisations Assessment (Chapters 2 to 3) were also discussed with a large number of stakeholders during two meetings in Wales, allowing for their validation and further refinement where needed.

Overview of progress of schools developing into learning organisations

The data presented in Figure 2.4 suggest that three out of every ten schools in the sample (30%) had put all of the seven dimensions of a learning organisation into practice – according to the staff working in them. The data furthermore show that three out of ten schools in the sample (28%) had put five or six SLO dimensions into practice – which suggests they are well on their way towards developing into learning organisations.

Figure 2.4 however also shows that more than four out of ten schools in the sample (42%) seem to need to make greater efforts if they are to develop into learning organisations; 12% of schools had put three or four dimensions in practice, while 30% of schools had realised only two or fewer. Some 10% of schools in the sample seem to have made insufficient progress in developing any of the seven dimensions.

The next section considers how schools in Wales match up against each of the seven SLO dimensions. The SLO survey is used as a starting point of the analysis and as such is based on self-perceptions which can bias the analysis. Acknowledging this risk we made use of multiple sources of data and information to deepen and triangulate the analysis. The analysis aims to help identify relative strengths of schools and areas for improvement.

Figure 2.4. Schools in Wales developing as learning organisations

Note: Data are analysed at the school level. The SLO survey items were generated in the form of five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral 4) agree; and 5) strongly agree. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. N: 174 schools. Four schools of the 178 were not taken into consideration as their staff had not completed the survey for all seven dimensions. Each point represents a school.

Source: OECD Schools as Learning Organisations Survey, 2017.

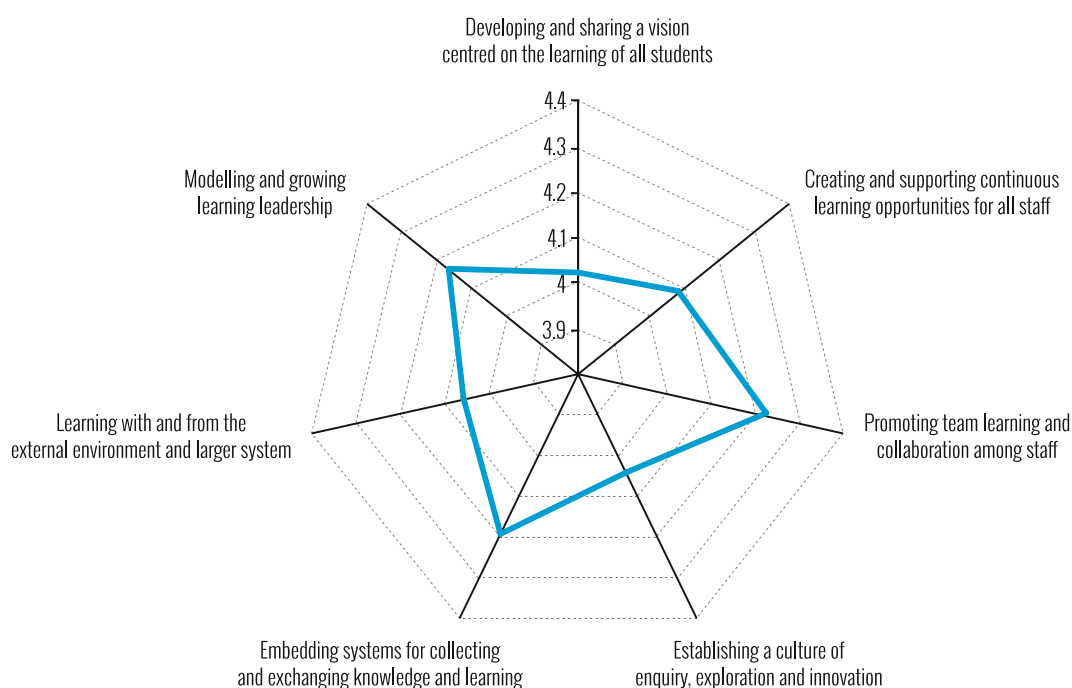
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An assessment against each of the SLO dimensions

The data from the sample of schools presented in Figure 2.5 suggest that on average, schools scored well on all dimensions, with average scores above 4 (see Box 2.2). When analysed at the school level, the data suggest that two SLO dimensions were less developed: “developing and sharing a vision centred on the learning of all students” (average score of 4.02) and “establishing a culture of enquiry, innovation and exploration” (average score of 4.04). The data suggest that many schools could also do more to “learn with and from the external environment and larger system” (average score of 4.06).

The strongest dimensions were “promoting team learning and collaboration among staff” (4.23) and “embedding systems for collecting and exchanging knowledge and learning” (4.20) in schools in Wales on average.

While the average scores on the SLO dimensions were arguably quite high – something that will be discussed further in the report – there was significant variance between and within the SLO dimensions. For example, for the dimension “modelling and growing learning leadership” there was a significant difference between the highest scoring school (5.00) and lowest (1.75) (standard deviation of 0.47).

Figure 2.5. Average score per SLO dimension

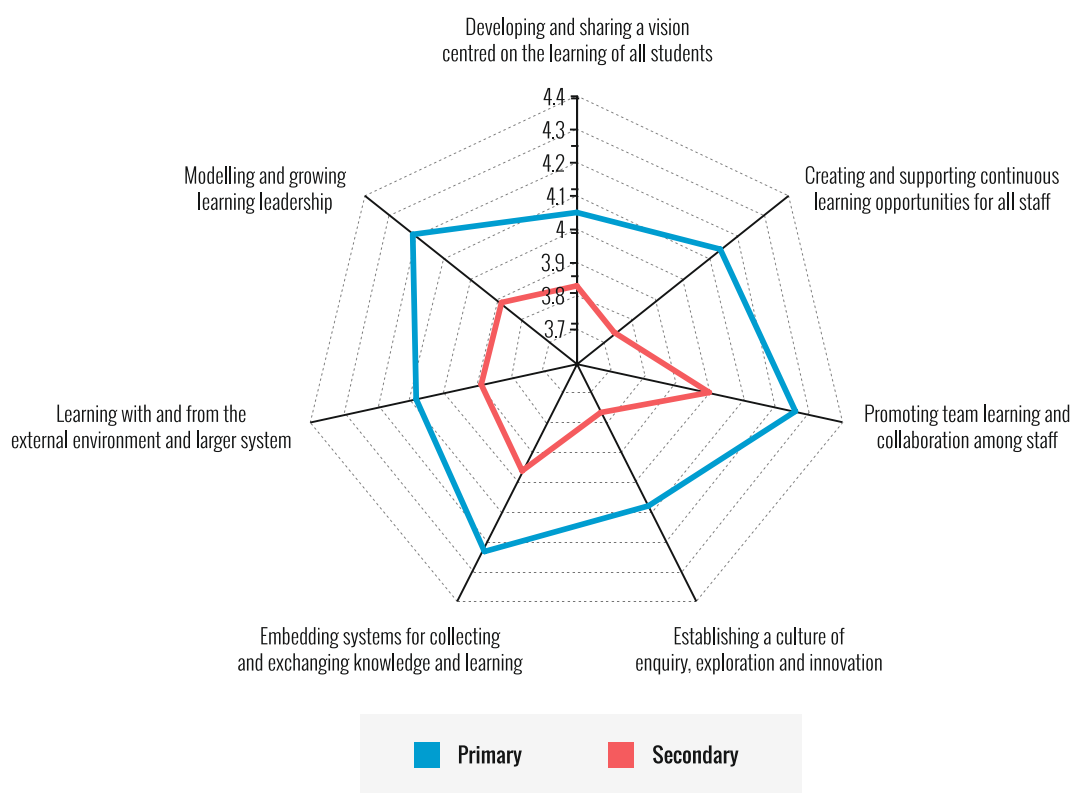
Note: Data are analysed at the school level. The SLO survey items were generated in the form of a five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral; 4) agree; and 5) strongly agree. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. N: 174 schools.

Source: OECD Schools as Learning Organisations Survey, 2017.

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There were also clear differences between primary and secondary schools, shown in Figure 2.6. While these were relatively small for the dimension “learning with and from the external environment and larger system”, they were more substantial for the dimensions “promoting and supporting continuous professional learning for all staff” and “establishing a culture of enquiry, exploration and innovation”. These differences are examined in detail in the following section.

A more detailed analysis of the SLO survey data, in combination with other sources of data and information collected as part of this assessment (see also Chapter 3), confirms these findings and points to the conclusion that on average primary schools are faring better than secondary schools in the extent they have put in practice the dimensions that make a school into a learning organisation in Wales (Welsh Government, 2017_[2]).

Figure 2.6. Average score per SLO dimension, by school type

Note: Data are analysed at the school level. The SLO survey items were generated in the form of a five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral; 4) agree; and 5) strongly agree. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. N is 151 for primary schools and 23 for secondary schools so 15% of schools in the sample are secondary schools. This is slightly above the national share (13%).

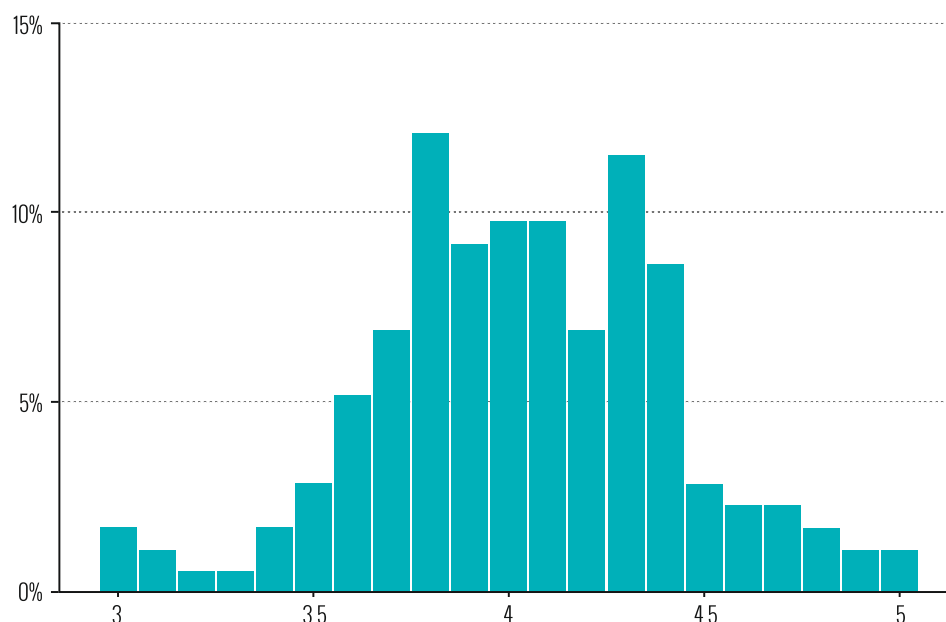
Source: OECD Schools as Learning Organisations Survey, 2017.

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Developing and sharing a vision centred on the learning of all students

According to the literature, a school that is a learning organisation has a shared and inclusive vision that gives it a sense of direction and serves as a motivating force for sustained action to achieve student and school goals (Schlechty, 2009^[22]; Silins, Zarins and Mulford, 2002^[5]). The evidence collected through the SLO survey, school visits and other sources suggests that the majority of schools in Wales have developed an inclusive and shared vision. This is evident from the average school score of 4.02 on this dimension (see Figure 2.7). Over half the schools in the sample (53%) had an average score of 4 or more on this dimension. In other words, the staff in these schools, on average, agreed or strongly agreed that their school had developed and shared a vision centred on the learning of all students.

Figure 2.7. Average school scores on developing and sharing a vision centred on the learning of all students



Note: Data are analysed at the school level. The SLO survey items were generated in the form of a five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral; 4) agree; and 5) strongly agree. N: 174 schools. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. The y-axis shows the percentage of schools in the sample that had an average score on the five-point scale. For example, 9% of schools in the sample had an average school between ≥ 4.0 and < 4.1 on this dimension.

Source: OECD Schools as Learning Organisations Survey, 2017.

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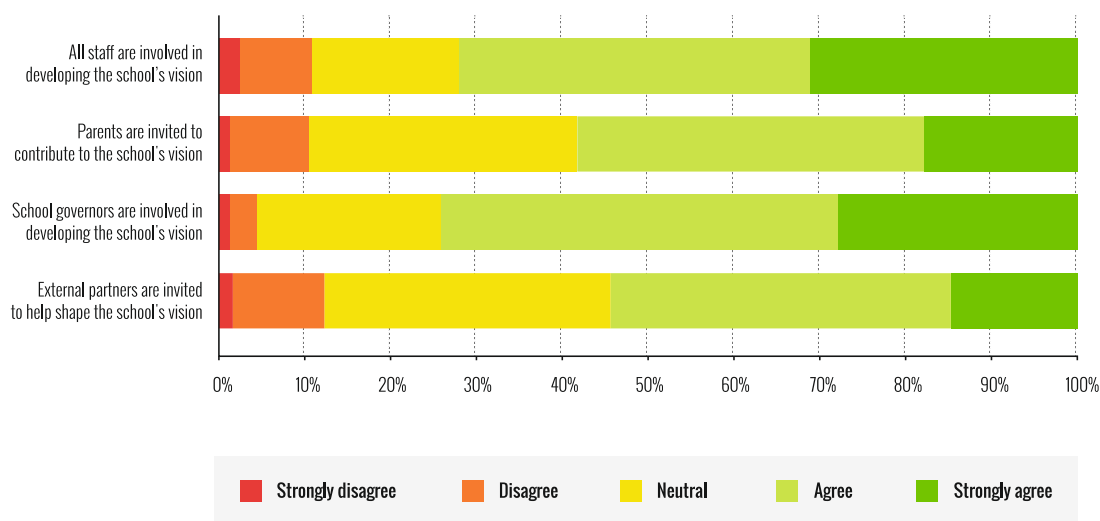
Nonetheless, the evidence suggests that for a sizable proportion of schools in Wales this dimension offers scope for further action. For example, 29% of the sample of schools (i.e. 50 schools) had an average score of below 3.8. About 9% of schools (15 schools) scored below 3.5 and two even had an average score below 3, indicating this is a particular area for further development for these schools.

The evidence points to significant differences on this dimension between the levels of education. While 56% of primary schools in the sample would seem to have developed a shared vision centred on the learning of all students (average score of 4 or higher on this dimension), only 30% of secondary schools had.

A closer look at the elements that make up this dimension through an exploration of the individual SLO survey items (see also Chapter 3) revealed that nine out of ten school staff (92%) reported that their school has a vision that focuses on students' cognitive and socio-emotional outcomes, including their well-being. Also, almost as many school staff (89%) responded that the school's vision emphasises preparing students for their future in a changing world. These are encouraging findings, considering that the direction set out in the new curriculum reflects a holistic understanding of what learning in the 21st century entails (Donaldson, 2015_[3]).

Nonetheless the evidence suggests that many schools in Wales have yet to put this vision into practice when considering the equity challenges they face. Schools in Wales are faced with relatively high levels of child poverty and a high proportion of low performers in PISA 2015 (OECD, 2016^[23]). The PISA 2015 results also pointed to some areas of student well-being where further progress could be made, for example concerning students' schoolwork-related anxiety and sense of belonging in school (OECD, 2017^[24]). Chapters 3 and 4 elaborate on this important issue.

Figure 2.8. Involvement in shaping the school's vision



Note: Data are analysed at the individual level. N: 1 699, 1 697, 1 692 and 1 692 individuals respectively for the presented survey statements. School governors are elected members of a school governing board that has a central role in decisions about budgets and recruitment of the school. Members consist of teaching staff, parents, councillors and community representatives.

Source: OECD Schools as Learning Organisations Survey, 2017.

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Further work would also seem needed to make the school's vision into one that is shared among its staff and other key stakeholders. The involvement of staff, parents and external partners in the shaping of the vision are areas for improvement (see Figure 2.8), in particular for secondary schools. For example, while 77% of primary school staff indicated they were involved in the development of the school's vision, among secondary school staff this was 57%.

Also, as is common in other countries, secondary schools in Wales seemingly find it more challenging to engage parents in the educational process and school organisation than primary schools (Borgonovi and Montt, 2012^[25]; Byrne and Smyth, 2010^[26]; Desforges and Abouchaar, 2003^[27]). This issue is discussed further below.

Creating and supporting continuous learning opportunities for all staff

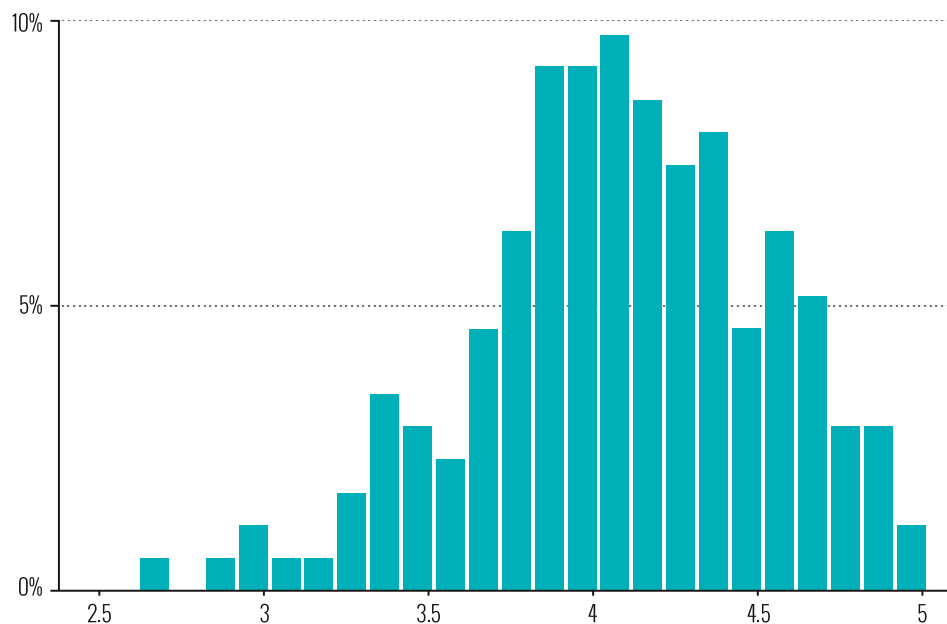
The kind of education needed today requires teachers who constantly advance their own professional knowledge and that of their profession. Scholars, educators and policy makers around the world increasingly support the notion of investing in quality, career-long opportunities for professional development and ensuring ongoing, active practice-

based professional learning (Schleicher, 2018^[28]; Timperley et al., 2007^[15]). For it to be effective it should incorporate most if not all of the following elements: it has to be content focused, incorporate active learning, support collaboration, use models of effective practice, coaching and expert support, feedback and reflection, and has to be of sustained duration (Darling-Hammond, Hyler and Gardner, 2017^[29]).

A school which is a learning organisation therefore creates continuous learning opportunities for teachers but also all other staff to enhance their professional learning and growth (Welsh Government, 2017^[2]; Thompson et al., 2004^[30]).

The evidence suggests that many schools in Wales have, or are in the process of developing, a culture that promotes professional learning for their staff (see Figure 2.9). Six out of ten schools in the sample (59%) would seem to have created and supported continuous learning opportunities for all staff (as reflected by an average score of 4 or more on this dimension).

Figure 2.9. Average school scores on creating and supporting continuous learning opportunities for all staff



Note: Data are analysed at the school level. The SLO survey items were generated in the form of a five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral; 4) agree; and 5) strongly agree. N: 174 schools. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. The y-axis shows the percentage of schools in the sample that had an average score on the five-point scale. For example, 9% of schools in the sample had an average school between ≥ 4.0 and < 4.1 on this dimension.

Source: OECD Schools as Learning Organisations Survey, 2017.

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The school-level data however revealed significant differences between the levels of education. From the sample almost two-thirds of primary schools (64%) had an average score of 4 or more. Among secondary schools this was around a quarter (26%). Furthermore, 23% of schools in the sample (i.e. 40 schools) had an average below 3.8.

Various sources of data and information show that induction and mentoring/coaching need to be strengthened in many schools across Wales. For example, 35% of respondents to the SLO survey disagreed or were unsure whether there were mentors or coaches available in their school to help staff develop their practice (see Table 2.1). The evidence again points to more challenges at the secondary level; 18% of secondary school staff indicated that mentoring and coaching support was not available for all staff, compared to 12% in primary schools. The OECD team's interviews with various stakeholders corroborated these findings. As Wales has embarked on a curriculum reform, teachers and learning support workers will need to expand their pedagogical and assessment skills. This puts greater emphasis on mentoring, coaching and other forms of continuous learning.

Table 2.1. Induction and mentoring and coaching support

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
All new staff receive sufficient support to help them in their new role	2.3%	7.8%	19.6%	44.5%	25.8%
Mentors/coaches are available to help staff develop their practice	2.5%	10.8%	22.1%	42.7%	22.0%

Note: Data are analysed at the individual level. N: 1 633 and 1 634 individuals respectively for the presented survey statements.

Source: OECD Schools as Learning Organisations Survey, 2017.

The SLO survey data revealed significant differences between staff depending on their position (i.e. staff category), and between primary and secondary schools (see Chapter 3). For example, about 81% of respondents in primary schools positively responded to the statement that “professional learning of staff is considered a high priority” in their school. This was 10% lower in secondary schools.

Promoting team learning and collaboration among all staff

Team learning and collaboration are central to a school that is a learning organisation and to the development of its staff (Silins, Zarins and Mulford, 2002^[5]; Schlechty, 2009^[22]; Senge et al., 2012^[4]). In order to ensure that teachers and other school staff feel comfortable in turning to each other for advice and engaging in team learning and working, schools need to create an enabling environment that is characterised by mutual trust and respect (Cerna, 2014^[31]).

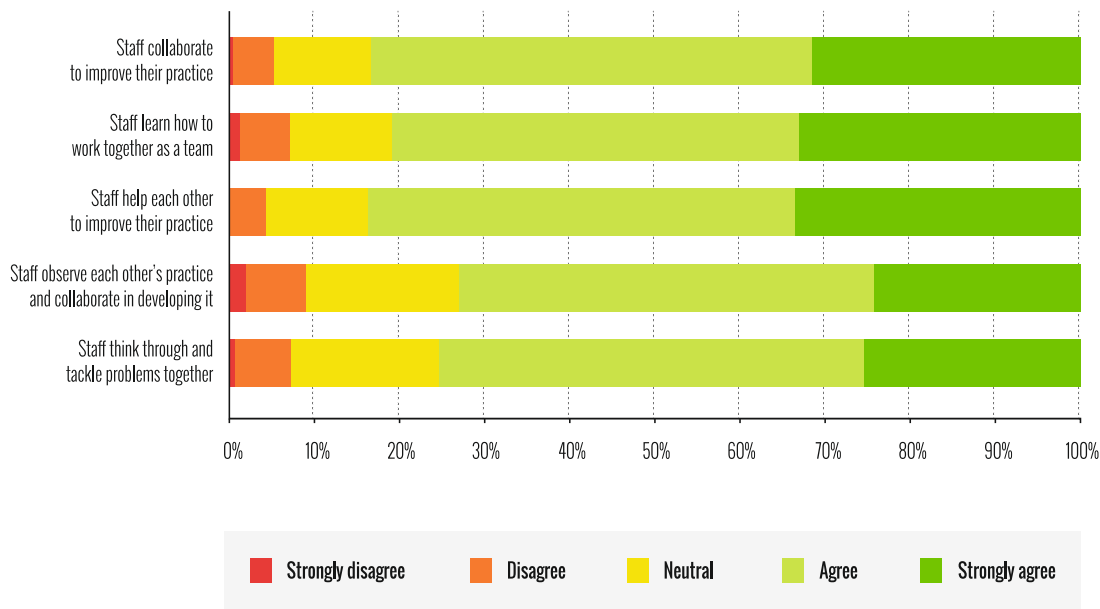
The evidence suggests that the majority of schools are promoting team learning and collaboration among all their staff. The SLO survey data suggest that some 71% of schools in the sample were promoting team learning and collaboration among all their staff (i.e. a score of at least 4), while in only a small proportion of schools was such practice less developed; 25 schools (14%) had an average score below 3.8, with one having an average score of 3.1. At the other side of the spectrum, more than half the schools (52%) had an average score of 4.2 or more.

The data suggest primary schools are also faring better in relation to this dimension; about 75% of primary schools appeared to promote team learning and collaboration among all staff (average score of 4 or more), compared with 48% of secondary schools.

This assessment points to specific areas for further improvement that apply to both primary and secondary schools (although in varying degrees). Schools could do more to

ensure that staff learn to work together as a team, more regularly observe each other and tackle problems together. For example, 25% of staff disagreed or responded neutrally to the SLO survey statement “staff observe each other’s practice and collaborate in developing it”. Similarly, 20% of staff were neutral or disagreed with the statement “staff think through and tackle problems together” (Figure 2.10). Such practices will be essential given the ongoing curriculum reform, which, as mentioned, will partially depend on staff engaging in trial and error learning and tackling problems together if it is to succeed. For both statements, teachers were the most critical in their responses.

Figure 2.10. Collaborative learning and working



Note: Data analysed at the individual level. N: 1 627, 1 625, 1 621, 1 624 and 1 625 individuals respectively for the presented survey statements.

Source: OECD Schools as Learning Organisations Survey, 2017.

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There were differences in perceptions across staff categories on several of the elements that make up this dimension. For example, in PISA 2015 about 92% of head teachers in secondary schools in Wales reported that teacher peer review (of lesson plans, assessment instruments, lessons) was used to monitor the practice of teachers, compared to an OECD average of 78% (OECD, 2016_[32]). This data needs to be interpreted with some caution, as the evidence from the assessment suggests that teachers and learning support workers in Wales do not always share the views of their head teachers. For example, while 92% of secondary head teachers positively responded to the SLO survey statement “staff observe each other’s practice and collaborate in developing it” in their schools, only 67% of teachers responded in a similar vein.

Although there are bound to be some differences in perceptions between staff categories, as some staff may simply be better informed due to the nature of their work, the sometimes sizable differences reported on this dimension (and others) suggest the need for more professional dialogue and sharing of information. This was found again particularly an area for improvement in secondary schools.

Furthermore, in both this and the previous SLO dimension (“creating and supporting continuous learning opportunities for all staff”), this assessment’s evidence suggests schools in Wales do not have equal access to time and resources to support their staff in their professional learning. Several interviewees raised the issue of differences in local funding models causing inequalities for both students and school staff across the 22 local authorities. This issue will be further discussed in Chapter 4, as policy action would seem needed.

It is however important to note that many of the steps needed to ensure staff have the time and resources to engage in continuous learning and collaborative working and team learning are within the control of schools. Chapter 3 presents several examples from Wales and internationally which provide testament to this.

Establishing a culture of enquiry, exploration and innovation

One of the marks of any professional is his or her ability to reflect critically on both their profession and their daily work, to be continuously engaged in self-improvement. To be able to do this within an organisation requires a pervasive spirit of enquiry, initiative and willingness to experiment with new ideas and practices (Watkins and Marsick, 1996^[33]). This mindset is critical if schools are to develop as learning organisations.

The OECD team were struck by a general change in attitudes since the OECD 2014 review. At that time, the team found an education profession that seemed less open and willing to change and innovate their practice, with some school staff reporting signs of reform fatigue (OECD, 2014^[19]). The many interviews by the OECD team with school staff, policy makers and other stakeholders suggest this situation has changed considerably. However, the OECD team found that this general change in mindset is yet to have resulted in a culture of enquiry, innovation and exploration in a significant proportion of schools in Wales. Four out of ten schools from the sample (41%) do not seem to have established such a culture yet (i.e. an average score of 4 or higher on this dimension). Some 31% of schools in the sample had an average score of below 3.8 on this dimension, with one school scoring as low as 2.71.

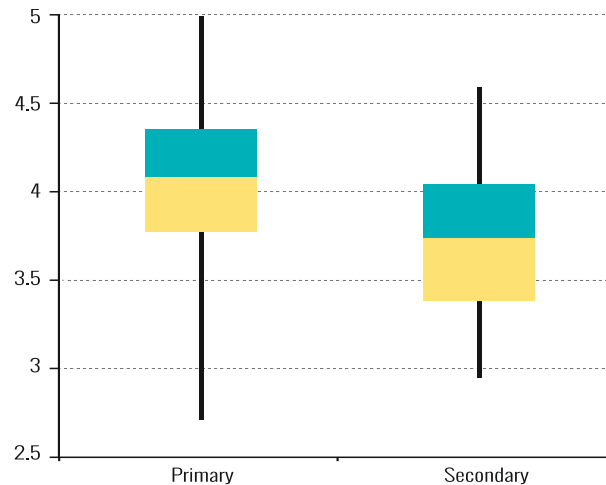
These findings may partially be explained by the high-stakes assessment, evaluation and accountability arrangements that are believed to have tempered people’s willingness and confidence to do things differently and innovate their practice. This would seem particularly the case for secondary schools – the SLO survey data found about 26% of secondary schools in the sample had established a culture of enquiry, exploration and innovation, compared to 63% of primary schools (see Figure 2.11). Other data sources corroborate this pattern.

Despite recent steps to move towards a new assessment, evaluation and accountability framework, school staff expressed uncertainties about what this framework will actually look like. As discussed in Chapter 4, greater clarity is thus urgently needed to give all schools the confidence to engage in enquiry, innovation and exploration of the new curriculum.

Exploring the individual-level responses to the SLO survey data revealed some significant differences across the four regions of Wales for several of the statements that make up this dimension, but also across the staff categories and levels of education (see Chapter 3). For example, while 96% of head teachers indicated that in their school staff were encouraged to experiment and innovate their practice, this proportion dropped to 82% among learning support workers. Interestingly this is one of the few SLO survey

items for which learning support workers reported the lowest score of the different staff categories.

Figure 2.11. Average school scores on establishing a culture of enquiry, exploration and innovation, by school type



Note: The SLO survey items were generated in the form of five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral 4) agree; and 5) strongly agree. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. The box plots show the average school scores sorted into four equal sized groups, so 25% of all scores are placed in each group. The middle “box”, in green and yellow, represents the middle 50% of scores for the group. The median marks the mid-point of the data and is shown by the line that divides the box into two parts, in green and yellow.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837359>

Embedding systems for collecting and exchanging knowledge and learning

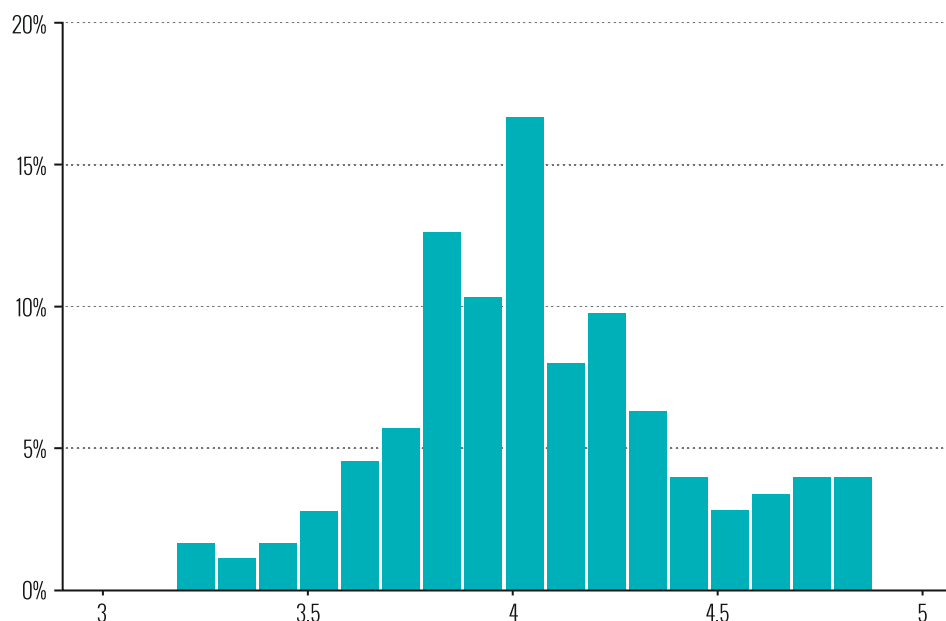
SLOs develop processes, strategies and structures that allow them to learn and react effectively in uncertain and dynamic environments. They institutionalise learning mechanisms in order to revise existing knowledge. Without these a learning organisation cannot thrive (Watkins and Marsick, 1996^[33]; Schechter and Qadach, 2012^[9]). Effective use of data by teachers, school leaders and support staff has become central to school improvement in countries around the globe (OECD, 2013^[34]), and this includes Wales.

The evidence suggests that schools throughout Wales and the system at large are “data-rich”. The interviews with stakeholders and findings from an earlier OECD assessment (2017^[20]) suggest that schools seem to have well-established systems for measuring progress. These findings were corroborated by the SLO survey data which showed that about 70% of schools had embedded systems for collecting and exchanging knowledge and learning (i.e. a score of at least 4). About 12% of schools in the sample had an average score below 3.8 (Figure 2.12).

Again, there were significant differences between primary and secondary schools (the largest among all dimensions): 76% of primary schools and 30% of secondary schools in

the sample seemed to have embedded such systems for collecting and exchanging knowledge and learning.

Figure 2.12. Average school scores on embedding systems for collecting and exchanging knowledge and learning

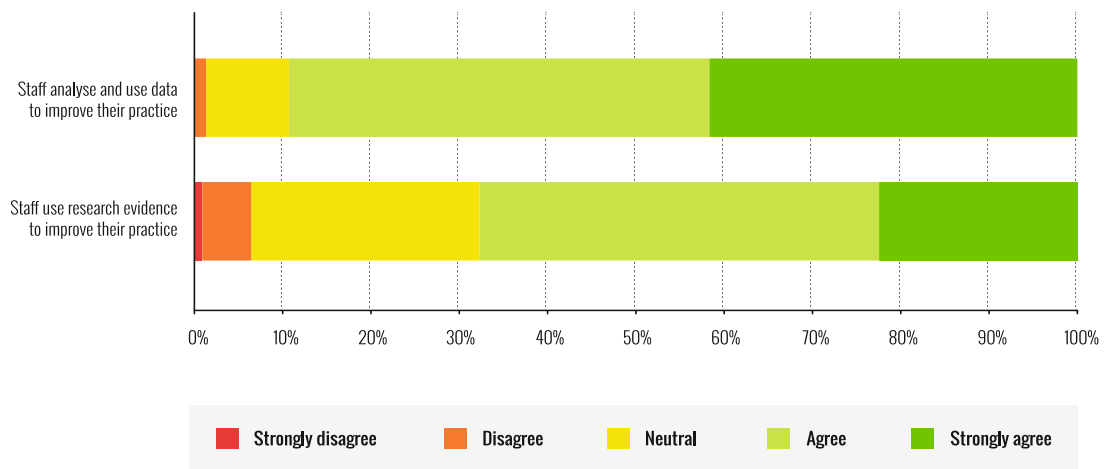


Note: Data are analysed at the school level. The SLO survey items were generated in the form of a five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral; 4) agree; and 5) strongly agree. N: 174 schools. An average school score of 4 or more across the survey items that make up one dimension was defined as the threshold for when a school is considered to have put the dimension into practice. The y-axis shows the percentage of schools in the sample that had an average score on the five-point scale. For example, 9% of schools in the sample had an average school between ≥ 4.0 and < 4.1 on this dimension.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837378>

In addition, a closer look at the data from the individual SLO survey items that make up this dimensions points towards an issue in the use of research by school staff. While the use of data was common in many schools across Wales, the proportion of schools using research evidence to inform their practice was considerably lower (see Figure 2.13). The school staff and other education stakeholders the OECD team interviewed recognised this as an area for improvement. The OECD team identified several recent measures taken at various levels of the system in response to this finding (see Chapters 3 and 4).

Figure 2.13. Staff use of data and research evidence to improve their practice

Note: Data analysed at the individual level. N: 1 604 and 1 595 individuals respectively for the presented survey statements.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837397>

Furthermore, although the vast majority of school staff agreed that development planning in their schools was informed by learning from continuous self-assessments (91%), the interviews by the OECD team found that the quality of school self-evaluations and development planning is an area for improvement for many schools in Wales. This finding was corroborated by Estyn’s 2016/17 annual report (2018_[21]) that noted that in one-third of primary schools and half of secondary schools, leaders did not make sure that self-evaluation and school improvement planning were ongoing processes, focused on improving teaching and learning. The report highlighted an over-reliance on data analyses at the expense of gathering first-hand evidence by listening to learners and scrutinising their work.

These findings resonated with the perception of the OECD team that schools in Wales – as well as other parts of the system – generally spend considerable time and effort on analysing and reporting upward on a wide variety of mostly quantitative data, which seems to negatively affect the desired focus on maintaining a rhythm of continuous improvement in schools. Part of the challenge seems to lie in the fact that there is no common understanding of what good self-evaluation and development planning actually entails for schools in Wales. This issue will be further discussed in Chapter 4.

Learning with and from the external environment and larger learning system

Schools do not operate in a vacuum; they are “open systems” that are sensitive to their external environment, including social, political and economic conditions. They forge partnerships with networks of students, teachers, parents and members of their local communities to complement and enrich their own capacity (OECD, 2013_[35]; Kools and Stoll, 2016_[18]).

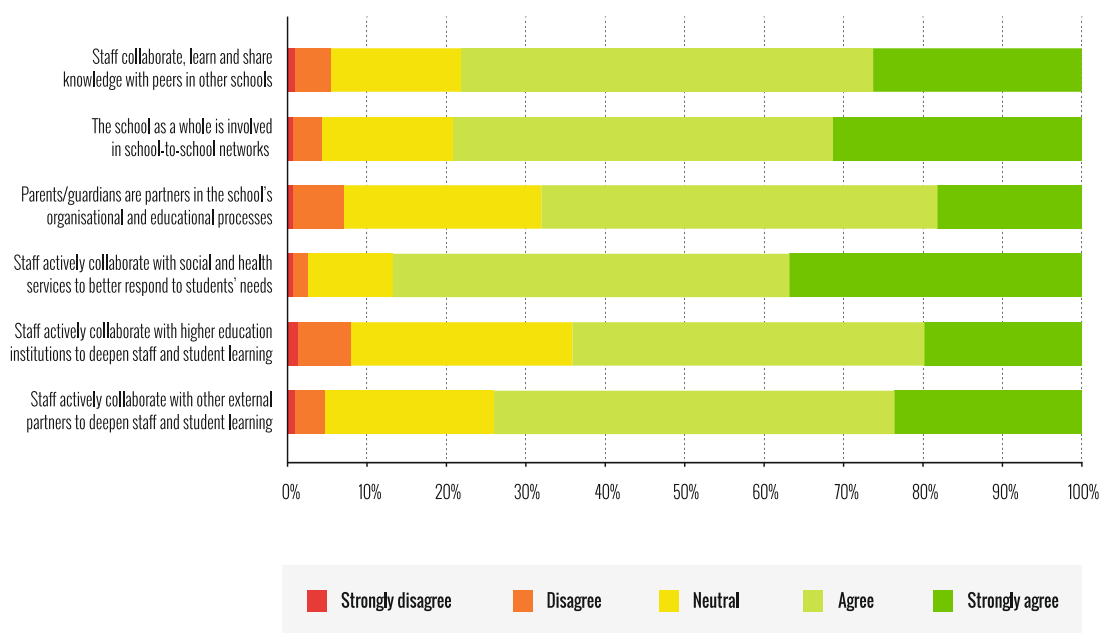
As the previous OECD assessment (2017_[20]) also found, learning with and from other schools and external partners has become common practice in many schools in Wales.

The SLO survey data showed that over half of schools in the sample (55%) were learning with and from their external environment and larger learning system (i.e. had an average score of at least 4 or more on this dimension). About one-third (35%) had an average score of 4.2 or more. At the other end of the spectrum, 22% of schools scored below 3.8, with one having an average score of 2.80.

Differences between primary and secondary schools were relatively small for this dimension (the smallest among all dimensions) – with 57% of primary and 39% of secondary schools having an average score of at least 4.

A closer look at the data reveals some areas of improvement for this dimension, such as engaging parents and guardians in the educational process and organisation of the school (see Figure 2.14). This is a particular challenge for secondary schools: 57% of secondary school staff responded positively to the SLO survey statement “parents/guardians are partners in the school’s organisational and educational processes”, compared to 71% of staff in primary schools (see Chapter 3).

Figure 2.14. Collaboration with external partners



Note: Data analysed at the individual level. N: 1 593, 1 597, 1 592, 1 589, 1 593 and 1 592 individuals respectively for the presented survey statements.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837416>

There were also differences in responses between staff categories, with teachers consistently being the most critical. PISA 2015 provides further information on this issue (OECD, 2017_[24]). It found that secondary head teachers in Wales in 2015 almost unanimously reported that their school created a welcoming atmosphere for parents to get involved (99%) and provided information and ideas for families about how to help students at home with homework and other curriculum-related activities, decisions, and planning (98.1%). A further eight out of ten (79.3%) secondary head teachers reported

that their school included parents in decision making (OECD average: 78.4%). The SLO survey data and interviews provide a more critical perspective on the engagement of parents in schools' organisational and educational processes. The OECD team recognise it may be more challenging to engage parents of secondary students in the school organisation and education process, than at the primary level – a finding that is also commonly reported in other countries. However, examples from Wales presented in this report and internationally show that it is possible to increase parental engagement in the school and the learning of their children – even at secondary level (see Chapter 3).

Furthermore, the fact that about one-third of school staff responded neutrally or did not agree with the statement that in their school “staff actively collaborate with higher education institutions to deepen staff and student learning” suggests this is another area for improvement for many schools – as well as higher education institutions – in Wales. The interviews revealed that stakeholders across the system were aware of this challenge and were taking measures to improve the situation. This issue will be further discussed in Chapter 4.

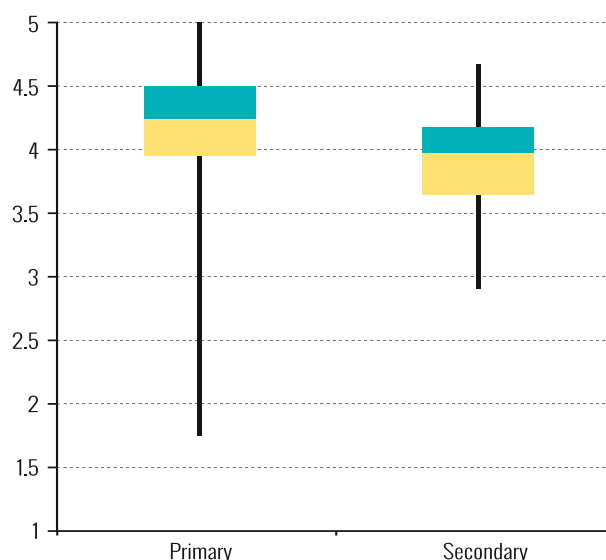
The SLO survey data furthermore showed that close to nine out of ten respondents (87%) indicated that in their school “staff actively collaborate with social and health services to better respond to students' needs” – 88% in primary schools and 80% in secondary schools. Interviews with various stakeholders however suggest Wales' school funding and governance model provides challenges to schools' ability to respond to the additional learning needs of all students. This issue will also be further explored in Chapters 4 and 5.

Modelling and growing learning leadership

Leadership is the essential ingredient that binds all the separate parts of the learning organisation together. Leadership should set the direction, take responsibility for putting learning at the centre and keeping it there, and use it strategically so that the school's actions are consistent with its vision, goals and values (OECD, 2013^[34]; Fullan, 2014^[36]; Marsick and Watkins, 1999^[37]; Schleicher, 2018^[28]).

The SLO survey data suggested that two-thirds of schools in the sample (67%) had leaders that were modelling and growing learning leadership. Less than one-fifth of schools (18%) in the sample had an average score below 3.8. At the other end of the spectrum, almost half the schools in the sample (47%) had an average score of 4.2 or more.

Figure 2.15 shows that primary schools also appeared to be doing better on this dimension. The SLO survey data point to several other areas for improvement. These include the need for leaders to enhance their coaching of those they lead and the creation of settings in which trust can develop over time so that colleagues are more likely to engage in mutual learning. For example, 38% of teachers were unsure or did not share the view that in their schools “leaders coach those they lead” (see Figure 2.16). Indeed, across all the items that make up this dimension, school leaders had a significantly more positive view than other staff of their learning leadership, with the difference between the more positive leadership group and teachers rising to as much as 20-25% in some cases.

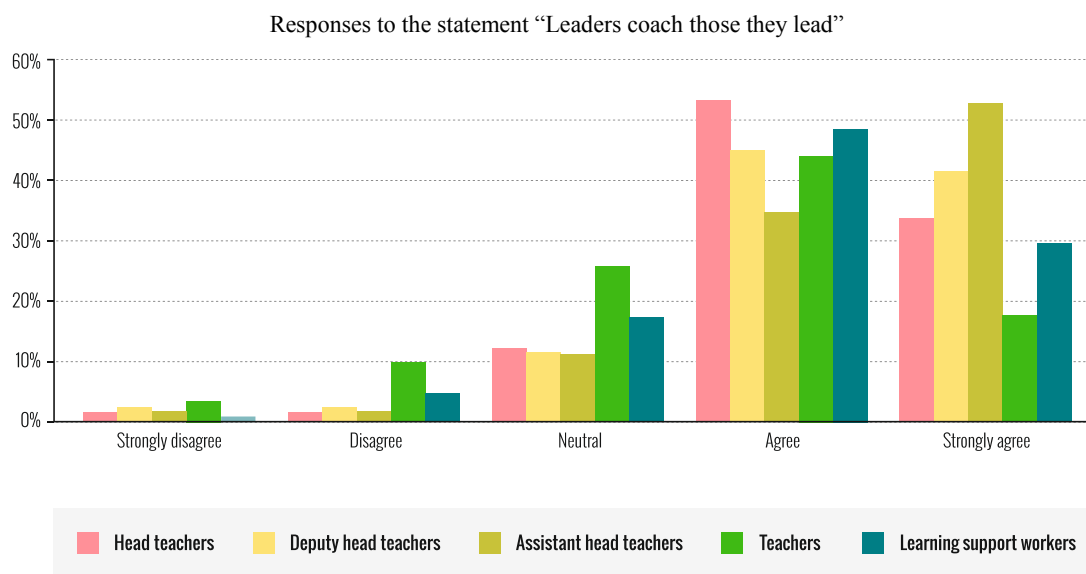
Figure 2.15. School scores on modelling and growing learning leadership, by school type

Note: The SLO survey items were generated in the form of five-point Likert scale: 1) strongly disagree; 2) disagree; 3) neutral 4) agree; and 5) strongly agree. The box plots show the average school scores sorted into four equal sized groups, so 25% of all scores are placed in each group. The middle “box”, in green and yellow, represents the middle 50% of scores for the group. The median marks the mid-point of the data and is shown by the line that divides the box into two parts, in green and yellow.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837435>

Furthermore, for the SLO survey statement “leaders ensure that all actions are consistent with the school’s vision, goals and values”, 13% of primary school staff and 16% of secondary school staff responded negatively or neutrally which may suggest they don’t know for sure. For both levels of education teachers were the most critical with 19% of primary teachers and 27% of secondary teachers responding in a similar vein. PISA 2015 offers an international perspective on this issue. It found that 39% of secondary school head teachers in Wales reported they ensured that teachers work according to the school’s educational goals more than once a month, compared to an OECD average of 53% (OECD, 2016^[32]). This suggests that secondary head teachers in Wales could place greater emphasis on ensuring their schools’ actions respond to their vision and goals, and communicating these efforts better with their staff.

Figure 2.16. Coaching by leaders, by staff category

Note: Data analysed at the individual level. N: 1 570 individuals.

Source: OECD Schools as Learning Organisations Survey, 2017.

StatLink  <http://dx.doi.org/10.1787/888933837454>

Furthermore, school leaders should not underestimate the pivotal role they will need to play in leading and supporting teachers and learning support workers in putting the curriculum into practice. This is bound to stretch people’s skills sets and take them out of their comfort zones – and this includes school leaders themselves. These changes may encounter resistance if this process isn’t carefully managed and facilitated.

The generally high scores on this dimension are contrasted by other data sources such as OECD team interviews and Estyn reports that pointed to several areas for further improvement. School leaders play a vital role in the promotion and strengthening of induction programmes, mentoring/coaching, peer review and creating a culture of enquiry, innovation and exploration in their schools. The establishment of these and other conditions for a learning culture to develop across the whole school organisation is particularly an area of improvement for leaders in secondary schools. These findings suggest that school leaders, but also teachers and learning support workers, need to reflect more critically on their own performance and that of their colleagues for deep learning to take place and sustained progress to be made.

Annex 2.A. Information on the analysis of the SLO survey data

As discussed, this study used various quantitative and qualitative data sources to examine the question to what extent the key characteristics of learning organisations exist in schools in Wales. The mixed-methods design of the first part of this report, the Schools as Learning Organisations Assessment, includes the SLO survey data, analysed at two levels: individual level and school level. While Chapter 3 only analyses the SLO survey data at the individual level, to get an insight into the extent to which school staff in Wales perceive their school to have put the dimensions and underlying elements of a learning organisation into practice, Chapter 2 also explores the data at the school level. This is because the SLO is an organisational-level concept and ideally should be analysed as such. The benefit of using both approaches is that it allows the analysis to be deepened. Each method has its benefits and drawbacks that are important to be aware of when reading this report.

Analysis of data at the individual level

Research suggests that a people's positions in the hierarchy of an organisation is one of the factors influencing their perceptions of it (Enticott, Boyne and Walker, 2008^[38]; George and Desmidt, 2018^[39]). The analysis of the SLO survey data also shows that the perceptions of staff about their school vary across the staff categories, sometime considerably. The data revealed a clear pattern where those in leadership positions held more positive views about their school than other staff. Teachers were the most critical category of staff, except for a few items where learning support workers were more critical. Although the differences between teachers and learning support workers were relatively minor on several of the survey items, their answers differed significantly from those provided by school leaders.

Annex Table 2.A.1 shows the response rates of staff by the position they hold in their schools. It shows how response rates vary from the national average school composition, with school leaders and, to a lesser extent, teachers being over-represented at the expense of learning support workers. The reader should be aware of this when interpreting reported average results. This finding was addressed by analysing the data for each of the survey items across the different staff positions, reporting relevant findings.

Annex Table 2.A.1. Overview of SLO survey responses by staff position

Position	Total number of staff in schools in Wales by position	Percentage of total staff in schools in Wales by position	Number of responses to the SLO survey by position	Percentage of responses to the SLO survey by position
School leaders	3 641	7.6%	336	22.0%
Teachers	22 531	47.2%	811	53.0%
Learning support workers*	21 583	45.2%	382	25.0%
Total	47 755		1 529	

Note: * “Learning support workers” is a term regularly used in Wales to indicate a sub-group of support staff in schools, consisting of higher level teaching assistants (HLTA), teaching assistants, foreign language assistants and special needs support staff. N: 1 703 individuals, consisting of 194 head teachers, 87 deputy head teachers, 55 assistant head teachers, 811 teachers, 382 learning support workers and 174 respondents who did not indicate their position. The latter group was not taken into account when specifically reporting on staff perceptions across the different staff categories. For all other situations this group was included in the analysis.

Source: Welsh Government (2018_[40]), “School staff”, <https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/teachers-and-support-staff/School-Staff>; OECD Schools as Learning Organisations Survey, 2017.

Analysis of data at the school level

As mentioned earlier the SLO is an organisational concept and ideally should also be examined as such. The SLO survey was distributed among school leaders (i.e. head teachers, deputy head teachers and assistant head teachers), teachers and learning support workers so it was therefore needed to carefully consider how to aggregate the data into one overall score per school.

Recognising that people’s positions in the hierarchy of an organisation influence their perceptions of it, it was important to carefully consider these differences in views and ensure a fair and accurate estimate of the views of all school staff. The OECD team considered the ideal method of calculating the average school score would take into consideration a school’s actual staff composition across the three staff categories as a basis for weighting the average response rates for each of categories. So for example, if a school’s staff consisted of 10% school leaders, 50% teachers and 40% learning support workers, these proportions would be used to weigh the average responses for each of these three staff categories. For this method to work, the team needed to have accurate data on the staff composition for each school in the sample. However, the administrative data shared by the Welsh Government revealed some inconsistencies, causing the OECD team to explore an alternative method.

The OECD team opted for the alternative of using the national composition of school staff to weigh the average response rates for each of three staff categories in a school (see Annex Table 2.D.1). So the average score of the school leaders of a school in the sample would be weighted by a factor of 7.6; that of teachers by a factor of 47.2; and that of learning support workers by a factor of 45.2.

The team did not define a minimum threshold for the number of responses per school (or staff category), knowing that many schools in Wales are (very) small in size, especially primary schools. This was also the case in the sample of schools. The administrative data provided by the Welsh Government suggested that about a quarter of schools (24%) in the sample had fewer than 15 staff across the three staff categories; 12% had fewer than 10 staff. Defining a threshold for each of the staff categories or the school at large would

have resulted in disqualifying a considerable proportion of smaller schools from the school-level analysis.

One consequence of applying national weights to the answers from different staff categories, was to downgrade the school-level average for items where there were no answers from one or more of the staff categories for a given school. Since it was considered that each school should contribute equally to the survey, a correcting formula¹ was used to restore the information contribution of these schools while respecting the relative weights between staff categories.

This method resulted in sample of 178 schools (31% of the randomly selected schools) used to conduct the school-level analysis. The OECD team recognise the limitations of this aggregation method, and also the relatively small size of the sample of schools, so advise interpreting the school-level analysis with some caution.

However, as discussed above, these school-level data were analysed as part of a mixed-methods design (see Box 2.2) that allowed for deepening and triangulating the findings – with explicit mention of any variations in the evidence from the different data sources in the report. This gives confidence in using the school-level data, as one of the data sources used, to get an indication of the extent to which schools in Wales have put in practice the dimensions of a learning organisation, their strengths and areas for further improvement.

Analysis of information collected through the open question

The SLO survey contained one open question (i.e. “Do you have any comments on ...?”) which gave respondents the opportunity to comment on anything they found relevant. A total of 118 of the 1 703 respondents (about 7%) made use of this opportunity. The information was analysed by first clustering the comments around certain themes or issues. Apart from the many respondents using the opportunity to express their positive views on their school and work (31 comments), two clusters of comments stood out. The first related to challenges in terms of workload, time and financial resources (27 comments). Budget pressures were raised several times as part of these (11 comments).

The second cluster pointed to staff concerns about the capacity of school leaders (12 comments) with several of them referring to the negative influence of the current assessment, evaluation and accountability arrangements in driving school leaders and other staff to focus on providing evidence in response by accountability demands, rather than focusing on teaching and learning.

The general trends that came out of these open comments corroborated the findings from other data sources used in this assessment. These and other findings were used to enrich other data sources, with occasional mentions of these anecdotal data in the report.

Annex 2.B. Data and information collected as part of the school visits

The mixed-methods design of the first part of this study, the Schools as Learning Organisations Assessment, used various quantitative and qualitative data sources (see Box 2.2). An important part of the latter were the interviews that were conducted in eight schools across Wales that were visited by the OECD team in June and July 2017.

More than 80 school leaders, teachers and learning support workers were interviewed, and the OECD team were also able to speak to a large number of students. Two schools were visited in each of the four regions of Wales; one primary school and one secondary school in each. Another selection criterion concerned the variance in school performance, meaning a range of “stronger” and “weaker” performing schools according to Estyn inspections or the national school categorisation system.

The interviews were semi-structured, with one set of questions for school leaders, teachers and learning support workers concerning 1) their understanding of the school as learning organisation concept; 2) their views on the curriculum reform (of which Wales’ SLO model is a part); and 3) their reflections on their own school against the seven dimensions of Wales’ SLO model.

The OECD team complemented and triangulated these interview findings with:

1. the schools’ results on the SLO survey (see Annex 2.C)
2. a desk study of the available data and information about the schools (e.g. school evaluation reports by Estyn)
3. a short self-assessment questionnaire completed by the school leaders to showcase “good practices” against an earlier shared template. Recognising a school can be good or excellent in many different ways the questionnaire asked school leaders to showcase their school against three different “profiles”: 1) The school as a learning organisation; 2) excellence, innovation, equity and well-being in the curriculum; 3) excellence, equity and innovation in your educational approach/process

The examples of good practices collected as part of the school visits were later complemented by those collected by the SLO Pilot Group. Several of these have been used to exemplify the findings and offer ideas and practical guidance to those wanting to develop their schools into learning organisations in Wales and beyond (see Chapter 3).

At the end of the day of conducting school visits the OECD team members met to collectively process and consolidate the collected data and information. Among other things this resulted in a strengths, weaknesses, opportunities and threats (SWOT) analysis for each of the eight schools that were visited. Two levels of analysis were differentiated: at the school level and the system level, thereby informing the two related parts of this report.

The use of these various data sources provided the OECD team with a wealth of data and information on the policies and practices in schools in Wales, their strengths and challenges, and the opportunities they face in developing as learning organisations and ultimately realising the new curriculum.

Annex 2.C. Schools as Learning Organisations Survey, 2017

Questionnaire for school leaders, teachers and teaching support staff

Guidance for completing the questionnaire: *(to be further tailored to local context)*

- This questionnaire is to be completed by school leaders, teachers and learning support workers.
- There are no right or wrong answers to the questions – your answers should reflect your honest and critical opinion on the current situation in your school.
- The questionnaire starts with a question on your position, followed by a set of questions for each of the seven dimensions of the school as learning organisation (background questions are not included).
- Please answer all questions in relation to the time frame of the last 12 months.
- Select one answer per question.
- The questionnaire should take approximately 10 minutes to complete.

QUESTIONS

A. Developing a shared vision centred on the learning of *all* students

<i>“In my school,”</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
A1. The school’s vision is aimed at enhancing student’s cognitive and social-emotional outcomes, including their well-being	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A2. The school’s vision emphasises preparing students for their future in a changing world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A3. The school’s vision embraces all students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A4. Learning activities and teaching are designed with the school’s vision in mind	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A5. The school’s vision is understood and shared by all staff working in the school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A6. Staff are inspired and motivated to bring the school’s vision to life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A7. All staff are involved in developing the school’s vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A8. School governors are involved in developing the school’s vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A9. Students are invited to contribute to the school’s vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A10. Parents are invited to contribute to the school’s vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A11. External partners are invited to help shape the school’s vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

B. Promoting and supporting continuous professional learning for all staff

<i>"In my school, ..."</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
B1. Professional learning of staff is considered a high priority	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B2. Staff engage in professional learning to ensure their practice is critically informed and up to date	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B3. Staff are involved in identifying the objectives for their professional learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B4. Professional learning is focused on students' needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B5. Professional learning is aligned to the school's vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B6. Mentors/coaches are available to help staff develop their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B7. All new staff receive sufficient support to help them in their new role	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B8. Staff receive regular feedback to support reflection and improvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B9. Students are encouraged to give feedback to teachers and support staff *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B10. Staff have opportunities to experiment with and practise new skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B11. Beliefs, mindsets and practices are challenged by professional learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

C. Fostering team learning and collaboration among staff

<i>"In my school, ..."</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
C1. Staff collaborate to improve their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C2. Staff learn how to work together as a team	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C3. Staff help each other to improve their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C4. Staff observe each other's practice and collaborate in developing it *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C5. Staff give honest feedback to each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C6. Staff listen to each other's ideas and opinions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C7. Staff feel comfortable turning to others for advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C8. Staff treat each other with respect	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C9. Staff spend time building trust with each other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C10. Staff think through and tackle problems together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C11. Staff reflect together on how to learn and improve their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D. Establishing a culture of enquiry, exploration and innovation

<i>"In my school, ..."</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
D1. Staff are encouraged to experiment and innovate their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D2. Staff are encouraged to take initiative	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

D3. Staff are supported when taking calculated risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D4. Staff spend time exploring a problem before taking action	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D5. Staff engage in enquiry (i.e. pose questions, gather and use evidence to decide how to change their practice, and evaluate its impact)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D6. Staff are open to thinking and doing things differently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D7. Staff are open to others questioning their beliefs, opinions and ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D8. Staff openly discuss failures in order to learn from them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D9. Problems are seen as opportunities for learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

E. Embedding systems for collecting and exchanging knowledge and learning

<i>"In my school, . . . "</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
E1. The school's development plan is based on learning from continuous self-assessment and updated at least once every year	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E2. Structures are in place for regular dialogue and knowledge sharing among staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E3. Evidence is collected to measure progress and identify gaps in the school's performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E4. Staff analyse and use data to improve their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E5. Staff use research evidence to improve their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E6. Staff analyse examples of good/great practices and failed practices to learn from them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E7. Staff learn how to analyse and use data to inform their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E8. Staff regularly discuss and evaluate whether actions had the desired impact and change course if necessary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

F. Learning with and from the external environment and larger system

<i>"In my school, ... "</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
F1. Opportunities and threats outside the school are monitored continuously to improve our practice *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F2. Parents/guardians are partners in the school's organisational and educational processes *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F3. Staff actively collaborate with social and health services to better respond to students' needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F4. Staff actively collaborate with higher education institutions to deepen staff and student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F5. Staff actively collaborate with other external partners to deepen staff and student learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F6. Staff collaborate, learn and share knowledge with peers in other schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F7. The school as a whole is involved in school-to-school networks or collaborations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

G. Modelling and growing learning leadership

<i>"In my school..."</i>	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
G1. Leaders participate in professional learning to develop their practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G2. Leaders facilitate individual and group learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G3. Leaders coach those they lead	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G4. Leaders develop the potential of others to become future leaders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G5. Leaders provide opportunities for staff to participate in decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G6. Leaders provide opportunities for students to participate in decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G7. Leaders give staff responsibility to lead activities and projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G8. Leaders spend time building trust with staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G9. Leaders put a strong focus on improving learning and teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G10. Leaders ensure that all actions are consistent with the school's vision, goals and values	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G11. Leaders anticipate opportunities and threats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G12. Leaders model effective collaborations with external partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Note: * Indicates the survey items that the principal component analysis and reliability analysis found not to fit the SLO concept i.e. Wales' SLO model. These items were excluded from the list of items used to calculate the average scores for each of the SLO dimensions and as such were also not included in the average SLO score reported on in Chapter 2.

Annex 2.D. Development and application of the Schools as Learning Organisations Survey, 2017

Overview of the Schools as Learning Organisations Survey design process

The OECD commenced the work on the Schools as Learning Organisations (SLO) Survey in May 2016, following the completion of the OECD Education Working Paper “What Makes a School a Learning Organisation?” by Kools and Stoll (2016^[18]) who proposed an integrated SLO model. This exercise should be viewed as a first endeavour at developing a scale that allows for the holistic measurement of the SLO.

For each of the seven dimensions and underlying elements of the model, items were generated in the form of five-point Likert scale with the options “strongly disagree”, “disagree”, “neutral”, “agree” and “strongly agree”. This type of self-reported scale is commonly used in public administration to measure core public management and governance concepts (McNabb, 2015^[41]; George and Pandey, 2017^[42]). Several background items were also generated concerning staff members’ position, employment status, years of experience, etc. In addition, the survey included an open question to give respondents the option to highlight anything they considered important.

An early draft of the survey instrument was trialled at a workshop at the UCL Institute of Education in England in June 2016 where 30 school and system leaders who were asked to review and provide feedback on it. A revised survey instrument was discussed during an expert meeting organised by the OECD on 1 July 2016 in Paris. The panel was made up of 14 international experts whose expertise included (but was not limited to) survey design and statistical analysis, the (school as) learning organisation, innovative learning environments, and school improvement more broadly.

The survey was then tailored to the Welsh context by the SLO Pilot Group, which had been established to develop a SLO model for Wales. These strands of work were conducted in parallel and shaped through a series of workshops that were organised in Cardiff between November 2016 and April 2017. The developmental work included a field trial of the survey in 32 schools.

These efforts resulted in a scale that was aligned to Wales’ SLO model and consisted of 69 items across the seven SLO dimensions that was ready for use as part this OECD study in Wales.

Application of the Schools as Learning Organisations Survey

Sample and response rate

The OECD and the Welsh Government’s Education Directorate agreed on the drawing of a random sample of 40% of schools in Wales whose staff would be invited to complete the online survey. The Welsh Government was responsible for drawing the random sample of schools and presenting OECD with the list of sampled schools. The Welsh

Government excluded a number of schools from the initial list for several reasons, including some scheduled closures or mergers of schools which are changing the structure of Wales' school system. By 2017, the number of schools in Wales had fallen by 109 from 1 656 schools in 2013, a drop of close to 7% (Giles and Hargreaves, 2006^[43]). The final sample consisted of 571 schools (i.e. 38% of primary, middle and secondary schools in Wales in 2017) whose staff were asked to complete the online SLO survey.

A total of 1 703 school staff from 178 different schools throughout Wales responded to the survey. This was lower than the OECD team had hoped for. Welsh Government Education Directorate staff however noted the response rate was in fact quite high compared with other surveys conducted in Wales in recent years. Part of the explanation for the (low) response rate may lie in the fact that schools in Wales were in the middle of an ambitious curriculum reform so completion of the survey may not have received equal attention in schools.

Although the responses from the 178 schools only represented 31% of the target sample schools, we controlled for the representativeness of the final sample of schools and found this to match the overall school population in Wales. The representatives of the sample of schools were controlled for by comparing the SLO survey data with the data from the latest school census (Welsh Government, 2017^[44]). First the proportion of primary and secondary schools was compared in the sample with that of the overall school population. On January 2017 there were 1 287 primary schools and 200 secondary schools in Wales, so 86.6% of these schools were primary schools and 13.4% were secondary schools. The sample showed a very similar proportion of 85.8% primary schools and 14.2% secondary schools.

Satisfied with this finding, the next step was to control the sample of schools against several of the characteristics of the school system by looking at the values of a number of available variables at the country and regional levels (Annex Table 2.D.1).

Annex Table 2.D.1. Comparison of the sample of schools against several characteristics of Wales' school system

	North Wales			South West and Mid Wales			South East Wales			South Wales			Total
	P	S	t	P	S	t	P	S	t	P	S	t	
Percentage of schools (public)	26	26		32	27		16	15		25	32		100 100
School size	255	289	0.9	286	280	-0.2	408	363	-0.9	391	364	-0.7	
Consortium percentage of students eligible for free school meals	17	16	-0.6	17	17	0.1	19	22	1	21	22	0.4	

Note: P, S and t stand for Population, Sample and t-stat. A * indicates that the sample is significantly different from the population at the 5% level.

The statistical test employed is a one-sample, two-tailed test of equality of means.² By definition, the t statistic cannot be calculated for a variable that does not vary within a region, such as the percentage of public schools. Conversely, the total number of students

and the share of students eligible for free school meals are not constant between schools, which allowed for the computation of standard deviations and the comparison with the total population. The results showed no systematic differences at the 5% significance level between the sample and the total population, because the null hypothesis of equality of means in each of the four regions cannot be rejected. In other words, no significant differences were found between the specified populations.

These results gave us confidence that the schools drawn during the random sampling exercise closely match the overall school population in Wales.

Principal component analysis and reliability analysis

For the development of the SLO scale a construct validity exercise that consisted of a principal component analysis and reliability analysis was conducted. It showed that Wales' SLO model held up well. A relatively small number of the survey items, i.e. four items of the original questionnaire were found not to fit SLO model according to the views of respondents (see Annex 2.C). The data however revealed an eight-component/dimension model, instead of the theorised seven-dimension model that was proposed by Kools and Stoll (2016_[18]). The data suggested the SLO dimension "developing a shared vision centred on the learning of all students" in fact consists of two dimensions. The two dimensions that split the theorised SLO dimension "developing a shared vision centred on the learning of all students" were labelled as "shared vision centred on the learning of all students" and "partners invited to contribute to the school's vision" (Kools et al., 2018_[45]).

Presentation of the analysis against the seven dimensions of Wales' SLO model

Following a discussion with the Welsh Government Education Directorate and other members of the SLO Pilot Group, the decision was made to present the analysis of this report based on the seven dimensions of Wales' SLO model as this would make the analysis more recognisable to schools and other stakeholders, who are now familiar with the seven-dimension SLO model for Wales (Welsh Government, 2017_[2]). The scores for these dimensions were therefore averaged to define one score for the SLO dimension "developing and sharing a vision centred on the learning of all students".

Furthermore, the four survey items that the principal component analysis and reliability analysis found not to fit the SLO concept, i.e. Wales' SLO model, were excluded from the list of items that were used to calculate the average score for each of the SLO dimensions and as such were also not included in the average SLO scores reported on in Chapter 2. However, appreciating that many school staff across Wales had given their time to report on these four items, the OECD team choose to include them in the presentation of the individual level analysis of the data that is primarily reported on in Chapter 3.

For further information on the development of the in this report used SLO scale please have a look at Kools et al. (2018_[45]), "The School as a Learning Organisation in Wales and its Measurement, OECD Publishing, Paris.

Notes

¹ The correcting formula is of the form $\frac{\sum_{i=1}^3 a_i x_i}{\sum_{i=1}^3 a_i x_i \neq 0}$, where a_i is the staff category and x_i the item response.

² The calculated t statistic follows a Student's law and is computed as: $= \frac{\bar{x} - \mu}{s / \sqrt{n}}$, with \bar{x} the average in the sample and μ the population average, s represents the sample standard deviation and n the sample size.

References

- Borgonovi, F. and G. Montt (2012), “Parental involvement in selected PISA countries and economies”, *OECD Education Working Papers*, No. 73, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k990rk0jsjj-en>. [25]
- Byrne, D. and E. Smyth (2010), *Behind the Scenes? A Study of Parental Involvement in Post-Primary Education*, Liffey Press, Dublin. [26]
- Caprara, G. et al. (2006), “Teachers’ self-efficacy beliefs as determinants of job satisfaction and students’ academic achievement: A study at the school level”, *Journal of School Psychology*, Vol. 44/6, pp. 473-490. [12]
- Cerna, L. (2014), “Trust: What it is and why it matters for governance and education”, *OECD Education Working Papers*, No. 108, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jxswcg0t6wl-en>. [31]
- Darling-Hammond, L., M. Hyler and M. Gardner (2017), *Effective Teacher Professional Development*, Learning Policy Institute, Palo Alto.. [29]
- Desforges, C. and A. Abouchaar (2003), “The impact of parental involvement, parental support and family education on pupil achievements and adjustment: A literature review”, *Research Report*, No. No. 433, Department for Education and Skills Publications, Nottingham. [27]
- Donaldson, G. (2015), *Successful Futures: Independent Review of Curriculum and Assessment Arrangements in Wales*, Welsh Government, <http://gov.wales/docs/dcells/publications/150225-successful-futures-en.pdf>. [3]
- Enticott, G., G. Boyne and R. Walker (2008), “The use of multiple informants in public administration research: Data aggregation using organizational echelons”, *Journal of Public Administration Research and Theory*, Vol. 19/2, pp. 229-253. [38]
- Erdem, M., A. İlğan and H. Uçar (2014), “Relationship between learning organization and job satisfaction of primary school teachers”, *International Online Journal of Educational Sciences*, Vol. 6/1, pp. 8-20, <http://dx.doi.org/10.15345/iojes.2014.01.002>. [10]
- Estyn (2018), *The Annual Report of Her Majesty's Chief Inspector of Education and Training in Wales 2016-2017*, Estyn, Cardiff, <https://www.estyn.gov.wales/document/annual-report-2016-2017>. [21]
- Fullan, M. (2014), *The Principal: Three Keys to Maximizing Impact*, Jossey-Bass and Ontario Principal’s Council, Toronto. [36]
- George, B. and S. Desmidt (2018), “Strategic-decision quality in public organizations: An information processing perspective”, *Administration & Society*, Vol. 50/1, pp. 131-156, <http://dx.doi.org/10.1177/0095399716647153>. [39]
- George, B. and S. Pandey (2017), “We know the yin—but where is the yang? Toward a balanced approach on common source bias in public administration scholarship”, *Review of* [42]

- Public Personnel Administration*, Vol. 37/2, pp. 245-270.
- Giles, C. and A. Hargreaves (2006), “The sustainability of innovative schools as learning organizations and professional learning communities during standardized reform”, *Educational Administration Quarterly*, Vol. 42/1, pp. 124-156. [43]
- Klassen, R. and M. Chiu (2010), “Effect on teachers’ self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress”, *Journal of Educational Psychology*, Vol. 102/3, pp. 741-756. [13]
- Kools, M. and L. Stoll (2016), “What makes a school a learning organisation?”, *OECD Education Working Papers*, No. 137, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jlwm62b3bvh-en>. [18]
- Kools, M. et al. (2018), *The School as a Learning Organisation and its Measurement*, OECD Publishing, Paris. [45]
- Day, C. and K. Leithwood (eds.) (2007), *Starting with What We Know*, Springer, Dordrecht. [16]
- Marsick, V. and K. Watkins (1999), *Facilitating Learning Organizations: Making Learning Count*, Gower Publishing Limited, Aldershot. [37]
- McNabb, D. (2015), *Research Methods in Public Administration and Nonprofit Management (second edition)*, Routledge, New York. [41]
- OECD (2017), *PISA 2015 Results (Volume III): Students' Well-Being*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264273856-en>. [24]
- OECD (2017), *The Welsh education reform journey: A rapid policy assessment*, OECD, Paris, <http://www.oecd.org/edu/The-Welsh-Education-Reform-Journey-FINAL.pdf>. [20]
- OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264266490-en>. [23]
- OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, PISA, OECD Publishing, <https://doi.org/10.1787/9789264267510-en> (accessed on 06 November 2017). [32]
- OECD (2014), *Improving Schools in Wales: An OECD Perspective*, OECD Publishing, Paris, <http://www.oecd.org/edu/Improving-schools-in-Wales.pdf>. [19]
- OECD (2013), *Innovative Learning Environments*, Educational Research and Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264203488-en>. [35]
- OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264190658-en>. [34]
- Razali, M., N. Amira and N. Shobri (2013), “Learning organization practices and job satisfaction among academicians at public niversity”, *International Journal of Social* [11]

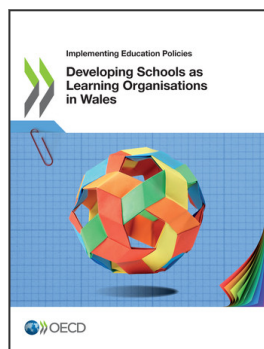
- Science and Humanity*, Vol. 3/6, pp. 518-521, <http://dx.doi.org/10.7763/IJSSH.2013.V3.295>.
- Robinson, V. (2007), *The Impact of Leadership on Student Outcomes: Making Sense of the Evidence*, http://research.acer.edu.au/research_conference_2007/5/. [17]
- Schechter, C. (2008), “Organizational learning mechanisms: The meaning, measure, and implications for school improvement”, *Educational Administration Quarterly*, Vol. 44/2, pp. 155-186. [7]
- Schechter, C. and M. Qadach (2012), “Toward an organizational model of change in elementary schools: The contribution of organizational learning mechanisms”, *Educational Administration Quarterly*, Vol. 48/1, pp. 116-153, <http://dx.doi.org/10.1177/0013161X11419653>. [9]
- Schlechty, P. (2009), *Leading for Learning: How to Transform Schools into Learning Organizations*, John Wiley & Sons. [22]
- Schleicher, A. (2018), *World Class: How to Build a 21st-Century School System*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/4789264300002-en>. [28]
- Senge, P. et al. (2012), *Schools That Learn (Updated and Revised): A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education*, Crown Business. [4]
- Silins, H. and B. Mulford (2004), “Schools as learning organizations: Effects on teacher leadership and student outcomes”, *School Effectiveness and School Improvement*, Vol. 15, pp. 443-466, <https://doi.org/10.1080/09243450512331383272>. [14]
- Silins, H., B. Mulford and S. Zarins (2002), “Organizational learning and school change”, *Educational Administration Quarterly*, Vol. 38/5, pp. 613-642. [8]
- Silins, H., S. Zarins and B. Mulford (2002), “What characteristics and processes define a school as a learning organisation? Is it a useful concept to apply to schools?”, *International Education Journal*, Vol. 3/1, pp. 24-32. [5]
- Thompson, M. et al. (2004), “Study of the impact of the California Formative Assessment and Support System for Teachers, Report 1: Beginning teachers' engagement with BTSA/CFASST”, *ETS Research Report Series*, No. RR-04-30, Educational Testing Service. [30]
- Timperley, H. et al. (2007), *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration*, Ministry of Education New Zealand, Wellington. [15]
- Watkins, K. and V. Marsick (1999), “Sculpting the learning community: New forms of working and organizing”, *NASSP Bulletin*, Vol. 83/604, pp. 78-87, <https://doi.org/10.1177/019263659908360410>. [6]
- Watkins, K. and V. Marsick (1996), *In Action: Creating the Learning Organization*, American Society for Training and Development, Alexandria. [33]
- Welsh Government (2018), *School Staff*, StatsWales website, [40]

<https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/teachers-and-support-staff/School-Staff>.

Welsh Government (2017), *Education in Wales: Our National Mission: Action Plan 2017-21*, Education Wales, Welsh Government, <http://gov.wales/docs/dcells/publications/170926-education-in-wales-en.pdf>. [1]

Welsh Government (2017), *School Census Results, 2017*, Statistics for Wales, [44]
<https://gov.wales/docs/statistics/2017/170726-school-census-results-2017-en.pdf>.

Welsh Government (2017), *Schools in Wales as Learning Organisations*, Welsh Government website, <https://beta.gov.wales/schools-learning-organisations>. [2]



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