

Independent Review of the Scottish National Standardised Assessments at Primary 1

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Introduction: Scottish National Standardised Assessments and the remit of P1 SNSA Review

The Scottish National Standardised Assessments (SNSA) were introduced in 2017 – 18 as part of the National Improvement Framework (NIF) for Scottish Education. These assessments are designed to provide a standard set of information of some aspects of literacy and numeracy attainment of children in P1, P4, P7 and S3.

The rationale for the introduction of SNSA has been outlined by the Scottish government in its response to The Education and Skills Committee Inquiry concerning Scottish National Standardised Assessments (see https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf)

As part of the development of the NIF, the Scottish Government decided to discontinue the previous national survey, the Scottish Survey of Literacy and Numeracy (SSLN), and replace it with a census-based approach predicated on teachers' professional judgement. The Achievement of CfE Levels Return (not the Scottish National Standardised Assessment) is the replacement for the SSLN. Data is collected from schools each June detailing the proportion of children in P1, P4, P7 and S3 who have achieved the relevant Curriculum for Excellence level. This ACEL data is published each December. The achievement of a level judgements provide data from every child and every classroom, rather than the sample approach used by SSLN.

The Scottish Government argued that this new approach has a number of significant advantages over the SSLN, which again are outlined in the submission to the Education and Skills Committee:

- It empowers teachers, placing primacy on their professional judgement as the key indicator of children's progress prior to national qualifications.
- It looks across the full CfE level not just elements of each level and determines whether a child or young person has achieved that level.
- It embeds the primary method of assessing the standard of Scottish education within the curriculum. A teacher's professional judgement on whether a child or young person has achieved a level is based on a range of evidence from a number of sources and potentially over a number of years.
- It aligns to systems that schools and local authorities already have in place to monitor and track each individual child or young person's progress within and between CfE levels.
- It provides annual data at school and local authority level and data which is broken down by pupil characteristics, allowing school and local authority staff

to analyse their own data for improvement purposes. National level data also contributes to national improvement planning.

- It provides annual data on both literacy and numeracy rather than every two years and it includes an additional stage, Primary 1, that was not covered by the SSLN.
- The results can be published and used for improvement purposes more quickly, within six months of the data being collected. SSLN results were generally published eleven months after the survey took place.
- It reflects the OECD's endorsement that 'an assessment system that encompasses a variety of assessment evidence, that includes rich tasks and a clear indication of expected benchmarks referenced to the breadth and depth of the curriculum, can enhance teachers' assessment skills and learners' progress.'

(Education and Skills Committee, Scottish National Standardised Assessments Inquiry to assess the evidence base and the alternative approaches. Submission from the Scottish Government, 2018:2-3)

https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf Accessed April 2019

As part of the process for supporting teachers' professional judgement and ensuring consistency across schools and local authorities in Scotland, the Scottish Government has taken a number of steps. These include:

- the publication of literacy and numeracy National Benchmarks to support practitioners when making decisions of children's progress between levels and achievement of a level;
- the Quality Assurance and Moderation Support Officer (QAMSO) programme and the development of a National Moderation Hub available to practitioners via GLOW;
- the introduction of the Scottish National Standardised Assessment (SNSA) to bring an element of national consistency to teachers' judgements, but also to provide a local and classroom perspective.

The Scottish Government argued that these elements are an essential part of the process of developing a consistent national system in line with the OECD report (2011) which points out that curriculum, instruction and assessment are interdependent, so it is important for a government clearly to define education standards aligned with the curriculum.

The SNSA are aligned to the Benchmarks in order to provide information to teachers on children's progress towards the achievement of a CfE level and thus inform judgements about whether objectives have been achieved in the areas that are assessed through the standardised assessments. The Scottish Government noted that

a range of standardised assessments, amongst a variety of other assessment tools, were already in use by schools in almost all local authorities. However, none of these tools was specific to Curriculum for Excellence. In short, SNSA, including in P1, should be seen in the broader context of the development and implementation of the National Improvement Framework.

Independent Review of SNSA in P1

The Australian Council for Educational Research International United Kingdom (ACER UK), a wholly owned subsidiary of ACER group, which is a not-for-profit organisation established in 1930, was contracted by the Scottish Government in October 2016 to implement and deliver the Scottish National Standardised Assessments (SNSA) across all publicly funded schools in Scotland.

The Scottish National Standardised Assessments were introduced nationally in August 2017 for the academic year 2017-18. Towards the end of the academic year, concerns about the implementation of SNSA, particularly in P1, began to be reported, including by the Educational Institute of Scotland (EIS). As a result, a debate took place in the Scottish Parliament which questioned the continuation of the use of SNSA in P1. In order to address these concerns, the Scottish Government commissioned an Independent Review.

Remit of the Review:

The Review will consider and provide recommendations on the following issues:

- the compatibility of the assessments with the play-based approach to early level of CfE;
- the alignment of the assessments to the Benchmarks for early level;
- the effect of taking an on-line assessment on P1 children;
- the usefulness of the diagnostic information provided to teachers and how it supports their professional judgement;
- the implications of the Review for the ongoing development of the national Gaelic Medium Education standardised assessments; and
- the future of the assessments considering in particular whether they continue in line with the current continuous improvement model, whether they be substantially modified, or whether they should be stopped.

Scope of the Independent Review

From January to March 2019, the Independent Review visited schools to observe the SNSA being undertaken, interviewed headteachers, deputes and P1 teachers, stakeholders, Local Authority staff and HMI, and looked at relevant documentation. In addition, the Review sought evidence through anonymous surveys completed by local authorities, headteachers and P1 teachers. It also took account of the conclusions of the P1 Practitioner Forum and the ACER User Reviews and responses to the dedicated email address. During the course of the Review, other issues arose which were not specified in the remit from Scottish Government: the purpose of the P1 SNSA; the use of the P1 SNSA data for school improvement purposes, and the challenges associated with implementation of the assessment. These are included in the Review report as they have informed the recommendations of the Review.

Evidence was gathered for each of the following areas:

- The purpose and administration of the P1 SNSA.
- The compatibility of the assessments with the play-based approach to early level of CfE, including the effect of taking an on-line assessment on P1 children.
- The usefulness of the diagnostic information provided to teachers to support professional judgements and specifically to inform achievement of CfE levels judgements.
- The use of the P1 SNSA data for school improvement purposes.
- The challenges of using the P1 SNSA.
- The implementation of national Gaelic Medium Education standardised assessments.
- The future of the P1 SNSA.

Coverage

Local authorities, headteachers and P1 teachers were interviewed and invited to complete an anonymous survey¹. The Review visited schools to observe the P1 SNSA being undertaken and interviewed staff involved. Stakeholders, particularly those who had sent submissions to the Scottish Parliament Education and Skills Committee's Inquiry, were interviewed to explore their opinions and concerns. A dedicated email address was established for general responses and the Review attended two sessions of the P1 Practitioner Forum held at Strathclyde University. In addition, the Review attended familiarisation sessions with the P1 SNSA and a training session, and interviewed staff from ACER, the assessment developers.

These sources of evidence, scrutiny of relevant documentation and reviews of recent research into key themes, were used to gather evidence for the Independent Review. The conclusions are summarised in the remainder of this report under the headings above. Each section includes an overarching narrative, key conclusions and

¹ Throughout this Review references to headteachers, teachers and others relate to those who participated in the interviews and surveys.

recommendations based on evidence from observations, interviews, surveys and documentation.

Participants in the Independent Review

Number (approx.)	Participants
142	P1 teachers
131	Headteachers and deputes
21	Local authorities
10	HMI and Education Scotland staff
20	Stakeholders and responders to the Education and Skills Committee Inquiry
324	Total

The Independent Review was carried out by David Reedy, formerly Co-Director of the Cambridge Primary Review Trust, Past President of the United Kingdom Literacy Association and Principal Advisor for Primary Schools, London Borough of Barking and Dagenham, assisted by Dr Eve Bearne, formerly of The University of Cambridge Faculty of Education.

Executive summary

This summarises the Conclusions reached in the areas covered by the Review.

The Independent Review identifies the primary purpose of the P1 SNSA as informing teachers' professional judgements about learning and teaching. P1 SNSA is a formative assessment which can inform summative judgements such as ACEL. However, it is not, and cannot be, in itself summative, as it only assesses part of the early level CfE and only forms part of the toolkit a teacher draws on to make professional judgements. P1 SNSA information does not have the capacity to perform a summative function on its own. As part of teachers' professional judgements the P1 SNSA offers a useful standard element within the overall evidence to inform judgements about learning and teaching. Results are calibrated against aspects of the Scottish Curriculum for Excellence, standardised on a Scottish population of children of the appropriate age, and can guard against unconscious positive or negative bias in relation to specific assessment criteria.

In administration of the P1 SNSA in schools, the level of support given to children varies widely and the assessment is carried out at different times of the school year, so that it is difficult to draw conclusions from aggregated data beyond the class or school. Despite concerns expressed about P1 SNSA data being used for high stakes purposes, the Review has not found any evidence that Benchmarks or P1 SNSA data are currently being used to set targets, make comparisons between schools, including league tables, or for teacher appraisal, nor that there are any plans to do so. The fact that there is flexibility in the timing of administering the P1 SNSA guards against information being aggregated to compare school performance.

There have been criticisms of the P1 SNSA on the grounds that it does not fit with a play-based pedagogy. Some argue that there should be no formal education before the age of 7; whilst these are genuine and committed views, they do not align with the current educational arrangements in Scotland. A small number of headteachers and teachers have also commented that the P1 SNSA does not fit with a play-based pedagogy but it seems that there are confusions between a 'moment of assessment' and a pedagogical approach. There are strong examples of schools where headteachers and teachers operate a play-based approach and find no incompatibility between that and the P1 SNSA.

There is scant evidence of children becoming upset when taking the P1 SNSA. However, there is evidence that the context for the assessments, including headteachers' and teachers' attitudes, makes a difference to children's assurance when undertaking the P1 SNSA.

Although survey and interview evidence shows that a majority of teachers and headteachers see the value of the P1 SNSA to support professional judgements about learning, teaching and assessment, a small number of others preferred more familiar assessment processes. Of those opposed to the P1 SNSA and those who expressed

more ambivalent views, almost all had not received training. In contrast, those who responded positively had all received training. There are, however, concerns about the administration of the assessments and the length of the P1 literacy SNSA specifically. The length of the P1 literacy SNSA gives rise to concerns about whether the results obtained for some children are reliable. In addition, it is not clear to some stakeholders how well the P1 literacy SNSA aligns with the Benchmarks for early level.

The Review has also revealed concerns about the time and staffing needed to administer the P1 SNSA and technological difficulties in carrying it out. However, some headteachers and teachers have found ways to overcome the challenges of technology involved in administering the P1 SNSA through careful planning, focused teaching and managed sharing of technology, although this is not always easy or straightforward, especially in bigger schools. Supporting children at P1 with ASN or EAL to undertake the SNSA can be challenging, needing sensible professional decisions about individual children's capability to undergo the assessment. However, the guidance offered about accessibility and administration of the P1 SNSA is comprehensive and clear about supporting children with ASN and EAL. In terms of reporting P1 SNSA data to parents/carers, the Review has found that headteachers often make it part of more holistic discussions of progress, as it is only one element of the assessment information gathered in schools.

Almost all the local authorities that responded to the Independent Review surveys have provided some training to implement the P1 SNSA. The Review did not specifically seek information about moderation but this has emerged as an important element of embedding and sustaining professional learning in relation to P1 SNSA and its place in informing professional judgements.

Teachers, schools and local authorities have identified ways in which P1 SNSA data can usefully inform elements of school improvement although they understand that P1 SNSA data only covers certain aspects of literacy and numeracy learning. P1 SNSA information, therefore, has the potential to be part of useful evidence for broader school improvement purposes. A minority of headteachers and teachers take a negative view of the value of the P1 SNSA to provide useful data to support school improvement in comparison to previous standardised assessments used in many local authorities. However, there is a relationship between understanding how P1 SNSA information can be used for school improvement purposes and attendance at training sessions focused on data analysis beyond the individual pupil.

It is the opinion of the Review that the national Gaelic Medium Education Standardised Assessment (MCNG) will avoid some of the difficulties encountered by the SNSA in its first iteration. Care has been taken to communicate with parents/carers, schools, local authorities and the Gaelic sector throughout the development of the assessments. The P1 MCNG has been robustly trialled and should

not be as lengthy as the literacy P1 SNSA and there is no reason for it not to be implemented.

The Review finds that P1 SNSA has potential to play a significant role in informing and enhancing teachers' professional judgements and should be continued with modification and safeguards against a drift towards high stakes. However, some important issues remain to be addressed including the view from some teachers and headteachers that introduction of the P1 SNSA undervalues professionalism. The P1 Practitioner Forum has played an important role in allowing professional debate about the usefulness and administration of the P1 SNSA.

Questions also remain about the purpose for collecting P1 SNSA data at national and local authority level and how the P1 SNSA will contribute to narrowing the poverty related attainment gap. The advantages of SNSA over other previously used standardised assessments should be made clear. At the moment, there can be little comparability of aggregated P1 SNSA data beyond the class or school and, therefore, this needs to be clarified and emphasised through the development of a Code of Practice clearly stating what SNSA data in P1 should productively be used for and what it should not. This should then be used as the basis for agreement in every school about the purposes and uses of P1 SNSA data. Leadership at school and local authority level is crucial to the success of the effective implementation of P1 SNSA and this will best be achieved through a clear and irrefutable statement of the purpose and uses of P1 SNSA data.

The Review would like to record gratitude to all children, teachers, headteachers, local authority officers and other stakeholders who have given their time in interviews and completing surveys.

Recommendations

1. The purpose and administration of the P1 SNSA.

That Scottish Government

- 1.1 Provide a detailed rationale for P1 SNSA setting out the purposes and uses of P1 SNSA at individual, class, school, local authority and national levels. This should include a statement that the intention of P1 SNSA data is solely focused on informing learning and teaching and will not be used for accountability purposes now or in the future.
- 1.2 Work with local authorities, schools and other stakeholders to develop a practical framework/Code of Practice which sets out what SNSA data in P1 should productively be used for and what it should not, including a statement about purpose. This framework should then be used as the basis for agreement in every school about the purposes and uses of P1 SNSA data. This should be publicised nationally and a copy sent to all schools and P1 teachers.
- 1.3 In consultation with schools and local authorities, provide clear guidance, along the lines of the guidance offered about administering the P1 SNSA with ASN and EAL children, on the level of support which can be given to P1 children as they undertake the assessments.
- 1.4 Continue with the flexible arrangements about the timing of the P1 SNSA.
- 1.5 Refrain from drawing any general conclusions from aggregated P1 SNSA data until there is evidence of consistent administration. P1 SNSA data should not be used to make comparisons between schools or local authorities.
- 1.6 In consultation with local authorities, teachers and headteachers, agree how P1 SNSA data will inform Quality Assurance conversations within the context of all the other data pertaining to the performance of schools. This should be based on the practical framework/Code of Practice recommended in 1.2.

That local authorities

- 1.7 In consultation with headteachers and teachers, agree how P1 SNSA data will inform Quality Assurance conversations within the context of all the other data pertaining to the performance of schools. This should be based on the practical framework/Code of Practice as recommended above to Scottish Government. P1 SNSA data should not be used to make comparisons between schools or local authorities.
- 1.8 Refrain from drawing any general conclusions from aggregated P1 SNSA data until there is evidence of consistent administration.

2. The compatibility of the assessments with the play-based approach to early level of CfE and the effect of taking an online assessment on P1 children.

That Scottish Government

2.1 In partnership with stakeholders, including teachers and headteachers, continue to develop guidance and examples of the ways in which a play-based approach to learning and teaching can accommodate administration of the P1 SNSA.

2.2 In partnership with stakeholders, including schools, develop specific guidelines about how to use data from P1 SNSA alongside observational and other evidence from play-based activities to support judgements of progress and planning of next steps for learning within a play-based approach.

2.3 Ensure that training in administering the SNSA and relevant documentation re-emphasises the option of stopping the assessment if a child becomes tired, bored or upset.

3. The usefulness of the diagnostic information provided to teachers to support professional judgements

That Scottish Government

3.1 Request that, as part of its development process, ACER review the P1 literacy SNSA to ensure that the items align with the relevant parts of the early level CfE. Attention should be given to the language used in the item descriptors and in the data generated from the assessments so that they are comparable with the language used in the expectations and outcomes and associated Benchmarks for the early level of Curriculum for Excellence. In addition, ACER should involve experienced P1 practitioners in the question development process in order to give feedback on the appropriate level of difficulty, particularly in the P1 Literacy SNSA.

3.2 Recommend that one of the two additional inservice days agreed for 2019-2020 should be used so that all schools, including P1 teachers, can engage in professional learning related to how P1 SNSA information can be used effectively to inform professional judgements and/or moderation activities.

3.3 In consultation with local authorities and schools, review the current materials available to ensure that there is easily accessible professional learning support available for schools to use on the dedicated inservice day and publicise these materials to schools.

3.4 Expand the QAMSO programme to support local authorities and school clusters in developing cross school moderation events.

4 The use of the P1 SNSA for school improvement purposes

That Scottish Government

4.1 Work in partnership with local authorities and schools to produce guidance outlining how P1 SNSA can positively contribute to school improvement including further detailed case studies showing how a range of both urban and rural schools

have used P1 SNSA for improvement purposes. This guidance should be accessible online.

4.2 Expand the frequency of professional learning opportunities/training in all local authorities, including face-to-face discussions, which focuses on both the positive use, as well as the limitations, of using P1 SNSA information. This should particularly target senior leaders in schools.

That local authorities

4.3 Expand the frequency of professional learning opportunities already planned, including cluster meetings. Develop bespoke training for P1 teachers and monitor attendance.

5 The challenges of using the P1 SNSA

That Scottish Government

5.1 Continue and extend support to schools for administering the P1 SNSA in terms of resource; this might include recommending that priority time should be given within the Collegiate Hours Agreement in schools so that there is planned time to administer P1 SNSA.

5.2 In consultation with local authorities and schools, develop more guidance for primary schools, particularly larger schools, in managing the technological demands of the P1 SNSA.

5.3 Recommend that, as part of its ongoing review process, ACER reduce the number of items in the P1 literacy SNSA.

5.4 Extend the work of QAMSOs and moderation processes specifically to include special schools and those teachers with responsibility for children with additional support needs and English as an additional language.

5.5 Continue to develop the productive partnership between home and school, including parents/carers in professional conversations about children's progress.

That local authorities

5.6 Extend support and consultation with schools experiencing difficulties in managing the technology and timing of administering the P1 SNSA.

6 The implementation of national Gaelic Medium Education standardised assessments

That Scottish Government

6.1 Working with local authorities and schools, proceed with the implementation of the national Gaelic Medium Education Standardised Assessment.

7. The future of the P1 SNSA

That Scottish Government

7.1 Retain the P1 SNSA to inform professional judgements about learning and teaching but address the recommendations identified in this Review, particularly in respect of the P1 literacy SNSA.

7.2 Ensure that the purpose for collecting P1 SNSA data at national and local authority level is made clear in Government documentation and clarify how the P1 SNSA will contribute to narrowing the poverty related attainment gap. (See also Recommendation 1.1)

7.3 Retain the P1 Practitioner Forum to offer advice and support to teachers, schools, local authorities, Scottish Government and Education Scotland.

Section One Purpose of P1 SNSA and its role within a broader assessment framework

1.1 What does research say about assessment?

The term ‘assessment’ is used in educational contexts to refer to judgements made by educationalists concerning individual pupil performance and the attainment of defined learning goals. It covers both classroom-based assessment as well as large scale external tests, examinations and standardised tests. As Harlen (2014) points out:

There is an important distinction between assessment and testing even though these terms are sometimes used interchangeably. Testing may be regarded as a method of collecting data for the process of assessment; thus, assessment is a broader term, covering other methods of gathering and interpreting data besides testing.

All assessment of pupils’ achievements involves the generation, interpretation, communication and use of data for some purpose. Any assessment activity will involve: pupils being engaged in some activity; the collection of data from that activity by some agent; the judgement of the data by comparing them with some standard; and some means of describing and communicating that judgement. (Harlen, 2014: 2)

The point about use of the words ‘test’ and ‘assessment’ interchangeably is important in the context of P1 SNSA. It is noticeable that teachers, headteachers and commentators more broadly who responded to the Education and Skills Committee Inquiry and to this Review, frequently used the term ‘test’, suggesting an incomplete understanding of the broader purposes of the P1 SNSA. There is an implication in using ‘test’ that it is matter of pass and fail and therefore high stakes for the individual undertaking the assessment. This Review defines SNSA as an assessment tool, not a test.

1.2 Purposes of assessment

There are four main purposes for assessment:

- to help children while they are learning
- to find out what pupils have learnt at a particular point in time
- to identify any significant problems that individual children might be experiencing or address any causes for concern
- to reflect on the effectiveness of the taught curriculum with groups of pupils against defined goals.

These can be termed *formative or continuous assessment, summative and diagnostic*. Diagnostic assessment can refer to the identification of specific learning needs for individuals but can also identify areas of the curriculum which need

attention. This dual use of the term can give rise to confusion, particularly where parents/carers are concerned.

1.2.1 Formative assessment

Formative/continuous assessment is commonly called assessment *for* learning. These assessments are designed to monitor children's learning at any stage in a teaching sequence. They give teachers the chance to address gaps in understanding. They also offer opportunities to identify children's strengths and weaknesses and provide feedback that can move learning forward. Formative assessment can also be diagnostic, helping to identify groups of children with common strengths or weaknesses so that more challenging learning and teaching or extra support can be planned for. Formative assessment is a cyclical process in which information is gathered in relation to pupils' progress towards agreed goals. This information is then used to identify the appropriate next steps to maximise learning, and the action needed to take these steps. This includes clear feedback to pupils.

There is a considerable research literature that demonstrates that formative assessment is an essential component of effective learning and teaching (CAN, 2006; Black and Wiliam, 2006; Marshall, 2012; Torrance, 2012; Hargreaves *et al.*, 2018). International commentators to the Education and Skills Committee's Inquiry into SNSA confirm this:

We feel that there is strong evidence of the benefit of using accurate and valid formative assessment information to inform teacher practice, as well as for school planning and evaluative purposes.

Dr Craig Jones, New Zealand

https://www.parliament.scot/S5_Education/Inquiries/20190125IEAN_New_Zealand.pdf

1.2.2 Summative assessment

Summative assessment can be defined as assessment *of* learning. These assessments are often carried out at the end of a period of teaching: yearly, termly, half termly or more frequently, often informed by tests. Although some summative assessments can be used formatively, they are generally used to monitor and sum up the progress of individuals and groups of children and to identify attainment at specific ages or stages. This information can then be used for reporting purposes. Summative assessment can help stakeholders keep track of pupils' learning, both individually and as part of certain groups. It can, alongside contextual factors, be used as part of school evaluation and improvement. Some formative assessment information can inform summative judgements.

1.2.3 Diagnostic assessment

Apart from its more technical use in identifying particular children's difficulties with learning, diagnostic assessment usually refers to analysing evidence of the impact of the taught curriculum (and sometimes pedagogical approach) on groups of children

against learning goals. It enables the teacher to find out if there are gaps in learning or general misconceptions which then need to be planned for.

Any assessment must comprise collating evidence and weighing it up in the light of specific criteria. Evidence can be observational, collection of examples of work or more formal assessment processes including standardised assessments and tests. The specific criteria might be the teaching objectives for a particular activity, Curriculum for Excellence Experiences and Outcomes, or National Benchmarks, for example.

In addition, summative assessment data can be used to hold individuals and institutions to account. In her submission evidence to the Education and Skills Committee's Inquiry of SNSA in all relevant year groups, Professor Louise Hayward stated:

Traditionally, assessment systems serve three main purposes: to inform learning, to sum up learning over time and to hold people to account. Assessment information gathered about the past is only helpful if it informs future action that leads to improvement. Children are not data – they are not numbers. They are people with lives and futures that depend on successful learning relationships. Learning must be our principal concern.

https://www.parliament.scot/S5_Education/Meeting%20Papers/20190123ES_Meeting_papers.pdf

Key points here are that individuals and institutions should be held to account because children's futures matter and that assessment is about ensuring children make the best progress possible. As one headteacher interviewed for the Independent Review pointed out:

I am accountable. I should be accountable. (Headteacher, interview)

1.3 Validity and reliability of P1 SNSA data

Any standardised assessment needs to be valid and reliable if it is to be dependable and give rise to usable data. *Validity* of an assessment is defined in terms of how well what is assessed corresponds to the learning outcomes that it is intended to assess (Gardner, 2012; Stobart, 2012). One form of validity is *consequential validity*; the validity of an assessment tool is reduced if inferences drawn on the basis of the results are not justified (Gielen *et al.*, 2003). For example, an assessment of word decoding skills may be perfectly valid as an assessment of decoding but not valid if it used to make a judgement about reading ability more generally. The *reliability* of an assessment refers to the extent to which the results can be said to be of acceptable consistency for a particular use (Hall and Burke, 2003; Black and Wiliam, 2012, Verhavert *et al.*, 2019). Reliability can be reduced if, for instance, the outcomes are dependent on who conducts the assessment or if the assessment is administered where some groups of children are offered more support than others. Reliability is measured by the extent to which the same result would occur if it were repeated.

There have been significant criticisms of the reliability and validity of P1 SNSA. The EIS have stated: ‘The question of assessment validity is highly pertinent to the continuing debate around P1 SNSAs.’ (EIS, 2018: 3)

https://www.parliament.scot/S5_Education/Inquiries/20181214EIS_Submission_Final.pdf

The evidence provided by Professor Lindsay Paterson to the Education and Skills Committee Inquiry and to this Review, focused particularly on validity of the SNSA, mentioning P1 SNSA specifically. Professor Paterson surveyed key documents provided by Education Scotland and ACER. He concluded that the validity of the assessments was secure with reliability at least satisfactory. He shows that the SNSA were developed paying close attention to specific details of the curriculum. Validity of assigning specific assessment tasks to the curricular headings in the Curriculum for Excellence was judged as secure by experts in literacy and numeracy from Education Scotland and beyond. He comments:

Thus the relevance of the tests to the curriculum was judged by the same kinds of professional committees as constructed the curriculum in the first place. If the tests are suspect because of how they were developed, then so is the curriculum. (Paterson, 2018)

<https://reformscotland.com/2018/11/scottish-national-standardised-assessments-professor-lindsay-paterson/>

In his evidence to the Education Committee inquiry, Professor Paterson also points out that the SNSA is:

... already giving reasonably reliable information, even for Primary 1 pupils. Contrary to the fears of their critics, this psychometric evidence suggests that it is possible to assess pupils in ways that are relevant to the curriculum and that produce results that can be broadly trusted.

Commenting on the link between the SNSA, the curriculum and the Scottish context, he continues:

The systems of assessment used by many local authorities before the advent of the SNSA suffered from two disadvantages:

(a) They were not based as closely on the Scottish curriculum as the SNSA, whose development has been monitored by the same types of committees of teachers and other educational professionals as produced the curriculum in the first place. The basis in the curriculum strengthens the validity of the SNSA.

(b) The results of these previous systems of assessment were not statistically standardised on any representative group of Scottish pupils. (Paterson, 2018: 1-2)

https://www.parliament.scot/S5_Education/Inquiries/20181206Professor_Lindsay_Paterson.pdf

1.3.1 Unconscious bias

When considering the importance of a national assessment system and its reliability and validity, it is important to remember that the use of standardised assessments can mitigate teachers' unconscious bias.

Hall and Sheehy (2018) point out that:

Assessing learning is not a neutral or value free activity. It is always bound up with attitudes, values, beliefs and sometimes prejudices, on the part of those carrying out the assessments and on the part of those being assessed. (Hall and Sheehy, 2018: 288)

Similarly, Professor Paterson raises the significant point that:

Teacher judgements are – with the best will in the world – not so reliable as standardised assessments. The reason is that teachers (at all levels, from pre-school to university) inevitably are biased towards optimism and towards the level of attainment that is officially expected of the students in their class. Evidence about the extent of this understandable bias was found by the Scottish Survey of Achievement (the predecessor to the Scottish Survey of Literacy and Numeracy). Standardised assessments provide a useful reality check, allowing teachers to calibrate their own judgements against independent criteria. (Paterson, 2018: 1-2)

This is confirmed by the Educational Endowment Foundation in its summary of effective assessment processes:

When we assess a piece of work from a child that we know well, our bias emerges. Perhaps we know they can perform better than the piece in front of us, subconsciously prompting us to raise the mark. Even if the work is assessed anonymously, the existing evidence shows that bias is exhibited against pupils with SEN, those whose behaviour is challenging, those for whom English is an additional language, and those on Free School Meals. Assessment judgments can often be overly-lenient, overly-harsh or, indeed, can reinforce stereotypes, such as boys being perceived as better than girls at mathematics.

<https://educationendowmentfoundation.org.uk/tools/assessing-and-monitoring-pupil-progress/improving-teacher-assessment/>

Standardised assessments can reduce bias:

... by removing much of the variation inherent in assessments administered by humans. Those which are delivered by computers (and don't use human marking) can reduce bias considerably, and increase the reliability and objectivity of the assessment process. (*ibid.*)

1.4 Issues with standardisation, validity and reliability in respect of the P1 SNSA

The use of the term ‘standardised’ has led to some confusion amongst stakeholders and educationalists. A minority of headteachers’ and teachers’ responses to the surveys and interviews questioned the ‘standardised’ nature of the SNSA, particularly how the assessments have been administered in different schools:

We are not sure that these are as standardised as indicated as they are not administered in the same way in schools and schools take them at different times in the year. (Headteacher, Dundee, interview)

It isn't a standardised assessment – it can't be if children do it at different times of the year – how can you make comparisons between schools and use it nationally as a snapshot? (Headteacher, Renfrewshire, interview)

Having talked to friends in other local authorities after completing the assessments, I know that we all carried out and supported the children in different ways. Therefore, I struggle to see how it can be seen as a standardised assessment. (P1 teacher, survey)

In its submission to the Education and Skills Committee Inquiry, Connect, an organisation that represents parents’ views on education in Scotland, expressed concern about the timing and adaptability of SNSA:

... the scheme as it has been introduced into Scotland is not standardised in any way. Indeed, Government has declared that tests should be administered when the teacher feels the time is right, though we know that in many local authority areas the approach has been ‘standardised’ so that all the cohort are tested in a specific time window. The assessment also adapts to the aptitude of the learner, which on one hand means the child is not left to struggle against a task beyond their ability, however it also means the assessment cannot be described as standardised. (Connect, December, 2018: point 4)

However, these comments indicate an incomplete understanding of what standardisation entails. To understand the results of a standardised assessment for a particular child it is necessary to have a range of results across all pupils for comparison. Put simply, that is what ‘standardisation’ means. As Professor Lindsay Paterson comments, the purpose of the P1 SNSA ‘... is to try to make sure that pupils are being judged by standards that might reasonably be expected of children of that age who are following this curriculum.’ (Paterson, blog, 2018)

<https://reformscotland.com/2018/11/scottish-national-standardised-assessments-professor-lindsay-paterson/>

Thus, the process of standardisation ensures that ‘the expectations of what pupils might achieve is realistic for pupils going through Scottish schools today’ (*ibid.*).

(See also ACER User Report, 2018 p.3 paras 1, 4 and 16, for example).

<file:///C:/Users/Windows%2010/Documents/Attached2/Scotland/Use%20these/Use%20this%20User%20report%202018.pdf>

Norming studies are part of the process of standardisation to ensure coverage of the range and type of conceptual understanding demonstrated typically across a 'band' of standardised scores by pupils in Scotland in P1. (*ibid.* p.16 para 81)

Therefore, the criticisms cited above are not actually about standardisation but about reliability. The comments indicate a concern regarding reliability, pointing to the issue that teachers administering SNSA in P1 are offering different levels of support to children as they take the assessments, particularly in literacy. This was confirmed during the Independent Review's direct observations of the assessments being implemented where there were differences in the levels of support given. Teachers administering the assessments *within* schools were consistent in the way they helped children complete them, but administration seems inconsistent *across* schools. If there were any intention to make comparisons between schools using the SNSA data, then lack of consistency in offering support to pupils becomes problematic. Unless consistency of implementation is achieved, aggregation of data beyond individual schools would not meet criteria for reliability.

Another aspect of the implementation of P1 assessments which acts against the reliable comparability of data sets is that the assessments can be taken at any point in the school year, not during set assessment 'windows'. As Education Scotland in its submission to the Education and Skills Committee Inquiry states:

It is for schools, in consultation with their local authority, to decide when children and young people should undertake the assessments. (Education Scotland, 2018:6)

https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf

Although evidence gathered for this Review indicates that the majority of P1 SNSA assessments are being taken at specific times agreed between schools and local authorities, this is not the case across all schools nor is there any guarantee that it will continue in this way in the future. Schools have some flexibility in deciding when to administer P1 SNSA with individuals or with groups of children. This flexibility supports the principle of teachers making the key judgement about appropriate timing of P1 SNSA where it will be most effective in informing learning and teaching decisions. Although there are in some cases agreements between local authorities and schools about timing of the assessments, these 'windows' have some scope for openness. The Review regards such flexibility as a valuable part of a teacher's assessment toolkit.

Although there are guidelines to support administration of SNSA for children with additional support needs or English as an additional language, headteacher and teacher survey responses suggested a need for more explicit guidance about the level of support which might be offered in mainstream situations:

These [SNSAs] are not standardised in the sense that schools can use them whenever they like, support varies from school to school in the conditions of the assessments. (Headteacher, survey)

Some guidelines as to the level of support is needed as some colleagues at other schools administered the test in various ways and with different levels of guidance and support. (P1 teacher, survey)

I would like clearer guidance about how they should be conducted. I don't know if this was the fault in the local authority delivery or nationally, but there seems to a lot of discrepancies between local authorities in terms of how they were presented to the children, how they were carried out and then how this was shared with parents. (P1 teacher, survey)

1.5 Concerns about high stakes testing

Section 1.2 sets out the key purposes for using assessment data. However, assessment data can have a negative impact when what is assessed only focuses upon what can be assessed easily, exacerbated by attaching rewards and punishments to the results within an overall accountability system. In this approach, targets for improvement in test scores are set externally and teachers and schools monitored systematically in their progress toward those targets. This creates a 'high stakes' assessment process, putting considerable pressure on teachers to increase results, which is then transferred to pupils. Such pressure has a negative impact on learning and teaching, as Harlen points out:

Research shows that when this happens, teachers focus teaching on the test content, train pupils in how to pass tests and feel impelled to adopt teaching styles which do not match what is needed to develop real understanding. Initially this effort increases test scores but soon level off as the effect degrades. Then the results become meaningless in terms of intended learning.
(Harlen, 2014:9)

In a high stakes context, not only are the results meaningless for pedagogy but also meaningless for accountability purposes when judging the effectiveness of the system as a whole, schools and individual teachers.

Some respondents to the Education and Skills Committee Inquiry regarding SNSA were concerned that, although the Scottish Government have given assurances to the contrary, there would be a drift towards 'high stakes' uses. The organisation Children in Scotland commented:

The new standardised assessments appear to present a pathway to 'high stakes' testing that move away from the broad educational ambitions of *Curriculum for Excellence* and the *Getting it Right for Every Child* approach.
(CiS, 2018: 2)

https://www.parliament.scot/S5_Education/Inquiries/20181219Children_in_Scotland.pdf

In their submission to the Education and Skills Committee Inquiry, Upstart Scotland, a charitable organisation dedicated, amongst other aims, to establish a statutory play-based 'kindergarten stage' for Scottish children, expressed concerns that:

[T]he linking of assessments to performance targets also raises the stakes significantly for schools and teachers. In Scotland, aspirational 'benchmarks' for children's educational performance were published to accompany the SNSAs. These are, not surprisingly, interpreted as targets. Along with advice to teachers that 'there is no need to provide curriculum level judgements in all curriculum areas – stick to literacy and numeracy', the benchmarks will exacerbate the 'salience effect' and 'teaching to the test'. (Upstart Scotland, 2018:1)

However, Scottish Government points out that SNSA was not designed for accountability purposes:

... no school or local authority level data is published. Some national level SNSA [analysis] is published to provide the overall picture of achievement in the assessments and to inform national improvement activity. The Scottish Government does not publish school league tables. (Scottish Government, 2018: 5)

https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf

In addition, the Scottish Government's submission to the Education and Skills Committee Inquiry quotes the Scottish Government's International Council of Education Advisors (ICEA) in its 2018 formal report in June 2018:

The ICEA initially expressed reservations about the introduction of these assessments and shared their views with the Scottish Government. The ICEA notes however, that the assessments are not 'high stakes tests' and the results do not determine any key future outcomes for young people, such as which school they go to, or whether they can progress to the next level. There is no pass or fail, and the ICEA notes that this approach to assessment and its central interpretation can be of formative use.

At the subsequent meeting of the ICEA in September 2018, Dr Allison Skerrett (from the University of Texas, Austin) speaking on behalf of the Council said that Scotland had carefully designed the assessments, their modes of delivery and their purpose. She said that Scotland has a real opportunity to be a model for other systems that have employed standardised assessments. (ICEA, 2018: 7-8)

Nevertheless, in interview for this Review, one headteacher explained that she was concerned about the use of data and about league tables:

What terrifies me is that where the Scottish Government is doing is opposite to what CfE is meant to be. There's been a storm on Twitter about SNSA being seen as high stakes. (Headteacher, Clackmannanshire, interview)

Another commented:

If SNSAs were published I would be dismayed. If they publish my ACEL I am happy for that. (Headteacher, Dunbartonshire, interview)

In a similar vein, a QAMSO explained:

I think there is still a worry amongst some teachers that Scottish Government is collecting the data – even though it can't be used like that. Twitter and Facebook chatter just makes it worse. It's important to get the message to everybody. (QAMSO, Argyll and Bute)

No local authority responding to the surveys or interviews indicated that there was any use of P1 SNSA data to make judgements about individual school effectiveness.

Comprehensive national assessments on their own do not in themselves improve learning and teaching. In her submission to the Education and Skills Committee Inquiry, Professor Claire Wyatt-Smith cited evidence from Australia showing that since the introduction of a national writing assessment in Australia, standards of writing had actually fallen (Wyatt-Smith and Jackson, 2016). There is also a connection between the fall in standards and a lack of teacher knowledge about how to link teaching, learning and assessment (Wyatt-Smith *et al.*, 2017). Any national assessments, therefore, are only part of a system which can inform quality learning and effective teaching. A standardised assessment in itself will not improve performance; while assessment information can be useful, it will not raise standards unless teachers understand how to use it.

The OECD report (Morris, 2011) also pointed out the dangers of only using the data from standardised assessments to inform decision making because they do not provide a full picture of what children can do or the effectiveness of classroom teaching:

“Only multiple measures of achievement can provide an accurate picture of student learning and school success,” writes Guilfoyle (2006: 1). Employing multiple evaluation measures – including incorporating non-test information into decision-making – reduces the risk of making incorrect decisions as a result of the limitations of standardised test scores, improves the validity of the system, and reduces the likelihood of excessive narrowing of curriculum (Hamilton and Stecher, 2002). (Morris 2011: 44)

It should be noted that some academics have praised the careful construction of a framework for national assessment which is not high stakes. Hall and Sheehy (2018) comment that the assessments available to Scottish schools:

crucially ... are not [high stakes], because there is not an emphasis on ranking and comparing. Performance tables are not compiled and published. (Hall and Sheehy, 2018: 296)

Moss (2017) argues that:

[T]he architecture of high stakes testing needs to be dismantled. Other methods should be used to explain to parents how schools are extending pupils' capacities and capabilities through their teaching. There are precedents we can learn from. Scotland in particular has invested much more in trying to make such a model work. (Moss, 2017: 63)

In summary, any assessment and its process must be clear about what it is going to assess, what purpose the assessment serves and the uses to which the assessment data will be put. If assessment information is used for 'high stakes' accountability it has a negative effect on learning and teaching and should therefore not be used in this way, but be part of overall information to inform future action for system improvement.

1.6 Intended purposes and use of P1 SNSA data

In its submission to the Education and Skills Committee Inquiry into SNSA, the Scottish Government stated that the SNSA is:

... a unique assessment system that has been specifically designed for the Scottish context. The SNSA is a diagnostic, supportive assessment that is designed to improve children's learning, giving teachers helpful feedback on children's next steps in aspects of reading, writing and numeracy. This is fundamentally different to other models of standardised assessment which are about 'proving' learning, with results being published. Information from SNSA supports teachers' professional judgement of the progress that children and young people are making towards the relevant Curriculum for Excellence level. That judgement is reached based on all the evidence available to teachers – the SNSA is just one, nationally consistent, element of that evidence.

The SNSA involves:

- Formative assessments, the key purpose of which is to provide diagnostic information to teachers on aspects of literacy and numeracy. This helps the teacher to shape teaching and learning and to support their judgements about children and young people's progress.
- Online, adaptive assessments meaning that the difficulty of the questions that children and young people get will vary depending on the answers they give to ensure an appropriate level of challenge.

- Not designed to provide a definitive assessment to confirm whether a child has or has not achieved the appropriate level. Instead, they are indicative and just one source of evidence that a teacher may call on in exercising their professional judgment as to whether a child has achieved a level. (Scottish Government. 2018: 5-6)

https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf

Gayle Gorman, HM Chief Inspector of Education, on behalf of Education Scotland, outlined the purposes of SNSA in Education Scotland's submission to the Education and Skills Committee Inquiry. These were identified at individual child, group, school and local authority level. SNSA data can:

- Be used as part of a range of evidence to support teachers' professional judgement on the progress of each child.
- Support the identification of key strengths in a child's progress and identify next steps. They are designed to be used formatively.
- Practitioners can look at the data, identify any general patterns in the areas in which groups of children are doing well or need support and can adjust their teaching.
- SNSA information should not be the only source of information for decisions about individual or groups of learners. The SNSA contributes towards a range of assessment information which teachers draw on to develop next steps in learning and determine progress within a level and achievement of a level. No decision about a learner would be made on the basis of their SNSA assessment alone.
- A school can use the data as part of the information to identify the areas which are being taught well and the areas in which children are not doing so well and can organise whole school professional development in these areas.
- Local Authorities can use SNSA information to help identify effective practice to disseminate as well as possible areas for LA wide professional learning (See Sections Three and Four).
- At a national level SNSA information could be used to inform the development and maintenance of support and professional learning.

(Gorman, 2018 paras. 19 – 22)

https://www.parliament.scot/S5_Education/Inquiries/20190104Education_Scotland.pdf

The above statements set out a comprehensive set of purposes for SNSA assessments, including at P1, with their tight focus on informing decisions about learning and teaching, and with formative/diagnostic assessment purposes clearly indicated. In addition, there is acknowledgement that SNSA data can only form part of the evidence drawn on for making professional judgements. However, evidence

collected by both this Review and the Education and Skills Committee's Inquiry demonstrates that there is a perception within the system that the purpose of SNSA has not been clear and has changed over time. For example, in their submission to the Education and Skills Committee Inquiry, EIS commented:

When first announced by the Government, it was clear that the intention was that they would be a summative measure of children's attainment, applied across the country during the same window of time each year. The influence of the EIS and others persuaded the Government of the value of some forms of standardised assessment for diagnostic purposes, and of the fact that if assessment is to genuinely support the learning of individual children, then whole cohorts and classes of young people should not be undertaking the assessments at the same time. SNSAs were then designed to enable their use at any point in the year, the Government advising that the timing be determined by schools and teachers in consultation with the local authority.

(EIS, 2018: 4)

https://www.parliament.scot/S5_Education/Inquiries/20181214EIS_Submission_Final.pdf

The Royal Society of Edinburgh argued that:

The Scottish Government does not have access to the data generated by the SNSAs as this resides with schools and local authorities. Scottish Government has access only to the national level data generated by the assessments. However, clarity about the range of SNSA data that Scottish Government would access came relatively late during the introduction of the assessments, indicating that Scottish Government was for some time unclear on how it intended to access and use the data. This may have contributed to the lack of consensus on the purpose of the SNSAs.

(RSA, 2019: 2)

https://www.parliament.scot/S5_Education/Inquiries/20181221RSE.pdf

Notwithstanding the concerns expressed by submissions to the Education and Skills Committee Inquiry and a few responses from surveys and interviews for this Review, teachers, headteachers and local authorities have commented on the usefulness of the P1 SNSA data:

I look for any surprises, children who have performed better than expected or have found the test more challenging than expected and compare results to my own assessment information. (P1 teacher, survey)

The maths one did show me topics which I hadn't covered very much in the year, but that was more an assessment of my teaching rather than the children's learning! I told their next teacher that they needed to do more work in those areas. (P1 teacher, survey)

We also use it alongside teacher judgement and other assessments to help us assess an individual's performance. It is used to pinpoint if there are trends

across the school in terms of strengths and aspects for development and we then plan at stages and as a whole school accordingly. This information then helps us plan next steps in terms of support and challenge needed to raise attainment and achievement. I think the P 1 SNSA is extremely useful in terms of the feedback it offers. (Headteacher, survey)

We find the class and cohort data very informative for identifying improvements required within schools' curriculum content, or approaches to delivering certain aspects of the curriculum. The diagnostic information is being used effectively at Cluster level also for schools to support and challenge each other on improving aspects of their curriculum. (Local authority, survey)

In summary, interview evidence and survey responses from teachers, headteachers and local authorities indicate an understanding of the use of data derived from the P1 SNSA. They can:

- provide information about where a child is in some aspects of numeracy and literacy at a particular moment in time in relation to some of the literacy and numeracy benchmarks
- be part of the evidence considered when teachers are making a judgement about CfE early level
- offer a standardised form of assessment linked to the CfE benchmarks so that consistency is promoted within and between schools across Scotland
- provide an indication, through the analysis of the data generated, that can inform planning for learning and teaching of an individual child
- inform teaching and learning discussions amongst school staff in relation to progress in terms of the CfE
- provide information on the profile of groups of pupils in a class which, when considered alongside other assessment information and the Experiences and Outcomes of the Curriculum for Excellence, may lead to changes in the planned experiences and teaching provided in order to meet identified gaps in learning
- provide headteachers and other senior leaders with information about how well teaching and the curriculum is meeting the needs of children and groups in the areas assessed by SNSA in P1 , leading to modifications if necessary
- provide local authorities with information which can be part of the evidence considered when having conversations about performance and school improvement.

There are, however, some concerns about how clearly the P1 SNSA links with the Experiences and Outcomes of the Curriculum for Excellence and the associated Benchmarks. (See Section 3.3)

The P1 Practitioner Forum Report suggests:

All educators (teachers, schools, local authorities, Scottish Government advisors and Education Scotland/HMIE) have a professional responsibility to ensure that their systems do not overplay the reliability or predictive capacity of SNSA, or any other data. A negotiated and voluntary 'Code of Practice' with clear processes to ensure that educators at all levels understand the power and the limitations of data and enact good data-use practices would underline this. Such understanding could help to prevent SNSA data becoming high-stakes. (P1PF, 2019)

<https://www.gov.scot/publications/p1-practitioner-forum-recommendations-scottish-national-standardised-assessments/pages/7/>

In agreement with P1PF, it is the view of this Review that in order to ensure that there is no drift towards using P1 SNSA data or Benchmarks to set targets and move towards a high stakes context, and to ensure clarity of purpose, a Code of Practice which includes a practical framework should be developed and agreed in partnership with stakeholders.

Conclusions

The Review identifies the primary purpose of the P1 SNSA as informing teachers' professional judgements about learning and teaching. P1 SNSA is a formative assessment which can inform more comprehensive summative judgements such as ACEL. However, it is not, and should not be, in itself, summative, as it only assesses part of the early level CfE and also only forms part of the toolkit a teacher draws on to make professional judgements. Being doubly partial, therefore, P1 SNSA information does not have the capacity to perform a summative function about literacy and numeracy on its own.

As part of teachers' professional judgements the P1 SNSA offers a useful standard element within the overall evidence to inform judgements about learning and teaching. Results are calibrated against aspects of the Scottish Curriculum for Excellence, standardised on a Scottish population of children of the appropriate age, and can guard against unconscious positive or negative bias in relation to specific assessment criteria.

The level of support given to children during the administration of P1 SNSA varies widely. In addition, different schools administer P1 SNSA at different times, both for individual children and across schools. This means that it is difficult to draw conclusions from aggregated data beyond the class or school.

Teachers and headteachers have expressed concerns that P1 SNSA data might in the future be used for high stakes purposes. The Review has not found any evidence that Benchmarks or P1 SNSA data are being used to set targets, make comparisons between schools, or for teacher appraisal, nor that there are any plans to do so.

Recommendations

That Scottish Government

Provide a detailed rationale for P1 SNSA setting out the purposes and uses of P1 SNSA at individual, class, school, local authority and national levels. This should include a statement that the intention of SNSA data is solely focused on informing learning and teaching and will not be used for accountability purposes now or in the future.

Work with local authorities, schools and other stakeholders to develop a practical framework/Code of Practice which sets out what SNSA data in P1 should productively be used for and what it should not, including a statement about purpose. This framework should then be used as the basis for agreement in every school about the purposes and uses of P1 SNSA data. This should be publicised nationally and a copy sent to all schools and P1 teachers.

In consultation with schools and local authorities, provide clear guidance, along the lines of the guidance offered about administering the P1 SNSA with ASN and EAL children, on the level of support which can be given to P1 children as they undertake the assessments.

Continue with the flexible arrangements about the timing of the P1 SNSA.

Refrain from drawing any general conclusions from aggregated P1 SNSA data until there is evidence of consistent administration. P1 SNSA data should not be used to make comparisons between schools or local authorities.

In consultation with local authorities, teachers and headteachers, agree how P1 SNSA data will inform Quality Assurance conversations within the context of all the other data pertaining to the performance of schools. This should be based on the practical framework/Code of Practice recommended in 1.2.

That local authorities

In consultation with headteachers and teachers, agree how P1 SNSA data will inform Quality Assurance conversations within the context of all the other data pertaining to the performance of schools. This should be based on the practical framework/Code of Practice as recommended above to Scottish Government. P1 SNSA data should not be used to make comparisons between schools or local authorities.

Refrain from drawing any general conclusions from aggregated P1 SNSA data until there is evidence of consistent administration.

Section Two The compatibility of the assessments with the play-based approach to early level of CfE

2.1 What is a play-based curriculum?

There is little disagreement in educational debate that play is essential to children's social, cognitive and identity development (Pentti Hakkarainen, 2006; Evans and Pinnock, 2007; Meire, 2007; Bruce, 2011; Carr, 2014). However, there is considerable variation in views of what a 'play-based' curriculum means and implies. Approaches vary across the world, including:

The Reggio Emilia approach, developed in northern Italy, which encourages imaginative play, and fosters children's intellectual development through focusing systematically on symbolic representation. Young children are encouraged to 'explore the environment and express themselves through multiple paths including expressive, communicative, symbolic, cognitive, metaphoric, logical, imaginative and relational.' (Gandini, 2011: 80) Adults focus on enquiry and expressive language.

Developmentally Appropriate Practice, largely seen in the UK and USA, but having influence across the world, sees play as 'a primary (but not exclusive) medium for learning' (Stephen, 2006). The role of the adult is to 'demonstrate, question, model, suggest alternatives and prompt reflection' (*ibid.*)

<https://www.webarchive.org.uk/wayback/archive/20180129182408/http://www.gov.scot/Publications/2006/01/26094635/0> (Accessed 7th April, 2019)

The High/Scope Curriculum, practised primarily in the USA, defines itself as play-based and child-centred, with children guided to 'explore, interact and exercise their creative imagination through purposeful play'. (<https://highscope.org/our-practice/curriculum/> accessed 7th April, 2019). Adults create a structured environment for children to exercise decision-making, cooperation, creativity and problem solving and prompt children to reflect on their learning.

Te Whariki, developed in New Zealand, pays particular attention to the social contexts in which children live and includes spontaneous play and play that supports meaningful learning in its curricular goals. Adults 'look closely at what children are seeing, saying, doing and knowing in order to understand, celebrate and elaborate learning' (Luff, 2012:143). Such assessment then leads to new levels of challenge for the children. ²

In England, the Ofsted report *Teaching and Play in the Early Years*, reports that: 'There is no one way to achieve the very best for young children' (Ofsted, 2015: 5). Most of the schools and settings visited saw approaches to teaching and play as a

² These are not intended as an exhaustive list, but represent some of the key approaches to play-based curricula.

continuum, with adults ‘weighing up the extent of their involvement and fine-tuning how formal or informal, structured or unstructured, dependent or independent each learning experience should be to meet the needs of each child most effectively.’ (*ibid.*)

In Wales, *The Curriculum for Wales: Foundation Phase Framework* sees experiential activities as central to learning in order for children to practise and consolidate their learning through the ‘serious business of play’, experimenting, taking risks and making decisions both individually and as part of a group. The role of the adult is to create a balance between structured learning through child-initiated activities and those directed by practitioners. (Learning Wales, 2015: 4-5)

In Northern Ireland, the document *Learning Through Play in the Early Years* describes the role of adults as ensuring ‘progression in the provision of activities to meet the developmental needs of children’ (p.8). It states that:

Children come to pre-school already as skilled learners. Through our observations, assessment and professional judgement we gain valuable insights into how each one learns best. This information informs our planning to meet the needs of each individual child’ (*ibid.*)

http://www.nicurriculum.org.uk/docs/foundation_stage/learning_through_play_e.y.pdf (Accessed 18th April, 2019)

In Scotland, *Building the Curriculum 2* includes play as an essential part of active learning ‘which engages and challenges children’s thinking using real-life and imaginary situations’ including opportunities for spontaneous play and planned, purposeful play (CfE 2007:5). It is important to build primary school experience on nursery experience, combining active, independent play with skilled and appropriate intervention or teaching. However, developing a more active approach to education means paying attention to progression in children’s development and learning (*ibid.* p.9). Establishing continuity and progression will include attention to: ‘using staffing resources to provide extended periods of learning through play for some children’ and ‘planning the careful development of literacy and numeracy skills supported by a strong and continuing emphasis on oral language and development’ (*ibid.* p.11) as well as considering how to use assessment information to plan next steps in learning (*ibid.* p.14).

2.2 Criticisms of P1 SNSA as not compatible with play-based learning

Submissions to the Scottish Government Education and Skills Committee Inquiry into the P1 SNSA (SGI, 2018 -19) outlined a range of concerns, some calling for ‘assessment practice that is appropriate for a genuinely play-based P1 curriculum.’ (EIS, 2018). In her presentation to the P1 Practitioner Forum (P1PF) Jean Carwood-Edwards, Chief Executive of Early Years Scotland (EYS), pointed out that EYS does not believe that the SNSA has to be entirely play-based, although she stressed that learning through play is one of the critical, and most impactful, ways that children

learn. Jean acknowledged that children also learn in other ways, for example, through observation, conversation, exploration, sustained shared thinking, and so forth.

In interview, she and Jane Brumpton outlined a particular concern that the use of technology for carrying out assessments can disadvantage some children who do not have experience in technology from their homes or communities or who might not yet be able to handle the demands of the electronic devices. They also pointed out that the terminology of the SNSA, specifically the idea of a ‘national standardised assessment’ has implications that can undermine a view of teachers’ professional judgements as the most valuable element of assessment. Instead, they suggest that the SNSA should be seen simply as part of the teacher’s toolkit in making assessments to move learning forward. Not only that, but ‘standardised’ carries suggestions of children sitting in serried rows which makes the SNSA seem to be in opposition to a more active play-based learning environment.

EYS recommends a wider national debate about how assessment at P1 might be described, explained, and carried out effectively, including meaningful engagement with early years practitioners, teachers and parents/carers to look at possible positive ways forward in the interest of the children.

Liz Smith (Scottish Conservative) in the Parliamentary debate on 19 September 2018, cited the kindergarten model, developed by Friedrich Froebel in the 19th century ‘using structured play and learning through discovery and gifts’, arguing that ‘Froebel did not ask infant teachers to make use of standardised tests or assessments. Instead, he asked them to be skilled in their professional judgments and well informed, through daily observation of each child, which would then be discussed with each family. Everything about that observation was done to inform and improve teaching’ (Smith, 2018).

These views express concern with the form of assessment. However, other criticisms, for example from Upstart Scotland, are founded on the belief that children should not undergo formal schooling until they are six or seven. In respect of SNSA, their concern is that Scotland may fall into the ‘test and targets trap’. Their *Play not Tests* campaign argues that ‘every country that has so far introduced national testing in primary schools has seen a narrowing of the curriculum, a steady increase in teachers ‘teaching to the test’ and a push-down of academic content to ever younger age groups. These developments are related to the inevitable linking of national assessments to targets for attainment at specific ages.’

<https://www.upstart.scot/play-not-tests-in-p1-campaign/> (accessed 7th April, 2019). (See Section 1. 5 for a discussion of targets)

In addition, Upstart Scotland argues that the P1 literacy Benchmarks do not align with Curriculum for Excellence’s early level for the three to six age group, which stresses the centrality of exploration and play. Furthermore, that a ‘relationship-centred, play-based kindergarten environment’ means that all children would have

access to ‘the type of experiences through which young human beings naturally develop problem-solving, vocabulary and language skills, including motivating play activities, explorations and investigations, involving real-life problem-solving and discovery of number and maths’ (*ibid.*) They continue ‘In countries where formal education doesn’t begin till seven, many children are already able to read, write and reckon by the time they start school and the overwhelming majority are ready to learn quickly and successfully.’ (*ibid.*)

Children in Scotland supports the *Play not Tests* campaign and firmly believes that play-based learning, rather than a focus on assessment in the earliest stages of school, is the most appropriate form of education for children at this stage. The organisation recognises that assessment is central to teaching and learning but opposes the SNSA at P1 and P4. (Submission to Education and Skills Committee’s call for evidence on Scottish National Standardised Assessments, 2018). Drawing on evidence papers provided by Carolyn Hutchison, Honorary Senior Research Fellow at the University of Glasgow, the main objections to the introduction of new standardised assessments are because of questions about their validity and reliability (particularly for those in P1 and P4), and whether the investment in time and resource will provide data that is likely to help improve educational attainment for pupils. (See Section 1.4 for a discussion of validity and reliability.)

Although not opposed to assessment in schools, Connect opposes all standardised assessment in Scottish schools for P1-S3. In specific opposition to SNSA, Connect argues that the assessments are ‘not standardised in any way’ (Submission to Education and Skills Committee’s Inquiry into Scottish National Standardised Assessments, 2018). (See Section 1.4 for a discussion of standardisation). In respect of play-based learning, Connect comments that ‘the P1 tests are administered in a stage where learning through play is the declared focus of our education system: to introduce tests at this stage is to act completely counter to the purpose of this approach and will inevitably lead to schools focusing on the tests as an end in themselves, moving away from the principles of Curriculum for Excellence’ (*ibid.*). Drawing on evidence from other countries, Connect argues that ‘China and Singapore along with Finland are all high performing education systems and have smaller equity gaps than Scotland, yet these countries have committed to test-free, play-based, early years education and childcare’ (*ibid.*).

2.3 Other countries as models for assessment in the early years

Opponents of assessment in the early years of schooling often draw on Scandinavian models where children do not attend formal schooling until they are 7 years old. From that age, assessment is integral to learning and teaching, for example in Finland:

The 2004 National Curriculum provides guidance for evaluation for students in early grades and throughout basic education. The National Core Curriculum for Basic Education 2004 (Finnish National Board of Education,

2004) divides classroom assessment into two categories: assessment during the course and final assessment. Both are nationally mandated to align with national criteria, but they serve different purposes. (Hendrickson, 2012)

International Education News observes that:

Finnish teachers use an array of diagnostic and screening tests extensively in the early grades in Finland to make sure that no students are falling behind, particularly in reading. For example in one municipality, primary school special education teachers administer a screening test in reading comprehension to all students at the end of 2nd and 4th grade across all schools (and many administer it at the end of every year). That information, however, is not used at the school or municipal level to “check” on who is and isn’t performing well, rather, it’s used to identify those students who will need extra help moving forward.

<https://internationalednews.com/2014/06/09/assessment-in-finland-steering-seeing-and-selection/> (Accessed 7th April, 2019)

In Iceland, in response to PISA reports of 2012 of a drop in standards in literacy, mathematics and science, as well as a widening gender gap, the Department of Education is proposing standardised tests for 6 year olds in phonetic awareness, decoding and comprehension. (Sigpórsson, 2017). There are no plans for developing similar practices in mathematics (Sigpórsson, 2019, personal communication).

There may be problems, however, in invoking practices from other education systems, as Aart de Geus, General Secretary of OECD from 2007-2011, points out:

Learning from another country’s experience does not necessarily imply copying all aspects of that country’s system. There is always a danger that such comparisons can become politicised because of the different traditions of different nations. ...it is possible for one country to learn from another’s good practices while recognising their different contexts and ideologies.’ (de Geus, 2011: 54)

Whilst other countries can offer useful insights into educational principles and approaches, the cultural and political context for any educational system needs to be taken into account.

2. 4 Respondents’ views of P1 SNSA in relation to a play-based curriculum

A few respondents commented on the P1 SNSA not being compatible with a play-based curriculum. Some are committed to not starting formal education until age 7:

Those countries with the highest rankings in education understand the vital role that play has in the social, emotional, mental, physical and academic wellbeing of children up to the age of at least 7 and tend not to formally

assess their pupils or even start formal education until this age, opting for a kindergarten style education. (P1 teacher, survey)

Raise formal schooling to age 7. Compulsory kindergarten before that. (Headteacher, survey)

Others think that a play-based approach does not suit an assessment carried out sitting for a period of time using a computer, for example:

The format and length of the assessment is not in the least conducive with the move towards a more play-based curriculum at early level. (Headteacher, survey)

Based on my experiences with the P1 SNSA I believe these assessments are inappropriate for P1 children. They are taking children away from positive, play-based experiences. (P1 teacher, survey)

Others, however, report that the SNSA can be aligned with a play-based approach, commenting:

They enjoyed it as a game. (Headteacher, survey)

Rather than being unsuited to a play-based approach, in some schools the SNSA experience was *'very positive – it was treated as a fun activity.'* (Headteacher, survey) and *'The children enjoyed the experience.'* (P1 teacher, survey).

In interview, the headteacher of a primary school in South Ayrshire explained:

Assessments are done as part and parcel of the school day. There isn't a problem –the teachers just do them. The assessments in P1 fit comfortably with what we do in our play-based approach. (Headteacher, interview)

In another school visited by the Independent Review, the Headteacher, who had been a P1 teacher, was satisfied that the P1 SNSA could be accommodated within a play-based approach to learning:

The children didn't know they were taking the assessment. They just saw it as another group activity. The children are used to that kind of activity anyway; they use the iPads with earphones. We did it in groups of four, just like in their usual carousel of activities. I explained it like I would explain any other activity. This is the way we teach anyway. A few left it and came back after break to finish it. One child with additional support needs did it during Learning Support time. (Headteacher, interview)

This echoes the P1 SNSA case study evidence from Peel primary school, West Lothian on the National Improvement Hub:

The primary 1 assessments were completed in May, allowing routines to be established for the children in a flexible, play-based curriculum. It was very

much felt that the Scottish National Standardised Assessments formed part of the day-to-day learning experience and, as such, did not require any additional planning beyond that of a normal lesson. (P1 SNSA Case Studies on the National Improvement Hub, 2018)

<https://education.gov.scot/improvement/Documents/snsa-p1-case-studies-west-lothian-council.pdf> (Accessed 17th April, 2019)

2.5 Assessment and play-based approaches

Members of the P1 Primary Forum recognised that ‘play itself is not a learning outcome and the SNSAs are not designed as play-based learning activities in and of themselves.’ (P1PF, 2019)

<https://www.gov.scot/publications/p1-practitioner-forum-recommendations-scottish-national-standardised-assessments/pages/5/>

Nevertheless, it seems that some submissions to the Education and Skills Committee Inquiry, and responses to the Independent Review, conflate assessment and pedagogy, seeing the ‘moment of assessment’ as the same as a pedagogical approach. However, there need not be any disparity between a play-based approach and P1 SNSAs. Both Professor Lindsay Paterson and Keir Bloomer in interview (February, 2019) distinguished between a play-based pedagogy which is a means to an educational end and an assessment which captures a snapshot of part of learning. Professor Paterson points out that ‘assessment and approach are different in function and have different purposes. An assessment that takes 45 minutes a year is not likely to interfere with a play-based approach to learning and teaching’ (Paterson, interview, February, 2019). As the Education Scotland documentation *Building the curriculum 2* (ES, 2007) and *How Good is Our Early Learning and Childcare?* (ES 2017), for example, indicates, effective use of assessment is very much part of learning and teaching in the early years.

Indeed, if learning is to be valued as important to children’s development, it needs to be systematically assessed (Carr, 2015). As a practitioner using the well-respected approach to play-based learning from Reggio Emilia, Gandini specifically makes the point that ‘There is a widespread and mistaken view that the Reggio approach is incompatible with assessment of children’s progress.’ (Gandini, 2011: 78). But formative assessment using a wide range of strategies to ensure a balanced view of each child’s learning is widely recognised as the most effective way to move learning forward (Siraj-Blatchford *et al.*, 2002; Drummond and Marshall, 2006, Hargeaves *et al.*, 2018). There is considerable consensus that assessment in the early years should be made through systematic observation and documentation from a range of sources, taking an holistic approach (NAEYC, 2009; Gandini, 2011; Tayler *et al.*, 2013; Drake, 2014; Walsh *et al.*, 2017). Indeed, research into effective teaching shows that the most effective teachers are ‘highly diagnostic’ in their assessments (Hall, 2012); the P1 SNSA offers support for teachers’ diagnostic and formative judgements.

Members of the P1 Primary Forum comment:

*The SNSAs are not play but they are consistent with the learning I'm looking to get from play. I used the practice assessments as a free choice activity in the playroom. (Teacher comment P1 PF, 2019: *ibid.*)*

*Play-based activities are planned with the Benchmarks in mind, so I don't have a problem with children demonstrating their learning through SNSA. (Teacher comment P1 PF, 2019: *ibid*)*

There is no necessary disjunction between assessment and a play-based pedagogy. Some organisations and individuals are fundamentally opposed in principle to children undergoing formal schooling before the age of 7, but discussion of this issue of principle is beyond the scope of this Review.

2.6 The effect of taking an online assessment on P1 children

Media reports and some members of the Scottish Parliament reported that the P1 SNSA was causing children distress. However, surveys and interview evidence show that the majority of headteachers and teachers did not see any distress or discomfort as children undertook the P1 SNSA, in fact, they reported that the children enjoyed it:

Most children have responded well. They are excited about the assessment being carried out using ICT and the practice assessment is useful for less confident children. (Headteacher, survey)

They enjoyed it. They thought it was a game. (P1 teacher, survey)

They completed it with their usual engagement and positive attitude. (Headteacher, survey)

The children enjoyed the P1 numeracy assessment and they liked the random nature of the questions. (Deputy headteacher, interview)

In the surveys and interviews providing evidence to this Review, there were very few comments about children becoming upset and tearful and rather more that children became tired and bored whilst taking the P1 Literacy SNSA particularly, for example:

...it was felt that the standard of some questions asked was beyond early level. Unfortunately, this caused some learners, who already lacked confidence, to become upset. (P1 teacher, survey)

Some children became demoralised because they found the test too difficult. (P1 teacher, survey)

Most children got to the point where they found it boring and tedious. (P1 teacher, survey)

There were comments about the teacher's approach having an effect on the children's response:

Most children have enjoyed the 'game' we play. When the class teacher is implementing it they know when a child is maybe not enjoying it and can stop them so as not to cause distress. (P1 teacher, survey)

They were oblivious. As far as they were concerned they were just playing a computer game. Children at that age experience absolutely no stress whatsoever at completing tasks like this if adults present it in the correct way. (P1 teacher, survey)

No children were upset because we don't make a big deal out of it. (Headteacher, interview)

Others pointed out that children varied in their response to the assessment:
Some have enjoyed the assessment procedure, showing pride in their ability to read. Others find it stressful and appear very nervous. (P1 teacher, survey)

[Response] varies from pupil to pupil. Some cope fine, some are 'click happy' and others become stressed and anxious. (Headteacher, survey)

The Review observed a total of 26 children in different settings as they undertook either the P1 numeracy or P1 literacy assessments. None of them showed any distress and indeed, in some cases, showed great perseverance. When asked about how they felt they were all quite happy, for example, C. commented that he liked matching the words to the pictures and although G. said she found it difficult she was quite unfazed (East Dunbartonshire primary school, observation and interview). A. not only enjoyed the assessment but carried out a running commentary on the questions: *'I've got a wildcat at home! She's very wild.'* and *'That's a silly question because it shows you in the picture.'* (East Dunbartonshire primary school, observation and interview). T. said *'Some of those were tricky'* but seemed quite happy about doing it. (Stirling primary school, observation and interview).

In summary, there was scant evidence of children being upset by taking the P1 SNSA. Where this occurred, it was mostly because children were taken away from their usual learning context and were working with unfamiliar staff. The context of the assessment can make a difference to how confident or worried the children might be and individual differences are also a factor, suggesting that teachers' knowledge of the children is important in the way different children respond to the assessment. Recent research (Rowe and Miller, 2016; Kucirkova *et al.*, 2016) indicates that children are keen users of digital technology for their own purposes. Investigating children's use of a range of digital technologies in the home, research by Cremin *et al.*, (2014) shows that teachers are often not aware of children's funds of knowledge about digital technology drawn from home. Nevertheless, children do not have equal access to digital technology in homes, so it is important that the use of technology for assessment is accompanied by classroom teaching in the uses of screen-based reading and composing.

Conclusions

Some critics who argue that the P1 SNSA does not fit with a play-based pedagogy do not agree with any formal education before the age of 7. These are genuine and committed views but do not align with the current educational arrangements in Scotland.

In survey and interview responses, a small number of headteachers and teachers commented that the P1 SNSA does not fit with a play-based pedagogy but it seems that there are confusions between a ‘moment of assessment’ and a pedagogical approach.

There are strong examples of schools where headteachers and teachers operate a play-based approach and find no incompatibility between that and the P1 SNSA.

There is scant evidence of children becoming upset when taking the P1 SNSA. However, there is evidence that the context for the assessments, including the teachers’ attitudes, make a difference to children’s assurance when undertaking the P1 SNSA.

Recommendations

That Scottish Government

In partnership with stakeholders, including teachers and headteachers, continue to develop guidance and examples of the ways in which a play-based approach to learning and teaching can accommodate administration of the P1 SNSA.

In partnership with stakeholders, including schools, develop specific guidelines about how to use data from P1 SNSA alongside observational and other evidence from play-based activities to support judgements of progress and planning of next steps for learning within a play-based approach.

Ensure that training in administering the SNSA and relevant documentation re-emphasises the option of stopping the assessment if a child becomes tired, bored or upset.

Section Three The usefulness of the diagnostic information provided to teachers to support professional judgements

3.1 SNSA and professional judgements

The purpose of P1 SNSA is to inform professional judgements about learning and teaching. P1 SNSA literacy and numeracy assessments produce a significant amount of assessment data in the aspects of numeracy and literacy they focus upon, although it is important to recognise that they do not – and cannot – cover all aspects of CfE early stage and associated Benchmarks. As stated above (Section 1.7) a range of potential ways have been identified so that this formative information can be used productively to support professional judgements. The time of the year that children undergo the assessment influences the way the information might be used depending on the decisions that are to be made. For example, if SNSA is undertaken by a child or group of children in January it is most likely to inform learning and teaching decisions about where children are at that point, and indicate the kinds of experiences they will need to make further progress. If it is in May, then in addition, it can provide information which can inform decisions about the attainment of the early level and possible areas for attention as the children move from P1 into P2. At both times, however, reference to a wide range of evidence will be needed to inform ACEL judgements.

In addition, the production of ‘long scales’ will also make available information that could be useful in mapping progress of individual pupils over time. In his evidence to the Scottish Government Education and Skills Committee Inquiry, Professor Lindsay Paterson noted:

The plans for the development of the assessments take advantage of the opportunity for longitudinal data by proposing to construct ‘long scales’. These will enable each pupil to be placed on a scale that stretches from early P1 to the end of S3.

Teachers will thus gain reliable information about each pupil’s progress through the stages of the curriculum, and thus will be able to tailor their teaching to each pupil’s needs. Only standardised assessments can provide this kind of educationally useful evidence. (Paterson, 2018:1)

https://www.parliament.scot/S5_Education/Inquiries/20181206Professor_Lindsay_Paterson.pdf

The intention of P1 SNSA data is to provide supportive information for diagnostic purposes.

3.2 How is P1 SNSA information being used?

Evidence gathered for the Independent Review through direct observation, interviews and surveys, reveals a mixed picture regarding headteachers’ and teachers’ views of the usefulness of the data to inform judgements at individual,

group, school and LA levels. A majority of teachers and headteachers see the value of the P1 SNSA to support professional judgements about learning, teaching and assessment. A minority take a negative view. Despite the positive view of the majority who see the P1 SNSA as a useful assessment tool, key themes emerged about reservations and concerns. Training is an issue; of those who expressed negative views of the P1 SNSA, the majority had not received any training:

We did not feel prepared for implementing and using the data. Members of the Management Team were trained on how to implement the SNSA, using the online training. Data was collated and made available to P1 staff. It was not as useful as hoped and did not match our teacher judgement. As P1 staff in our establishment work closely and teach all P1 pupils across the week, we believe that our teacher judgement gives us a more realistic picture.

(P1 teacher, survey)

I felt completely unprepared for implementing and using data from P1 assessment. No training was provided to colleagues or leaders within my establishment prior to assessments being completed. HT and DHT received some training after data had been received. This was not shared with all staff.

(P1 teacher, survey)

Respondents who saw the value of the assessments recognised that the information can inform precise teaching interventions:

By assessing the children soon in P1, this informed my teaching of groups and highlighted the extent of prior knowledge my pupils had. (P1 teacher, survey)

I use it to see which areas of numeracy in particular have not been covered or need revisiting. Also, in literacy it highlighted the fact that all three of my children were needing working in recognising rhyming words, so I was straight away able to push rhyming stories and classic nursery rhymes into our daily literacy routines. (P1 teacher, survey)

The data is also seen as useful in passing on information at transition to P2 and to inform professional judgements of achievement of early level:

We used the data to support transition of information for P2 teachers, analysed with key steps in teaching and learning from strengths and development points highlighted in areas of our curriculum progression pathways for individual pupils. They were looked at to support teacher judgement of achievement of a level to help triangulate this data.

(Headteacher, survey)

Some respondents were explicit about the SNSA offering a nationwide comparison:

I found them really helpful as you are comparing across Scotland whereas local authority standardised assessments are comparing within authority. It gives a fairer comparison. (Headteacher, survey)

Others, however, compared SNSAs with other forms of assessment:

They generate a lot of data providing a snapshot in time but the output is not as user friendly as other online assessments and takes longer to administer.

(Headteacher, survey)

A few respondents felt that the information offered did not align with their expectations:

I do not use the data as it does not provide an accurate picture of each child in my class – many children who have English as an additional language guessed answers and scored highly when they do not yet speak English.

(P1 teacher, survey)

Only a very small number of survey responses expressed this view and as the comments were from the surveys and not interviews, it was not possible to discern by discussion whether the perception was that the P1 SNSA was not suitable for particular children with EAL or ASN or whether the assessment revealed capabilities that the teacher had not appreciated.

3.3 Evidence of diagnostic information being used to support professional judgements

Teachers' responses to the surveys and comments from the P1 Practitioner Forum indicated that where they had received training, they saw positive value in the P1 SNSA data to inform judgements about learning and teaching:

It was useful for us in identifying areas where there wasn't a depth of knowledge across the whole class or there were significant gaps in an individual's learning. (P1 teacher, P1PF, 2019)

<https://www.gov.scot/publications/p1-practitioner-forum-recommendations-scottish-national-standardised-assessments/pages/7/>

I use SNSA in line with other assessment evidence to target gaps in learning. I shall also be using data to inform future planning and engage with SNSA data to aid planning for all children in my class. Also, looking for trends/gaps which may show areas of learning which need to be revisited and analysing data to help plan learning and teaching next steps. (P1 teacher quoted in LA survey, East Dunbartonshire)

Headteachers also recognised the benefits of the P1 SNSA data in supporting teachers' professional judgements:

It is used to pinpoint if there are trends across the school in terms of strengths and aspects for development and we then plan at stages and as a whole school accordingly. We also use it alongside teacher judgement and other assessments to help us assess an individual's performance. This information then helps us plan next steps in terms of support and challenge

needed to raise attainment and achievement. I think the P 1 SNSA is extremely useful in terms of the feedback it offers. (Headteacher, survey)

Local authorities, too, commented on the potential for P1 SNSA to support teacher professional judgements:

There is some value in providing data that schools can use at all the milestones in Curriculum for Excellence. It will allow schools to track learner flightpaths over time and provide supporting evidence in quality assurance and benchmarking of teacher professional judgement.

(Western Isles Council, survey)

Some schools are beginning to report that the diagnostic information gleaned from the assessments is useful as it helps support next steps in learning, professional dialogue between teaching staff and senior leadership teams. It is also beginning to support understanding of possible targeted support / interventions and next steps in learning. (East Dunbartonshire, survey)

3.4 The alignment of the assessments to the Benchmarks for early level

One recurrent theme in the responses from headteachers and teachers was about the difficulty of the literacy SNSA, although there were hardly any negative comments about the numeracy assessment. There was concern expressed that not only was the literacy SNSA too long (see Section 5.4), but that it did not fit the Benchmarks for early level. This included respondents who were positive about the P1 SNSA as well as those who were critical:

I think the P 1 SNSA is extremely useful in terms of the feedback it offers. However, for this feedback to be valid, reliable and robust, I feel the actual assessments need to be more realistic in terms of our expectations of children at this age and stage. (Headteacher, survey)

The literacy test is far too hard. Bearing in mind this is early level, children would not be reading paragraphs of information to answer questions. The wildcat/kite stories were much too difficult for the majority of children in my class although they have almost all hit the Benchmarks for early level. The numeracy test was fine, but all children who have completed the literacy test have found it very difficult. (P1 teacher, survey)

In addition to responses from teachers and headteachers in interviews and surveys, Jonathan Cunningham and Catriona Smith, representatives from the Headteacher and Deputies Association, were particularly critical of the difficulty of the P1 literacy SNSA and called for a review of the difficulty against the Benchmarks for the early level. (Interview, February, 2019)

One issue raised in the survey responses was the lack of clear links in terminology between the early level Benchmarks and the descriptors provided in the data from the P1 SNSA:

Many questions in both the literacy and numeracy assessments were not linked to the Benchmarks set by the Scottish Government.

(P1 teacher, survey)

Another feature of the criticism of the level of the P1 literacy SNSA was linked to the approach taken by the school in teaching early reading. Many schools use commercial phonics schemes which do not align with the CfE early level, so that the literacy SNSA, which is linked to the early level, seemed to be mismatched with the approach taken to teaching phonics in the school:

Many of the questions did not seem to match up to the Benchmarks and concepts were very difficult in comparison to the average early level expectations. Some phonemes that would not be expected at P1 level were included in Literacy assessments along with some selections of common words. These were more appropriate to those in P2 and beginning First Level.

(P1 teacher, survey)

This doesn't match the Benchmarks because there is a lot of reading that isn't CVC. (P1 teacher, interview)

Assessments themselves seem far too advanced in reading. Our pupils have been taught using a phonics based scheme and therefore the texts that they are being asked to work with are far too complicated. (Headteacher, survey)

Many words they were expected to read had phonemes in them that are not taught using our P1 phonics programme and would not be taught until P2.

(P1 teacher, survey)

Many words contain phonemes that have not been taught – 'ea' 'ai' 'ou' and magic e, pupils are unable to read these words. (P1 teacher, survey)

The incompatibility between commercial phonics schemes and the Curriculum for Excellence is not within the scope of this Review, but is a matter which deserves attention.

In addition to comments about phonics, a recurrent theme in the headteacher and teacher responses was about the length of texts. This was particularly true in the story that extended over four pages which children had to read independently. Respondents commented that the length of the P1 literacy SNSA made too great demands on the stamina needed to read the longer texts, and was beyond many P1 children (see Section 5.4).

In interviews, there was agreement that some items in the literacy assessment should go beyond early level as there would be children in P1 who were working towards first level, but that there were too many of these items. It was also suggested that current P1 teachers should be involved in feeding back to the assessment developers their views concerning the balance of difficulty in the assessment items. The representatives from the Headteacher and Deputes Association suggested that ‘There needs to be more input from school based professionals to help design the early level questions so that they can be better calibrated’ (interview, February, 2019). ACER reviews and refines the P1 SNSA as part of their continuing developmental quality assurance processes (see ACER National Report, 2017-18).

<https://www.gov.scot/publications/scottish-national-standardised-assessments-user-review-year-1-session-2017/>

This includes feedback from practitioners. Suggestions about ease of undertaking the assessment and the alignment of the P1 SNSA to the CfE early level Benchmarks, can be fed back to the assessment developers. Whilst it is understandable that there is reticence to involve teachers in development of assessment items because of confidentiality, there is an argument for some kind of mechanism that can more closely involve P1 classroom teachers in question development.

3.5 Professional learning

Professional learning is crucial for developing capacity, particularly when new initiatives are being introduced and change is occurring. Adult learners interpret experiences in their own way, based on perspectives grounded in their histories and in their cultural contexts. Mezirow (1997) suggests that although adult learners usually prefer to stay within their own meaning perspectives to avoid anxiety and loss of self-confidence, this inhibits taking on new perspectives and flexibility in learning. Effective professional development opportunities enable teachers and headteachers to see beyond their current meaning perspectives and to consider the advantages of new contexts where change is occurring. As Michael Fullan points out, successful change requires a dynamic relationship between pressure, support and continuous negotiation (Fullan, 2001:91). The pressure for change may come from government, local authority or school initiatives. The provision of systematic professional development training to answer the needs of such initiatives is part of support. It enables new developments to be placed in a wider context, providing not only the rationale for change but also indicating the practical application of change: in the case of P1 SNSA, this would include the assessment information produced. The element of negotiation is critical in the process of developing new initiatives since teachers and headteachers need to be convinced that change will enhance current practice and, further, understand and accept the practical usefulness of systematically informing decisions about learning and teaching.

As part of the implementation plan for SNSA, SCHOLAR has been tasked with planning and delivering a range of professional learning opportunities, both in terms of content and mode of delivery. These sessions have included introduction to the

rationale and practical administration of SNSA, an introduction to the analysis of SNSA data, the use of SNSA data in practice and how this can fit within the wider NIF assessment strategy, and using SNSA with ASN and EAL learners, including the provision of accessibility guidelines and practical advice. Modes of delivery have included face-to-face sessions, webinars, and online video. Training opportunities for face to face sessions and webinars have been organised and delivered in almost all Scottish Local Authorities since 2017. As P1 SNSA has been implemented nationally, attendance at professional learning sessions have had a significant effect upon whether teachers and schools see the SNSA data in P1 as very useful for informing decisions. The analysis of impact documented in *Impact of training on perceived diagnostic value of SNSA* (ACER, April 2019) finds that:

The number of practitioners indicating a positive perception of the diagnostic value of SNSA rose from just over half, before training, to almost 90% after training. Overall the mean response value to the question on diagnostic value rose by 1.47 as a result of the training provided.’ (ACER, 2019:5)

Only 2% expressed negative perception after attendance.

The report goes on to note:

Practitioners involved in the delivery of Primary 1 assessments were slightly more positive about the value of SNSA than practitioners in general, both before and after training. (*ibid.*)

In interview for this Review, a P1 teacher who was invited to be a member of the P1 Practitioner Forum and who had not attended any training sessions before going to the forum, explained that she changed her initial perceptions of the usefulness of the data and overall understanding of the context of SNSA information after attending:

I can see more of the positives and find it reassuring that SNSA links with the Benchmarks. But it is interesting what it can't assess –the full range of comprehension and the creative elements of reading and maths.

(P1 teacher, interview)

It is clear, however, that although a range of successful professional learning opportunities have been organised across Scotland, access to them has been problematic, particularly for P1 teachers. The P1 Practitioner Forum report points out:

Some forum members with class commitments had received little or no information about implementing the SNSA; children were simply extracted from their class, they had been given minimal information and were unaware of the kinds of Benchmarks and outcomes the SNSA assessed or the implementation choices that could be made. The current training strategy, with Webinars, video materials and ‘tutor’ training materials was poorly advertised and local authority meetings did not always reach P1 classroom teachers. There is no printed manual that describes what the SNSA offers or how it works. The digital training materials are available on the SNSA website, which can only be accessed from an approved IP address (i.e. at school or via a

VPN link to the school server). This does not offer sufficient ‘reach’ across the profession and teachers, who are committed full time in school, cannot easily access training that is only offered at specific times or via the school intranet. (P1PF, 2019)

<https://www.gov.scot/publications/p1-practitioner-forum-recommendations-scottish-national-standardised-assessments/pages/6/>

A comment from a headteacher gives another reason why P1 teachers may not understand how SNSA information could be useful in informing professional judgements:

Briefing sessions were attended early on but these have not been followed up as DHT was given responsibility of organising ongoing assessments. Therefore P1 teachers do not have a working knowledge of the administration or use of data. Original session was face to face in a large hall, teacher had no access to PCs to try out system so it was of limited use.
(Headteacher, survey)

The survey responses from headteachers and teachers indicate that of those who responded negatively to the P1 SNSA, the majority of headteachers and most of P1 teachers had not attended any training. In contrast, schools where the training was effectively communicated through meetings and discussions, express a positive welcome to the opportunities offered by the P1 SNSA.

In a school of 157 pupils, all staff used the webinar training. The headteacher organised sessions where all the staff were gathered in the staff room and watched the videos together, discussing issues as they followed the videos. The P1 teacher commented: ‘The online webinar is fine. They took us through each section and the LA has put on extra training.’ (Primary school, Argyll and Bute)

Given the above evidence, it seems not only that opportunities for professional learning should be continued and expanded, but that bespoke training for P1 teachers in particular should be made a priority.

Just over half of the Scottish local authorities responded to the surveys from the Independent Review. Their responses indicated that most schools in those authorities had received training. Some of this was through the webinars and online materials but the majority of those who responded to the survey had also provided meetings to support P1 SNSA training:

The QI team has run specific professional learning opportunities for all staff to attend with colleagues teaching at the same stage, to explore and deepen individual understanding of the standards, expectations and judgements of progress. (West Lothian, survey)

Another local authority gave evidence from professional development session evaluation responses, which indicated the value of locally organised professional development opportunities in supporting the implementation of P1 SNSA:

Analysing data to help inform next steps for learners and to indicate areas to target through direct teaching, interventions and/or revision of pedagogy. Detailed analysis of SNSA results to identify areas for improvement in curriculum and learning and teaching. We will certainly analyse our own results and see if we have any curricular or individual gaps. I will look at how best to use SNSA data with SMT and staff - particularly in identifying gaps in learning: analysing the (long scale) bands to help make informed decisions about children's progress along with my own professional judgement and assessment strategies; creating reports from the website to help analyse assessment data; gathering data on my class and being able to pinpoint where the gaps are and which pupils. I am going to share what I learned with teaching staff in the school and SLT. I will work with the SLT to analyse our data when assessments are complete to identify weaker topic areas. This will then impact my planning and teaching.

(P1 teacher, quoted in East Dunbartonshire Council survey)

3.6 Moderation

Access to moderation is a powerful professional learning opportunity and an essential component to support consistency of assessment judgements against specific criteria. The Cambridge Primary Review (CPR, 2010) cites evidence that group moderation is particularly effective. Group moderation occurs when educators within and between schools meet and share their interpretations of assessment criteria regarding levels, and discuss their judgements drawing on specific sets of evidence including any standardised assessments. The CPR concluded:

Experience of group moderation suggests it has benefits beyond improving the quality of assessment. It has well established professional development function and indeed the practice of teachers meeting to discuss the conclusions that can be drawn from studying pupils work has been described as 'the most powerful means of developing professional competence in assessment. (CPR, 2010: 323)

Discussion and comparison of examples helps professionals to dig deeper into the data under scrutiny as one QAMSO explained:

I think we're quite far ahead with assessment and moderation. I was an AMF (Assessment and Moderation Facilitator) then the LA wanted one person per school to be trained as a QAMSO (Quality and Assurance Moderation Support Officer). The LA training is very good so we were already au fait with the assessment and moderation cycle. We take a different focus each term and concentrate on the Benchmarks and do it together. We devise an assessment task and feed back our findings to the authority. I was a maths person so I decided to do the reading

QAMSO training. Each LA has a QAMSO for each level and they go to national training events to train people in using the assessment cycle. I think the training helps to see assessment as a process. Every term we are called back to discuss examples. We take examples of our own but they give us examples of plans and assessments to moderate across the group. It's good to meet other people and to see the standard across the country. It's all about sharing the standard and what counts as evidence. My job now is to support schools within our cluster (11 schools in our area). (QAMSO, Argyll and Bute, interview)

Moderation activities within and between schools will develop practical understandings of how P1 SNSA data can inform professional judgements about the achievement of a level. The role of the QAMSO is crucial here.

Conclusions

Survey and interview evidence shows that majority of teachers and headteachers see the value of the P1 SNSA to support professional judgements about learning, teaching and assessment. Of those opposed to the P1 assessment and those who expressed more ambivalent views, almost all had not received training. In contrast, those who responded positively had all received training.

Interview and survey evidence revealed concerns about administration and the length of the P1 literacy SNSA. (See Section Five)

Of the minority of respondents opposed to the use of the P1 SNSA, some had principled objections to assessing P1 children; others preferred more familiar assessment processes.

An emergent theme from surveys, observations and interviews is that it is not clear to some stakeholders how well the P1 Literacy SNSA, specifically, aligns with the Benchmarks for early level.

Almost all the local authorities which responded to the Independent Review surveys have provided some training to implement the P1 SNSA.

The Independent Review did not specifically seek information about moderation but this has emerged as an important element of embedding and sustaining professional learning in relation to P1 SNSA and its place in informing professional judgements.

Recommendations

The Scottish Government

Request that, as part of its development process, ACER review the P1 literacy SNSA to ensure that the items align with the relevant parts of the early level CfE. Attention should be given to the language used in the item descriptors and in the data generated from the assessments so that they are comparable with the language used in the expectations and outcomes and associated Benchmarks for the early level of Curriculum for Excellence. In addition, ACER should involve experienced P1

practitioners in the question development process in order to give feedback on the appropriate level of difficulty, particularly in the P1 Literacy SNSA.

Recommend that one of the two additional inservice days agreed for 2019-2020 should be used so that all schools, including P1 teachers, can engage in professional learning related to how P1 SNSA information can be used effectively to inform professional judgements and/or moderation activities.

In consultation with local authorities and schools, review the current materials available to ensure that there is easily accessible professional learning support available for schools to use on the dedicated inservice day and publicise these materials to schools.

Expand the QAMSO programme to support local authorities and school clusters in developing cross school moderation events.

Local authorities

Expand the frequency of professional learning opportunities already planned, including cluster meetings. Develop bespoke training for P1 teachers and monitor attendance.

Section Four: The use of the P1 SNSA data for school improvement purposes

4.1 The intended purpose of SNSA data for school improvement

As outlined in Section 1.2 an intended purpose of P1 SNSA was to inform school improvement. In its submission to the Education and Skills Committee Inquiry, Scottish Government stated that the SNSA system:

... provides class, school and local authority level reports all of which are designed to be used for improvement purposes. The class and school level reports are comprehensive and enable detailed analysis. This allows teachers and school managers to identify patterns in learning across groups of children and identify areas of strength or development needs. (2018: 8)

and concluded:

Improving the data we have available and using that data for improvement purposes at all levels of the system is an important part of that commitment, alongside our education reform programme. By expanding that evidence base and by providing diagnostic information to teachers and schools to help them tailor future teaching and learning, the SNSA are a key part of that reform and improvement agenda. (*ibid.*p.9)

https://www.parliament.scot/S5_Education/Inquiries/20181221Scottish_Government.pdf

Education Scotland also outlined how SNSA data could be used for the purpose of individual school improvement:

Practitioners can look at the data from different cohorts of children to identify any patterns in the areas in which they are doing well or need support and can adjust their teaching. Across the school, the establishment can review its data to identify the areas which are being taught well and the areas in which children are not doing so well and can organise whole school professional development in these areas. (2018:4)

https://www.parliament.scot/S5_Education/Inquiries/20190104Education_Scotland.pdf

4.2 The components of the school improvement process

The National Improvement Framework outlines the importance of school improvement:

School improvement focuses on the quality of education, including learning, teaching and assessment, as well as the quality of the partnerships that are in place to support children and young people with their broader needs. (NIF, 2109:32)

<file:///C:/Users/Windows%2010/Documents/Attached2/Scotland/Reports%20used%20in%20responses/00543908.pdf>

England's National College of School Leadership describes school improvement as:

... mainly concerned with the processes through which schools can raise standards: the changes they can make and the strategies they can use to improve pupil outcomes. (2013:6)

<https://www.nationalcollege.org.uk/transfer/open/dsbm-phase-4-module-1-understanding-school-improvement/dsbm-p4m1-s3/dsbm-p4m1-s3-t1.html>

Ofsted in England, in a report on how headteachers achieve school improvement, emphasise developing effective monitoring systems based on school level data as critically important for identifying issues, assessing need and evaluating the impact of changes in school policies and practices (Ofsted, 2012). The analysis of school level data is therefore central to the process of continuous school improvement with a clear focus on improving pupil outcomes.

4.3 Evidence of use of SNSA data for school improvement purposes

Feedback from both interviews and surveys included many examples of positive use of P1 SNSA information for improvement purposes. After attending training by SCHOLAR, one teacher identified the areas she felt P1 SNSA data would inform:

I will be very keen to use the different ways to analyse data, which will in turn help to maximise support for pupils, and staff, thus raising attainment throughout; analysing data to establish if any interventions are required to raise attainment. I am planning on sharing the information and skills I gained at this course with my P1 stage colleagues before and after administering the SNSA assessments within our age group.... Use of the individual and class reports to help plan next steps in teaching and learning to raise attainment in numeracy and literacy and ensure progression throughout school; being able to pinpoint aspects for whole school priorities; considering groups of learners rather than looking at whole cohort.

(P1 teacher quoted in LA survey, East Dunbartonshire Council)

Some schools and LAs are already using P1 SNSA productively for school improvement:

It is used to pinpoint if there are trends across the school in terms of strengths and aspects for development and we then plan at stages and as a whole school accordingly. We also use it alongside teacher judgement and other assessments to help us assess an individual's performance. This information then helps us plan next steps in terms of support and challenge needed to raise attainment and achievement. (Headteacher, survey)

Helps give further evidence for different cohorts of learners including pupils with additional support needs and able pupils. (Headteacher, survey)

In survey evidence from the local authorities, this headteacher identifies the value of using the data not only for school improvement but also in discussions within the school cluster:

We find the class and cohort data very informative for identifying improvements required within schools' curriculum content, or approaches to delivering certain aspects of the curriculum. The diagnostic information is being used effectively at Cluster level also for schools to support and challenge each other on improving aspects of their curriculum.

(Headteacher, quoted in LA survey, West Lothian Council)

Local authorities in particular see the value of the P1 SNSA for school improvement:

These can be effective in supporting teachers' judgements, providing they are placed in perspective, when considering a wide range of assessment evidence. They can be used to identify common areas requiring a focus in the planning of next steps in learning for individuals, groups, class.

(Edinburgh City Council, survey)

P1 SNSA data could be used very effectively to drive continuous school improvement. This is due to the fact that it provides diagnostic data at individual, group and school level. This means that senior leaders in schools can look across the results to see if there are particular gaps, strengths etc. which will then inform next steps not only for individual pupils, but in terms of curriculum and assessment.

(East Dunbartonshire Council, survey)

However, both headteachers and local authorities emphasise that P1 SNSA information is only a part of the school level data that should be considered and that, after only one year of implementation, the productive use of the information is potential, needing time to embed in the system:

All reliable assessment data is useful for school improvement. Analysis of themes and strengths and next steps is a useful starter for professional discussion. When used alongside the BGE Benchmarking tool, it is useful to have national comparators to help gauge progress and attainment.

(Headteacher, survey)

It will take time to fully realise the value of the tests. In principle SNSA can provide information and feedback that can be used alongside other information to help teachers make decisions about next steps and progress in learning. Schools can use the information as part of the range of evidence gathered to reflect on impact of improvements and areas for further development. (South Ayrshire Council, survey)

4.4 Criticisms of the usefulness of P1 SNSA data for school improvement purposes

In survey responses, some headteachers and P1 teachers commented that they were not convinced of the usefulness of P1 SNSA data, comparing it unfavourably with previous standardised assessments:

Other data from other types of assessments were easier to read and understand. (P1 teacher, survey)

Some felt that SNSA information did not add anything to the information gathered through ongoing teacher assessment or was not accurate enough:

There was already enough information. The SNSA is not an appropriate assessment for P1. Teacher observations and a broad range of evidence collected over time are more appropriate at this age. We use assessments that demonstrate breadth, depth and challenge to inform school improvement. Then SNSA does not provide this, and P1 is not meaningful. (Headteacher, survey)

Others felt that the data generated was inaccurate, unnecessary and therefore not any use for informing school improvement:

It is not at all useful for improvement purposes. I am wholly against the use of this assessment in P1 and think it is detrimental to teaching and learning due to the time it takes to administer and the unreliable information it has provided for some of our children. (P1 teacher, survey)

However, the majority of the responses expressing no confidence in the P1 SNSA as generating useful data for school improvement were from teachers or headteachers who had not received training or who felt unprepared to carry out the assessment and interpret the data.

Evidence from one local authority points to the value of training to support teachers and headteachers in using P1 SNSA data to support school improvement:

Evaluations in relation to the SCHOLAR training from participants was very positive with all participants stating that they found the sessions extremely useful and that the training made them more confident in their ability to administer the assessments, but importantly, to access and analyse the attainment data for improvement purposes. (East Renfrewshire, survey)

In addition, those who refer to other assessments as more useful, for example, PiPs, which were administered at the beginning and end of P1 to all children, may not be clear about the different purposes of the SNSA and the distinction between summative and formative assessments.

As the Independent Review took place after only one full year of implementation of the P1 SNSA, responses to the surveys indicated that their use for school improvement purposes was still at the early stage and their impact was seen as potential rather than identifiable:

It is too early to say that all schools are using the data effectively for school improvement, but there is potential for this as understanding grows at school and officer level. (Shetland Islands Council, survey)

One local authority warned that the limitations of using P1 SNSA information should be understood:

We already use a range of measures for school improvement purposes. The SNSA is used almost exclusively to identify any gaps in general learning or for individuals. We would not use the SNSA on its own for school improvement purposes. (East Ayrshire local authority, survey)

However, headteachers who recognise the value of the P1 SNSA are aware of the partial nature of the assessment but nevertheless see it as a useful element in their professional toolkit:

It's useful as a part of a range of assessments. We want to use it better this session. (Headteacher, survey)

Conclusions

Teachers, schools and local authorities have identified ways in which P1 SNSA data can usefully inform elements of school improvement although they understand that P1 SNSA data only covers certain aspects of literacy and numeracy learning. P1 SNSA information, therefore, has the potential to be part of useful evidence for broader school improvement purposes.

All local authorities who returned surveys were positive about the potential for using P1 SNSA data to inform school improvement.

Survey and interview evidence show that a minority of headteachers and teachers take a negative view of the value of the P1 SNSA to provide useful data to support school improvement in comparison to previous standardised assessments used in many local authorities.

There is evidence of a relationship between understanding how P1 SNSA information can be used for school improvement purposes and attendance at training sessions focused on data analysis beyond the individual pupil.

Recommendations

The Scottish Government

Work in partnership with local authorities and schools to produce guidance outlining how P1 SNSA can positively contribute to school improvement, including further detailed case studies showing how a range of both urban and rural schools have used P1 SNSA for improvement purposes. This guidance should be accessible online.

Expand the frequency of professional learning opportunities/training in all local authorities, including face-to-face discussions, which focuses on both the positive use, as well as the limitations, of using P1 SNSA information. This should particularly target senior leaders in schools.

Section Five Challenges of using the P1 SNSA

5.1. Value of the P1 SNSA

A majority of interview and survey respondents saw value in the P1 SNSA, particularly for supporting professional judgements. These views are supported by the findings of the P1 Primary Forum. However, concerns were expressed about administration and the length of the P1 literacy SNSA. Responses detailing challenges associated with the P1 SNSA from surveys and interviews, even those showing unequivocal commitment to the value of the P1 SNSA, clustered around:

- the time and staffing needed to administer the assessments
- difficulties with technology
- the length of the P1 literacy SNSA
- the difficulty of some of the items, specifically in the P1 literacy SNSA (see Section 3.3).

5.1 Time to administer the assessments

Time is an issue which is more acute in larger schools. In one school visited by the Independent Review there were 122 P1 children to be assessed. The headteacher was positive about the potential value of the P1 SNSA but pointed out that administering the assessments meant allocating a large amount of time for each P1 teacher. The Review observed nine children undertaking the P1 literacy assessments in the computer suite, supported by four members of staff. The children who took the longest time spent 45-50 minutes completing the assessment. In other schools the Review observed children undertaking the P1 numeracy assessment which took 30 minutes at the most.

In survey responses, headteachers and teachers commented:

[The SNSA] can only be carried out in a quiet space which means there has to be an adult available to do this. At the moment the majority of schools do not have extra staff to carry out these tests. In many schools there are staff who do not get any McCrone cover. PSAs are needed for specific children and in many instances cannot spend full days carrying out these tests. Tests also take a long time to administer. (Headteacher, survey)

It is very difficult to support a large number of children – more than one to 3 is difficult to support children so they show what they can do.
(Headteacher, survey)

On the other hand, visits and observations by the Review, and survey responses, indicate that in some schools there is a developed system which is integrated into the teaching day so that the P1 assessments are administered over a longer period of time as part of normal learning and teaching time. Equally, some schools have embraced the opportunity to pause the assessments if children are becoming too tired or switching off:

It is not too long for P1 children – and you can give them a break if needed.

(P1 teacher, Argyll and Bute , interview)

I was amazed about what other people had been told. I didn't know we could stop midway, that there were practice activities they could do beforehand or that I could let children choose what [technology] to use. (P1 teacher from P1 PF report, 2019)

<https://www.gov.scot/publications/p1-practitioner-forum-recommendations-scottish-national-standardised-assessments/pages/6/>

However, this is not quite so easy to organise if there are three or four P1 classes.

5.3 Difficulties with technology

Survey and interview responses covered a range of problems including: children not being familiar with using the mouse or desktop computers generally; internet connection failures; technical problems with machinery, particularly involving the use of earphones; scrolling up and down; availability of digital technology in the school:

As I carried these out with the children, they found the dragging nearly impossible. Their mouse control is not advanced enough to do this.

(Headteacher, survey)

The pupils are not able to manage the test independently on a computer. The children do not have the fine motor skills for example, joining a line from one image to another. The test would be better completed on a tablet using the child's finger but we do not have this facility at our school. (Headteacher, survey)

Thankfully we were able to use iPads to complete the test. If it had been on a laptop or PC, the children would have struggled with the ICT skills.

(P1 teacher, survey)

On a Review observation visit, one teacher pointed out that when the P1 teachers discovered in the first iteration of the P1 SNSA that children were struggling with some aspects of using the technology, the team planned extra time to develop the skills needed so that this year there were no problems for the children in managing the technology.

Case studies on the Education Scotland National Improvement Hub give examples from 2018 of schools organising the use of technology to support the administration of the P1 SNSA. In a primary school in South Ayrshire there were two classes in P1:

As well as two computers in the classroom itself, all classes have access to computers in the open area outside their classroom. Primary 1 children regularly use these computers in a range of learning and teaching activities.

<https://education.gov.scot/improvement/self-evaluation/primary-1-snsa-case-studies>

The Head of Education at West Lothian Council commented:

There were a few issues with P1 in terms of technology and the management of groups of children doing it at the same time so in West Lothian we have looked into this and developed appropriate support as part of our implementation plan including extensive consultation with staff. (Interview)

In a primary school, West Lothian, an urban school with 56 P1 children:

The primary 1 SNSAs were one of a number of activities children were involved in at the same time. There was a work station of touchscreen computers that groups of children (around 4 or 5) used, while the rest of the class were working on other activities at different workstations.

<https://education.gov.scot/improvement/self-evaluation/primary-1-snsa-case-studies>

Clearly, some technological challenges can be overcome by planning, focused teaching, managed sharing of technology and local authority support and consultation. However, difficulties remain, particularly in larger schools where access is more demanding and P4 and P7 SNSAs also need to be accommodated.

5.4 The length of the P1 numeracy and literacy SNSAs

In surveys, observations and interviews the only comments about the length of the P1 numeracy assessment was to compare it with the length of the literacy assessment:

The numeracy tests are well matched to what is expected of a P1 child, and matches the Benchmarks. The literacy tests are very difficult and require a huge amount of concentration to complete; some took 40-45 minutes to complete. (P1 teacher, survey)

The reading section was lengthy and children lost interest; they were much happier completing the numeracy assessment. (P1 teacher, survey)

Some feel that the maths assessment at P1 is more manageable and accessible for pupils than the literacy assessment. This is due in part to the amount of text that children are required to read (in the literacy assessment) before answering the questions.

(East Dunbartonshire Council, survey)

There were frequent comments about the length of the literacy SNSA:

The assessments themselves are very lengthy; the test is exceptionally long for P1. (Headteacher, survey)

It was hard for some children to complete the sections due to the time it took to complete. (P1 teacher, survey)

One local authority reported that there had been concerns within the authority about the length of the P1 literacy SNSA:

*In terms of length and content of text, it appeared to be far too advanced and the amount of text being presented was quite daunting for some children.
(Aberdeenshire, survey)*

Responses indicated that the length of the literacy assessment threatened the validity of the results:

The length of the tests resulted in the children becoming very bored and clicking any answer. (P1 teacher, survey)

I found the literacy SNSA in particular was too long and wordy. The children were faced with huge passages that they could not read and this caused them to get bored/guess answers. (P1 teacher, survey)

In a school visit, the Review observed a highly fluent P1 reader completing the assessment with ease and relish. Nevertheless, when he reached the third lengthy text in the assessment adapted for the higher level, he was visibly flagging although he gamely and successfully continued to the end. This, again, might threaten the reliability of the assessment for particularly fluent readers. Whilst, as noted above, it is possible for children to discontinue the assessment and resume when they have been rested, this is not always possible in everyday contexts and especially in schools with large P1 numbers. In addition, it might be argued that if the P1 teacher is administering the assessments, any errors made as a result of disengagement can be noted and taken into account. However, it is by no means standard practice for P1 teachers themselves to administer the assessment, making more salient the issue of possible skewing of results because of the length of the P1 literacy SNSA.

The Review takes into account the need for a spread of questions in order adequately to assess the range of pupils undertaking the P1 literacy SNSA. However, in interview ACER confirmed that there would be no loss of coverage or reliability if the P1 literacy assessment were shorter with fewer items.

5.5 Suitability of the P1 SNSA for children with additional support needs

The Review did not ask any specific questions about the suitability of the P1 SNSA for children with additional support needs (ASN) or children with English as an additional language (EAL) and there were few references in the survey responses. One headteacher noted that children diagnosed as autistic experienced difficulty with the earphones and another commented:

Some pupils with ASN or who were not computer literate found the programme difficult to navigate. (Headteacher, survey)

One local authority commented that some schools:

...reported that pupils with ASN/EAL can present with anxiety when engaging with the SNSAs and are seeking greater clarity about the support strategies which should be in place to eliminate this. (City of Edinburgh Council, survey)

However, in observations and interviews, the Review found that some schools use their usual support arrangements to enable children with ASN to have access to the assessments as a matter of equity. Indeed, one headteacher's survey response pointed out that the SNSA:

Supports approaches to targeting funding for initiatives supported by Pupil Equity funding. (Headteacher, survey)

Using the guidance offered in *Accessibility Guidance Primary 1 School year 2018-19*, and the SNSA Help Page Guidance on ASN and EAL, headteachers and teachers can use their professional judgement and expertise to make decisions about pupils undertaking the P1 SNSA and about appropriate support arrangements:

Pupils with additional support needs were given some support in terms of understanding what they were being asked to do, however completion was very much down to pupils. (P1 teacher, survey)

There were only two responses to the Review survey from headteachers of special schools, neither of which uses the assessment as it is not suited to the very complex needs of the pupils in those schools. However, in interview, Steven McPherson, HMI, pointed out that some special schools are able to use the assessments and that additional support need not be a barrier (telephone interview, April, 2019). The Review recognises that it may be more of a challenge at P1 to support children with ASN to undertake the SNSA. However, it is clear from the Accessibility Guidance that teachers can decide whether or not it is appropriate for children with ASN or EAL to undertake the P1 SNSA.

Every local authority has a different approach to accommodating children with additional needs and in some areas funding for support may be an issue. Nevertheless, the P1 SNSA has potential to support teachers both in the mainstream and in the special sector in developing appropriate assessment processes, and to boost professional confidence in assessment and moderation judgements.

5.6 Children with English as an additional language

Again, the Review did not specifically seek out responses about the suitability of the P1 SNSA for pupils with English as an additional language (EAL). In surveys and interviews, few teachers or headteachers commented on children with EAL in respect of the P1 SNSA. Two who did respond thought that the P1 literacy SNSA was too difficult and lengthy for their EAL children. However, one headteacher commented that the P1 SNSA:

Supports analysis of performance of children in relation to SIMD, male/female, FME, EAL information gathering supporting targeted approaches if appropriate. (Headteacher, survey)

One local authority specifically commented on the support materials:

Online information materials for practitioners was informative and supportive in administration of the assessments as well as the removal of barriers to accessing SNSA for EAL and ASN learners. (Glasgow City Council, Survey)

See:

file:///C:/Users/Windows%2010/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/YRM8LSYK/p1_accessibility_teacher_guidance_1819.pdf

file:///C:/Users/Windows%2010/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/YRM8LSYK/eal_and_asn_administration_guidance-min.pdf

In observation visits and interviews, although there were children with EAL in some schools, no issues were identified. It seems that overall the good professional sense of headteachers and teachers and the guidance offered, helps to identify the appropriate use of the P1 SNSA with pupils who have English as an additional language.

5.7 Notifying parents/carers of SNSA results

The Review survey for headteachers specifically asked if parents/carers were notified of the results of the P1 SNSA. Of those who responded, the majority either did not report the results at all or specified that they reported as part of holistic reporting of progress to parents/ carers. In interviews, Eileen Prior, of Connect, and separately Joanna Murphy of the National Parent Forum of Scotland (NPFS), both pointed out that if the P1 SNSA is retained the data should not be reported to parents in isolation as it is just part of the information that teachers use for ongoing assessment purposes (interviews, February, 2019). Eileen Prior commented that reporting the results would give them special status. In their evidence to the Education and Skills Committee Inquiry, Connect argues that ‘Assessment should inform quality conversations between teachers, children and families’ yet ‘parents tell us they often do not know about the tests, nor are they given any feedback on the outcomes.’ (Submission to Education and Skills Committee’s Inquiry into Scottish National Standardised Assessments, 2018:2)

Both Connect and NPFS call for a better quality of communication between home and school about learning. As Eileen Prior explains, ‘what parents/carers want is a proper dialogue between child, parents/carers and school about what is going well, what isn’t and how home and school can work together to move forward.’ (Interview, February, 2019)

The National Improvement Framework (2019) agrees, and points to the value of genuine home school partnerships:

We want to improve and increase the ways in which parents, carers and families can work with teachers and partners to support their children and young people. We also want to increase the voice of parents and carers in leading improvements within schools. Parental involvement ensures that parents can help to shape the ethos, activity and priorities for the school in partnership with school leaders. (NIF, 2019:26)

Since the data generated from the P1 SNSAs is intended to support teachers' professional judgements and only assesses part of the CfE early level, it is inappropriate to report the results separately from general and holistic reporting of progress to parents. Conversations about progress with parents/ carers should focus on the entire child and her/his educational well-being.

Conclusions

Observations, interviews and survey responses reveal concerns about: the time and staffing needed to administer the P1 SNSA; technological difficulties; and the length of the assessment, specifically the P1 literacy SNSA.

Some headteachers and teachers have found ways to overcome the challenges of technology involved in administering the P1 SNSA through careful planning, focused teaching and managed sharing of technology although this is not always easy or straightforward, especially in bigger schools.

The length of the P1 literacy SNSA gives rise to concerns about whether the results obtained for some children are reliable.

Supporting children at P1 with ASN or EAL to undertake the SNSA can be challenging, needing sensible professional decisions about individual children's capability to undergo the SNSA. However, the guidance offered about accessibility and administration of the P1 SNSA is comprehensive and clear about supporting children with ASN and EAL.

Headteachers are generally thoughtful about reporting SNSA data to parents/carers, often making it part of a more holistic reporting conversation.

Recommendations

The Scottish Government

Continue and extend support to schools for administering the P1 SNSA in terms of resource; this might include recommending that priority time should be given within the Collegiate Hours Agreement in schools so that there is planned time to administer P1 SNSA.

In consultation with local authorities and schools, develop more guidance for primary schools, particularly larger schools, in managing the technological demands of the P1 SNSA.

Recommend that, as part of its ongoing review process, ACER reduce the number of items in the P1 literacy SNSA.

Extend the work of QAMSOs and moderation processes specifically to include special schools and those teachers with responsibility for children with additional support needs and English as an additional language.

Continue to develop the productive partnership between home and school, including parents/carers in professional conversations about children's progress.

Local authorities

Extend support and consultation with schools experiencing difficulties in managing the technology and timing of administering the P1 SNSA.

Section Six The national Gaelic Medium Education Standardised Assessment (MCNG)

6.1 Development of the MCNG

Measaidhean Coitcheann Nàiseanta airson Foghlam tron Ghàidhlig (MCNG) is a version of the Scottish national standardised assessments (SNSA) for children and young people in Gaelic Medium Education (GME). These assessments were launched in December 2018. Initially they were expected to be published in August 2018 but were delayed to enable improvements based on a review of the use of standardised assessments in English medium. The MCNG is part of the National Improvement Framework. The cohort for whom MCNG is designed is relatively small: there are about 6000 children and young people in Gaelic Medium Education (GME), of whom 582 are in P1. Standardised assessments, bespoke to the Gaelic Medium Education curriculum were requested by stakeholders to assist with assessing children's progress, to provide diagnostic information and to support teachers' professional judgement. MCNG, therefore, was specifically developed to enable children to be assessed in literacy and numeracy in Gaelic as the language in which they were being immersed.

An advisory group, including national organisations, local authorities and teachers working across 14 local authorities agreed the general principles for developing the MCNG and oversaw the development to ensure that the assessments align with the Benchmarks of the Curriculum for Excellence and the staging posts for literacy and numeracy.

The content was developed by the company Giglets who have experience in creating Gaelic medium reading and onscreen resources. Nine content creators were recruited, representing all levels of CfE with a range of teaching experience, specifically to ensure that the content aligned with CfE. Material was then subjected to a quality assurance process. Giglets assembled a group with experience in Gaelic Medium Education, including an educational psychologist and an academic from Edinburgh University. This group checked consistency across the questions for quality, appropriateness, and level of difficulty based on National Benchmarks. All questions were then submitted to an Education Scotland/Scottish Government group, comprising local authority representatives and chaired by Education Scotland, for final sign off.

User trialling was conducted in three phases (between May and October) in a variety of schools across different local authorities, which took into account different sizes of school, geography and accessibility issues. The feedback from this user trialling was then shared with Giglets to inform further system improvements.

The MCNGs take account of children's additional support needs. For example, font and screen colour can be selected and the children can listen to rather than read the questions. There will also be audio support in three different accents, which is particularly useful at P1. A terminology checklist of Gaelic terminology used within the assessments has been created for teachers. The checklist will be updated as new questions are generated. For the content creators, a style guide has been written to assist with developing questions. However, the working group will still be consulted on particularly complex, or ambiguous issues. There has been ongoing communication with the Gaelic sector and the Scottish Government wrote to all professional associations and interested organisations to highlight the value of receiving feedback.

6.2 The purpose of the P1 MCNG

The advisory group were keen to clarify understanding of the purpose of the assessment. It is to discover 'Where is the child at?' and they have ensured that MCNG fits with the Early Level of CfE. Nursery education supports the development of Gaelic. There is no window suggested for the assessments although there was early general discussion about the P1 assessment not being used until later in the school year. Overall, however, the view is that progress within immersion should drive when the assessments are done.

It is expected that by P7 children will achieve equal fluency and literacy in both Gaelic and English. Children in Gaelic Medium Education take MCNG at P1, P4, P7 and S3. In addition they take SNSA at P7 and S3. Teachers will have access to the assessment data and will inform parents where appropriate and as part of general reporting on progress. The data will not go beyond the local authority. At national level reporting is anonymised so there will be no attributable data used to identify national trends. The same policy will be used for Gaelic as for English: that there will be no high stakes use of data.

For MCNG, Education Scotland held moderation events in three locations to strengthen the understanding of a broader holistic assessment and the relationship with national standards. These events emphasised that the assessments were only part of teachers' professional judgements about progress with Curriculum for Excellence levels.

6.3 Teachers' Gaelic subject knowledge

In interview, HMI commented that teachers' subject knowledge in GME has been strengthened by publications such as HM Inspectors' Advice on Gaelic Education. This Advice describes best practice in immersion, based on evidence from scrutiny. It has assisted with achieving more consistency in the use of highly effective immersion as central to GME. Teachers' subject knowledge has been supplemented by the National Benchmarks which were designed to provide clarity on national standards.

6.4 Involving parents

There is information available on the MCNG public website

<https://measaidheancoitcheann.gov.scot/en/parents>

and the leaflet regarding the approach to assessment outlined in the National Improvement Framework has been made available to parents and carers of children in GME schools on parentzone and the SG website.

<https://www.govscot/binaries/content/documents/govscot/publications/factsheet/2016/11/assessing-childrens-progress-guide-for-parents-and-carers/documents/3a7ac459-c886-4c29-a1d2-d52c084cc7f9/3a7ac459-c886-4c29-a1d2-d52c084cc7f9/govscot%3Adocument>

In addition, parents can access online Gaelic resources used in schools provided by the commercial company Stòrlann, so that children and parents can access the same books. Also, BookBugs online reading resources are available in Gaelic. Gaelic4Parents.com is a website to support parents and children learning in GME. It also provides live support with homework. Gaelic4Parents.com enables access to a range of resources to support parents with supporting learning at home. For example, reading books, games, stories and audio.

6.5 Evidence for the Independent Review

The MCNG was launched in December 2018, and the first assessments began to be undertaken from January 2019. During the Review's information gathering period, however, very few schools had yet gained experience in carrying out the assessments, and it did not prove possible to identify schools which were able to demonstrate the assessments to the review. During an outreach event in March for all GME providing local authorities, however, Scottish Government did share the review mailbox address with practitioners and encouraged any early feedback on the system to be submitted as appropriate.

Evidence has been taken from HMI and Education Scotland and considered against the conclusions for the P1 SNSA. Local authorities report in interview that there have been no concerns about the Gaelic assessment: 'It's all been very well organised. And we have been involved in the trialling.' (Comhairle nan Eilean Siar (Western Isles), interview, April, 2019)

Conclusions

It is the opinion of the Review that the MCNG will avoid some of the difficulties encountered by the SNSA in its first iteration.

Care has been taken to communicate with schools, local authorities and the Gaelic sector throughout the development of the assessments. Attention has been given to involving parents/carers.

The assessment has been robustly trialled and the MCNG is not likely to be as lengthy as the literacy SNSA.

Recommendation

The Scottish Government

Working with local authorities and schools, proceed with the implementation of the national Gaelic Medium Education Standardised Assessment.

Section Seven The future of the P1 SNSA

7.1 The role of SNSA at national level

Evidence gathered by this Independent Review shows that there is unevenness in understanding across the sector about the intention and purpose of SNSA at national level and this has become a particular issue in P1. There is a need for clarity about:

- The purpose for collecting P1 SNSA data at national level.
- How the implementation of P1 SNSA helps to close the poverty related attainment gap.
- Given that most local authorities have used standardised assessments already in P1, what the advantages of SNSA are over other standardised assessments that have been in general use in Scotland.

SNSA was developed carefully so that it aligns with the CfE through the Benchmarks; none of the previously used assessments did this. In distinction from previous assessments, the SNSA is standardised on a Scottish population which again was not a feature of those assessments. In addition, having a standardised assessment as part of a professional toolkit for making judgements about children's learning serves to counter unconscious bias. Further, the P1 SNSA has the potential to support teacher subject knowledge.

Evidence gathered for this Review from teachers, schools and local authorities indicates a will that SNSA should succeed in its role of informing consistent professional judgements about learning and teaching. In its submission to the Education and Skills Committee Inquiry, EIS argued that the SNSA cannot offer 'small data' (Pasi Sahlberg, ICEA): 'the information that is most useful to teachers, learners and parents as they work in partnership to progress individuals' learning' (EIS, 2018:3). There were fears that the P1 SNSA might be used by those 'driving narrow accountability agendas either at local or national level' (*ibid.*). This reflects wider concerns about high stakes uses of data (see Section 1.5). However, this Review has not found evidence of intent to use the P1 SNSA data in this way. Indeed, it is difficult to see how the data could be aggregated for broader accountability purposes. Nevertheless, as recommended in Section One, there should be strong safeguards against any drift towards the use of the P1 SNSA data for high stakes or accountability purposes. The data should be a tightly focused part of a broader range of evidence informing teachers' decisions about learning and teaching. Indeed, the granular nature of the data generated by P1 SNSA, alongside teachers' direct observations, offers the kind of 'small data' which is valuable in informing teachers' professional judgements.

As the OECD report explains, standardised assessments are only a single aspect of a much broader process so that there should be a wider view of school accountability:
... it is especially important to obtain a complete view of student outcomes and teacher instruction, which standardised tests cannot provide. Earl and Katz

(2006) recommend gathering data in a wide range of forms, including standardised tests and formative classroom assessments, in order to enhance accountability evaluations (cited in Campbell and Levin, 2008). By implementing a 'toolkit' for understanding student performance and feedback, the concept of accountability becomes a conversation on ideas and challenges and a means to monitor progress, rather than a static approach to data collection and analysis. Such an approach to accountability not only provides more genuine data, but also can increase teacher buy-in and therefore reduce system distortions. (Morris, 2011)

<https://www.oecd-ilibrary.org/docserver/5kg3rp9qbnr6-en.pdf?expires=1554734976&id=id&accname=guest&checksum=FB80C111D6391003ECFCB43E5DF1A693>

Professor Kathy Hall, an international expert on assessment, acknowledges that Scottish policy tries to guard against narrow high stakes use of assessment data:

In Scotland, unlike England, individual schools are not held to account through comparative achievement data, and there are no league tables of performance. In essence, the tests available to Scottish schools are not substantially different to those used in England, but, crucially, they are not 'high stakes' because there is not an emphasis on ranking and comparing. Performance tables are not compiled and published. (Hall, 2018: 296)

7. 2 Teachers' perceptions of the value given to their professional judgements

This Review values the contributions made by teachers and headteachers in responding to the survey, particularly at a very busy time of the teaching year. Their responses show that some teachers feel that their professional judgements are being undervalued by the introduction of the P1 SNSA as a 'standardised' assessment. This needs addressing. While the terminology is accurate in describing how the assessments have been developed, it has been taken to suggest that teachers' professional judgements have less status. This was not the intention of the development of the assessments and should be further emphasised in documentation. However, it may be the case that teachers who felt most keenly that their professional judgements were being questioned were those who had not had training or who had not had personal experience of carrying out the assessments.

7.3 Potential of the P1 SNSA to enhance teachers' subject knowledge

In the observations carried by this Review of children undertaking the P1 SNSAs, it was clear that the assessment offered rich observational as well as content data about children's learning behaviours in literacy and numeracy. In addition, survey responses from P1 teachers who had carried out the assessments indicated that they valued this 'quality time' (P1 teacher, survey) with individual children. On the other hand, where P1 teachers had not been personally involved in administering the SNSAs, they were less aware of its value. The P1 SNSA is potentially a very useful

extra observational tool and one which, in its detailed descriptors, can support the development of teachers' assurance in making consistent judgements of children's capabilities. If the assessment is to realise its potential as a diagnostic tool, then P1 teachers need to have experience of administering it themselves. This may create challenges for larger schools and mean some creative administrative decisions, but in terms of developing a skilful staff, it has real value.

Used at its best, as this headteacher noted, the P1 SNSA can support professional judgements as it:

- *Becomes part of our overall tracking data.*
- *Supports transition information sharing.*
- *Supports looking for trends and gaps in learning.*
- *Supports triangulation of formative and summative assessment and teacher judgement.*
- *Supports planning consultation meetings about next steps in learning and teaching.*
- *Supports analysis of performance of children in relation to SIMD, male/female, FME, EAL information gathering, supporting targeted approaches if appropriate.*
- *Can be used to analyse improvements in performance of learning (in conjunction with other assessments).*
- *Supports the tracking of pupil performance and identifying value added trends following initiatives.* (Headteacher, survey)

The NIF report 2019 emphasises the 'strong link between teachers' professional skills and competences and the quality of children and young people's learning experiences' (NIF, 2019: 23). It continues:

Consistent, well-moderated teachers' professional judgement data on achievement of Curriculum for Excellence levels in literacy and numeracy will help us to focus accurately on the difference in attainment between the most and least disadvantaged children and young people, and take further action as a result. (*ibid.*)

7.4. School leadership

Observational and survey evidence gathered for this Review shows that the effective implementation and use of the P1 SNSA data depends on the senior leadership team in any school. As the NIF report (2019) points out:

Evidence indicates that in the most effective systems, decisions about learning and teaching are made as close to the child or young person as possible, drawing on the expertise of the professionals who know them best and listening to the views of the child, young person and their family. School leaders play a critical role in creating a culture of empowerment and collaboration where curricular and learner pathways are designed and developed to meet the needs of children and young people. (NIF, 2019: 20)

School leadership is the fulcrum for effective use of data to support children's learning futures. Decisions about assessment, and particularly P1 SNSA, set the ethos for the school. The Review met headteachers whose thorough understanding of the consistent and considered use of data enhanced the experiences of both children and teaching staff. Headteachers who have a secure sense of how data can be used for school improvement, including P1 SNSA, set the tone for a positive view of how best to move the school and the children it serves forward. This headteacher's analysis of the advantages of using the P1 SNSA is an example of effective leadership:

- *Standardised data that supports regular tracking of pupils learning and performance at school.*
- *Ability to share themes and trends across cluster schools as all undertook the same assessments. Supports cluster planning and initiatives to improve and enhance learning.*
- *A good way to get where pupils are on a national perspective supporting school improvement planning.*
- *Ability to drill down individually for children to see themes, trends and improvements or fluctuations in their learning ability.*
- *Children can take as long as they need to complete the assessment (unlike other online/standardised assessments).*

(Headteacher, survey)

7.5 Local authority leadership

In a similar way to the critical role of senior leadership teams in schools, the leadership of the local authority is crucial in challenging and supporting schools and setting the context for the effective and ethical use of P1 SNSA information. In responses to this Review, local authorities described their attitudes and approaches:

We have created guidance regarding administration and use of SNSAs. Schools are aware that SNSAs are not designed to be used as a test for achievement of a level. The results from the standardised assessments will provide an additional source of nationally consistent information to inform teachers' professional judgement, both when planning next steps and when considering whether children have achieved Curriculum for Excellence levels. Guidance for schools - the information gathered through standardised assessments should be used as part of a suite of information to inform learning and teaching. Standardised assessments can provide a detailed breakdown of a child's ability in literacy and numeracy. Together with assessments from day to day learning and other assessment tasks or activities, standardised assessments can provide a detailed picture of children's progress.

(East Dunbartonshire, survey)

As an authority, we regularly gather and analyse pupil progress at all stages, based on teacher professional judgement. We are then able to analyse any correlations between teachers' professional judgements and the outcome of the SNSA. This then prompts professional discussion between the

authority and school leaders, which in turn prompts professional dialogue between school leaders and classroom practitioners. As an authority, this gives an additional layer of data for professionals to analyse together to ensure a robust approach to assessment, moderation, tracking and monitoring. (West Lothian, survey)

P1 SNSA data should be embedded in a broader understanding of how evidence is used to inform teacher professional judgements about learning and teaching and to support school improvement.

7.6 In summary

As Gayle Gorman, HM Chief Inspector of Education, points out in her Foreword to the *National Thematic Inspection Report, 2018*:

... there is a careful balance to be struck between providing the right amount of governance and accountability while at the same time allowing leaders and practitioners flexibility and autonomy to meet their pupils' needs. (Gorman, 2018)

This Independent Review has considered how Scottish Government might best strike such a balance in respect of the P1 SNSA. Overall, the Review has been impressed with the commitment of teachers, headteachers and local authorities to the children and families they serve. The Review has outlined the current situation with respect to the use and implementation of P1 SNSA. As one local authority leader puts it:

We need to be able to say 'here's where we are'. We need to understand as a country where we are. We're all accountable. We can't allow our children not to experience the best learning and teaching. (Interview, West Lothian)

It is clear to the Review that P1 SNSA has a place in informing consistent and effective assessment practice. It has potential, but has not yet completed its second year of implementation, and indeed much of the evidence drawn on for this Review has been from only one year. The SNSA assessment process is founded on self-review and making changes as a result. It has to be acknowledged that the assessment is still in the early stages of implementation and that there is still work to be done and discussions to be held. As one local authority put it:

Whilst we did receive more comments about P1 SNSA than for SNSA at any other stage during session 2017-18, we feel that highlighted issues that could be resolved and improved upon through dialogue and ongoing improvement, rather than on issues of principle about the validity of conducting standardised testing at this stage. (Aberdeenshire, LA survey)

The P1 Practitioner Forum has already made a valuable contribution to the debate about the usefulness of P1 SNSA. It has also made sound recommendations for the future of the assessments and has given P1 practitioners an opportunity to voice their professional concerns. This Forum should be continued in order to advise the

Scottish Government, ACER and practitioner communities on the continuing implementation, development and use of SNSA in P1 classrooms.

Conclusions

P1 SNSA has potential to play a significant role in informing and enhancing teachers' professional judgement. However, some important issues remain to be addressed including the view from some teachers and headteachers that introduction of the P1 SNSA undervalues professionalism.

Questions remain about the purpose for collecting P1 SNSA data at national and local authority level and how the P1 SNSA will contribute to narrowing the poverty related attainment gap.

Most local authorities have for some years used standardised assessments at P1. It should be made clear what the advantages of SNSA are over other standardised assessments that have previously been in general use.

At the moment, there can be little comparability of aggregated P1 SNSA data beyond the class or school.

Leadership at school and local authority level is crucial to the success of the effective implementation of P1 SNSA.

The P1 Practitioner Forum has played an important role in allowing professional debate about the usefulness and administration of the P1 SNSA.

Recommendations

Scottish Government

Retain the P1 SNSA to inform professional judgements about learning and teaching but address the recommendations identified by this Review.

Ensure that the purpose for collecting P1 SNSA data at national and local authority level is made clear in Government documentation and clarify how the P1 SNSA will contribute to narrowing the poverty related attainment gap.

Retain the P1 Practitioner Forum to offer advice and support to teachers, schools, local authorities, Scottish Government and Education Scotland.

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Schools visited

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Explanation of terms of quantity

The following standard Education Scotland terms of quantity are used in this report:

All 100%

Almost all 91%-99%

Most 75%-90%

Majority 50%-74%

Minority/less than half 15%-49%

A few less than 15%

Other quantitative terms used in this report are to be understood as in common English usage.