

The Future of School Performance Feedback Systems

Conference Discussion Group Paper

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Abstract: This paper introduces a simple categorisation of school performance feedback systems. It explores how a cross-national review of systems in each category, using a number of selected criteria, can identify features that warrant development, if user accessibility is to be enhanced in the future. The paper indicates potential value to be gained from both a deeper and a wider cross-national study.

Keywords: School performance feedback systems; school performance; pupil performance and monitoring; future developments

1. INTRODUCTION

The discussion group explored issues that face researchers wanting to undertake future studies on school performance feedback systems (SPFSs). Coe and Visscher (2002) define SPFSs as: “information systems external to schools that provide them with confidential information on their performance and functioning as a basis for school self-evaluation”. The uses of SPFSs are clearly related to a range of features that are constructed by developers, as well as those features and uses that are promoted or supported by advisers and trainers. Having said that, it is certainly possible within this overall definition of SPFSs to distinguish two different types of systems, dependent upon the focus for the self-evaluation within a school: the first focus is concerned with pupil performance and attainment at individual, class, year group and school levels, while the second focus is concerned with other aspects of school performance (including school leadership, school climate and the characteristics of classroom processes).

In terms of looking at the uses and outcomes of SPFSs, the discussion group felt that there are a number of key questions that are of fundamental importance to future research in this area, irrespective of whether a system is

focused on pupil attainment or on school performance in a wider sense. The key questions identified by the discussion group were:

- What are the main features of current SPFSs?
- What are the future needs for SPFSs, to improve utilisation and impact?

It was felt that the sharing of details about different national SPFSs, in conferences such as ITEM, indicated that certain forms of more intensive study (cross-national comparative studies) would be likely to aid researchers in the short-term as well as to potentially support those concerned with policy and practice in the longer-term. From details emerging during the ITEM 2008 conference, it was clear that there were differences and similarities in terms of features and approaches across systems used in different countries, and that some issues faced by some countries had been addressed in particular ways in other countries. The discussion group felt that a useful approach would be to undertake an initial small-scale review of systems in three countries to illustrate these forms of principle, and to begin to identify some indicators that might address the three key questions that the group identified. The approach reported here is to select three national SPFSs in each of the two categories (pupil attainment, and school performance in a wider sense), one from each of the countries represented by members of the discussion group (Germany, The Netherlands, and England). The remainder of this paper will briefly describe the SPFSs selected, identify criteria selected to draw comparisons across the systems, provide a table of comparisons using these criteria, and indicate conclusions drawn and recommendations made on the basis of the results shown.

2. BRIEF DESCRIPTION OF SYSTEMS

The SPFSs selected that focus on pupil attainment or monitoring are:

- In The Netherlands – The CITO Leerlingvolgsysteem (CITO Pupil monitoring system) (Vlug, 1997).
- In Germany – Vergleichsarbeiten (VERA) (Schrader et al., 2008; Hosenfeld et al., 2008).
- In England – Reporting and Analysis for Improvement through School Self-Evaluation (RAISEonline) (some features are reviewed in the paper by Passey, in this book).

The SPFSs selected that focus (also) on other aspects of school performance are:

- In The Netherlands – Zelfevaluatie in het basisonderwijs (ZEBO) (Hendriks et al., 2002).
- In Germany – Selbstevaluation in Schulen (SEIS) (Stern et al., 2008).
- In England – Self-Evaluation Framework (SEF) (DfES and Ofsted, 2004).

3. CRITERIA FOR COMPARISONS

The discussion group selected fifteen criteria to describe these six SPFSs. They were:

1. The source provider (for example, a government, university or commercial group)
2. The purpose (for example, for school improvement, accountability, certification, or inspection of policy implementation)
3. Extent of use (for example, nationwide, statewide, regional or local)
4. Number of data sets used or involved
5. Interoperability with other systems (for example, school management information systems)
6. Indicators (the elements of focus that the data relate to)
7. Forms of presentation offered (for example, tabular, graphical or pictorial)
8. Whether comparisons, trends or benchmarking are offered
9. Whether psychometric analysis provides indicators of reliability or confidence levels
10. Flexibility for users, in terms of data analysis
11. Targeted users, including collaborative use
12. User friendliness for (non-) occasional users, concerned with data entry, analysis, retrieval and interpretation
13. Ownership issues with regard to the data (for example, privacy and security)
14. The time lag between data collection and data access by users of the system
15. Instruction, guidance and support (technical and non-technical) as well as training for use

4. TABLE OF COMPARISONS

Table 1 shows a comparison of the six SPFSs, using criteria listed above.

Criteria	School performance			Pupil attainment and monitoring		
	ZEB0	SEIS	SEF	CITO pupil monitoring system	VERA	RAISEonline
The source provider	Developed by the University of Twente, now sold by a commercial company	The Bertelsmann Foundation	The schools' inspectorate	CITO	University of Koblenz-Landau	The government department
The purpose	Provides information on school process variables and on classroom variables for school self-evaluation	Instrument for self evaluation in schools, provides questionnaires (online/paper-based) to gather data about school quality (teachers, students, senior staff, parents)	Provides a framework to allow schools to gather the range of evidence to allow self-review as well as independent inspectorate review	A pupil monitoring system for 4 to 12 year olds and for schools (with benchmarking against similar pupils and schools)	Feedback of results from standardised tests at the end of the third grade (in mathematics and German)	Provides online analysis and reporting of pupil attainment, comparison to other similar schools nationally, as well as target

						setting and monitoring facilities
Extent of use	About 150 primary schools	Optional for schools, but recommended by some States	All schools in England must complete this form regularly	70 to 80% of Dutch primary schools (about 5,000 schools)	Accessible for all primary schools in participating States (16)	All schools in England have access to this facility
Number of data sets used or involved	One data set is used	One data set, involving in the region of between 30 and 80 questions for each stakeholder	A data set gathered about the school is supplemented with national test results, pupil and parent comments	One data set is used	One data set gives results of tests and comparison data between grades, schools with the same socio-economic status, and other States	One data set gives pupil attainment data from national tests, at a question level as well as a complete mark level
Interoperability with other systems	None	Data can be imported to and exported from MS Excel	The format allows the document to be copied and pasted	Data on pupils can be imported from and exported to other CITO tests and school administration systems	None	Data can be imported into or out of the system
Indicators	Indicators cover: consultation on school functioning; educational leadership; professional development; achievement orientation; team cohesion; pupil care; didactic methods; pupil achievement evaluation; and adaptive education	6 dimensions of school quality: results, teaching and learning, school culture, leadership and management, teacher's professionalism, goals and strategy. Each dimension has a set of indicators	Levels of pupil attainment, including those for specific groups, progress over time, personal development and well-being, assessments of teaching, the curriculum, care and guidance, leadership and management, school objectives, and links with other groups	Pupils' progress in the core subjects is shown at an individual, lesson group and whole school level	Ability tests, norm-reference models (the Rasch scale) in two subjects, plus socio-economic status (with a separate questionnaire)	Pupil attainment, in each subject area, by gender, ethnic group, gifted and talented, special educational needs, and those in care
Forms of presentation offered	Box and whisker plots	Raw data, tables with comments, bar graphs	Textual and tabular only generally	Graphical forms, and in numbers and percentages	Aggregated data (Rasch scales), tables, graphs	Graphical and tabular
Whether comparisons, trends or benchmarking are offered	Benchmarking is made with a reference group (an average Dutch primary school)	Between participating schools, and between different stakeholders, annually	None are offered within the online framework, but schools are given benchmarks	Yes, there are comparisons with pupils' previous scores, with other pupils and with other schools	Comparisons within school, and between schools with the same socio-economic status, and benchmarks	Comparisons with other school groups with similar socio-economic status or previous results can be made
Whether psychometric analysis provides indicators of reliability or	Yes	No	The data are from the one school alone, so this form of analysis does not	Yes	Yes	Indicators of reliability and confidence levels are shown in some reports

confidence levels			apply			
Flexibility, in terms of data analysis	Standard reporting only	Schools can add additional questions, but there is no additional data visualization	Schools can review the data in their own ways, but there are no online facilities to do so	Part of the system is computer-supported and part is not. There is limited flexibility in terms of analysis	There is a fixed set of data and its representations	There are a set number of reports and analyses that can be used
Targeted users, including collaborative use	Teachers and school teams	School management, parents, teachers, local community	School managers and governors	Teachers and school managers in primary schools	Teachers and school managers	Teachers and school managers
User friendliness for (non-) occasional users	Few complaints have been raised about user-friendliness	Said to be well designed, easily accessible, but the output is not very flexible	Users would almost certainly be regular school manager users	Parts of the system are accessible to occasional users	The first version had many reported problems, a revised version was much better, but a high level of knowledge (both computer use and psychometrics) is expected	Reports suggest that occasional users find the facilities quite difficult to use
Ownership of the data	The school that uses the system	Schools	The data must be shared with the inspectorate	Schools can use the data to improve the quality of instruction, but Inspectorate can use the information for judging the schools' performance level	University and schools	Schools have access to their own specific data alone, but comparisons with grouped data are possible
Time lag between data collection and data access by users	Access is possible as soon as data has been entered	Immediate response after data collection and entry	Access is possible as soon as data has been entered	Access is possible as soon as data has been entered	Three to six months	There has been a delay of several months between tests being taken and results being accessible through this system
Instruction, guidance, support (technical and non-technical) and training	The company offers some support and will offer a training course to promote system use	Website support, manuals, and in some States there are regional co-ordinators	Online help and support, documentary support and guidance, and training through local authority groups are all accessible	There is a training course providing information on the more basic level of use	Website support, hotline, and in some States there is individual discussion with schools	Online help and support, documentary support and guidance, and training through local authority groups are all accessible

Table 1: Comparison of six SPFSs using selected criteria

5. CONCLUSIONS AND RECOMMENDATIONS

In terms of main features of current SPFSs, if the systems selected are representative of the provision within each of the three countries, then it is clear that systems to support both school performance and pupil attainment monitoring processes are available in each of the three countries. Government and government agencies provide systems in England, but the provision in Germany and The Netherlands is through university and commercial companies. In most cases, use of the systems by schools and teachers is optional and dependent upon school involvement. Data sets from schools are commonly used, but in some systems national data sets are used for comparative purposes. Comparisons or benchmarking are used commonly within systems in all three countries, while indicators of reliability and confidence appear to be shown where these apply to data collected in relevant forms. Schools generally own their data, but sharing with other groups is sometimes necessary (with inspectorates) or possible (with other schools). Training and support are generally offered across all three countries, but the focus of that support varies from basic user training to the specific analysis of data reports.

In terms of the future needs for SPFSs, to improve utilisation and impact, the review suggests that future focus would be worthy in certain areas. Across all three countries, interoperability with other systems is generally at a low level, while user-friendliness appears to vary, and would be worthy of further exploration also. Flexibility of systems is currently low (it is not easy for teachers or managers to ask questions outside a range accommodated by providers). Time delays reported in England and Germany to data about pupil attainment suggest that the use of these systems by teachers may well be increased consequently if this aspect was addressed. A cross-country analysis could be mutually supportive in a number of additional areas: indicators that are used within the data are generally comparable across all three countries, but some systems focus more on indicators allowing specific groups of pupils to be selected and their attainments viewed for comparative purposes; forms of presentation of data reports vary, but some basic (and some more precise) visual forms are used in some systems; systems focus on school managers and teachers as users, while parents and governors can access the school self-evaluation systems in Germany and England, and the outcomes of these different forms of access could well be of wider interest.

A cross-country study looking at certain aspects of systems would be potentially worthy, and consideration and identification of appropriate research methods would be needed for a focus on, in particular, features of interoperability, user-friendliness for occasional as well as regular users, flexibility of systems to support questions outside a specific range, ways to address time delays in accessing data, the review of attainment for selected pupil groups, uses of visual forms of presentation, and outcomes of use of such systems by parents, governors or pupils themselves.

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