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Concise summaries of ongoing policy research aimed at helping to improve the national education system

Teacher Evaluation

Lessons from other countries

Research has identified effective teachers as the most critical factor in determining student achievement. Countries around the world have focused on teacher evaluation as a process that can be used to both assess and improve teaching quality. In South Africa this is a pressing issue.

This CDE publication is the second of three reports on the potential value of different approaches to teacher evaluation to improve teacher accountability and teaching quality. The report is based on research looking at a wide range of countries to explore the connection between teacher evaluation, teacher effectiveness and student achievement. It reveals a range of approaches, common trends, best practice, important debates and valuable lessons for South Africa.

The key finding is that well-designed performance-based assessments, which assess on-the-job teaching based on multiple measures of teaching practice and student learning, can measure teacher effectiveness. An integrated teacher evaluation model which combines these assessments with productive feedback and professional learning opportunities can increase teacher effectiveness and so raise student achievement.

Introduction

Education systems are increasingly being held to account by their various stakeholders with regard to the cost of their inputs, the efficiency of their processes, and the standard of their outcomes. International comparative surveys have made governments more aware than ever before of the relative standing of their educational systems, teachers and students[1] in relation to other countries and this has fuelled debates around accountability and efficiency.

Acronyms

AITS	Australian Institute for Teaching and School Leadership
AST	Advanced Skills Teacher
BEST	Beginning Educator Support and Training
IQMS	Integrated Quality Management System
ITT	Initial teacher training
MET	Measures of Effective Teaching
NBPTS	National Board for Professional Teaching Standards
NCLB	No Child Left Behind
OECD	Organisation for Economic Co-operation and Development
PACT	Performance Assessment for California Teachers
QMS	Quality Management System
QTS	Qualified Teacher Status
RTT	Race to the Top
SADTU	South African Democratic Teachers Union
SIG	School Improvement Grants
TALIS	Teaching and Learning International Survey
UK	United Kingdom
US	United States
VAM	Value-Added Model

In South Africa, the extent of the education challenges are highlighted by the dismal rating of its education system as "the worst of all middle-income countries that participate in cross-national assessments of educational achievement"[2] and the ranking of South African teachers, particularly in mathematics, near the bottom of world standards.[3]

There are many factors that affect teacher effectiveness: the poor education and training of most teachers, resulting in severe deficits in their subject and pedagogical content knowledge; inadequate teaching and learning conditions in many schools; ineffective professional development; a lack of professionalism; and a lack of effective accountability.[4]

In order to address the low quality of schooling, government has launched many initiatives, including an Integrated Quality Management System (IQMS). The Minister of Basic Education, Angie Motshekga, has also announced the use of accountability measures such as performance contracts and competency tests for school principals and teachers.

However, her attempts to introduce such accountability measures has met with opposition from the largest teacher union, the South African Democratic Teachers Union (SADTU).[5] SADTU argues that schools must be properly resourced and teachers' salaries, working conditions, development and support must improve before teachers' performance can be assessed and their pay linked to performance.

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Teacher pay for performance initiatives are part of a range of teacher incentives that countries have been exploring to attract, train, develop and retain teachers. This is as a result of the global shortage of high quality teachers, particularly in mathematics, science and languages, the high attrition rates among new teachers, and the growing numbers of teachers retiring.

As pay for performance is so contentious an issue, CDE undertook research on pay for performance programmes around the world and the lessons South Africa could learn from them.[6] The research findings were released in a 2012 CDE report and revealed that pay for performance is no panacea, with no universal evidence of a positive link with student achievement.

At the same time, there has been an upsurge in international interest in an integrated approach to teacher evaluation that seeks to both strengthen accountability and facilitate teacher development. As such, teacher evaluation may hold the promise of an approach that will be acceptable to both government and teacher unions.

Accordingly, in 2014 CDE undertook research to investigate the international literature and experience of teacher evaluation. This report provides insights into the approaches, policies and practices of teacher evaluation in a wide range of countries and the potential lessons for South Africa. It explores the links between teacher evaluation, teacher effectiveness and student achievement, and identifies common trends, best practice and key issues in teacher evaluation internationally.

What is Teacher Evaluation?

Significant research studies over the past 20 years have identified effective teachers as the most critical success factor in determining student achievement.[7] The increasing emphasis on teaching quality and effectiveness has sharpened the focus on teacher evaluation[8] as the process that can be used to both assess and improve teaching quality, within the wider context of improving the quality of schooling systems.

In its broadest interpretation, teacher evaluation refers to the processes of assessment of a teacher's performance and competence and includes both formative and summative components. Formative evaluation is aimed at the personal growth of a teacher, and is designed to provide a teacher with information that she can use to improve her practice by identifying her professional development needs. Summative evaluation is usually undertaken as part of a performance review and focuses on teacher accountability.

The evaluation of a teacher's performance and competence is usually based on a common understanding of teacher practice as defined in professional teaching standards. The evaluation process incorporates multiple sources of evidence to assess teacher competence in relation to these standards. The result is a comprehensive profile of a teacher's performance and competence against the teaching standards. This is typically used to enhance teacher performance and effectiveness through feedback, instructional coaching, and professional development.

> The increasing emphasis on teaching quality and effectiveness has sharpened the focus on teacher evaluation as the process that can be used to both assess and improve teaching quality

In measuring teacher effectiveness, *teaching quality* must be distinguished from *teacher quality*.[9] Darling-Hammond explains that while teacher quality is a collection of personal traits, knowledge, skills and dispositions of a teacher, teaching quality refers to strong instruction that enables a wide range of students to learn. Teaching quality is influenced by teacher quality but also strongly by the context of instruction: the curriculum, the match between teachers' qualifications and what they are actually teaching, and the teaching conditions. "If teaching is to be effective, policymakers must address the teaching and learning environment as well as the capacity of individual teachers."[10]

International Experience

CDE's review of the international literature on teacher evaluation was strengthened by the publication recently of a number of seminal reports on teacher evaluation from the Organisation for Economic Co-operation and Development (OECD), the Bill & Melinda Gates Foundation, the New Teacher Project and the National Commission on Teaching and America's future.[11]

The international literature identifies predominant trends as well as different approaches in teacher evaluation across a wide range of developed countries and a number of developing ones, and raises some important considerations.[12] International experience also reflects teacher evaluation systems as under continuous refinement or renewal, constantly adapting to changing demands, and incorporating best practice trends as these emerge.

Purpose of Teacher Evaluation

Although there are considerable differences in the purposes of teacher evaluation from country to country, the most common ones are to improve teaching quality by strengthening teacher accountability and inform teacher professional development.

Of the 29 education systems surveyed in the OECD *Review on Evaluation and Assessment Frameworks for Improving School Outcomes*,[13] 23 reported having policy frameworks (national or state laws or regulations) in place to regulate one or more types of teacher evaluation. Where policy frameworks exist, these specify the purpose of teacher evaluation for the particular country.

In New Zealand, Canada and England, for example, regulations prescribe that teacher evaluation includes probationary assessments to determine the readiness of new teachers for entry into the system.[14] Teachers who meet the minimum competency requirements are granted employment status. Those who fail to meet the minimum standards are not appointed. Probation is consequently used as a mechanism to prevent individuals with poor teaching potential from entering the profession.

Teacher evaluation in South Korea incorporates three different elements, each operating independently from one another, and each with a different purpose.[15] Performance management appraisal is used for teacher accountability and feeds into decisions about promotion and career opportunities. Professional development appraisal, which relies on multiple measures (classroom observation by peers and school leaders, as well as student and parent surveys), is used for individual and school-wide teacher professional development. In addition, an incentive scheme that is performance-based, rewards teachers for achievement of specific deliverables or roles.

Teacher quality is a collection of personal traits, knowledge, skills and dispositions of a teacher; **teaching quality** refers to strong instruction that enables a wide range of students to learn

The 2013 OECD report provides information about teacher evaluation in three Asian countries: China, Japan and Singapore.[16] In all three, teacher appraisal is mandatory, but in China and Japan the development of the evaluation framework is devolved down to the districts and/or schools, while in Singapore it is determined by the central education authority. While in Japan and Singapore teacher appraisal is linked to professional development and teacher promotion, in China it is not. There it affects a teacher's bonus and representatives of both the Communist party and teacher union sit on the school's evaluation task team with other elected representatives by teachers or the teacher union. In all three countries teacher self-appraisal is used as one of the measures of teacher performance. Student results are another measure used in Singapore and China, and a teacher's contribution to school development and the community, amongst other aspects of performance, is evaluated in China and Japan.

In Australia teacher registration is one of the primary purposes of teacher evaluation and is also governed by regulation.[17] Australian teachers are required to be officially registered. A teacher is initially granted provisional registration status as a graduate and then progresses to full registration after demonstrating achievement of the proficiency career stage, as defined by the Australian Professional Standards for Teachers. Registration decisions are based on a recommendation at school level, with supporting evidence to show that the teacher has met all of the standards. A minimum of 80 days of teaching is required before an application can be made for full registration. The teacher authorities undertake quality assessment on a continual basis to ensure consistency in judgment. Teachers are required to renew their registration periodically, typically every five years.

Teacher proficiency is one of the primary objectives of teacher evaluation in the United States (US). Historically the different approaches of the states to teacher evaluation have tended to be perfunctory, resulting in high ratings for the vast majority of teachers, who have not been measured by or held accountable for student achievement. However, since 2009 the states have been introducing new evaluation systems seeking to differentiate between teachers based on their effectiveness in the classroom.[18] The conjunction of three factors has resulted in a national movement to reform teacher evaluation: advances in education research, pressure from education reform advocates, and significant policy shifts. Federal initiatives such as Race to the Top (RTT) and the School Improvement Grants (SIG) Program, as well as conditions articulated by the US Department of Education for state waivers from No Child Left Behind (NCLB), and privately funded investments, such as the Measures of Effective Teaching (MET) project of the Bill & Melinda Gates Foundation, all promoted changes to teacher evaluation policies.[19]

> Teacher proficiency is one of the primary objectives of teacher evaluation in the United States

The competitive grants available to states under the RTT initiative required them to develop comprehensive teacher evaluation systems that included four components: measures of student growth; a rigorous, transparent, and fair evaluation system for teachers; annual evaluations that include timely and constructive feedback; and use of the evaluation information to inform decisions pertaining to professional development, compensation, promotion, retention and tenure.[20]

The six education systems that did not have regulatory frameworks in the OECD survey are the French Community of Belgium, Denmark, Finland, Iceland, Norway and Spain. However, teacher appraisal does take place in these countries, typically at the local or school level, with considerable

freedom in determining the model used. In Sweden, for example, teachers are evaluated as part of school self-evaluation and school inspection, but there is no official method to appraise individual teachers. In both Norway and Iceland teacher appraisal approaches are designed at the local and/or school level, while in Finland the guidelines of teacher appraisal are defined in the contract between the local government employer and the teachers' trade union as a part of labour-market negotiations.

Professional Teaching Standards

The reliance on professional teaching standards as a framework and reference against which teachers are evaluated is consistently identified as critical for building fairness and reliability into a teacher evaluation system.[21] Teaching standards are commonly premised on a shared understanding of the professional responsibilities of a teacher, the required competency profile of a teacher, and a working definition of what constitutes effective, high quality teaching. While not all countries have teaching standards in place, those that do not, such as Belgium, Denmark, Finland, Iceland, Norway and Spain, indicate that it is difficult to conduct teacher evaluation in the absence of an understanding of what constitutes good teaching.[22]

A critical issue in establishing professional standards is who develops them – the state, the teaching profession, or both in collaboration.

Darling-Hammond argues that the teaching profession should be the developers and custodian of professional teaching standards. She contends that professionalism incorporates two important components, accountability and autonomy, and she makes the distinction between professional accountability and bureaucratic accountability, both of which have a place in teacher professionalism.[23] Professional accountability should be driven by the profession rather than by external forces and is based on the three principles:

- Knowledge is the basis for making autonomous decisions with respect to the unique needs of clients.
- The practitioner pledges his first concern to the welfare of the client.
- The profession assumes collective responsibility for the definition, transmittal, and enforcement of professional standards of practice and ethics.

The US provides significant examples of teaching standards led by the profession. New initiatives to develop appropriate teaching standards and assessments for teaching arose from educator opposition to mandatory performance assessment tests. These consisted mainly of multiple-choice tests of basic skills or subject matter, which educators maintained do not adequately reflect the essence of the knowledge and skills needed for teaching. A pioneer was the National Board for Professional Teaching Standards (NBPTS) comprising mainly educators.[24] It offers voluntary testing for accomplished teachers, where they have to demonstrate their proficiency through a comprehensive evaluation process against defined teaching standards. Certification is valid for a period of 10 years, after which a teacher has to re-apply.[25] The evaluation process includes a review of a teacher's portfolio, observation of a lesson being taught (which is video-taped), and assessment-centre exercises. A team of educators and experts evaluates the material.[26]

> It is difficult to conduct teacher evaluation in the absence of an understanding of what constitutes good teaching

The edTPA, the first standards-based assessment to become nationally available in the US, was developed by educators for educators and is built on the NPBTS model. Today it is used by institutions in 35 states and the District of Columbia.[27]

In Australia the federal government initiated the establishment of the Australian Professional Standards for Teachers in 2009 and the process has been taken forward by the Australian Institute for Teaching and School Leadership (AITSL) which engages with the profession.[28] The standards describe the professional knowledge, professional practice and professional engagement required by the teacher and are structured into four career stages, (graduate, proficient, highly accomplished, and lead) and guide the preparation, support and development of teachers. The stages reflect the continuum of a teacher's career from undergraduate preparation through to being an exemplary classroom practitioner and a leader in the profession.

New Zealand serves as an example of active engagement with teachers to engender teacher ownership and accountability. A collaborative process by the Teachers Council, employers and teachers' unions developed the teaching standards, together with a collective agreement between the various bodies that teaching standards will be used as the benchmark criteria for their performance management system.[29]

In Chile, the *Good Teaching Framework* established in 2003 following a tripartite agreement between the Ministry of Education, the Chilean Association of Municipalities and the Teachers' Association sets the standards for teacher performance.[30] Standards are clustered into four key categories: creating a conducive environment for classroom learning; teaching for learning outcomes; preparation for learning, based on the content of student learning; and professional responsibilities. Teacher performance is rated in these categories using defined indicators (poor, basic, proficient or outstanding).

While England has had national teaching standards in place in the past, these were not previously linked to a teacher evaluation system. In 2012, the evaluation system was streamlined and for the first time, teacher performance, based on national standards, was directly linked to teacher evaluation.[31]

In Ontario, Canada, teacher evaluation systems are based on the Ontario College of Teachers' *Standards of Practice for the Teaching Profession*.[32] The standards include commitment to students and student outcomes; professional knowledge, professional practice, leadership in learning communities; and ongoing professional development.

A key point emphasised by researchers is that professional teaching standards should be expressed in performance terms: what the teacher must know and be able to do to support student learning, as opposed to how many hours they should sit in classes or workshops to gain credits. They need to describe practices shown by research to be associated with student learning and concrete enough to guide observations and feedback to teachers.[33] A good example of this is found in the San Mateo school district in California.[34]

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Standards-Based Evaluation in San Mateo, California

The California Standards for the Teaching Profession guide initial teacher licensing in California as well as evaluation systems in many local districts. The standards address the following areas:

1. Engaging and supporting all students in learning
2. Creating and maintaining effective environments for student learning
3. Understanding and organizing subject matter for student learning
4. Planning instruction and designing learning experiences for all students
5. Assessing student learning
6. Developing as a professional educator

Each standard contains five subcategories, rated using a rubric with levels from unsatisfactory to exemplary. In the San Mateo school district, evaluation is based on both supervisors' observations and collection of evidence about each of the standards. To supplement what is observed by the evaluator about a specific standard, teachers are invited to include evidence from their lesson plans, assignments, samples of student work, test scores and other evidence of student learning, student self-assessments, student or parent communications or evaluations, or videotapes of classroom practice.

A substantial body of research has been conducted in the US on standards-based assessments of teacher effectiveness. Well-designed performance-based assessments have been found to measure teacher effectiveness in terms of student achievement gains: these include the assessment used for National Board Certification by the NPTBS, as well as standards-based teacher evaluation systems used in some local districts in the US.[35] The Performance Assessment for California Teachers (PACT) and the Connecticut Beginning Educator Support and Training (BEST) assessment have shown that beginning teachers' ratings on these assessments predict their students' achievement gains on state tests.[36] Research on the BEST assessment showed that students of teachers who were identified as more effective gained four months of teaching time.[37]

> Well-designed performance-based assessments have been found to measure teacher effectiveness in terms of student achievement gains

Evidence from standards-based assessments can also provide a lever for improving initial teacher education programmes, induction and teachers on-going professional development.[38]

Sources of Evaluation Evidence

Multiple sources of evidence are collected as confirmation of a teacher's competence and performance. The type and variety of assessment instruments differ from system to system, as does the weighting apportioned to individual instruments. Common sources include classroom observation, self-assessment, peer assessment, teacher portfolios, student achievement, student and parent surveys, and teacher testing.

Evaluations should include multi-faceted evidence of teacher practice, student learning, and professional contributions that are considered in an integrated fashion, in relation to one another and to the teaching context.

International research highlights the value of a mix of evidence sources in teacher assessments, as is well documented in the Gates Foundation's MET project in the US. This three-year study was launched in 2009 to build and test measures of effective teaching. It aimed to find out how evaluation methods could best be used to tell teachers more about the skills that make them most effective, and help identify and develop teaching quality and effectiveness.[39] They investigated three different evaluation instruments: classroom observation, student opinion surveys, and progress in student scores.

The study concluded that:

- effective teaching can be measured; and
- using a mix of evaluation measures increases the understanding of the different elements of effective teaching.

The research considered the implications of using multiple measures with different weightings and found that equal weighting across evaluation instruments creates a more accurate assessment of teacher effectiveness. The heavy weighting of one measure over others can obscure the value of other measures.

Classroom Observation

As the most important elements of teaching occur within the classroom, teacher evaluation typically includes classroom observation as a source of evidence. Of the 29 evaluation systems reviewed in the *OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes*, almost all used classroom observation as a measure for purposes of teacher assessment.[40]

Classroom observations provide an opportunity for line managers to see teachers in action. They can assess their style of teaching, pupil management and other aspects of teaching that cannot be obtained from other forms of teacher evaluation, such as test scores. They also provide an opportunity for teachers to receive constructive feedback on their teaching methods so that they improve over time.[41]

However, classroom observation is not without its challenges. It can be resisted by teachers who perceive it as threatening and intrusive, an infringement of their professionalism, and related to past experience of evaluation as punitive or ineffective.[42] Evaluation by school leaders is often criticised as being prejudiced and based on the personal preferences of the evaluator.

The accuracy and reliability of classroom observation has been extensively debated and researched. The 2012 MET study project found that although classroom observations do significantly correlate with teacher performance, compared to value-added scores and pupil surveys on teacher performance, they are a less accurate measure of teacher performance in the long run.[43] This is because a classroom observation can only be a snapshot of the teaching process, whereas test score gains are a culmination of the teacher's input over the course of a year.

As the most important elements of teaching occur within the classroom, teacher evaluation typically includes classroom observation as a source of evidence

In a 2013 report for the Sutton Trust, Murphy makes the point that the main potential benefit of classroom observation is that it allows for constructive feedback to the teacher, which the other methods cannot provide.

Productive feedback has been shown to improve the long-term effectiveness of teachers.[44] Taylor and Tyler's analysis of an evaluation program in Cincinnati Public Schools showed that frequent observation and feedback cycles with expert evaluators as well as principals promoted teacher development and raised student achievement in mathematics, in the short and longer term, but that sufficient time, training and support was needed by the principals.[45]

To strengthen the accuracy of classroom observation, the MET study among others[46] emphasises the advantage of including external evaluators in classroom observation, even if this is not at every evaluation. Researchers caution that if classroom observation is restricted to a once-off annual event, it is unlikely to provide authentic evidence of a teacher's typical day-to-day practice.[47]

Critical to the effectiveness of classroom observation is the evaluation competence of the supervisor. Meaningful classroom observation requires evaluators well trained in this, with the ability to engage and provide constructive feedback. Teachers, too, require training in teacher evaluation and classroom observation, so that they understand how their performance will be assessed.[48] In Kenya, for example, inspections of schools and classroom observation have been seriously compromised due to inadequate and incompetent inspectors and a lack of state funding for evaluator training. In addition, transport for the evaluators to schools has been inadequate with many schools, particularly those in rural areas, difficult to access.[49]

The MET study concludes that while classroom observation is an indispensable part of every teacher evaluation system, it requires a major time commitment from teachers, principals and peer-observers and thus should be designed to be as accurate and reliable as possible.

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Teacher Testing

The practice of teacher testing is not common internationally, but in countries where it is practised, it is usually in relation to teacher entry into the profession, the end of the probation period, or teacher registration. In some countries, such as Chile, Mexico, Luxembourg and Slovenia, teachers are subject to testing in order to confirm their competence while, in exceptional cases, such as with Chile and Mexico, teacher tests are linked to reward schemes, but this appears to be against the dominant trend.[50]

In the United Kingdom (UK) all current and prospective trainee teachers must pass the professional skills tests in numeracy and literacy before they can be recommended for the award of qualified teacher status (QTS). These tests assess the core skills that teachers need to fulfil their professional role in schools, rather than the subject knowledge needed for teaching. This is to ensure all teachers are competent in numeracy and literacy, regardless of their specialism. Initial teacher training (ITT) providers are responsible for checking that all trainees meet the current ITT entry requirements for the skills tests, before they start the course.[51]

As discussed earlier, the NBPTS in the US offers voluntary teacher testing designed to develop, retain and recognise accomplished teachers. Four areas are tested: content knowledge, differentiation in instruction, teaching practice and learning, and an effective and reflective practitioner.

Peer-Assessment

Peer-assessment refers to a collaborative process between colleagues, where one teacher assesses another, as part of an evaluation process. In Denmark, teacher evaluation includes teacher-to-teacher dialogue, and team discussions aligned to the way work is structured for teams of teachers.[52] Planning, learning and knowledge sharing all take place in work teams. This approach fosters co-operation amongst teachers who work together to promote the quality of teaching in the school.

The Inspectorate of Education in the Netherlands has devised a peer-assessment programme called SKOOP where teachers from one school visit and assess teachers in another school.[53] This is followed by a visit from the school's management team to the other school where panel interviews are conducted to form an impression of the school. This information is subsequently discussed with the school authorities and written in a report. The results from this programme indicate that this type of peer review adds value to the professionalisation of teaching staff and initiates internal discussion and debates about teaching practice.

The Czech Republic also encourages co-operation and exchange amongst teachers, organising teachers into subject 'commissions' that facilitate peer exchange around lesson preparation and how to teach particular subject-specific concepts. Teachers within the commissions are involved in peer-assessment of colleagues within the same discipline.[54]

This type of peer-assessment process is seen to have many advantages with both teacher and teacher-assessor benefiting through sharing and engaging in dialogue about teacher practice. In addition, teachers as assessors are perceived as being more understanding of their peers, less threatening, and more likely to show insight into the challenges in the classroom.[55] Based on their own experience as a teacher, the quality of feedback is likely to be specific with practical suggestions to aid teacher practice.

Teacher Portfolios

A teacher's portfolio of work is typically used as an additional source of evidence in the assessment process and is seen to further substantiate a teacher's competence and performance. Combined with other sources of evidence, a teacher's portfolio is commonly used for summative evaluation purposes.

Portfolios are sometimes informed by a country's regulatory framework and can be mandatory, as in Scotland and Singapore. In England they are optional and not required by government regulation. Portfolios are structured according to their role in the evaluation process and usually include a combination of, or all of the following: lesson preparation, teaching materials, samples of students' work, teacher marking and assessment of students' work, self-evaluation and self-reflection reports.

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Student Surveys

Student and/or parent surveys as an input into evaluation systems are uncommon, although international experience points to a growing awareness of their potential in assessing teacher effectiveness. Obtaining constructive and meaningful feedback from students or parents requires a controlled mechanism through which to gather the data and a structure to draw out the feedback with clear policies on how information is disseminated.[56]

The MET Project found student surveys produce more consistent results than classroom observations or student achievement gain measures. These surveys aggregate the impressions of many students who have spent numerous hours with a teacher.[57] Growing evidence of their reliability as an indicator of teacher effectiveness has led researchers to suggest their use in teacher evaluation is appropriate when combined with other measures.[58]

In Norway, school leaders, unions and student organisations are working together on developing principles and guidelines for teacher evaluation by students.[59] They focus student input questions on teaching practice, rather than questions about the teacher as an individual. Other questions probe teacher learning approaches, teaching materials, and general conditions in the classroom environment. Students are invited to undertake a self-assessment and peer-assessments as a means of evaluating the impact of student effort and motivation on the learning environment.

In Sweden, teachers often conduct surveys among their students to obtain feedback on their teaching practices.[60] The surveys are organised by the teachers themselves, are only used by the teacher, and are not part of a wider teacher evaluation process. The Swedish experience is that if questions are formulated in a simple and relevant way, students respond reliably about teaching quality and provide useful insights for the teachers. The feedback is considered valuable and influences teachers' strategies for teaching and learning.

Teacher Self-Assessment

Self-assessment enables teachers to reflect upon their practice and identify strengths and areas for further development, plan their professional learning, or set career goals. Teacher self-assessment is used in most countries as part of the performance management process and is most commonly used to guide teacher professional development. In Israel, teacher self-assessment forms part of the end of the probation process, while in New Zealand it is part of the registration process, and part of the promotion process in Estonia and Israel.[61]

Student Achievement and Value-Added Models

Promoting students' academic achievement is arguably the most important component of a teacher's job.[62] Using student achievement in teacher evaluation is seen to promote the ultimate goal of teaching – the improvement of learning – and to strengthen the direct accountability of teachers in this regard.

> The MET Project found student surveys produce more consistent results than classroom observations or student achievement gain measures

Those in support of using student achievement as a measure of teaching quality argue that it addresses the incongruence that sometimes exists in teacher evaluation practices between a teacher's high ratings for performance effectiveness and the poor achievement of students for whom the teacher is directly responsible. Supporters argue that achievement scores focus solely and directly on student learning, are relatively objective, and are useful because they are comparable across schools if they use the same statistical methods and common tests.

However, there is considerable opposition to the use of student achievement as the primary or only means of teacher evaluation. It is contended that teachers contribute to their students' development in a number of significant ways, and should not be evaluated only in relation to their students' achievement in tested subjects.[63] Using student grades as the only measure can encourage 'teaching to the test' and even manipulating marks.

In reality, however, research shows that the practice of using student achievement in teacher evaluation is quite limited. The Slovak Republic uses student outcomes to evaluate teacher performance at the completion of probation, and Mexico uses student outcomes for regular teacher appraisals in the context of performance management and links these into its reward scheme.[64] In Chile student results are used to evaluate groups of teachers as part of the National Performance Evaluation System.[65] England, Scotland and Singapore also use student outcomes at some point in the teacher evaluation process.

In the US, a number of states have passed regulations requiring teacher evaluation systems to incorporate student achievement. However, there is evidence that few have fully implemented this practice. A 2014 Brookings Institution study of four educational districts across the US indicated that only 22 per cent of teachers were evaluated on student achievement or test results.[66]

International practice thus reflects the advice of researchers that student academic achievement should not be the only measure of teacher performance and should be used as only one of many indicators in the evaluation process.[67]

A more sophisticated approach to measuring student achievement is known as a Value-Added Model (VAM). This a specific type of growth model, using a set of statistical techniques to isolate a teacher's impact on students' achievement progress while controlling for other measurable factors, such as student, home and school characteristics, that are outside that teacher's control. A fierce debate surrounds the use of VAMs, with both opponents and supporters using a growing body of research over some three decades to support their positions. Opponents argue that value-added models suffer from measurement and estimation problems, are unreliable, invalid and unfair, and can result in potentially adverse effects.[68] They can penalise teachers of the neediest children and thus create a disincentive for them to serve high-need children.[69]

By contrast, supporters contend that teacher evaluations are only meaningful if these measures are a heavily weighted component.[70]

> There is considerable opposition to the use of student achievement as the primary or only means of teacher evaluation

However, among researchers there is growing consensus that value-added estimates of quality based on student achievement should not be used as the only element in teacher evaluation or in high-stakes decisions about individual teachers or schools.[71]

Nonetheless, Carlo points out that they do add value:

> It is as much of a mistake to use value-added estimates carelessly as it is to refuse to consider them at all. Error is inevitable, no matter which measures you use and how you use them. But responsible policymakers will do what they can to mitigate imprecision while preserving the information the measures transmit.[72]

Use of Evaluation Results

Teacher evaluation is only valuable if the results are used, and used effectively. Results can be used for either improvement or accountability purposes. Achieving the right balance, and making the connections between the improvement (formative) and accountability (summative) functions in teacher evaluation is seen as a key challenge and one that is often underestimated.[73]

Implementation is not simple either. In the US, for example, the overhaul of state teacher evaluation policies has created political pushback and strong opposition from teacher unions in many states. It has also increased the human capital states need to invest in evaluating and developing teachers.[74] Progress has been slow and uneven because the process of policy change can be complex and requires substantial time to implement, particularly when states first have to engage in negotiations with teachers' unions.[75]

While the use of an integrated model of teacher evaluation for accountability and professional development is spreading internationally, there are researchers that disagree with this approach. Popham argues the case against most US teacher evaluation systems that attempt to integrate the formative and summative functions into a simultaneous process. He talks of the "dysfunctional marriage" that exists as a result of combining formative and summative evaluation processes, arguing that the important function of evaluating teachers to help them become more effective, and the equally important function of evaluating teachers to identify inept teachers and hold them accountable, are "splendid if separate, but counter-productive when combined".[76]

Similarly, Murphy advises that schools should separate the teacher appraisal and teacher development observations to allow the observer and teacher to have a free and frank discussion about the teacher's strengths and weaknesses without the concern of it being kept on permanent record.[77] He points to Arizona where the appraisal and development systems are separate and the development and formal assessment observations are conducted by different observers, but using the same standards and goals.

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Evaluation for Accountability

Teacher evaluation results are used as a basis to inform decisions in relation to poor performance, career progression, promotion, salary increases, and performance-linked pay. In the case of poorly performing teachers, the OECD study indicates that the dominant international practice is to address poor performance initially through remedial interventions. Where performance does not improve, progressive sanctions are implemented.[78]

Underperformance at the end of a probationary period typically results in the teacher not being employed. Compulsory in-service training is typically the first sanction for poor performing teachers and usually includes a further process to re-assess performance. Sanctions for poor performance can also impact on contract, career advancement or salary level. Dismissal as a result of poor performance is not common in international practice and appears only to be used in exceptional and extreme cases, Australia and Austria being the only two countries that indicated they use this measure.

Researchers stress the importance of creating a continuum of appraisal approaches linked to professional learning and career advancement, starting with appraisals at the end of a probation period, moving to formative and school-based appraisals, and concluding in summative appraisals for accountability purposes.[79] However, the OECD survey found limited evidence about the use of evaluation results for career advancement and progression.[80]

Only 16 per cent of countries that participated in the OECD Teaching and Learning International Survey (TALIS), for example, indicated that teacher evaluation led to a moderate or significant change in the career prospects of teachers.[81] Australia, however, has recognised the need to introduce career diversification and teachers can volunteer to be appraised by applying for Advanced Skills Teacher (AST) positions.[82] These positions carry higher salaries and are associated with additional responsibilities and specific roles in schools. In so doing, advanced teaching skills are recognised with a formal position and more pay. Teachers appointed in AST positions are expected to have deeper levels of knowledge, show more sophisticated teaching, be responsible for co-curricular aspects of the school, and assist colleagues.

The results from teacher evaluation can inform the basis of reward or pay for performance systems, where incentives, which are usually (but not only) financial, are paid to staff on the basis of achievement of pre-determined targets, or 'rank-order tournaments' where performance is measured relative to other teachers or schools. As discussed in CDE's previous research, there is no convincing evidence of a positive link between teacher pay for performance and student achievement.[83]

Evaluation for Professional Development

Experts point to the value of a teacher evaluation system that supports professional learning, not just accountability.[84] A professional development system closely aligned to teacher performance-based assessment should support effectiveness for all teachers at every stage of their careers beginning with recruitment.[85]

> Experts point to the value of a teacher evaluation system that supports professional learning, not just accountability

To improve teaching quality, professional development should include both formal development programmes and job-embedded learning opportunities linked to a teacher's individual development needs.[86] High-quality support, including mentoring for teachers needing assistance, coaching and opportunities for collaboration and knowledge sharing with their peers, are essential.[87] Research has found that peer learning among small groups of teachers seems to be the most powerful predictor of improved student achievement over time.[88]

Although research shows that well-designed professional development can improve practice and increase student achievement, in the US it is rare. A minority of teachers have experienced sustained professional development, mentoring, coaching or collaborative work, or have observed in other classrooms.[89]

High-achieving nations in Europe and Asia offer extensive, sustained learning opportunities embedded in practice: teachers are given 15 to 25 hours a week for collaboration plus 100 hours a year for professional learning.[90] A review of high-quality experimental studies found that while professional development offerings of less than 14 hours per year on a given topic had no effect on student learning, high-quality professional development programs of about 50 hours over a 6-to-12 month period increased student achievement by 21 percentile points on average.[91]

In many countries, however, professional development programmes are not adequately integrated into the evaluation process and fail to meet individual needs.

> *Many systems invest significant sums [money] in professional development programs but do so out of habit, tending to offer the same set of training courses each year, without regard to how they fit into a comprehensive program or how effective they are – even when teachers complain that some of the courses are not useful.[92]*

Despite clear evidence for decades that one or two-day workshops are ineffective in improving teaching quality, they persist as the most common form of professional development. However, access to sustained, focused learning is what teachers need to improve their practice.

Generic 'one-size-fits-all' training is typically not enough to meet teacher professional development needs, although it has some value if used appropriately. The challenge is to strike a balance between the different approaches of en masse training (which is more cost-effective), professional collaborative learning, and individually tailored professional development.

One strategy is to segment professional development by grouping teachers according to experience level and job performance, as in the Teach For America and The New Teacher Project in the US that group all entry-level teachers together.[93]

Peer learning among small groups of teachers seems to be the most powerful predictor of improved student achievement over time

Summary of Findings

Research has found that well-designed performance-based assessments, which assess on-the-job teaching based on multiple measures of teaching practice and student learning, can measure teacher effectiveness. Moreover, an integrated teacher evaluation model that combines these assessments with productive feedback and professional learning opportunities is able to increase teacher effectiveness and so raise student achievement.

Despite the differences in how countries' teacher evaluation systems are designed, implemented and evolve, CDE's survey has revealed that the dominant approach is the integrated model that aims to appraise teacher performance, strengthen accountability and support professional development. Common trends, issues and challenges that could usefully inform teacher evaluation in South Africa have also been identified.

Common Trends

These include:

- Regulation of teacher evaluation, including probationary assessments of newly qualified teachers, teacher registration and proficiency requirements at all career stages, is growing.

- There is a common emphasis on professionalising teacher practice and the use of professional teaching standards as the benchmark for assessing teachers' performance. These standards evaluate teaching quality based on practices shown by research to be associated with student learning.

- Multiple sources of evidence, none of them error-free, are used in the evaluation process to strengthen the reliability and validity of the outcomes:

  » Classroom observation is the most common instrument but its reliability depends on the competence of the evaluator, more than one observation a year and more than one evaluator – preferably an external one.

  » Considerable debate and research surround the use of student academic achievement and value-added models as a measure of teacher performance, but there is agreement that they should not be the primary or only measure used.

  » Carefully constructed student surveys and peer-assessment and dialogue hold promise as useful inputs in appraising and improving teacher effectiveness.

- In the case of poor teacher performance, the dominant international practice is to address it initially through remedial interventions and re-assessment of performance. When it does not improve, progressive sanctions are employed, but outright dismissal for poor performance is rare.

- A high-quality professional development system should be closely aligned with teacher performance assessment to support teachers' effectiveness at every stage of their careers. However, achieving this is not simple and in practice most professional development is of poor quality, ineffective, and of limited duration.

An integrated teacher evaluation model that combines these assessments with productive feedback and professional learning opportunities is able to increase teacher effectiveness and so raise student achievement

» Generic one-size-fits-all training (typically in short courses or one-shot workshops) is not sufficient to meet specific teacher professional development needs, as research has proven; it must be balanced with professional collaborative learning and individual development plans.

» The results of teacher appraisal should be used to give constructive feedback to teachers and linked to formal professional development and job-embedded learning opportunities, including mentoring for teachers needing assistance, coaching, and knowledge-sharing to improve teaching quality.

• Effective teacher evaluation requires a productive teaching and learning environment, and a significant investment of human capital, funds and time to agree on a system, establish the necessary structures, build evaluation capacity at all levels of the system, and monitor its implementation.

Key Issues

In designing teacher evaluation systems, the differences between countries' approaches and research debates indicate that consideration should be given to a number of issues:

• Should a centralised one-size-fits-all policy for teacher evaluation be designed, or a decentralised one, allowing for local or school-level discretion?

• Should teacher performance assessment and professional development processes be integrated, or separated?

• What should be the roles of professional accountability and bureaucratic accountability in professionalising teachers?

• Who develops the professional teaching standards and becomes their custodian: government, the teacher profession, or both in collaboration?

• What range of evaluation instruments should be used, given the deficiencies of all and their different benefits?

• What governance and supportive structures, resources and capacity-building at every level of the school system is needed to effectively evaluate teachers and develop them professionally to improve learning?

Concluding Remarks

The need to improve learning achievement in South Africa is not in question, and the international research shows that an effective teacher evaluation system can help to achieve this - and more. As the National Council on Teacher Quality in the US points out:

The impact of teacher evaluation systems that truly measure teacher effectiveness would be profound. If done well, and if policymakers act on the results, it could change much of what is now standard practice in the teaching profession by setting the foundation for better targeted policies for struggling teachers, higher standards for teacher preparation programs and fair but rigorous policies for replacing persistently ineffective teachers. Compensating teachers based on effectiveness could help attract and retain the best teachers in the profession.[94]

> Generic one-size-fits-all training (typically in short courses or one-shot workshops) is not sufficient to meet specific teacher professional development needs, as research has proven

However, if poorly designed and implemented, teacher evaluation could disadvantage teachers of the neediest learners and produce a perverse incentive for good teachers to avoid teaching low-performing students or in low-performing schools, or even to leave the profession. Given the extent of educational inequality in South Africa, this would be disastrous: the purpose of teacher evaluation must also be to ensure greater equity in learners' access to good teachers.

The findings of CDE's international research can provide valuable reference points against which to examine teacher evaluation in South Africa. What can South Africa learn from other countries' evaluation policy and practice to inform the further development of effective teacher evaluation here?

The current teacher evaluation policy in the Integrated Quality Management System (IQMS) has been in place for a number of years but is to be replaced by a new policy, the Quality Management System (QMS). This invites the question: to what extent does the QMS reflect best practice internationally?

Getting teacher evaluation policy right is important, but other countries' experience shows that implementing it is a significant challenge – a problem South Africa knows only too well. How effective has the IQMS been on the ground, and what can be learnt from schools' practice for the future?

These questions prompted CDE to undertake further research on teacher evaluation in a sample of public and independent schools, and the findings are contained in its 2015 report, *Teacher Evaluation in South African Schools.*

Endnotes

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