Continual improvement through aligned effort

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Abstract

Effective classroom teaching and distributed instructional leadership are keys to improving student outcomes. Almost all school systems understand this, but not all systems take the logical next step of making the improvement of day-to-day teaching and the development of effective instructional leadership the primary focus of their reform efforts. Instead, priority is given to secondary considerations such as redesigning school curricula, measuring performance levels, increasing local autonomy and holding schools publicly accountable. Improvements in student outcomes depend on an alignment of effort – by students, teachers, school leaders, systems and governments – to enhance the quality and effectiveness of day-to-day teaching and learning. For all these groups, improvement depends on a commitment and belief that performance can be further improved; a clear understanding of what improvement would look like; a way of establishing current levels of performance as starting points for action; a familiarity with evidence-based, differentiated improvement strategies; and ongoing processes for monitoring progress and evaluating improvement efforts.

Introduction

The most effective strategy available to governments, schools and school systems for improving student achievement is to improve the quality of day-to-day teaching and learning. At a fundamental level, this means changing what teachers do. The challenge is to get all teachers doing what the best already do and supporting the best teachers to develop still more effective classroom practices.

There has sometimes been reluctance in school education to engage with the details of teachers' practice. The questioning of practice has been seen as an encroachment on the professionalism of teachers. It has been argued that teachers are best placed to decide what is appropriate in their particular settings; that teaching is an art not a science; and that there are no single 'best' ways of teaching.

As a consequence, discussions of teaching and the development of standards for teachers often have been limited to relatively superficial, observable aspects of teacher behaviour, including compliance. Has the teacher covered the entire curriculum for the year level? Has the teacher participated in the requisite hours of professional development? Have they participated in assessment moderation activities? Do they comply with relevant legislative, administrative and organisational requirements? Does the teacher maintain an orderly classroom environment? Is there evidence of the teacher using a range of teaching strategies?

However, research shows unequivocally that effective teaching – and thus improved student learning – depends on teachers having expertise in the subjects they teach, deep knowledge of how students learn those subjects (including common student misunderstandings and errors), and familiarity with the general conditions that support successful learning. This paper argues for the system-wide alignment of effort to promote teachers' understandings of *learning* and the implications for effective classroom teaching.

Student learning

There is a substantial body of research into learning. Research in a range of disciplines is adding to our understanding of human learning and contributing to an emerging 'science of learning' (Bransford, Brown & Cocking, 2000). This body of research includes the following observations:

- High expectations

  Learning is more likely to occur when there is a deep belief (on the part of both learners and teachers) that successful learning is possible. Learning is more likely in classroom environments in which all students are expected to make excellent progress, are engaged, challenged, feel safe to take risks and have deep beliefs in their own capacities to learn successfully. In such classrooms there is recognition that learners are at different points in their learning and may be progressing at different rates, but there is an underpinning belief that every student is capable of making excellent progress and eventually achieving high standards if motivated and if exposed to appropriate learning opportunities. In other words, there is a positive

and optimistic belief about every learner's capacity for learning and high expectations are held for every learner's success.

- Clarity about learning intentions

  Learning is more likely to occur when it is made clear to students what they are expected to learn. Learning and improvement in any area depend on an understanding of what it means to improve. Learners and teachers can monitor progress only if the nature of progress is made explicit. Intended curriculum sequences, rubrics and maps of typical student progress ('developmental continua') with associated progress indicators are some ways of providing this explicitness. Learning intentions also can be clarified and communicated through examples of high quality work or performance.

- Starting points for learning:

  Learning is more likely to occur when efforts are made to understand where individuals are in their learning (their current levels of attainment, interests, motivations, ways of thinking, etc.) and learning opportunities are designed to address their levels of readiness and learning needs. Learning is less likely to occur when students are presented with material that is much too easy or much too difficult. There is evidence that learning is maximised when students are presented with challenges just beyond their current level of attainment – in the 'zone of proximal development' – where success is possible, but often only with scaffolding or other support (Vygotsky, 1978). An implication is that teachers need to gather evidence about where students are in their learning to guide starting points for teaching.

- Evidence-based methods

  Learning is more likely to occur when teachers use teaching strategies and methods that have been shown through research and experience to be effective in practice. Popular teaching methods often lack a solid research base. Some commercial programs are based largely on proponents' beliefs about what should work or on misinterpretations of research (e.g., some 'brain-based' teaching methods misinterpret evidence from neuroscience). Many widely used literacy and

numeracy programs have never been adequately evaluated and some approaches to the teaching of reading are inconsistent with available research evidence.

- Monitoring and feedback

  Learning is more likely to occur when learners are provided with feedback that identifies actions to improve future performance. Feedback is essential to all learning and is most effective when it is timely, allows students to see the progress they are making and builds confidence that further progress is possible. To be most effective, feedback needs to be provided on a very regular basis.

High-performing education systems have an aligned, system-wide focus on assisting all teachers to do these things well. They recognise the importance of building every teacher's pedagogical knowledge and skills and teachers' capacities to implement highly effective teaching methods. This is a priority for central office staff, for regional/district offices, and for school leaders and teachers themselves.

As well as being aligned around this common focus, effective school systems are also aligned in the sense that all levels of the system are pursuing a continual improvement agenda. Some key elements of an improvement agenda are represented by the rows in Table 1. They include an ongoing commitment to improving practice and performance; an understanding of what further improvement would look like; a process for establishing and understanding current levels of performance as starting points for action; a familiarity with evidence-based, differentiated improvement strategies; and processes for monitoring progress and reflecting on the effectiveness of improvement efforts.

Table 1: A framework for continual improvement

	Students	**Teachers**	**Schools**	**System**
Commitment to improvement	a commitment to, and belief in, every student's ability to learn successfully	a commitment to the continual development of every teacher's effectiveness	a commitment to the continual development of every school's practices and programs	a commitment to continually improve the effectiveness of system initiatives and support
Improvement framework	a framework that describes increasing levels of student learning and achievement	a framework that describes increasing levels of teacher expertise and effectiveness	a framework that describes increasing levels of school practice and performance	a framework that describes increasing levels of system practice and performance

Assessment processes	processes for establishing where students are up to in their learning	processes for establishing current teacher expertise and effectiveness	processes for evaluating current school practices and performance	processes for evaluating current system practices and performance
Improvement strategies	evidence-based teaching strategies tailored to students' current levels of progress and learning needs	evidence-based, differentiated strategies for developing teacher expertise and effectiveness	evidence-based, differentiated strategies for improving school practices and programs	evidence-based, differentiated strategies for enhancing system effectiveness and support
Feedback and monitoring	a process for monitoring learning and providing feedback to guide student action	a process for monitoring and recognising increasing teacher expertise and effectiveness	a process for monitoring and reflecting on progress in improving school practices and programs	a process for monitoring and reflecting on progress in improving system initiatives and support

Classroom teaching

A prerequisite for improved teaching is a recognition that no matter how good a teacher's current practice may be, improvement is always possible. A belief in the possibility of improvement and a commitment to learn how to improve are as important to the improvement of classroom teaching as they are to improvement at all other levels of an education system.

Importantly, teachers require an understanding of what improved teaching looks like. Some attempts to describe development as a teacher use broad career stages such as having prerequisite knowledge about teaching, having practical teaching experience, assisting colleagues in their teaching and taking on school-wide instructional leadership roles. But such descriptions do not go to the heart of what it means to become a more expert teacher – for example, what it means to become more expert in the teaching of reading, or what it means to become more expert in the analysis of student learning and the diagnosis of learning difficulties. Improved teaching depends on clarity about what highly effective pedagogical practice looks like (Hattie, 2003).

Assessments of teachers' practice can be useful in identifying ways of supporting further professional learning and development, particularly if assessments probe the details of teachers' content knowledge, pedagogical content knowledge and day-to-day classroom teaching. For diagnostic and developmental purposes, global, impressionistic

judgements of teacher performance are generally less useful than systematic observations and assessments against explicit descriptions of effective teaching practices.

Strategies for improving teaching practice are most effective when they are differentiated, personalised and grounded in teachers' day-to-day work. Graduate pre-service and in-service courses are useful for building expert pedagogical content knowledge. But powerful forms of learning also occur when teachers collaborate in analysing student work, planning lessons and providing feedback on each other's teaching and as a result of coaching and mentoring by specialist teachers.

Teachers benefit from feedback on the quality of their teaching and the progress they are making. As with all feedback, to be most effective, this needs to be timely and supportive and to identify specific actions that teachers can take to further improve their teaching. Again, impressionistic judgements and general comments are likely to be less useful than specific suggestions for improving practice.

School leadership

School leadership teams are in powerful positions to influence the quality of classroom teaching and learning. Schools that make significant improvements in student achievement invariably are led by individuals with a passion for improvement – leaders who believe in the possibility of high performance regardless of a school's circumstances or students' socioeconomic backgrounds. These leaders adopt a 'no excuses' policy and drive a strong and explicit agenda to improve the quality of teaching and learning throughout the school. They also surround themselves with colleagues who share their commitment to improvement.

Effective leaders are clear about what it will take to bring about improvement and what kinds of changes they wish to see. They place a high priority on the analysis and discussion of systematically collected data (e.g., student achievement levels, attendance rates, student behaviour, parent perceptions, etc.) as a basis for school planning. They may set targets and timelines for improvements in performance. Effective leaders also understand the changes in school practices and processes required to support improved teaching and learning. They work to create a culture of high expectations; apply discretionary resources to the improvement of outcomes; build a professional team of

highly able teachers who take shared responsibility for student learning and success; and work to ensure the use of effective, evidence-based teaching strategies throughout the school.

School improvement frameworks that describe increasingly effective practices can assist schools to reflect on where they are in their improvement journeys and to identify areas in need of further attention. Such frameworks provide a common language for discussing performance and progress (Masters, 2010). School leaders also sometimes find it useful to have external, independent reviews of a school's performance to identify starting points for whole-school action.

The improvement strategies that schools adopt usually depend on their circumstances. For some schools, the first priority may be to increase student attendance and engagement and to reduce levels of student mobility and staff turnover. Challenges may include raising student, parent and teacher expectations, improving student behaviour and creating learning environments in which disruptions and distractions are kept to a minimum. In other schools, priorities may include having teachers work together to support each other's teaching and professional learning and securing school community support for teaching and learning innovations.

Improvement is facilitated when schools and their communities are able to see improvements in teaching, learning and student outcomes. One way to do this is through regular internal and/or external school reviews. Feedback allows schools to monitor improvement over time and to evaluate the effectiveness of improvement strategies.

System leadership

Continual improvement is equally important at the level of entire education systems. Improvements in systems' practices and processes depend on a belief that, no matter how well a school system is performing, it can always do a better job of supporting and promoting quality teaching and learning. High-performing systems passionately adopt this as their main challenge.

This, in turn, requires an understanding of what it means to become more effective as a system. In recent years there has been growing interest in lessons that can be learnt from high performing and rapidly improving school systems (Barber & Mourshed, 2007;

Mourshed, Chijiok & Barber, 2010). International comparative studies suggest that high-performing systems place a high priority on student learning. They align the efforts of students, teachers, school leaders and system leaders around this core purpose and rigorously evaluate programs and resource allocation on the extent to which they result in improved outcomes. Comparative studies also highlight the crucial importance of attracting highly able people into teaching, retaining them in the profession and investing in their development as expert teachers.

Many education systems undertake or commission regular reviews of their performance. The purpose is to scrutinise system initiatives and plans, to evaluate these in the light of international best practice, and to recommend improvement strategies.

Strategy differentiation is as important to system improvement as it is to student learning, the professional development of teachers and school improvement. In a study of the world's most improved school systems, Mourshed, Chijiok and Barber (2010) concluded that, in systems with very low levels of student performance, the most effective forms of system action include addressing students' basic living needs, improving school attendance, providing scripted teaching materials and textbooks and getting all schools to a minimum level in terms of infrastructure and student results. In systems with very high levels of student performance, the most effective forms of system action include decentralising decisions about teaching and assessment, encouraging collaborative practice among teachers and promoting experimentation and innovation.

Finally, school systems require feedback on the effectiveness of their improvement strategies. Systematic evaluations of programs and initiatives are essential to informed future action. At the same time, participation in national and international achievement surveys provides systems with valuable information about trends over time and the effectiveness of system initiatives in improving the quality and equity of schooling.

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