Using data, conversations and observations for school improvement

Kathryn Moyle

ACER

CONTENTS

INTRODUCTION

One of the policy priorities in all jurisdictions in Australia is to improve the quality of teaching and school leadership. This is consistent with reform efforts in several countries in Australia's region, where there is also a focus on building the capacity of school leaders and teachers to provide high-quality teaching and learning that leads to improved student outcomes, and to ensure that excellent teaching and leadership practices are distributed across the school system. The intention of this policy priority is that by improving teaching and school leadership, improvements in students' learning outcomes will follow. Improvements in teaching and school leadership collectively are referred to as school improvement.

Running concurrently with the school improvement agenda has been the introduction of the *Australian Curriculum*, which has drawn attention to the importance of the educational leadership role of school principals and other school leaders in supporting teachers to develop students' knowledge and understandings of discipline content, cross-curriculum priorities, and the general capabilities that underpin learning and the application of knowledge in different contexts. In the *Australian Curriculum*, the general capabilities included are: literacy, numeracy; information and communication technology capability; critical and creative thinking; personal and social capability; intercultural understanding; and ethical understanding (Australian Curriculum, Assessment and Reporting Authority, nd). Interestingly, the *Australian Curriculum* does not explicitly nominate 'problem-solving' as a general capability. Determining whether students are progressing in their learning through the use of both formative and summative measures is also a central role of teachers and school leaders. Understanding curriculum and assessment practices and how they fit together, however, is one of the perennial professional learning challenges for everyone who works in schools.

It is fair to assume that most Australian school principals have school improvement plans, which are focused on improving students' outcomes through improving the quality of teaching and learning. At the heart of improvements in educational practices, though, are human relationships. Professional learning involves developing human relationships based on thoughtful communication strategies. This paper investigates the human aspect of professional learning and the ways in which data, conversations and observations can be used as professional learning tools, to support school improvement.

ESTABLISHING A BASIS FOR CONVERSATIONS AND OBSERVATIONS

School improvement requires that the school leadership team implement professional learning approaches that support teachers' ongoing development. Members of the school leadership team also require ongoing professional learning themselves, so that they can provide opportunities to the school staff and other members of the school community. Professional learning can include attendance at local or regional workshops and seminars, and state, national and international conferences; online learning such as through webinars and extended accredited programs; informal sharing of information in the workplace; on-the-job training; mentoring, coaching and work-shadowing programs; work exchanges; career management and development activities; skills training in vocational and tertiary education programs; and other recognised modes of adult learning.

Professional learning has been shown to make a difference when it is directly relevant to teachers' development requirements (Cole, 2012). Conversations and observations about school-based data and individual improvements in classroom practices can form some of the more powerful parts of a school's overall approach to professional learning deliberately aimed at gaining improvements. As such, the focus in this paper is on the professional learning purposes of using data coupled with conversations and observations, rather than their use for accountability purposes.

COACHING AND MENTORING CONVERSATIONS

Effective communication strategies are essential if professional conversations are to be conducted about improvements in individuals' teaching practices, based on data and observations. The use of coaching and mentoring approaches by school leaders with their teachers is one strategy generating successful outcomes, so much so, that school leadership development centres across Australian jurisdictions have all included professional learning about how to conduct coaching and mentoring conversations in their suite of professional learning offerings.

The use of coaching and mentoring conversations for deliberate school improvement involves several intersecting education theories and practices about how to bring about change. These include school improvement approaches used by effective school leaders that are aimed at improving students' learning outcomes; approaches to teachers' inservice professional learning; and the use of conversations and observations in coaching and mentoring approaches.

For the purposes of this paper, *coaching* refers to the nature of the processes, and the type of communications used, to help another person realise his or her personal or professional goals. A coach fosters increased self-awareness through conversations aimed at self-directed learning. In comparison, a *mentor* provides direction, guidance, education, influence and support to others who are less experienced, with the aim of supporting the mentee's development. Both coaches and mentors may observe the classroom pedagogies employed by the teachers they are developing, and vice versa. That is, mentees and coachees may also seek to observe their mentors' and coaches' classes respectively, so they can learn from each other and work on identified aspects of their teaching (Zhang, Ding, & Xu, 2016). These approaches can also be used as ways of distributing excellent teaching and learning across systems.

Coupled with the use of school-based data and observations, coaching and mentoring conversations can contribute to the improvement of the quality of professional learning offered to teachers and to the increased transfer of that professional learning to local circumstances. A study conducted in the United States by Joyce and Showers (2002) investigated teachers' applications of their learning from traditional forms of professional development to classroom practices, compared with the use of coaching conversations for improvements in professional practices. They found that there was minimal transference of learning from the traditional forms of professional development to classroom practices, but that when coaching was included in the teachers' professional learning, the application of the learning increased substantially. Joyce and Showers (2002) also showed that professional learning programs that lead to higher achievement by students share some common characteristics, including:

- a focus by teachers and school leaders on curriculum and pedagogies;
- clear goals for improvements in student learning;
- plans to meet the identified goals;
- implementation of these plans;
- school-based research to evaluate the implementation of the learning; and
- the collection of formative and summative measures of progress toward the identified goals.

Constructive coaching and mentoring conversations, however, do not happen by themselves. They require planning and preparation, especially if the conversations are to be informed by school-based data. Coaches and mentors themselves also require training about how to conduct coaching and mentoring conversations. Effective approaches to conducting coaching and mentoring conversations, though, do share some common processes.

- The role for the coach or mentor and that of the coachee and mentee is clearly defined at the beginning of the process.
- Implementation plans are prepared that include:
  o identification of the pedagogical issue or issues to be addressed;
  o selection of the pedagogical strategies to address the issue or issues identified;
  o development of plans to address the pedagogical issue or issues to be addressed;
  o implementation of the chosen instructional plans; and
  o assessment of students' learning.
- Reflection on whether the plans generated improvements in students' outcomes.

Implementing these processes requires that the school leadership team has a clearly focused understanding of the purpose of the coaching or mentoring conversation that is consistent with the observations and other data collection that they undertake to achieve school improvement. These approaches also require that foundations are laid with the teaching staff, as their commitment to such processes is vital.

LAYING THE FOUNDATIONS

Before initiating coaching and mentoring conversations for school improvement, it is necessary to establish a conducive situation for the use of such conversations. This requires a commitment by the school leadership team to use coaching or mentoring strategies to build the capacity of the school staff. It also beneficial if the principal or the whole school leadership team successfully completes an accredited coaching and/or mentoring training program. Once these pre-conditions are in place, the foundations for the use of coaching and mentoring conversations can be laid within the school. This process involves establishing

- collegiality among the staff and between members of the leadership team and teachers;
- clear pedagogy and assessment expectations by teachers of students and by the leadership team of teachers;
- a shared understanding of the priorities for school improvement within their school; and
- a culture of continuous improvement and risk-taking based on a cycle of conversations, classroom observations, constructive feedback, planning and implementing strategies that will make a difference to the priorities identified for school improvement.

Where these conditions have not been established, the school leadership team has to build the capacity of the staff and the culture within the school in order to enable coaching and mentoring conversations to be used.

BUILDING A CULTURE OF TRUST

Meaningful conversations about school improvement require disclosures of weaknesses, and this requires a culture of trust within a school. Equally, asking teachers to have conversations with school leaders, particularly school principals, about the aspects of their practice they would like to improve requires a culture of trust. Building a culture of trust – trusting attitudes, behaviours and expectations, as accepted systemic cultural norms – takes time and cannot be rushed. It may represent a whole cultural shift within the school, and so school leaders have to plan strategically to build and sustain a culture of trust. This is not an easy thing to do.

Trust is cultivated by communication that is supportive, frequent, clear and honest. Words are accompanied with consistent non-verbal cues. Sustaining trust requires that time is taken for fostering informal interactions within the school to build relationships. The value of informal social gatherings by teachers should not be under-estimated; they provide opportunities for getting to know colleagues in a deeper sense as people, rather than only as teachers. And building trust takes patience.

The expertise of the school principal and the school leadership team as educators, has to be respected and recognised by those in the school community, if trust is to be built and sustained, and if conversations and observations used as professional learning tools are to be effective.

Once mutual respect is established, and teachers feel comfortable about engaging in conversations and classroom observations, then the processes of meaningful school improvement can proceed.

BEING FOCUSED

Implementing coaching and mentoring conversations to assist with interpreting data, and to improve classroom teaching, requires clarity about the main focus of coaching and mentoring conversations for school improvement. One purpose of using coaching and mentoring conversations is to build the capability of all teachers in a school so that they can take positive steps towards the achievement of the strategic vision and priorities in the curriculum; link their teaching and assessment with the learning of students; and interpret classroom data in order to make judgements about students' progress and outcomes.

Coaching and mentoring conversations are premised on a shared understanding of the priorities of the improvement agenda being pursued within the school. Such conversations not only require an environment of trust, but also a culture of ongoing or continuous learning, and a willingness for and acceptance of risk taking by both the school leadership team and the staff.

Implementing coaching and mentoring conversations to assist with interpreting data, and to improve classroom teaching, requires clarity about the main focus of coaching and mentoring conversations for school improvement.

BEING STRATEGIC

Not all teachers want to be involved in such approaches to professional learning. To introduce classroom observations accompanied by coaching and mentoring conversations for school improvement requires the school leadership to be strategic about introducing such approaches in the school. Here are some suggestions that may assist with these processes.

Work with early adopters

Coaches and mentors believe that people have the inner resources to achieve improvements in their practices through coaching and mentoring processes. Teachers who are keen to volunteer to try out new ideas and approaches, including in their own professional learning – otherwise known as 'early adopters' – are likely to be ready to draw on those inner resources to achieve improvements in their practices. Working with these teachers builds the confidence of the school leadership team to use data, observations and coaching and mentoring conversations with teaching staff for the first time, while at the same time modelling the new approach for other staff members.

Understanding student data and being able to make judgements based on that data may also require the development of benchmarks and common assessment tools for use across the school.

Use data

The use of data to inform the achievements and future directions of observations, and coaching and mentoring conversations contributes to the development of shared understandings of the outcomes achieved through the implementation of specific strategies. Using data requires schools to have processes in place that enable teachers to easily access the data they require to inform their classroom practices. It also requires principals and school leadership teams to identify what teachers in their schools have to know about data so they can use them effectively, which may require targeted professional development to support teachers to interpret data about their students.

The purposes for using school-based data include:
- tracking individual student's achievement;
- tracking individual students' progress over time;
- providing a basis for ongoing classroom observations accompanied by coaching or mentoring conversations between the principal, leadership team and teachers; and
- tracking improvements in the quality of learning in each class across the school aligned to the school improvement plan, in order to understand progress toward the planned improvement goals.

Understanding student data and being able to make judgements based on that data may also require the development of benchmarks and common assessment tools for use across the school. Such approaches depend on the collaborative work of teaching teams to review student work samples and collected data to inform classroom observations, and the coaching and mentoring conversations.

Establish points for comparison

Using data to make judgements about progress requires the establishment of a starting point from which to measure 'distance travelled'. Data on students' performances and whether they are improving, staying the same, or going backwards on standardised tests provides mechanisms by which aggregated students' progress can be viewed over time. Such standardised tests include international sample surveys such as the Programme for International Student Assessment (PISA), the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS), and national census surveys such as the National Assessment Program: Literacy and Numeracy (NAPLAN). To illustrate, the cohort of students tested in PISA in 2012 were three-year-olds in 2000, and so completed their primary schooling and lower secondary schooling in the period between 2000 and 2012 (Masters, 2014). PISA data between 2000 and 2012 show that Australian students' performances on some measures are declining over time, and declining relative to some other countries and economies in our region, such as Korea, Singapore and Shanghai (Thomson, De Bortoli, & Buckley, 2013).

If we look over the fence to Korea, Singapore and Shanghai, these are places that not only have students who perform well on PISA, TIMSS and PIRLS, they also have education policies which include expectations of school-based research, mentoring and coaching as part of teachers' professional learning, and identifiable career paths, through which teachers and principals can progress. In these countries, to move to the next stage on the career path requires that the teachers demonstrate increasing sophistication as an educator. In Shanghai and Singapore, as teachers progress through their careers, they must take increasing responsibility to serve as mentors and trainers of other teachers. Some mentors provide subject-specific guidance, while others provide support about more general pedagogical development.

Although there are several different approaches to determining students' progress, the use of NAPLAN data provides teachers with a means by which to begin conversations about students' performances and progress. Observational data provide additional insights into what is happening in the classroom by the teacher. It should be noted, however, that data about student performance as reflected by students' achievements on standardised tests, and data from classroom observations have different goals, and are likely to produce complementary rather than correlated data. Grossman and colleagues in their 2014 US study, for example, identified only modest to relatively low correlations between observational data and student examination data. They suggest that such low correlations may reflect a lack of alignment between the goals of certain teaching practices captured by observation protocols and the kinds of student outcomes measured by many standardised tests (Grossman, et al 2014). In short, different measurements may find different things.

Plan for improvement

School improvement requires the enactment of school improvement plans at the whole-school level, and teaching plans at the classroom level. These plans should include targets for students' progress in specific discipline areas. Where observations accompanied with coaching and mentoring approaches to school improvement are valued, then these approaches are embedded into performance and school development policies to support school improvement.

Gaining consistency in the pedagogical approaches implemented across a school requires a whole-school approach. A whole-school curriculum plan and associated policies provides teachers with structured guidance about what it is they are expected to do. For example, if the school improvement is focused on improving the literacy levels of students, the school should have a clear curriculum plan and whole-school literacy development policy. The curriculum plan may include programming and planning, and scope and sequence guidance, as well as moderation approaches and assessment tools. It may also include clear and explicit assessment expectations for students based upon student data. These policies, plans and school-based data then provide the basis upon which shared understandings about classroom observations and conversations can be structured.

STRUCTURING CLASSROOM OBSERVATIONS AND ASSOCIATED CONVERSATIONS

The role of coaches and mentors is to ask the right questions, to promote greater self-awareness and to foster more informed decision-making, so that coachees and mentees can each learn something. It is not the role of mentors and coaches to try to solve problems for the coachee or mentee, but rather to ask probing questions so that together coachees and mentees can identify the best solutions.

At the outset of the coaching or mentoring relationship, the educational leader has to establish a shared understanding with their coachees or mentees about their respective roles, in order to:

- facilitate an understanding of the purposes of the relationship;
- explore the motivations, skills and thought processes to be used;
- discuss the processes of observation, listening and asking questions;
- support goal setting and assessment;
- support solutions-oriented approaches to teaching, learning and leadership;
- support a commitment to action;
- ensure a planned approach to the improvement of personal skills and abilities; and
- contribute to a whole-school approach to improvement.

Conversations about individual plans by teachers to make deliberate improvements in their practices can be informed by observations of their practices. Classroom observations are intended to provide direct feedback on the specific pedagogies used by teachers in situ. The value of classroom observations is increased if they are accompanied by pre-observation and post-observation conversations.

The purpose of classroom observations is for the teacher to seek to improve his or her practice, which sees improvements in students' learning. To support these processes, teachers and school leaders should agree on the guidelines about how these specific processes will be undertaken. Communication by the school leader should facilitate the co-creation of the guidelines the teacher and school leader plan to use in these conversations. The use of coaching or mentoring skills about the conduct of classroom observations provides an informed basis from which to work.

Pre-observation conversations

Prior to conducting a classroom observation, an initial conversation between the observer and teacher enables both participants to develop shared understandings about the purpose and desired outcomes planned from the activity. This initial conversation provides the opportunity for both people to agree on:

- the goal of the classroom observation – what the teacher and school leader want to achieve, specific aspects of classroom teaching practice to be observed and discussed in follow-up conversation;
- how the classroom observation will be conducted; and
- when and where the follow-up conversation will occur.

Open-ended questions can be used to structure the conversation. These questions should require the teacher to undertake some personal reflection, and can be similar to the following:

- What are your students learning?
- How are you doing?
- How do you know?
- What are your criteria for success?
- How can you improve?
- Where do you go for help?
- What professional learning do you think you require?

Classroom observations

Classroom observations can take different forms, ranging from an observer sitting in a classroom for a whole lesson through to classroom walk-throughs, which are brief, focused observations of teachers and students. Whichever form an observation takes, its purpose is to provide data to inform follow-up conversations related to teaching and learning, and classroom practices. A rubric to assist in the conduct of a classroom observation can be developed by the teacher and observer, or they may choose to adopt or adapt existing frameworks.

There are several different frameworks that can be applied for conducting classroom observations. *The Framework for Teaching*, developed by Charlotte Danielson (The Danielson Group, 2013), is built on the principles of constructivism that value student meaning-making and active engagement. In this *Framework*, teaching is divided into four domains: planning and preparation; the classroom environment; instruction and professional responsibilities.

The *Mathematical Quality of Instruction* (MQI) approach, developed by Heather Hill and her colleagues (Hill, Blunk, Charalambous, Lewis, Phelps, Sleep & Ball 2008), places importance on teachers' mathematical knowledge for teaching, and the value of precision in mathematical explanations.

The *Protocol for Language Arts Teaching Observation* (PLATO), a subject-specific observational protocol developed from research on high-quality teaching in English Language Arts (Grossman, Loeb, Cohen & Wyckoff 2013). It places importance on the rigour of content and the intellectual challenge of tasks. There is an emphasis placed on the centrality of classroom discussions in order to develop sophisticated understandings of content and disciplinary skills. The theory underpinning this approach is that a critical role of teachers is to provide instructional scaffolding for students to help them succeed.

Irrespective of the chosen approach for classroom observations, agreement about how the observation will be undertaken is necessary.

Post-observation conversations

Soon after a classroom observation has been conducted the observer and teacher should meet to discuss their respective reactions to the classroom observation, and the evidence of progress toward the planned improvement goals. Again, open-ended questions encourage narratives and reflections by both participants as well as agreement on further actions and future directions. Documenting achievements and new challenges provides a basis for ongoing development. Reviewing these notes periodically overtime, alongside student performance data collected for the same period, enables teachers and the school leadership team to more precisely measure the extent to which school improvements are actually being achieved.

Open-ended questions encourage narratives and reflections by both participants as well as agreement on further actions and future directions.

CONCLUSION

The fundamental purpose of school improvement plans is to improve students' learning outcomes through the development of an explicit improvement agenda, an analysis and discussion of data, a culture that promotes learning, targeted use of school resources, an expert teaching team, systematic curriculum delivery, differentiated teaching and learning, effective pedagogical practices, and school-community partnerships.

Strategies for collecting and using data, undertaking observations and implementing coaching and mentoring programs are among the variety of strategies available to school leaders seeking to develop a school improvement agenda, obtain support for it and build collective capacity for its implementation. The success of such strategies depends on the development of a school culture of trust, and the use of effective communication strategies. Data-informed professional conversations in support of school improvement do not simply happen by themselves; they require school principals and leadership teams to structure and enable professional learning with school staff over time that draws on the collective professional knowledge and practice of staff focused on improving students' outcomes through improving the quality of teaching and learning.

REFERENCES

Australian Curriculum, Assessment and Reporting Authority, (nd). General capabilities. Introduction. Education Services Australia, Melbourne Available at www.australiancurriculum. edu.au/generalcapabilities/overview/introduction

Cole, P. (2012). *Linking effective professional learning with effective teaching practice*, Melbourne: Australian Institute for Teaching and School Leadership.

Grossman, P., Cohen, J., Ronfeldt, M., & Brown, L. (2014). The test matters. The relationship between classroom observation scores and value-added on multiple types of assessment, *Education Researcher*, 43(6), 293–303.

Grossman, P., Loeb, S., Cohen, J., & Wyckoff, J. (2013). Measure for measure: The relationship between measures of instructional practice in middle school English language arts and teachers' value-added scores. *American Journal of Education. 119*(3), 445–47.

Hill, H.C., Blunk, M., Charalambous, C., Lewis, J., Phelps, G.C., Sleep, L., & Ball, D.L. (2008). Mathematical knowledge for teaching and the mathematical quality of instruction: An exploratory study. *Cognition and Instruction, 26,* 430–511.

Joyce, B.R., & Showers, B. (2002). *Student achievement through staff development*, Washington DC: Association for Supervision and Curriculum Development.

Masters, G. (2014). *Is school reform working? Policy Insights 1,* Melbourne: Australian Council for Educational Research.

The Danielson Group (2013). *The Framework,* The Danielson Group, retrieved from https://www.danielsongroup.org/framework/

Thomson, S., De Bortoli, L., & Buckley, S. (2013). *PISA 2012: How Australia measures up,* Melbourne: Australian Council for Educational Research.

Whitmore, J. (2009). *Coaching for performance. GROWing human potential and purpose. The principles of coaching and leadership,* London and Boston: Nicolas Brealey and Associates.

Zhang, M., Ding, X., & Xu, J. (2016). *Developing Shanghai's teachers,* Washington, DC: National Center on Education and the Economy.

www.acer.edu.au