Using data for school improvement: A practitioner's approach

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Data and school improvement – A school perspective

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Wayne Craig was appointed as Regional Director of Education for Melbourne's Northern Metropolitan Region early in 2005.

Prior to this appointment Wayne was principal at Box Hill Senior Secondary College. Under Wayne's leadership Box Hill Senior developed a significant reputation as an innovative school providing diverse programs and pathways.

Box Hill Senior played a leading role in the integration of vocational education in senior schooling and established unique sporting programs in basketball, football and tennis.

In 2005, Box Hill Senior established the Middle Years Tennis School to cater for 150 students seeking to combine middle years education with a strong sporting program.

Box Hill also developed innovative approaches to the use of ICT as both a teaching and management tool.

Wayne commenced his working life as a research officer for a major retail company and later taught mathematics and science at a number of technical schools in Melbourne's east and south east.

Over the past decade, Victorian government schools have become accustomed to the use of data as a means of evaluating school performance and identifying potential areas for improvement.

In many instances however, the data has been relatively unsophisticated and the data has not been readily available to or useable by teachers, and students rarely had access to this information.

The Victorian Education Department's Accountability and Improvement framework, underpinned by a three-year school charter, required schools to monitor, evaluate and report on performance data across a range of areas. Data sets include:

- Like School Group – a measure of the socioeconomic status of the school population
- AIM* results
- VCE** Results against 'Like Schools'
- Vocational provision and achievement
- Real Retention
- Student Absence
- Parent Opinion
- Staff Opinion

The Framework was more a compliance mechanism than an improvement tool. The data underpinning the Framework assisted in identifying issues, but was relatively unsophisticated and is not readily usable in schools as the basis for improving student achievement.

In 2003 Victorian Education Minister Lynne Kosky launched a *Blueprint for Government Schools* with a moral purpose to improve student achievement regardless of background or location. The Blueprint emphasises the need for an accountability and improvement focus that is responsive to school needs and focuses on improving student outcomes and now the charter process is evolving into a four-year strategic planning process.

Another of the Blueprint Flagship Strategies is the implementation of a performance and development culture across all schools. The core of this performance and development culture is the provision of multiple sources of feedback to teachers so that teachers can constantly monitor and improve their performance.

In an attempt to drive improved outcomes, schools such as Box Hill Senior Secondary College have developed their own data gathering processes to inform both teachers and students about performance.

Box Hill Senior Secondary College – a Years 10 to 12 school of 600 students – is unusual in the Victorian context. As one of two 'stand-alone' senior colleges, it has no feeder schools and relies on 'word of mouth' recommendations to secure its enrolment. A third of Box Hill students travel three to four hours per day to and from school and the school has developed an enviable reputation for innovative programs across a broad range of programs. In 2005, as part of the Blueprint's *Leading Schools Fund*, the school established the Middle Years Tennis School. The Middle School has 55 students from Years 5 to 9 combining tennis with schoolwork and this enrolment will increase to 150 students in 2006.

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*AIM – Achievement Improvement Monitor: a statewide literacy and numeracy test administered at Years 3, 5 and 7.

** VCE – The Victorian Certificate of Education

Box Hill Senior uses a broad range of electronic tools to gather information on student attitudes, aspirations, expectations and achievement. Some of this information is fed back to students as part of a mentoring process and some goes to teachers to assist in improving their performance.

There are several crucial preconditions for the implementation of the Box Hill approach:

- Clarity and unity of purpose
  ◦ Unless the school has a strong sense of direction, data is more likely to confuse than clarify or assist.
- A strong emphasis on use of data
  ◦ Using data that is potentially confronting for teachers is a gradual process.
- The use of ICT for collection and analysis of data
  ◦ ICT is essential to collect, analyse and distribute data.
- High levels of trust
  ◦ Teachers and students must be confident that data will be used appropriately.

In its work with students the school uses a well-developed mentoring program that assists students to take responsibility for their performance. This program supports students in reflecting the match between achievement levels and aspirations and expectations. Much of the data at the heart of the mentoring process is also used to support improved teaching.

Data collection and use

To get a picture of student ability levels all students sit ACER Literacy and Numeracy tests on entry to the school.

Students also complete a number of tasks on *Websurvey* (web-based software developed by the school) which include:

- A learning styles test that is intended to raise student awareness and reinforces the need for teachers to consider different learning styles as they plan teaching programs;
- A self-assessment of approaches to learning. This includes questions like 'How do you rate yourself on commitment to study? Very committed? Committed? Not committed? How much time do you expect to spend on homework each day?';
- Questions related to future employment such as, 'Being highly paid is … Very important? Important? Not important?;
- Questions on achievement expectations in each subject;
- Questions related to involvement in part-time work, sport and the arts (outside school); and
- Questions related to the student's access to ICT at home.

Box Hill Senior has also developed a web-based attendance and progress reporting system that monitors student attendance by the half-hour and provides a monthly progress report in each subject. This progress report also includes a grade point average on student performance.

Individual student mentoring sessions are conducted with a teacher several times per year. The student is encouraged to reflect on levels of achievement compared to expectations and aspirations and what strategies might be used to lift achievement.

At the end of each semester, students complete their own report on progress

using scanning technology. Students evaluate their approaches to learning, indicate whether they have achieved at the level they expected, factors contributing to their success and steps they can take to lift their performance. The reports are a key component of the Student Progress Conferences that are held with parents and students. Success factors and improvement options are also forwarded to each of the student's teachers.

Teachers at Box Hill have electronic access to all the data regarding students and are encouraged to reflect on this information as part of the school's performance management process.

Two other significant data sets are also used to assist staff to improve the quality of their teaching.

The first is an analysis of individual student performance at Year 12 in the VCE. The analysis takes into account three key factors:

- Ability as measured by the General Achievement Test that is administered by the Assessment Authority during Year 12;
- Gender, as girls generally outperform boys; and
- Year level, as students taking one Year 12 subject at Year 11 generally outperform Year 12 students taking five subjects.

Other variables such as attendance, age and student family occupation can also be included in the analysis.

Teachers have information on the performance of each student in their classes and are able to look at how those students performed in other classes. The data indicates whether students performed at, above or below what would have been expected on

the basis of ability, gender and year level.

The data lays a rich foundation for discussion in performance management sessions, in learning area meetings and between groups of teachers. These discussions have encouraged teachers to modify their teaching practice and have led to changes in class organisation in some instances.

Another key data set for Box Hill teachers is student opinion on the quality of teaching. Using scanning technology, all staff members are expected to survey classes during the year. Students are asked to respond to questions such as:

- My teacher is an expert in this subject.
- My teacher is well prepared.
- My teacher checks understanding.
- In this class, students are treated as adults.
- In this class, high standards of work are expected,

Implementing this approach required a significant leap of faith on the part of teachers. There was some concern, particularly from experienced teachers, as to whether students would actually assess teacher performance fairly. At the same time, some students expressed doubt as to whether teachers would respond to teacher opinion.

There were four clear outcomes from the student opinion surveys.

Firstly, students treated the surveys seriously.

Secondly, teachers were highly regarded by students and this had a significant impact on morale. Most teachers had never received any formal feedback from students in their classes. During performance review many teachers

spoke about how they always knew when they had a really bad lesson or really good lesson but the surveys provided detailed information across a range of performance areas.

Thirdly, student opinion gave teachers an insight on aspects of their performance that could be improved. Most teachers looked at the survey results and identified two or three indicators that were lower than others. These aspects became the improvement focus for the next twelve months.

Finally, the survey data added another layer of rich discussion to the schools performance management process and assisted the school administration to identify professional development needs for the staff as a whole.

The strategic use of data at Box Hill Senior Secondary College supports improved student achievement and a similar, but broader, approach is now being developed to serve government schools in Melbourne's Northern Metropolitan Region. A regional data service is being developed to provide teachers and students with a range of information on student achievement, ability, aspirations and expectations.

The data service will support a range of other school improvement initiatives to be rolled out over the next two years.