

## Teachers: the major players in the education process

It might have seemed more obvious to start with the students, but that would not be the correct place to start! We so often make claims about students, their learning styles, their attitudes, their love or not of schooling, their families and backgrounds, and their culture. In so many cases, this discussion is about why we can or cannot have an effect on their learning.

We so often worry about who students are. While it is the case that the largest source of variance in learning outcomes is attributable to the students, this should not mean that we stop at what students can and cannot do. We invent so many ways in which to explain why students cannot learn: it is their learning styles; it is right or left brain strengths or deficits; it is lack of attention; it is their refusal to take their medication; it is their lack of motivation; it is their parents not being supportive; it is because they do not do their work, and so on. It is not that these explanations are wrong (although some are – there is no support for learning styles, for example) or right (parental expectations and encouragement are powerful factors), but the underlying premise of most of these claims is the belief that we, as educators, cannot change the student. It is this belief that is at the root of deficit thinking. The belief that background factors have the strongest influence on learning would be an argument for putting more resources into poverty and home programs rather than into schooling. We must consider ourselves positive change agents for the students who come to us – for most, it is compulsory that they come to school and sometimes they come reluctantly, but mostly (at least initially) students are eager to be challenged into learning. My point is that teachers' beliefs and commitments are the greatest influence on student achievement over which we can have some control – and this book outlines these beliefs and commitments.

We so often worry about what teachers do. It would be easy to say that it is 'teachers who make the difference'. This is, indeed, *not* the case being made in this book. There are just as many teacher influences below  $d = 0.40$  as there are above, and in most school systems there is more variance within a school than between schools. This within-school variance highlights the variance provided by teacher effects, and while we may wish to believe that all of our teachers are excellent, this is not always the view of those who have been their students. Rather, there are some teachers doing some things that make the

difference. The effect of high-effect teachers compared with low-effect teachers is about  $d = 0.25$ , which means that a student in a high-impact teacher's classroom has almost a year's advantage over his or her peers in a lower-effect teacher's classroom (Slater, Davies, & Burgess, 2009). A major claim in this chapter is that the differences between high-effect and low-effect teachers are primarily related to the attitudes and expectations that teachers have when they decide on the key issues of teaching – that is, what to teach and at what level of difficulty, and their understandings of progress and of the effects of their teaching. It is some teachers doing some things with a certain attitude or belief system that truly makes the difference. This brings me to the first set of attributes that relate to 'visible learning inside': passionate and inspired teachers.

We start with the teachers' and school leaders' mind frames. For example, Sam Smith (2009) introduced a very powerful target-setting program in a large urban high school, and many of the teachers refused to participate, claiming that they were not responsible for whether students met targets or not: 'If they did not do their homework, failed to complete assignments, did not attend class, then why should teachers be held responsible for students meeting targets?' The teachers argued that teacher targets were related more to ensuring coverage of the curriculum, providing worthwhile resources and activities, and ensuring order and fairness in the classroom.

Russell Bishop (2003) has provided one of the most effective interventions available for minority students in mainstream classrooms and he starts with the beliefs of teachers. He argued that teachers come into classrooms with very strong theories about students and often resist evidence that their students do not conform to these theories. These teachers have theories about race, culture, learning, development, and students' levels of performance and rates of progress. One of the first acts in Bishop's intervention is to survey students' views on these matters. He then shows the teachers the difference between the students' beliefs and the teachers' own. Only then can Bishop start the intervention, which is about teachers' beliefs, first and foremost.

### VISIBLE LEARNING – CHECKLIST FOR INSPIRED AND PASSIONATE TEACHING

1. All adults in this school recognize that:
  - a. there is variation among teachers in their impact on student learning and achievement;
  - b. all (school leaders, teachers, parents, students) place high value on having major positive effects on all students; and
  - c. all are vigilant about building expertise to create positive effects on achievement for all students.

## The case for the passionate, inspired teacher

### VISIBLE LEARNING – CHECKLIST FOR INSPIRED AND PASSIONATE TEACHING

2. This school has convincing evidence that all of its teachers are passionate and inspired – and this should be the major promotion attribute of this school.

One of the more exciting periods of my research work was when I was at the University of North Carolina working with Richard Jaeger, Lloyd Bond, and many others on the technical issues relating to the National Board for Professional Teaching Standards (NBPTS). Laurence Ingvarson and I recently edited a book about this exciting time, and the breakthroughs in performance assessment in education, the development of scoring rubrics, and the psychometrics relating to these issues that have truly changed our way of looking at teachers, classrooms, and identification of excellence (see Ingvarson & Hattie, 2008). The NBPTS is still, in my estimation, the best system for dependably identifying excellent teachers, although there is still much to do to improve it. Using multiple indicators of the effect of teachers on students, moving away from evaluating the correlates as opposed to the actual effects on students, and making sure that the evaluation methods are also excellent professional development is at the heart of the NBPTS model. This chapter, however, is not a review of the NBPTS, because there are other sources and websites that can provide this background. Instead, one study is highlighted that underlines the importance of passionate and inspired teachers.

Richard Jaeger and I started by reviewing the literature (in the more traditional way than that used when undertaking a meta-analysis) on the distinctions between expert and experienced teachers, rather than using the more usual distinction between experienced and novice teachers. We sent our findings to many of the pre-eminent researchers in this field, and to expert teachers, for their comment, changes, and input. We identified five major dimensions of excellent, or 'expert', teachers. Expert teachers have high levels of knowledge and understanding of the subjects that they teach, can guide learning to desirable surface and deep outcomes, can successfully monitor learning and provide feedback that assists students to progress, can attend to the more attitudinal attributes of learning (especially developing self-efficacy and mastery motivation), and can provide defensible evidence of positive impacts of the teaching on student learning. Herein lies the differences between the terms 'expert' and 'experienced'.

### VISIBLE LEARNING – CHECKLIST FOR INSPIRED AND PASSIONATE TEACHING

3. This school has a professional development program that:
- a. enhances teachers' deeper understandings of their subject(s);
  - b. supports learning through analyses of the teachers' classroom interactions with students;

PD  
content  
vs  
practice

- c. helps teachers to know how to provide effective feedback;
- d. attends to students' affective attributes; and
- e. develops the teacher's ability to influence students' surface and deep learning.

## a. Expert teachers can identify the most important ways in which to represent the subject that they teach

In *Visible Learning*, it was shown that teachers' subject-matter knowledge had little effect on the quality of student outcomes! The distinction, however, is less the 'amount' of knowledge and less the 'pedagogical content knowledge', but more about how teachers see the surface and the deeper understandings of the subjects that they teach, as well as their beliefs about how to teach and understand when students are learning and have learned the subject. Expert teachers and experienced teachers do not differ in the amount of knowledge that they have about curriculum matters or knowledge about teaching strategies – but expert teachers do differ in how they organize and use this content knowledge. Experts possess knowledge that is more integrated, in that they combine the introduction of new subject knowledge with students' prior knowledge; they can relate current lesson content to other subjects in the curriculum; and they make lessons uniquely their own by changing, combining, and adding to the lessons according to their students' needs and their own teaching goals.

As a consequence of the way in which they view and organize their approach, expert teachers can quickly recognize sequences of events occurring in the classroom that in some way affect the learning and teaching of a topic. They can detect and concentrate more on information that has most relevance, they can make better predictions based on their representations about the classroom, and they can identify a greater store of strategies that students might use when solving a particular problem. They are therefore able to predict and determine the types of error that students might make, and thus they can be much more responsive to students. This allows expert teachers to build understandings as to the how and why of student success. They are more able to reorganize their problem-solving in light of ongoing classroom activities, they can readily formulate a more extensive range of likely solutions, and they are more able to check and test out their hypotheses or strategies. They seek negative evidence about their impact (who has not learnt, who is not making progress) in the hurly-burly of the classroom, and use it to make adaptations and to problem-solve.

These teachers maintain a passionate belief that students can learn the content and understandings included in the learning intentions of the lesson(s). This claim about the ability to have a deep understanding of the various relationships also helps to explain why some teachers are often anchored in the details of the classroom, and find it hard to think outside the specifics of their classrooms and students. Generalization is not always their strength.



## b. Expert teachers are proficient at creating an optimal classroom climate for learning

An optimal classroom climate for learning is one that generates an atmosphere of trust – a climate in which it is understood that it is okay to make mistakes, because mistakes are the essence of learning. For students, the process of reconceptualizing what they know so that they can take on board new understandings may mean identifying errors and disbanding previous ideas. In so many classrooms, the greatest reason why students do not like to expose their mistakes is because of their peers: peers can be nasty, brutal, and viral! Expert teachers create classroom climates that welcome admission of errors; they achieve this by developing a climate of trust between teacher and student, and between student and student. The climate is one in which 'learning is cool', worth engaging in, and everyone – teacher and students – is involved in the process of learning. It is a climate in which it is okay to acknowledge that the process of learning is rarely linear, requires commitment and investment of effort, and has many ups and downs in knowing, not knowing, and in building confidence that we *can* know. It is a climate in which error is welcomed, in which student questioning is high, in which engagement is the norm, and in which students can gain reputations as effective learners.

## c. Expert teachers monitor learning and provide feedback

This ability of expert teachers to problem-solve, to be flexible, and to improvise ways in which students can master the learning intentions means that they need to be excellent seekers and users of feedback information about their teaching – that is, of feedback about the effect that they are having on learning.

A typical lesson never goes as planned. Expert teachers are skilled at monitoring the current status of student understanding and the progress of learning towards the success criteria, and they seek and provide feedback geared to the current understandings of the students (see Chapter 7 for more on the nature of this 'gearing'). Through selective information gathering and responsiveness to students, they can anticipate when the interest is waning, know who is not understanding, and develop and test hypotheses about the effect of their teaching on all of their students.

## d. Expert teachers believe that all students can reach the success criteria

Such an expectation requires teachers to believe that intelligence is changeable rather than fixed (even if there is evidence to show it may not be – see Dweck, 2006). It requires teachers to have high respect for their students and to show a passion that all can indeed attain success. The manner used by the teacher to treat and interact with students, to respect them as learners and people, and to demonstrate care and commitment for them also needs to be transparent to students.

This notion of passion is the essence of so much, and while we may find it difficult to measure, we certainly know it when we see it:

Passionately committed teachers are those who absolutely love what they do. They are constantly searching for more effective ways to reach their children, to master the content and methods of their craft. They feel a personal mission . . . to learning as much as they can about the world, about others, about themselves – and helping others to do the same.

(Zehm & Kotler, 1993: 118)

To be passionate about teaching is not only to express enthusiasm but also to enact it in a principled, values-led, intelligent way. All effective teachers have a passion for their subject, a passion for their pupils and a passionate belief that who they are and how the teacher can make a difference in their pupils' lives, both in the moment of teaching and in the days, weeks, months and even years afterwards.

(Day, 2004: 12)

Students can see it. The Measures of Effective Teaching Project (Gates Foundation, 2010) has estimated the value-added component of 3,000 teachers and at the same time asked students of these teachers to complete surveys of their experiences in these classes. The set of seven factors (the '7 Cs') listed in Table 3.1 show dramatic differences in how students see the classes of those teachers (called 'high added-value teachers') who have added higher-than-expected achievement gains (taking into account students' prior achievement, at the 75th percentile) compared with students in classes in which the gains are much lower (at the 25th percentile). For example, teachers whose students claim that they 'really try to understand how students feel about things' are more likely to be at the 75th percentile than at the 25th in terms of the value-added learning that occurs in classes.

The picture of expert teachers, then, is one of involvement and respect for the students, of a willingness to be receptive to what the students need, of teachers who demonstrate a sense of responsibility in the learning process, and of teachers who are passionate about ensuring that their students are learning.

## e. Expert teachers influence surface and deep student outcomes

The fundamental quality of an expert teacher is the ability to have a positive influence on student outcomes – and, as noted in Chapter 1, such outcomes are not confined to test scores, but cover a wide range: students staying on at school and making an investment in their learning; students developing surface, deep, and conceptual understandings; students developing multiple learning strategies and a desire to master learning; students being willing to take risks and enjoying the challenge of learning; students having respect for self and others; and students developing into citizens who have challenging minds and the disposition to become active, competent, and thoughtfully critical participants in our complex world. For students to achieve these outcomes, teachers must set challenging goals, rather than 'do your best' goals, and invite students to engage in these challenges and commit to achieving the goals.

How do expert teachers differ from experienced teachers in these five dimensions?

These five dimensions of expert teachers were identified from a literature review and they set the scene for a study in which we compared National Board certified teachers (NBCs) ('expert teachers') with teachers who had applied for, but did not become, NBCs ('experienced teachers'). While we sampled more than 300 teachers, the final study concentrated on those close to the 'pass' mark. We choose 65 middle childhood/generalists or early adolescence/English language arts teachers; half scored just above and half scored just below the cut-off score. For each of the five dimensions of expert teachers, we devised a series of student tasks, class observation schedules, interviews with the teacher and students, and surveys, and we collected artefacts of the instruction that we observed (see Smith, Baker, Hattie, & Bond, 2008, for details). There were major differences in the means of the two groups across all dimensions.

The magnitude, or importance, of the differences in these means is best demonstrated by graphing the effect size of each of the dimensions (see Figure 3.1). The more accomplished teachers set tasks that had a greater degree of challenge; they were more sensitive to context and they had a deeper understanding of the content being taught. More importantly, there was little difference between the classrooms of expert and experienced teachers in surface-level achievement outcomes, but there were major differences in the proportions of surface and deep understandings: 74 per cent of the work samples of students in the classes of NBCs were judged to reflect a deep level of understanding, compared

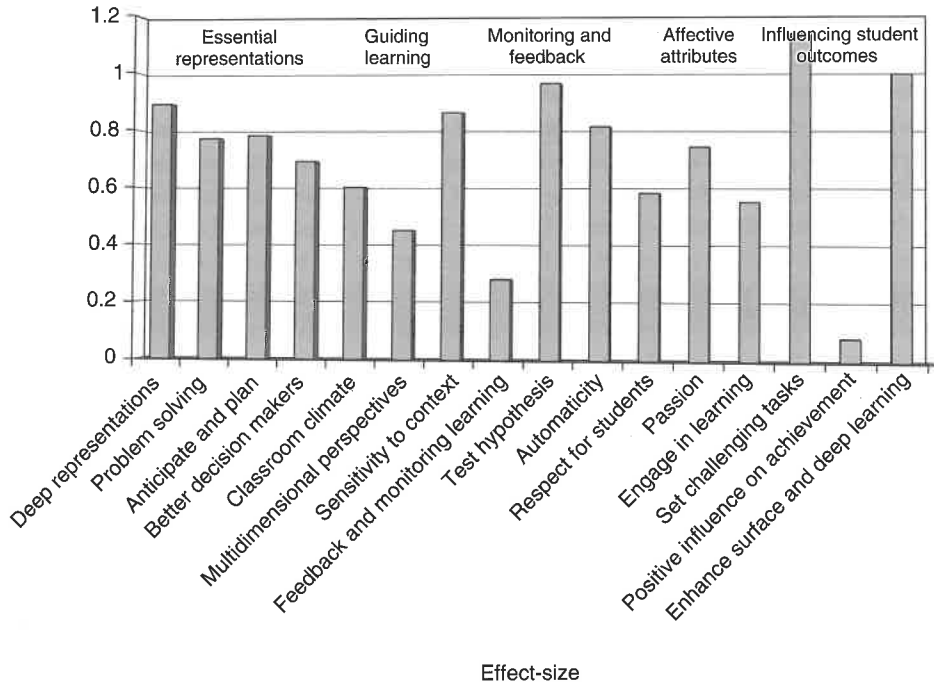


FIGURE 3.1 Effect sizes of differences between expert and experienced teachers

TABLE 3.1 Differences in students' views of high-value and low-value teachers on seven factors of classroom climate (the '7 Cs')

DIMENSIONS	EXAMPLE ITEMS	AT THE 25TH PERCENTILE	AT THE 75TH PERCENTILE
Care	My teacher in this class makes me feel that s/he really cares about me My teacher really tries to understand how students feel about things	40% 35%	73% 68%
Control	Students in this class treat the teacher with respect Our class stays busy and doesn't waste time	33% 36%	79% 69%
Clarify	My teacher has several good ways of explaining each topic that we cover in this class My teacher explains difficult things clearly	53% 50%	82% 79%
Challenge	In this class, we learn a lot almost every day In this class, we learn to correct our mistakes	52% 56%	81% 83%
Captivate	My teacher makes lessons interesting I like the ways in which we learn in this class	33% 47%	70% 81%
Confer	Students speak up and share their ideas about class work My teacher respects my ideas and suggestions	40% 46%	68% 75%
Consolidate	My teacher checks to make sure that we understand when s/he is teaching us The comments that I get on my work in this class help me to understand how to improve	58% 46%	86% 74%

The source of ideas and the role of teachers

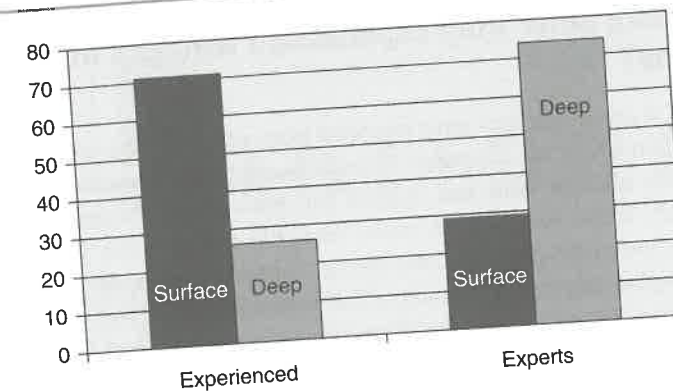


FIGURE 3.2 Percentage of student work classified as surface or deep learning

with 29 per cent of the work samples of non-NBC teachers (see Figure 3.2). Students of expert teachers are much more adept at deep, as well as surface, understanding, whereas experienced non-experts are as adept at surface, but not deep, learning.

Although there have been many claims of what makes an effective teacher, too few have been based on evidence from classrooms. Too often the lists have been based on simple analyses of individual parts of teaching, on small numbers of teachers, and on teachers that have not already been identified as expert based on rigorous and extensive assessment processes. The study reported above started with an extensive review of literature and a synthesis of many thousands of studies. It then led to a very detailed specification of information that was gathered in classrooms over many days. This information was then independently coded, using some exciting new developments in classroom observation methodology. The results are clear: expert teachers *do* differ from experienced teachers – particularly in the degree of challenge that they present to students, and, most critically, in the depth to which students learn to process information. Students who are taught by expert teachers exhibit an understanding of the concepts targeted in the instruction that is more integrated, more coherent, and at a higher level of abstraction than the understanding achieved by students in classes taught by experienced, but not expert, teachers.

### The inspired teacher

#### VISIBLE LEARNING – CHECKLIST FOR INSPIRED AND PASSIONATE TEACHING

4. This school's professional development also aims to help teachers to seek pathways towards:
  - a. solving instructional problems;
  - b. interpreting events in progress;
  - c. being sensitive to context;
  - d. monitoring learning;
  - e. testing hypotheses;

- f. demonstrating respect for all in the school;
- g. showing passion for teaching and learning; and
- h. helping students to understand complexity.

Steele (2009) has used our studies to develop a model of 'inspired teaching'. She made distinctions between the 'unaware', 'aware', 'capable', and 'inspired' teacher; that inspiration comes both from teachers being evaluators of their own effect and from teachers taking inspiration from the students – their reactions, learning, and challenges. She traces the pathways for each of the dimensions: the path to solving instructional problems; the path to interpreting events in progress; the path of being sensitive to context; the path to monitoring learning; the path to testing hypotheses; the path to demonstrating respect; the path to showing passion for teaching and learning; and the path to helping students to understand complexity.

Take, for example, showing passion for teaching and learning. Steele notes that passion is not mysterious: it relates to the level of enthusiasm that the teacher shows, the extent of commitment to each student, to learning, and to teaching itself, and it can be seen when listening to teachers talking about student learning.

These teachers are firmly convinced that they are responsible for student learning and consistently bend their efforts toward doing a better job every day.

(Steele, 2009: 185)

These teachers see better ways in which to teach their students; they believe that how they talk about the specific topic and the ways in which they lead students to experience it can make each lesson more engaging; and they believe that they are personally responsible for student learning. Most of us recall our favourite teachers because they cared deeply that we shared their passion and interest in their subject, they seemed to take extra effort to make sure that we understood, they tolerated and learned from our mistakes, and they celebrated when we attained the success criteria. These passionate teachers had the same time, same curriculum, same exam constraints, same physical settings, and the same class sizes as other teachers, but they certainly communicated the excitement of the challenge, and their commitment and caring for learning.

Steele notes that nearly all enter the teaching profession with a sense of idealism and purpose. As we confront the realities and challenges of schools and classrooms, we can then choose four roads: quit (as do about 50 per cent within the first five years); become disconnected and simply perform the role of teaching; work to become competent and seek promotion out of the classroom; or learn to experience the joy of inspired teaching. The difference between the inspired teacher and the capable teacher is large. I do acknowledge that some commentators prefer to talk about inspired *teaching* (rather than *teachers*), arguing that individual teachers can be inspired on some days, but not necessarily on all days – and maybe not for all students all of the time. This is indeed the case. We know, for example, that Roger Federer is not a brilliant tennis player with every shot – but this should not mean that we can speak only of inspired tennis playing, and not of inspired tennis players.



Federer is inspiring and most of us would claim that he is an expert tennis player. Similarly, inspired teachers do not always have inspired teaching, but overall the probabilities are such that we can talk about inspired teachers. Yes, in my own tennis playing, I too can play an occasional shot like Roger Federer and, in these moments, could be considered an inspired player (at least in my own mind), but overall I am not an expert tennis player.

There are certainly many things that inspired teachers do *not* do: they do *not* use grading as punishment; they do *not* conflate behavioural and academic performance; they do *not* elevate quiet compliance over academic work; they do *not* excessively use worksheets; they do *not* have low expectations and keep defending low-quality learning as 'doing your best'; they do *not* evaluate their impact by compliance, covering the curriculum, or conceiving explanations as to why they have little or no impact on their students; and they do *not* prefer perfection in homework over risk-taking that involves mistakes.

We can have high expectations of teachers and schools to have major impacts on students' growth in learning. We expect this of our sports coaches – not to win all of the time, but to teach and improve the quality of each player's skills, to play the game in the spirit of the rules, to develop individual as well as team work, to value commitment and loyalty to improvement, and to be fair to all players about the dual success criteria of most child sport (participation and aim to win). Our expectations of those in our schools need be no different.

The major theme underlying the five dimensions of expert teachers discussed in this chapter is that they are about the impact that teachers have – and not about teachers' personal or personality attributes (Kennedy, 2010). If only teacher education programs were more concerned about how budding teachers can know about the effect that they have, and less about knowing who they are and how to go about teaching, then we may get a better outcome. The ultimate requirement is for teachers to develop the skill of evaluating the effect that they have on their students. It is not so much a concern, for example, that beginning teachers *know* about diversity; it is more a concern that they know about the effects that they have on the diverse student cohort that they are likely to be teaching. They need to be able to react to the situation, the particular students, and the moment. Teachers work in remarkably varied situations, have interactions with many different students, and work in schools with much variance in conditions (planning times, interruptions, collaborative opportunities). To expect sustained effect on a regular basis is too big an ask – but the ask in this book is that teachers constantly attend to the nature and quality of the effect that they are having on every student.

## Conclusions

### VISIBLE LEARNING – CHECKLIST FOR INSPIRED AND PASSIONATE TEACHING

5. Professionalism in this school is achieved by teachers and school leaders working collaboratively to achieve 'visible learning inside'.

There is so often a rush to solve the problem of 'the teachers', but this is a mistaken direction. The messages in this book should not take us into the territory of measuring teachers, paying better teachers more, changing the training, and fixing entry into the profession – albeit that these are important and fascinating questions. Instead, the message of this book is to enable each teacher to better understand his or her effect on his or her students, and to assist teachers to develop a mind frame of evaluation to help them to move into the group of highly effective teachers (that is, those who regularly have impacts  $d < 0.40$ ) that we all should be inspired to join.

This is how a profession works: it aims to help to identify the goal posts of excellence (and they are rarely simple, uni-dimensional, and assessed by a test alone, as the outcomes of education outlined above should clearly show); it aims to encourage collaboration with all in the profession to drive the profession upwards; and it aims to esteem those who show the competence. Too often, we see the essential nature of our profession as autonomy – autonomy to teach how we know best, autonomy to choose resources and methods that we think are best, and autonomy to go back tomorrow and have another chance of doing what we have already done many times. As I noted in *Visible Learning*, we have good evidence that most, if not all, of our methods, resources, and teaching do have a positive effect on achievement – and many attain greater-than-average effects. The profession needs to be embracing the notions of what it is to be successful in teaching, helping all in a collaborative manner to attain this excellence, and recognizing major effects when they are evident. We have no right, however, to regularly teach in a way that leads to students gaining less than  $d = 0.40$  within a year.

Clearly, this approach of evaluating the effects of teaching places more emphasis on student learning; often, we have been much more concerned with teaching rather than learning. At best, for some, learning occurs if the students complete the task, show interest and engagement, and 'pass' tests. Moving towards understanding learning, however, means starting with the private world of each student and the semi-private world of peer interactions, as well as the more public teacher-managed effect on students. Nuthall (2007) noted that 25 per cent of the specific concepts and principles that students learn are critically dependent on private peer talk or the choice of resources with which students can engage. The key is what is going on in each student's mind – because influencing these minds is the point of the lesson!

When students are interviewed as to what they want from teachers, the same theme of understanding their learning comes through. McIntyre, Pedder, and Rudduck (2005) summarized an extensive series of research on student voice and concluded that students want a constructive focus on learning. Students do not digress to complaining about perceived injustices, or describing personal teacher characteristics; they wanted to talk about their learning and how to improve. As Chapter 7 will show, our studies underline the importance that students place on 'moving forward'. The students preferred concise explanations, recognition that students can learn at different rates, tasks that connected new with the familiar, and a greater independence and autonomy in their classroom learning than that to which they were often accustomed. As McIntyre et al. noted, it is as easy as it is legitimate for teachers to claim that students' suggestions rarely take adequate account of the complexity of the teacher's task, but it is only those teachers who have the mind frame that students' perceptions are important who make the sustained efforts needed to engage students more in learning.

## Exercises

1. Using a six-point Likert scale (from 'Strongly disagree' to 'Strongly agree') administer the '7 Cs' measure of effective progress' discussed above. Use the results as the basis for a discussion about how you could change what you do as a teacher to have more students rate all of the items either '5' or '6'.
2. Consider forms of evidence from the NBPTS (<http://www.nbpts.org>) about teacher quality. Discuss how you might use this evidence to enhance your teaching, or collect the evidence and then discuss with colleagues how you might modify your teaching to increase your impact on *all* students.
3. Invite all teachers to write a description of 'yourself as a teacher'. Pool all responses (with no names) and then meet to decide if this description is consistent with the inspired and passionate teacher.
4. Monitor the topics of debate in staff meetings, coffee sessions, and professional development meetings, then classify them according to domains of discussion (for example, structural, teaching, curricular, assessment, student). If they are not about the impact of our teaching, discuss what would be required in this school to shift the debates to the impact of teaching on students – and then engage in those debates.
5. Ask your teachers (or student teachers) to interview students (preferably students from another teacher's class to reduce bias and perceived pressure), asking: 'What does it mean to be a "good learner" in this classroom?' Share the interview results (minus student names) with your fellow teachers.
6. With other teachers, learn how to use the SOLO surface and deep categories (see Hattie & Brown, 2004) to develop learning intentions, success criteria, questions for assignments, and teacher and student in-class questions, and to provide feedback on student work. Ensure that there are high levels of agreement across teachers as to which categories are surface and which are deep.
7. Ask each teacher to think about the last time that they showed passion in their teaching. Ask students the same question (about their teachers). Compare these examples of passionate teaching.

## The lessons

The aim of the next five chapters is not to suggest that there is a linear route through from planning to impact, but to frame the findings from *Visible Learning* into the key stages of decision making through which teachers work when they are engaged in the staccato of teaching and learning. Decisions are so often made to engage students in interesting activities, to excite them to participate in learning, and to ensure that, when the bell rings, they have completed the assigned tasks and at least enjoyed the activity. Such dull aspirations for students may entice the willing, the bright, and those with high levels of 'inhibitory control', but will not continue to challenge students to reinvest in the game of schooling. Lingard (2007) and his team observed 1,000 classroom lessons and noted the low levels of intellectual demand, and there are many observational studies that highlight the overpowering presence of teachers talking and students sitting passively waiting. The claim is that these behaviours are not the case in all classrooms. Instead, the claim is that teachers must have the mind frame to foster intellectual demand, challenge, and learning, because these are the more powerful predictors of interest, engagement, and higher level and conceptual thinking that make students want to reinvest in learning.

There is an emphasis on planning, being clear about the purposes and outcomes of lessons (both by the teachers and students), having expectations or targets of what the impact should be, and then continually evaluating the impact of the teacher on the learner. It is important, however, to note that while the emphasis in this book is very much on the teacher, this does not mean that students cannot learn via other sources (such as the Internet, peers, family) or that they cannot become their own teachers. Such self-learning is surely a goal of our teaching efforts.

The methods and processes outlined in these next chapters often cite the importance of teachers critiquing each other, planning together, evaluating together, and finding many other ways in which to work together. I acknowledge that this is a resource-intensive claim. The plea is to find ways in which to resource this learning together within schools, because this would be a much more effective and efficient use of educational funding than that typically spent on the peripheries and structural issues of schooling – which so often have less effect, such as offering summer school ( $d = .23$ ), reducing class size ( $d = .21$ ), ability grouping ( $d = .12$ ), open learning communities ( $d = .01$ ), extra-curricular programs ( $d = .17$ ), or retention ( $- .16$ ). Accomplishing the maximum impact on student learning depends on teams of teachers working together, with excellent leaders or coaches, agreeing

on worthwhile outcomes, setting high expectations, knowing the students' starting and desired success in learning, seeking evidence continually about their impact on all students, modifying their teaching in light of this evaluation, and joining in the success of truly making a difference to student outcomes.