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in conversation

Know Thy Impact: Teaching, Learning and Leading

An interview with John Hattie

In this issue of *In Conversation*, we present a thought-provoking interview with internationally acclaimed educator and researcher Dr. John Hattie, whose influential book *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement* has been recognized as a landmark in educational research.

We learn more about "visible learning" – not only what it is but also what it isn't. We are also exposed to Hattie's passion for learning. It is a passion that shines through this interview as Hattie articulates his beliefs and values about the mind frames that underpin the visible learning concept.

Hattie's work represents the single largest analysis of evidence-based research ever undertaken into what actually works in schools to improve learning. It has in turn created considerable discussion among professional educators about the many traditional assumptions the research challenges.

Hattie's findings showed that feedback is one of the most important factors in effective learning, followed by a student's expectations and the trust built by teachers with their students. Not surprisingly, it demonstrated that positive teacher-student interaction was by far the essential factor in effective teaching.

In talking about feedback, Hattie makes some significant observations about the role of error in learning. He says that feedback and learning thrive in conditions of error or "not knowing" – not in environments where we already know and understand. Thus, he says, teachers and leaders need to welcome error and misunderstanding in order to promote learning in their classrooms and schools. Students and adults alike learn and grow most easily in an environment in which they can get and use feedback about what they don't know – without fearing negative reactions from their peers, their teachers and leaders or their parents.

Throughout the interview, Hattie tells educators – including himself – to talk less, or in other words, to "just listen." He argues that we as teachers and leaders tend to have a concept of ourselves tied to the belief that we have knowledge we need and want to impart. But, he argues, it is only when we stop talking – when we engage closely and listen actively – that deep learning can take place.

In his words, "Our job is to help teachers and leaders see learning through the eyes of kids and the great thing is when they do, teachers change."

In closing, I encourage you to consider these ideas deeply, as I have, and explore how they might be applied in your own leadership practice.

George Zegarac

George Zegarac
Deputy Minister of Education

ABOUT JOHN HATTIE

John Hattie is Professor and Director of the Melbourne Education Research Institute at the University of Melbourne, Australia. Prior to his move to the University of Melbourne, Hattie was a member of the independent advisory group reporting to the New Zealand's Minister of Education on the national standards in reading, writing and mathematics for all primary school children in New Zealand. Hattie's PhD is from the Ontario Institute of Education at the University of Toronto. He was made an Officer of the New Zealand Order of Merit in the 2011 Queen's Birthday.

His influential 2008 book, *Visible Learning: A synthesis of over 800 Meta-Analyses Relating to Achievement* synthesized the results of more than 15 years' research involving millions of students and represented the biggest ever collection of evidence-based research into what actually works in schools to improve learning. The study found that positive teacher-student interaction is by far the most important factor in effective teaching. His recent book, *Visible Learning for Teachers* released in 2012, takes the next step in explaining how to apply the principles from *Visible Learning* to any classroom anywhere in the world.

In spite of the success of *Visible Learning* and his increased media profile, Dr. Hattie quickly dismisses the notion that he is an "educational celebrity." Considered by many friends and associates to be refreshingly down to earth, Dr. Hattie prefers to spend his weekends reading, or coaching and umpiring cricket. He and his wife find their free time is further commandeered by their three sons, as well as three Bichon Frise dogs that Dr. Hattie claims are a welcome contrast to the three boys.

In *Visible Learning for Teachers: Maximizing Impact on Learning* you present eight "mind frames" or ways of thinking that together must underpin every action and decision in schools and systems. You argue that teachers and leaders who develop these ways of thinking are more likely to have major impacts on student learning. In this interview we ask you to talk about each of these mindframes as a way of deepening our understandings about why they are such important contributors to effective learning and how we can integrate them into our practice.

JOHN HATTIE'S EIGHT MIND FRAMES

MIND FRAME 1: Teachers/leaders believe that their fundamental task is to evaluate the effect of their teaching on students' learning and achievement.

MIND FRAME 2: Teachers/leaders believe that success and failure in student learning are about what they, as teachers or leaders, did or did not do…We are change agents!

MIND FRAME 3: Teachers/leaders want to talk more about the learning than the teaching.

MIND FRAME 4: Teachers/leaders see assessment as feedback about their impact.

MIND FRAME 5: Teachers/leaders engage in dialogue not monologue.

MIND FRAME 6: Teachers/leaders enjoy the challenge and never retreat to "doing their best."

MIND FRAME 7: Teachers/leaders believe that it is their role to develop positive relationships in classroom/staffrooms.

MIND FRAME 8: Teachers/leaders inform all about the language of learning.

Throughout this *In Conversation*, John's comments may at times be provocative. In some cases, this may be because his remarks do not provide all the detail needed to address questions readers may have about a particular comment. In other cases, it may be that readers simply don't agree with what John is saying and want to know more about the evidence base. With these considerations in mind, readers are advised to delve into John's ideas by referring to his two books on visible learning, *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement* (Hattie 2009) and *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie 2012) or by contacting him at jhattie@unimelb.edu.au.

Mind Frame 1: Teachers/leaders believe that their fundamental task is to evaluate the effect of their teaching on students' learning and achievement.

I think what happens to us as educators is that, more often than not, we perceive our role in the education of students as being one of implementing the curriculum, of planning and delivering lessons, of making sure the education we're offering meets the needs of students and so on. And that's all very worthy. But it's also part of the problem. When a student succeeds in the classroom, we tend to say, "Look, this student is high achieving; he put in a lot of effort; she did her homework; they all completed the tasks we asked of them."

What we don't say is, "and we had an impact on them and on their learning." And the problem with this fairly typical mindset is that we think that the success has to do with the student, or with the curriculum, or with the activities that are taking place. We rarely think in terms of our own role in the learning – as a teacher or as a leader.

So what I am trying to get at with this first mind frame is recognition that when we are in schools and when we are in classrooms our fundamental role is to evaluate our own impact. When this is acknowledged, then I believe that all those other things that make a difference – like teaching methods, resources, sequence and so on – actually work.

I have studied this over many years, and I used to think that the success of students is about *who* teaches *where* and *how* and that it's about what teachers *know* and *do*. And of course those things are important. But then it occurred to me that there are teachers who may all use the same methods but who vary dramatically in their impact on student learning. And added to this, even in a class where the teacher uses one method brilliantly, you'll still find half a dozen students who just don't get it that way.

And this is directly linked with research on expectations. Teachers who have high expectations of their students are more likely to lead them to have high expectations of themselves and of their own achievement, and so on.

And so what follows from this notion is that it's not about what teachers *know* and *do* but rather about what they *think*. One of the origins of this viewpoint is the research of Carol Dweck who looked at whether teachers' beliefs – for example, beliefs about whether intelligence is fixed or changeable – are a predictor of student performance.

So this notion of evaluating our own impact, I think, is really quite critical in making a difference in student achievement and success.

According to Carol Dweck (2006) there are two sets of beliefs that people can have about intelligence and that students can have about their own intelligence:

- They may have a *fixed mind-set*, in which they believe that intelligence is a static trait; for example, that some students are smart and some are not, and that's that.
- Or, they may have a *growth* mindset in which they believe that intelligence can be developed by various means, for example, through effort and instruction.

…Teachers and leaders should send messages that intelligence is fluid, and they need to hear such messages too. They too, need permission to learn – the freedom to stretch themselves, make mistakes, and try again. Only in growth mindset cultures, where teachers and administrators are encouraged to fulfill their potential, will they be able to help their students fulfill *their* potential in schools that are free of bias.

From *Mindset: The New Psychology of Success* (Dweck, 2006)

If this is my fundamental task – evaluating my impact – what does my day look like as a teacher and as a leader? How do I go about doing it?

Well, one of the first things you do is to stop and listen – listen to the students, listen to their discussions, listen to their questions, listen to what they're grappling with, listen to where they're making errors. And then ask yourself, "If this is what they're thinking at the moment, if these are the errors they're making, if that's the success they're having, then what is it that I need to do next?"

In contrast, so often what we do is we have a script, and we have a plan, and we execute it. And sometimes we get concerned when students interrupt the flow of our lesson. So we look around the classroom and find a student who can answer the questions we're asking and we say, "Aha, you've got it!" and we generalize this to the whole class. And then we carry on with the flow of our lesson. Now this picture may seem a bit exaggerated. But what I'm arguing here is that our focus needs to be less on what we have planned and more on the impact we're having on all the students and their learning. And we achieve this focus by listening to what students are saying and by observing what students are doing.

By the way, I should mention that this listening requires a classroom learning environment with a high element of trust. When students ask a question the biggest issue on their minds is what their peers are going to say. And creating an environment in which it's okay *not to know* requires a lot of effort and commitment on the part of teachers.

The same is true for school leaders. If I'm the school leader, what I need to do is create opportunities where I can hear what teachers are talking about and what their issues are. I need to create an environment where teachers can say, "this is not working for me" or, "I'm struggling with this particular student," because acknowledging and addressing teachers' issues and questions is essential.

The term "psychological safety" refers to a shared expectation, conveyed by the words and actions of leaders, that people will be commended for admitting or pointing out mistakes, rather than shunned.

From 'Psychological Safety and Learning Behaviour in Work Teams' (Edmondson, *Administrative Science Quarterly*, 1999)

This is a very dynamic – and potentially demanding – form of teaching and leading that you are describing.

Yes, it is. It requires considerable problem-solving, improvisation, and flexibility. But before addressing that, let me come at this subject from another angle.

One of the reasons we adopt this long-established teacher-centred stance is because that's what we've been taught – we've been taught to create lesson plans; we've been taught to create interesting, engaging activities for students; we've been taught that students need to concentrate, and all these kinds of things. But the question is, "What is the evidence that supports this kind of teaching?"

And probably the most profound insight for me, in doing the work that led up to *Visible Learning* is that, in fact, everything works. Virtually everything we do enhances achievement to some degree. And so teachers have gathered a ton of evidence in recent years to show that their favoured teaching method is effective and makes a difference.

Hattie concludes that because 95 per cent of interventions result in some gain in achievement, the "criterion of impact" must be "more than 'better than nothing.' It must surpass a benchmark of real-world change."

Likewise, in 'It's How You Use a Strategy' Robert Marzano (2012) cautions that "a strategy is just a tool" and that it's "how you use the strategy" that is key. The effect on student learning will be dependent on the extent to which the strategy is effectively put into practice.

I think that's a problem because it's an easy trap to fall into. I am the classic sinner here. When I go into my university classrooms or do public speaking, I ask for a question or a comment. And someone – among those who have the courage or who already know that the question or comment they are about to put forward is not completely stupid – will make a comment. When this happens I say, "Great!" and conclude that I have been successful in communicating and that I've done a good job. But unfortunately what I have done is generalize this one question or comment to the whole audience.

My point here is that there is always evidence to justify what we're doing. If we choose another direction – which is to be more flexible and open-minded and to listen and let our students create the agenda – we may actually discover that they don't understand what we're talking about, even though we've talked to them for half an hour.

For Hattie, expert teachers demonstrate the following five dimensions of teaching:

1. Can identify the most important ways in which to represent the subject that they teach
2. Are proficient at creating an optimal classroom climate for teaching
3. Monitor learning and provide feedback
4. Believe that all students can reach the success criteria
5. Influence surface and deep student outcomes.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie 2012)

So back to your question, yes, it's a dynamic form of teaching. It emphasizes improvisation and problem solving. And we know that this is something that requires a lot of expertise and know-how.

That's a challenge we've had over the years – and I'm not speaking specifically of Ontario here – but certainly in my part of the world. The problem is that we haven't asked teachers to come into the profession because they're expert problem solvers or clever improvisers. We've asked teachers to come in because they're willing to adopt a traditional mode of teaching that, in some cases, requires them to be a few pages ahead of their students. It requires them to have a particular way of thinking about what their job is, and this perspective can actually diminish improvisation and ingenuity.

"What we do doesn't matter nearly as much as how kids experience what we do."

From "It's Not What We Teach; It's What They Learn" (Kohn, *Education Week*, 2008)

I talk often about the notion of passion. For me, you have passion when you are willing to listen, when you are willing to demonstrate that you care about what the other person is saying. If you are listening, you need a different set of skills than you do when you are the dominant talker.

Christine McAuliffe, the astronaut, summed up the underlying passion of teaching perfectly – "I have touched the future: I teach."

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie 2012)

The flipside, arguably, is that it's a much more exciting and engaging method of teaching.

Yes. And again, what I think is fascinating when I ask the question, "What should the proportion of talk be?" I can't find anyone in the world who has researched that question. It's just assumed that the way we've been teaching is a desirable one – in other words, that we should talk a lot. What is a surprise to some that when I considered the question of optimal class size – looking at all the observational research – I found in the smaller classes, that teachers actually talk more.

And so we seem to think that when we have the opportunity to talk more, we're better able to inform our students. But when you're learning something for the first time, particularly when there's a lot of trial and error – and there will be a lot of error – then that requires pausing to process the learning.

I am very impressed by the work being done in Ohio on quality talk. They're asking themselves how to structure classrooms for listening to student talk. And when you go into these classrooms, you get a particular vibe, a sense that, "Wow…something exciting is happening here." Those classrooms are not classrooms where you're listening to the teacher talk.

The Ohio work that Hattie refers to is a study that examined the effects of classroom discussion on measures of teacher and student talk and on individual student comprehension and critical thinking and reasoning outcomes. The report on the study is titled 'Examining the Effects of Classroom Discussion on Students' Comprehension of Text: A Meta-Analysis' by Murphy, Wilkinson, Soter, Hennessey and Alexander, 2009 and is available at **http://www.quality-talk.org/pdf/Murphy_et_al_2009.pdf**.

Mind Frame 2: Teachers/leaders believe that success and failure in student learning are about what they, as teachers or leaders, did or did not do…We are change agents!

Well, this mind frame is in contrast to the traditional view we have of ourselves as a "guide on the side," where the teacher is the facilitator. This is based on the idea that students are going to learn anyway, and that our job is to construct situations where the students do the learning and our job is to listen to how they're learning and work from there. But look, if I give you an incredibly difficult task to do, at some point very soon on you're going to need some guidance and help. You're going to need me to get involved and say something such as, "Don't go that way; go this way." And so instead of taking on the role as facilitator, teachers need to see themselves as change agents – the teacher's role is to effect change.

Cornelius-White conducted a meta-analysis of research on teacher-student relationships and found that teachers' warmth, empathy, and "non-directivity" strongly correlated to higher levels of student participation, motivation and achievement. In his words, "it means showing that you understand their view of things even if it may seem simplistic to you as an adult. You need to have the expectation that they will be able to make it through or that what they want to learn is worth learning."

From *Learner-Centred Instruction: Building Relationships for Student Success* (Cornelius-White and Harbaugh 2010)

Most students, if they had the choice, wouldn't come to school and do what we give them to do anyway. We've decided as a society that it's important they do it. So they're there. And so it's incumbent upon us to take on the mindset that we can effect change. And we have some stunning examples of teachers who are activators and who enhance student learning. We all know which teacher has had the greatest impact on us and it's because they've changed us.

The teacher's role is to change students from what they are to what we want them to be, what we want them to know and understand – and this of course highlights the moral purpose of education.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie 2012)

So I'm going to put that right up front – your job is to effect change. It's the same with a school leader – the leader's job is to effect change in a school.

That doesn't mean we do change for the sake of change. We have to work out what change is important. And that's the skill of teaching and leading. The reason I like this mindframe right up front is that it addresses what I think is a malaise in teaching at the moment: the belief that we are facilitators, that students are going to learn anyway, and that it's all about discovering where they're at.

No! Teaching requires knowledge of what students bring into the classroom. This prior knowledge – understanding what students bring to the class – has turned out to be far more important than what we do with them, and what lessons we give them. This requires a deliberate intent on the part of teachers to know a tremendous amount about their students.

Mind Frame 3. Teachers/leaders want to talk more about the learning than the teaching.

I'm at the stage now where I don't want to talk about teaching anymore – not because it isn't important but because it often keeps us from having important discussions about learning. It starts, I think in teachers' colleges where the emphasis is on teaching – here's a good way to teach and here's how you teach this concept and this is what you do when this doesn't happen, and so on.

The problem here is that it assumes if I'm very good at using collaborative inquiry or reciprocal teaching for example then students will learn that way. But the fact is that, even if I'm brilliant at it, there will always be a group of students in every class who don't get it using that approach. In the same way, if I am principal of a school and I want teachers to adopt a particular teaching method, it assumes that every teacher can teach that way and that every student is equally good at learning that way.

In *Instructional Rounds in Education: A Network Approach to Improving Teaching and Learning* City, Elmore, Fiarman, and Teitel (2009) and in Instructional *Rounds in Action*, Roberts (2012) outline strategies for engaging in authentic observation are provided in the context of the rounds process.

The authors agree with Hattie that one of the best ways to understand what is going on in the instructional core is to talk with students and offer the following "favourite" questions to ask students:

- What are you learning? What are you working on?
- What do you do if you don't know the answer or you're stuck?
- How will you know when you're finished?
- How will you know if what you've done is good quality?

What also bothers me on this point is professional development that concentrates on teaching. Instead the focus should be about the impact of our teaching. And while you could argue that this mind frame is a bit strong because of the emphasis I place on learning rather than on teaching – this might suggest that we should have learning colleges, not teachers colleges, and so on. That said we do need to adjust our focus from what we do as teachers to what the students are doing as learners.

Another example that comes to mind is what usually happens when we observe other teachers in their classrooms – the focus is on the teacher. Then what follows more often than not is that we give them feedback about what they did well and what they could have done differently. What we should do instead is spend our time observing two or three students in the classroom and find out what they're learning and what they're responding to. The conversation with the teacher afterwards will be dramatically different.

I understand that it is a challenge to observe students engaged in authentic learning. But that's the point. It is very difficult, even for teachers to do it. And this is where the visible learning comes in – the observing is about having other eyes in the classroom to watch the learning going on.

When I go into professional development sessions, or into a teacher's college, and I ask, "What learning theories are you using?", the answer is often a long silence. You'll hear a lot about teaching methods but notions about learning are missing. And so constantly focusing on how students are learning, what they're learning, and what their progress is – that's what I want us to pay attention to. I want us to get away from the debates we have about teaching. Not because teaching isn't important – it's too strong to say it's not, of course – but it's wrong for it to be the *one and only* focus.

So teachers should come out of teachers' college with expertise on how students learn as opposed to expertise on how to teach.

Absolutely. Here in Melbourne we have a very large teacher education program with over 2,000 students. And my role – if I had to put it simply – is to try to promote three things: diagnose, intervene and evaluate. And that means teachers diagnose what students are doing, analyze their learning, figure out where they're at, where they've come from, get involved in multiple ways, and of course evaluate that intervention. So that's the focus – it's entirely on the process of learning.

Mind Frame 4: Teachers/leaders see assessment as feedback about their impact.

> Teachers need to be adaptive learning experts, to know multiple ways of teaching and learning, to be able to coach and model different ways of learning and to be the best error detectors in the business.
>
> From *Visible Learning for Teachers: Maximizing Impact* on Learning (Hattie 2012)

Typically when we give a test, it's to show students how well they've done and in what. It's a statement to students about their performance. But if you start by asking students to predict what score they're going to get, you'll find that students from about age eight onwards are brilliant at doing this. They can predict the results very accurately.

You see, students quickly learn their place in class. They learn what it is they can and can't do, and unfortunately what they do is perform to that level. Like adults, they set very safe targets. And certainly across all the things I've ever looked at, students' predictions of their own achievement is the most powerful predictor of their performance. They are stunningly good at it. And so you seriously have to ask, "Why bother testing students when they can already predict the result!"

Students have reasonably accurate understandings of their levels of achievement…and overall are very knowledgeable about their chances of success. On the one hand, this shows a remarkably high level of predictability about achievement in the classroom but on the other hand, these expectations for success may become a barrier for some students as they may only perform to whatever expectations they already have of their ability.

From *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement* (Hattie 2009)

That's one part of this. But here's the other side of it: with the emphasis on evaluation of impact as the teacher's mindset, the fundamental reason for administering assessments in the classroom is to find out what you as the teacher did well – who did you teach well and who not so well, what did you teach well and what not so well, and so on.

When we developed the New Zealand assessment system for the whole country, we focused it entirely on providing reports back to teachers about their success. It's a voluntary system and, ten years later, 80 per cent of schools are still using it.

When teachers are given this kind of information about their own impact they're actually quite eager to have it. And what really impresses me – and this is the source of my faith in this business and what keeps me going – is when you give teachers information about who they did well with, and about what, they're very good at adapting what they do after that.

New Zealand's *Assessment Tool for Teaching and Learning (asTTle)* was developed to assess students' achievement in reading, mathematics, and writing. Teachers using asTTle have found it to be an effective tool for planning, helping students to understand their progress, and involving parents in discussions about their children's learning.

Visit **http://e-asttle.tki.org.nz/** to learn more about asTTle.

Mind Frame 5: Teachers/leaders engage in dialogue not monologue.

One of the difficulties of so much teacher talk is that it demonstrates to students that teachers are the owners of subject content, and controllers of the pacing and sequencing of learning. It reduces the opportunities for students to impose their own prior achievement, understanding, sequencing, and questions.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie, 2012)

When we do classroom observation research, it turns out that teachers talk between 70 and 80 per cent of the time in the classroom. Teachers' talking increases as grade level rises and as class size decreases. When teachers aren't talking, students are typically doing work on their own. And so classrooms can be very isolating places for many students.

As I mentioned earlier, I think monologue comes from our beliefs and conception about what teaching is. If I was sitting with you, and teaching you about something right now, what I'd probably do, in the typical scenario, is talk, tell you how to do it, explain it, and so on. I would probably pause and check whether or not you were with me, and if you weren't – if there was a gap between what I'm saying and what you said back to me – I'd probably say it again in a different way. I'd fill in the gaps and start again.

The more important task for teachers is to listen. Listening needs dialogue – which involves students and teachers joining together in addressing questions or issues of common concern, considering and evaluating differing ways of addressing and learning about these issues, exchanging and appreciating each others' views and collectively resolving the issues.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie, 2012)

This model of teaching requires an incredible amount of monologue with a constant focus on the teacher. Now I can also use another approach such as give you an activity or a task to complete. You do it and if you don't do it the way I hoped, we'll talk about it and I'll come up with another approach and give you another go at it. That's the difference. The emphasis in dialogue is active listening by the teacher to how students are learning. And that's the message that I want to get across.

A lot of progress is being made on how we can have constructive dialogue in the classroom and how we can develop deliberate ways of constructing class discussions that are both effective and efficient – because if you have a class discussion, it does take time. And teachers often think that their time could be better spent by talking. So this is about reversing the model of getting there through monologue.

Connected to this point, I'm spending a lot of time researching the issue of student questions. And I can tell you that student questions are glaringly absent from classrooms. On the other hand, we know that teachers ask about 200 questions a day and that students already know the answers to 97 per cent of them. And most of the questions are about surface level knowledge, and require between three and seven words in response. On average, most students ask about one question a day at school.

Then there's another related issue that involves the kind of assessments that are set for students. For example when I analyzed assessments across several jurisdictions in the U.S., I found that over 90 per cent of the assessment questions were focused on surface level knowledge, rather than on deep knowledge. And that's very typical, despite all our intentions and our claims otherwise.

It is more efficient sometimes to simply transmit surface level knowledge, but if students are going to relate this knowledge to other ideas, if they're going to analyze or synthesize it, then that requires them to *do* something. And that in turn requires that teachers engage students in dialogue and discussion. So I see this as a critical problem – the fact that the assessments we give are so dominated by surface level knowledge that they actually promote monologue.

In response to the lament, "If only we had more time to figure out what students really know and do something about it!", Fisher and Frey suggest the following to save time and help ensure that feedback is effective:

1. Focus on errors with the following in mind:
   - *Factual errors* interfere with a student's ability to perform with accuracy.
   - *Procedural errors* make it difficult to apply factual errors.
   - *Transformation errors* occur when students incorrectly apply information to a new situation.
   - *Misconception errors* can result from the teaching itself.
2. Identify patterns in student errors.
3. Distinguish between global and targeted errors and teach accordingly.
4. Use prompts and cues.

From 'Making Time for Feedback' (*Educational Leadership*, September 2012)

Just as a thermostat adjusts room temperature, effective feedback helps maintain a supportive environment for learning.

From 'Feedback: Part of a System' (William, *Educational Leadership* October 2012)

Mind Frame 6: Teachers/leaders enjoy the challenge and never retreat to "doing their best."

I think the worst thing you can say as a teacher or a parent is, "Do your best." This actually finds support in current research. For example Amabile and Kramer (2011) in their multi-year study tracking the day-to-day activities, emotions, and motivation levels of hundreds of knowledge workers in a wide variety of settings, found that the top motivator of performance is making progress at work. These researchers found that managers who provided meaningful goals, resources, and encouragement got dramatically positive results compared with managers who asked their employees to "Do your best."

So I translated this finding into a school situation. We often say to students, "Do your best" or, "That was your best." But what we should be saying is, "Sometimes your best is not good enough and my job is to help you do better than your best."

Some cautions about feedback:

- Feedback thrives in conditions of error or not knowing – not in environments where we already know and understand. Thus, teachers need to welcome error and misunderstanding in their classrooms.
- The simple act of giving feedback won't result in improved student learning – the feedback has to be effective.

From 'Know Thy Impact' (Hattie, *Educational Leadership*, September 2012)

And this is what I was talking about earlier – the business of student expectations and the way students set targets for themselves. This is where I argue that schools don't exist to meet the needs of students; they don't exist to help students reach their potential. The purpose of schools is to help students exceed their potential and do more than they thought they could do. To find out what students can do, and help them do better. And that's a challenge. We should never accept a student's best. It's okay. But it's a springboard to doing even better.

When you look at young adolescents, in particular, you see that they thrive on challenge. There's no question that it is challenge that drives them more than anything else. This raises an interesting problem: teachers sometimes think, "This is a really difficult task, so I'm going to break it down into smaller chunks to make it easier for students to learn." But of course you've just taken the complexity out of the learning! Students thrive on challenge. Think about the reason a youngster plays *Angry Birds*. They do it because they want to get to the next level. They want to meet the challenge and go higher.

Angry Birds is a puzzle video game created by a Finnish computer game developer. The player controls a flock of multi-coloured birds that are attempting to retrieve their eggs which have been stolen by a group of green pigs.

And so one of the things I want teachers to think about – and here's the hard part of it – is to challenge their students from where they're at. And unfortunately, in a class of 20 or 30, the students can be all over the place in terms of what challenges them. And that's the art of teaching. But I really want to bring home this notion of challenge. Students are going to engage in learning in the same way that we all engage in learning – when we are presented with complex and difficult problems. If I give you a task to do that's easy, you probably won't keep on doing it. I want to see the challenge back in education.

Presumably this mind frame applies, not only to students, but also to teachers and leaders, who are also called on to do "better than their best."

Yes, as in, "I taught, but they didn't learn." This is where the problem solving and improvisation and having multiple strategies come into play. "Hey, that student didn't learn this way; I have to try something different." But here's the issue: when I ask teachers what they mean by challenge, they often focus on the nature of the task they give the student – "This is a difficult problem" or "This is a challenge." But when you ask students what challenge means to them, they'll tell you, "It's when my head hurts."

So I want teachers to think – obviously not about making their students' heads hurt – but about how to get students to that point where there is challenge. Teachers have to do the thinking; they have to reconcile what the student knows with what the student needs to know.

And of course the same is true of principals whose challenge as the "learning leader" is not only to listen to teachers to learn what their issues are but also to influence their work and their professional growth.

A major reason why teachers stay in a school or stay in teaching relates to the support from school leaders that leaves teachers feeling they can have a positive impact. The factor that explains the decision to stay or not – by a long way – relates to the nature of the leadership (Boyd et al, 2012; Ladd, 2011).

It is the leaders' motivation of teachers and students identifying and articulating high expectations for all, consulting with teachers before making decisions that affect teachers, fostering communication, allocating resources, developing organizational structures to support instruction and learning, and regularly collecting and reviewing with teachers data on student learning. Learning leadership is the most powerful incentive to stay in teaching.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie, 2012)

Mind Frame 7: Teachers/leaders believe that it is their role to develop positive relationships in classrooms/staffrooms.

Yes, and this is because of the role of error in learning. My teaching you something you already know is not very useful. And about 50 per cent of what is taught in classrooms students already know.

The main reason that we are in this business called teaching is to find out what students don't know and to help them learn it. If this is the case, then what students don't know that results in error is a fundamental part of all learning. And so the argument here is that I have to build some pretty positive relationships. There has to be a high level of trust before students in a classroom – or teachers in a staff room – are going to say for example, "You've been speaking for an hour and I have no idea what you are talking about."

Most students are fairly passive in the classroom. They've learned to be rule-governed and they've learned to behave which means to be quiet and do the work. Take math for example. Some students think that doing math is about giving an answer even if the answer is wrong. They don't think in terms of saying at some point, "I need help."

Most classrooms, particularly those dominated by teacher talk, don't invite the opportunity to be wrong. And now here's the issue: if I put up my hand, as a student in a classroom, and say, "Look I'm having trouble; I don't understand," then I am taking the risk that my fellow students will say, "Oh, there he goes…he doesn't understand." That's why trust and positive relationships are so critical.

In 'Psychological Safety and Learning Behavior in Work Teams,' Edmondson (1999) draws on a large body of research to argue that "asking for help, admitting errors and seeking feedback exemplify the kind of behaviours that pose a threat to face." This sense of threat, she says, limits individuals' willingness to engage in problem-solving activities. As a result people tend to act in ways that inhibit learning when they face the potential for threat or embarrassment.

Mind Frame 8: Teachers/leaders inform all about the language of learning.

This mindframe grew out of work we did with parents in the home. One criticism of my work is that I don't address the influence of the home. While I would argue that's not true, I certainly take the position that once a student passes through the school gate schools can't use the home as an excuse. They can't use it as a reason why a youngster can't learn, even though the home is a very important contributor to student learning.

In *Visible Learning*, Hattie (2008) devotes an entire chapter to 'The Contributions of the Home.' Among his findings are the following:

- parents need to hold high aspirations and expectations for their children, and
- schools need to work in partnership with parents to make their expectations appropriately high and challenging and then work in partnership with children and the home to realize, and even surpass, these expectations.

A few years ago we mounted a project that focused on parents from the five lowest socio-economic schools in the whole of New Zealand. The goal was to get parents more involved in the school. In this five-year project we followed parents, went into their homes, and talked with them. What we learned from this work is that many parents, particularly those in lower socio-economic areas had not had good experiences at school themselves.

What we learned as well was that these parents didn't understand what happens in schools – and this is still the case with many parents today. They don't understand the language of learning and they don't understand what is involved in learning today. And this means that they don't know how to talk with their children about their learning or with teachers about their children's learning.

One initiative within this project involved placing computers in the home. Former teachers were hired to go into the home and help parents use the computers. And we discovered that it wasn't the computers that made the difference for parents. Rather it was learning how teachers teach and experience the learning firsthand. The evaluation demonstrated that it was these former teachers who were enlightening the parents about the language of schooling that made big differences – that is, the parents learned about the nature of learning in today's classrooms, learned how to help their children to attend and engage in learning and learned how to speak with teachers and school personnel. Teaching parents the language of learning led to enhanced engagement by students in their schooling experiences, improvements in reading achievement, greater skills and jobs for the parents and higher expectations, higher satisfaction, and higher endorsement of the local schools and community.

And so this brings us back to the notion of learning as the focus rather than teaching. It's about students and their parents understanding what learning looks like. What this means is that we need to help students understand what learning looks like and become their own teachers. So that's why I included this mind frame. I want students to understand what learning is and how to figure out what to do next in their learning. And I would argue that this is how we get more parents involved.

The Flaxmere Project: When Families Learn the Language of School was a series of initiatives related to improving home-school relations within a sampling of schools. Initiatives common to all schools were Home School Liaison Persons, Computers in Homes, and homework support.

Learn more about the Flaxmere Project and its findings at **http://www.educationcounts.govt.nz/publications/schooling/10001**.

If parents actually understand what we do in classrooms and how successful we are, particularly compared to what they did in their own early school experiences, then we could achieve a breakthrough. All parents want a better education for their children than they had.

Parents should be educated in the language of schooling, so that the home and school can share in the expectations, and the child does not have to live in two worlds – with little understanding between the home and school.

From *Visible Learning: A Synthesis of Over 800 Meta-Analyses Relating to Achievement* (Hattie, 2012)

In light of all this, what are the implications of these mindframes for school leaders? In particular, what would you suggest school leaders need to abandon and what do they need to take on?

The Ontario Leadership Framework 2012 adopts an integrative perspective on the concept of leadership and management. This is because the tasks typically associated with both concepts make potentially important contributions to the achievement of organizational goals. And so, one defining attribute of effective leaders is their ability to carry out even the most routine and seemingly trivial tasks in such a way as to nudge their organizations toward their purposes.

From *The Ontario Leadership Framework 2012 with a Discussion of the Research Foundations* (Leithwood, 2012)

Let me start with the abandoning. There's a classic example of this. In the 90s, principals were given a lot of autonomy where they had control over everything including budgets. And one of the things that happened is that principals who took on the role loved it. They loved being project managers. They loved concerning themselves with the physical plant, its size and the condition of their buildings and the paint and the bus schedules and all those kinds of things.

And we can't seem to move principals away from this conception of the role and from this way of working. It's incredibly difficult. Principals love to sort out things related to the operations of schools. Of course they also like doing all the other things that are related to teaching and learning. The problem with this picture is the demands it places on principals. When we do our surveys of principals' work, we find that they have the longest work weeks all year long.

And so, I think this is where the autonomy concept breaks down. The notion of efficiency across schools means that a lot of the work we count on principals to do we actually don't *need* them to do. I'm not in any way underestimating how hard it is to take that work away from them. My argument about what they should do comes back to the first mind frame which is "teachers/leaders believe that their fundamental task is to evaluate the effect of their teaching on students' learning and achievement."

I want principals to start by thinking differently about what their role is. And the first things I would take away from them are those tasks that are not directly related to student learning in the schools. In my view as I have said earlier, their role is to be the lead adult learner in the school community, a person who is concerned about the impact that all the other adults are having on student learning in that community.

The principal works in partnership with teachers and parents to ensure that each student has access to the best possible educational experience. The principal is also a community builder who creates an environment that is welcoming to all, and who ensures that all members of the school community are kept well informed.

To support student learning, principals ensure that the Ontario curriculum is being properly implemented in all classrooms through the use of a variety of instructional approaches, and that appropriate resources are made available for teachers and students. To enhance teaching and student learning in all subjects…principals promote learning teams and work with teachers to facilitate teacher participation in professional development activities. Principals are also responsible for ensuring that every student who has an Individual Education Plan (IEP) is receiving the modifications and/or accommodations described in his or her plan – in other words, for ensuring that the IEP is properly developed, implemented, and monitored.

From 'The Role of the Principal' section in all current Ontario Curriculum policy documents

For me, the two questions that drive things from the leadership point of view are: "What evidence do you have that you are making an impact?" and "How do you evaluate that evidence?" So the principal needs to involve the teachers by saying, "Is this good enough?" and "Is there evidence that this is good enough?" and then, "What are we doing in light of that evidence?"

We might discover, for example, that some students who we thought were not very good at music have actually got some talents in this area. Or, we might discover that there is a group of students who are not engaged. Or, we might discover students who have certain weaknesses and others who excel in certain areas. So the question becomes, "What is our strategy now in terms of where we need to go next?"

Now this notion about impact requires opening up classrooms. It has to do with looking at what the impacts on student learning are, looking for evidence in the artifacts of students' work, and then leading those dialogues and discussions. For example, "What does progress look like in your area?", or "What does challenge look like to you?" And then, particularly in a high school setting, "How do you know that each student is making progress across all the subjects?"

When I work with schools, after a while I say, "Look, if you're going to make this happen, you'd have to appoint a senior person in the school to help you to do this." I think it's unreasonable to ask teachers to be data analysts. But someone in the school can help them with looking at data, and creating a dialogue in the staff room about what evidence we have that all our students are making progress and what evidence there is about what to do next.

Hattie offers the following "Personal 'Health' Check for Visible Learning" for personal reflection and follow-up dialogue with trusted colleagues and coaches:

1. I am actively engaged in, and passionate about teaching and learning.
2. I provide students with multiple opportunities for learning based on surface and deep thinking.
3. I know the learning intentions and success criteria of my lessons, and I share these with students.
4. I am open to learning and actively learn myself.
5. I have a warm and caring classroom climate where errors are welcome.
6. I seek regular feedback from my students.
7. My students are actively involved in knowing about their learning (that is, they are assessment capable).
8. I can identify progression in learning across multiple curriculum levels in my student work and activities.
9. I have a range of teaching strategies in my day-to-day teaching repertoire.
10. I use evidence of learning to plan next learning steps with students.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie, 2012)

So for me, that's the major issue for school leaders – giving up some of the project management and becoming more concerned about the impact they're having on teaching and learning.

What, similarly, would you suggest are the implications of your work for system leaders?

Well, let me start with what we've done traditionally. We have had this tendency to ask schools for their data. One kind of data is the test scores. We collect evidence; we make it available to parents; and so on. And I think the problem with this is the minute you ask someone else for the data you end up owning that data. And that I think is where systems have made the fundamental mistake – in believing that the data are for them.

What I convinced the New Zealand system to do is never to go into a school and ask for data. What you do instead is go into a school and ask, "What evidence do you have that you're making an impact on student learning?" If they don't produce test data, they fall short. If they only produce test data, they also fall short. And that's because there are so many ways that we can find evidence of success and learning in our schools and in our systems.

And then what follows from looking at the evidence is addressing the question, "What are you doing about it?" What we're finding in Australia at the moment is when students are not achieving success schools have an incredibly wonderful number of strategies. But for students who are having success, schools have hardly any strategies that help these students do even better. And that's the problem with asking for test data. We tend to promote a certain way of doing things. So if the students or schools are performing poorly we ask, "How do we get better results?" But then for students who are having success we are not asking, "How do we help students get even better than where they are performing well?"

And so, I would suggest that what systems should be doing is providing better resources for schools, to help them answer all those questions. Again, what we did in New Zealand was to give schools and teachers reporting information on a daily basis – information that is current that they can use immediately to inform their teaching – that is related directly to the national curriculum, and through which they can effectively monitor and assess their impact on student learning.

As I said before, it's a voluntary system, and schools have been using it for ten years now. And it's completely based on this notion of impact – how do we know we're having an impact – and it moves us away from the notion that the test results and scores are about the students.

Then with respect to the system, I think its role is to help schools improve their understanding of the formative nature of assessment and move away from a total reliance on normative testing, where we give a student a test once a year. It doesn't help!

This focus on evidence, by the way, is extremely important. I don't go into classrooms and ask teachers to give me a rating on how well they're doing, for example in reducing the amount of teacher talk, because they will do exactly that – give me a rating. Instead I say, "What evidence do you have that you're doing less teacher talk?" And then, of course, I expect them to provide evidence of this – perhaps through videos, or by getting input from students, and so on. This changes the nature of the discussion quite dramatically. It's taking an idea from Michael Fullan, who talks about levers of change. This to me is the single biggest lever of change.

Fullan defines a "wrong driver" as a deliberate policy force that has little chance of achieving the desired result and a "right driver" as one that ends up achieving better measurable results for students. He offers four criteria to judge the effectiveness of a driver. Does it:

1. foster motivation of teachers and students;
2. engage educators and students in continuous improvement;
3. inspire teamwork; and
4. affect all teachers and students?

From *Choosing the Wrong Drivers for Whole System Reform,* available at **http://www.michaelfullan.ca/media/13396088160.pdf**

So how do we get there from where we are now?

"Visible learning inside" takes time, cannot be rushed, and requires that much groundwork be done before you can drive delivery. The mindframes of senior leaders are critical, because if there is any sense of accountability, it is highly likely to fail; they need to be learning leaders. This is a developmental, shared concept of excellence and impact, which needs to involve all staff in shared success of the effects on all students in the school.

The process must be seen as supportive of teachers, provide opportunities for teachers to discuss their beliefs and concerns about the nature of the evidence and the meaning of the ways in which the school decides to "know its impact" and see the value and esteem that comes from engaging in this process.

From *Visible Learning for Teachers: Maximizing Impact on Learning* (Hattie, 2012)

Over the last ten years, I've been learning a lot about how you start. Where I start and what we do in the team we have that works with schools, is to use an informal kind of checklist as a reference point for asking, "What evidence do you have at the moment that you're doing these things?"

Now we have to be careful not to presume that schools are not doing well – in other words, we want to drive change from success. So let's look first at where we're having success in the school, in terms of what the teachers are thinking, in terms of what evidence they have about their own impact, in terms of the nature and quality of the evidence that convinces me as a school leader that we are having an impact on all of our students.

From there as a starting point, we ask, "Where are the gaps?" Now that's not such a difficult conversation. The biggest problem with it is that you discover very quickly that teachers have multiple concepts of what challenge is, and what success looks like. So are you ready, school leader, to have those challenging and difficult conversations? How do you separate those conversations about challenge from the individual?

We've spent almost a millennium in schools, protecting teachers from discussions about their impact as teachers. We have a profession that ties its sense of professionalism to its notion of autonomy. And so we've not been very good at having these discussions.

And then of course, after the first question "Where do we start?" comes the next question, "How do we keep it going?" That's a hard question. In the work I do, it would be fair to say that after three months about 60 per cent of schools stop having these challenging discussions. It's a lot easier not to know. So that's why we now spend a lot of time in schools working with school leaders, getting them ready for those hard, difficult conversations.

And that part – the challenging conversations – reflects some of Ken Leithwood's work. The most important thing I would focus on is how to have those conversations and how to get teachers to realize that it's not about accountability. It's about them sharing collaboratively, understanding what success looks like, understanding what impact looks like. And so that's where we start.

The reference to Ken Leithwood's work that Hattie makes here includes, but is not limited, to the following:

- *How Leadership Influences Student Learning* (Leithwood, Louis, Anderson and Wahlstrom, 2004)
- *Evolving Perspectives: Leaders and Leadership – An Interview with Ken Leithwood* (**http://www.edu.gov.on.ca/eng/policyfunding/leadership/InConversation.htm**)

I can give you an example of one thing that happens often. You go into a school and everybody knows that Mr. Jones over there. He's been here for 25 years; he teaches in a very old-fashioned way; he doesn't cooperate. And then you find out that he has an incredible impact of these kids. And what we discover is that Mr. Jones is passionate about what he does, and is very expert at what he does, and students like going to his classroom.

They find him strict, but his impact on learning is incredibly high.

Now that really causes a challenge for people – particularly because they think I'm saying there's a particular way of teaching, and it requires a particular way of thinking. It doesn't. And my argument in the case of Mr. Jones is – leave him alone!

If you're having an impact, do more of what you're doing. It's not about all of us coming together and doing the same thing. We don't have a climate in most of our schools that says, "You're a great teacher if you have a high impact." What we often find is a culture that says, "You're a great teacher if you leave the rest of us alone." Sometimes the people who are really dedicated to high impact are not the most sociable or popular people in the school!

Hattie (2012) offers the following "School 'Health Check' for Visible Learning" for personal reflection and follow-up dialogue with trusted colleagues and coaches in your school:

1. We provide collaborative talk about formative evaluation to our teachers.
2. We have structured and regular professional development for our teachers based on achievement patterns in our school.
3. We provide opportunities for the whole school to have a common concept of progress across the curriculum.
4. Our families understand us when we talk about how their children are learning and achieving at school.
5. We trust and use student achievement data from our colleagues.
6. In our classrooms students feel safe to say when they don't know.
7. The main focus of our staff meetings is on learning and our impact on students.

So we're still struggling with these questions: How do we produce those conversations? How do we make the process efficient?

One of the things I've learned is that you need expertise in schools to collect this kind of evidence. This can be gathered in walkthroughs, from instructional rounds, and so on. I know that even where there is a lot of classroom observation taking place, it doesn't always result in artefacts, like notes or student work, that represent what has been observed. Yet these artefacts, or documents, are needed to support follow-up discussions about what the impact of the teaching has been on student learning.

And so what is missing is the whole debate and discussion about how we can efficiently get to that discussion among leaders and teachers about what progress looks like, what challenge looks like, how to do it efficiently. That's how you start, and I would suggest to any school leader that, despite the challenges, the rewards of this approach – for teachers, students and parents – are very compelling.