



جامعة زايد  
ZAYED UNIVERSITY

**Tomorrow's Teachers: Success through Standards  
Conference Plenary**

**A Question of Standards**

**John Mac Beath**

Our starting point is with three questions?

- Which world country has the highest standards?
- What does the word ‘standards’ mean to you?
- What is the best way to raise standards?

These are questions which preoccupy policy makers, worry academics and impact on teachers because how these questions are answered penetrates deep into policy and practice. These questions may be answered simplistically or with a reasoned understanding based on sound evidence.

### **The standards olympic**

Most people’s answer to the first question would almost certainly refer to the countries of the Asia-Pacific, to Japan, Taiwan, Korea, Singapore, Hong Kong. These countries consistently score well on the international standards olympiad which test children at given ages, usually on mathematics, science and language.

Countries such as the United States which have performed less well take these data extremely seriously and invest hugely in raising standards. In 1983 the alarmist report *A Nation at Risk* (1983) was published claiming “a rising tide of mediocrity that threatens our very future as a nation and a people”, Without any evidence it support it claimed that:

“our once unchallenged pre-eminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world.”

(National Commission on Excellence, p5)

Twenty years later George W. Bush is revisiting these very same issues, using the same rhetoric and has a national drive to raise standards in the holy trinity of subjects – literacy, numeracy and Science. the result of which is that school children spend less time

on other less easily measurable subjects, and teachers are pressured to concentrate heavily on the 'core'. This is true not only of the United States but many other countries of the world.

What the 2001 OECD Pisa study found was some strong similarities from country to country but also some distinctive differences , for example:

- In every country surveyed, girls are, on average, better readers than boys.
- In about half the countries boys and girls perform equally in maths literacy, in the other half boys perform better than girls
- On average 6% of students--but in some countries more than twice that proportion-- fall below the lowest level of reading proficiency. That means they could not locate a simple piece of information or identify the main theme of a text.
- In most countries there is a wide gap between the highest and the lowest performers but in some countries notably Finland, Japan and South Korea there is a comparatively narrow gap between the highest and poorest performers. Overall Japan and South Korea are the top performers in math and science literacy.

### **What are standards?**

What the PISA results illustrate is a world-wide paradigm shift from the measurement of inputs to a focus on outcomes. Since researchers began to look at school effects in the mid 1960s there has been a move from measurement of inputs to measurement of outputs or 'outcomes'. In other words, input measures tell us little because while we can get measures of all the resources, time and expertise invested in a school, if we measure this alone we will only find about how much is spent but not its effects and value for money. Outcomes has now become the leading, and often the only, measure regarded as

worthwhile by policy makers. However, as we have seen with the PISA data, outcomes are normally equated with:

- what students achieve at key moments in their school career
- what they achieve by the time they leave school
- what tests and exams measure as achievement
- the difference between what they bring in to school and what they leave with

Individual student outcomes are then aggregated (or averaged) at class level, school level, district level and national level to give a picture of ‘standards’. This is now very common practice in many countries and provides the data for international comparison. However, this chain of argument raises big questions at every step.

These are some of the big questions too often ignored because of their complexity or contentious nature. Policy makers do, after all, tend to seek simple answers and quick fixes.

- What can tests measure and what can’t they measure?
- What is most worth measuring?
- What can we deduce from aggregated data and what is its value?
- Is age of student a good basis for making comparisons? When is an outcome an outcome?
- How much are measures sensitive to context – time, place, relationship, mood, motivation?
- Does learning follow a smooth sequential path or is a more erratic process?
- What are the effects of testing on learning?
- What is the most influential site for learning?
- Is learning always an individual matter?
- What are the social and peer group effects on learning?.
- Who gets the credit for what students learn?

All of these questions ask us to think again about outcomes, about what is easy to measure and what is really worth measuring. The comparisons by age which underpin all such schemas rests on ignorance (perhaps wilful) of the large difference among children at different ages and implies that there is a 'standard' of learning which all children should acquire at a given age, with attendant monitoring and assessment. This is a hangover from the industrial production line model in which the product could be divided into separate parts, managed and assessed efficiently against a production standard.

It also relies on the practice of aggregation, that is the belief that every small item of data (individual pupil attainment for example) can be added together and averaged to give a sum at class level, school level, local level and national level. This provides the deceptive picture of national standards which is then worried over by politicians who fail to take account of the patterns which lie beneath the data. But it is the differences that are the most illuminating – differences between rich and poor, boys and girls, ethnic groups or rural as against urban areas. When we disaggregate to the most micro level we find two children in the same class with the same teacher and the same curriculum achieving wildly different results. These are the kinds of data of most use to teachers and to the system as a whole because we can only make wise policy at micro and macro level when we understand something about why differences arise and the process that produces those differences.

A recent and highly influential study from King's College in London (Black and Wiliam, 2001) found that feedback – what teachers give to pupils in return for their efforts - can often decrease motivation rather than increase it. Indeed the alarming evidence is that feedback, whether a mark, a comment, a gold star or a smiley face very frequently does just that. It can leave pupils confused, bemused, vaguely gratified but uncertain of where to go next or where they went wrong. Or even how and why they got it right. What does help learning and raise the standard of student work is a very specific kind of feedback to the learner. It is formative. It deepens understanding. It helps him or her know where to go next. It looks forward rather than backward. It looks to the potential of the future rather than to the failures of the past. Like coaching in any field of endeavour the focus is

on how to move on, not to revisit failure or rehearse errors. There was a historic and unpredicted victory of the Scots over the English in rugby two years ago. It was attributed to the video put together and shown to the team just before the match. It was the coach's edited highlights not of prior mistakes to be learned from but selected moments of excellence. Its message was inspirational –see how well you can play if you try.

One of the most telling studies of learners and learning comes from the Hungarian psychologist, Csikszentmihalyi (1993). He found that real learning, learning that matters, is driven by its own internal motor. It is learning for its own sake. Because this is what humans do best. He identified a state of being which he called 'flow', 'the optimal human experience', when learning is so compelling that time loses its normal dimensions and achievement becomes its own reward. This is the kind of learning that grows deep roots and becomes embedded in life long learning.

We also have to remember that an 'outcome' is an end point, a summative measure of what has been achieved. And so measurement of knowledge reproduced on tests and exams is treated as a focal 'outcome' of schooling. Indeed, in practice, what is tested by a 'final' exam is seen as the end point of learning but we are also well aware from research that a large proportion of what is reproduced for the benefit of exams is soon left behind. Only a fraction of what is tested by final exams is subsequently built on and continued on into higher education or employment.

The American evidence is salutary and frightening (Labaree, 1997). It is a panic response to the continued low standing of the United States in international league tables and manifested (Berliner and Biddle, 1995, Peter Senge (2002), in one and a half years of a child's primary school career devoted to preparing for tests, crowding out more creative activities, in some cases abolishing breaks. It rests on a belief, totally at odds with all research evidence, that working harder and longer will produce better results. Indeed all the evidence points in precisely the opposite direction, that short periods of work, breaks, physical activity and refreshment enhance learning.

In the U.K. the Government's numeracy and literacy strategies , while successful in raising test scores, have resulted in 'collateral damage' (Fullan, Earle, Leithwood, 2001), a narrowing of the curriculum, an impoverishment of the educational experience. In many primary schools music, art and drama were sacrificed to more 'hard work' on 'the basics', again underpinned by the same misconception that more teaching produces more learning.

In Australia, the Early Years Literacy Numeracy Programs devotes 50% of the total time to these two subjects, leaving the other 50% to the other six Key Learning Areas.

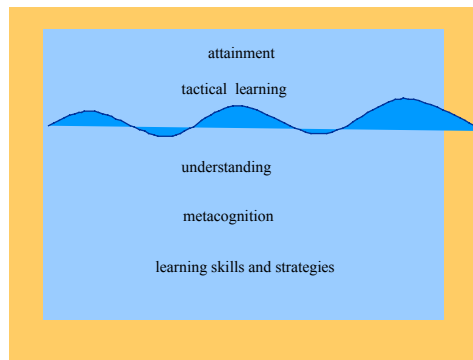
Townsend (2001) comments:

"This allocation automatically prejudices our views as to what is important, but there has not been any community debate that has been used to justify this."

With reference to Korea, at the top of the world league according to latest PISA data, Sung-Sik Kim (2002) writes:

What makes the extreme features of Korean education, *the high achievement level and the serious school crisis* is the voluntary participation of the related groups, *the government, the parents and students, the founder of private schools and private education institutes*. This "voluntarism" has been a main factor of the development of Korean education, emerging often in the form of educational competition, which has been called "educational fever" in Korea. This has originated the educational expansion that had been ever seen before, and consequently the secondary education based on non-government foundations, and the widespread of private education- "a previously and repeatedly study prior to schooling". As the private education gives students the same lectures prior to the schooling, they will surely become to be boring and inattentive in their classes. More often than not they are just chatting one another doing something that are not relevant to learning in their classrooms."

All of these examples illustrate the inherent dangers of pursuing superficial ‘standards’ at the expense of understanding and deep learning. We may represent this by an iceberg in which there is surface and deep learning. The surface learning, that which is not deeply rooted in long term memory and motivation and emotional intelligence has a short life. While attainment (what tests measure) is important it is not enough, and while tactical instruction on exam technique is also important it misses the essential point of an education.



Beneath the surface lies understanding (which means teaching less and learning better, working smarter rather than harder) . Brave teachers and risk-taking school leaders are increasingly discovering that covering less but allowing more time for thinking and understanding produces deeper meaning and integration into memory and ultimately higher standards, in a sense that matters. Metacognition – thing about your thinking, learning about the process of your learning lies at a deeper level but is a standard to which many more enlightened school systems aspire. While learning skill and strategies in what you carry with you for the rest of your life and is the ultimate standard.

What we know about learning is that it is most effective when:

- it has a purpose for the learner
- there is a goal, end point or target to be achieved
- the goal is set, understood, or ‘owned’ by the learner herself

- it is seen as worth investing effort in
- it is neither too ambitious to be worth investing effort in, nor so unambitious that it can be achieved without effort ('the zone of proximal development')

But also

- when it is spontaneous and surprising
- when it sets off for one goal but achieves another
- when it asks critical questions of its own premises

In other words, learners are generally helped by targets but can also be surprised into learning. Much learning is also unconscious, informal and latent, sometimes stored and retrieved at a later point. Learning is not always, indeed not often, linear but multi-layered, capricious, regressing as well as progressing. It is sometimes 'ruthlessly cumulative', often requiring unlearning, deconstructing, abandoning a known answer in favour of a perplexing question. We also are discovering more about intuitive and emotional learning and about the nature of 'flow'. Research into the optimal experience identifies 'an inner game', sometimes described as 'being in the zone' when conscious effort to do better or improve is actually dysfunctional. There is some evidence that learning at gut level, 'enteric' learning, can in fact bypass the higher thinking centres (Gorshon, 1998).

While none of this invalidates the need for good outcome data it does require that what we measure be put into a context of best knowledge about the learning process and that fitness for purpose is scrupulously observed.

### **What we know about change**

Change may be presented as 'development' or 'improvement' or 'raising' standards but it is intrinsically about a move away and a move to. It implies a move away from

established routine to a different way of doing things and a different way of thinking about things. A considerable body of literature on change tells us that change:

- Creates turbulence
- Generates dissent and conflict
- Is resisted by some and embraced by others
- Affects organisational culture
- Goes through a fairly predictable cycle
- Cannot be mandated or legislated
- Is facilitated by expert and sensitive leadership

So, governments and schools around the world have been moving towards a process of target setting, implying a change in the way we do things at every level from classroom to government. It is widely accepted that targets ought to be SMART (specific, measurable, achievable, realistic and time-contained). However, this is not the whole story nor necessarily uncontentious. Following these precepts religiously may be prove, in practice, to be mechanistic and ultimately dysfunctional. Over-emphasis and overuse but demotivate rather than the opposite. Stress on the measurable may too easily lead to a narrowing focus on the quantitative. Indeed it may be argued that the relationship between the measurable and the important is an inverse one. For example moral, spiritual, social, intellectual and aesthetic development lend themselves least well to quantitative measurement and specific targets.

Therefore, drawing on what we know about learning, about change –and about human nature - we can conclude that for targets to be accepted and embraced by teachers and school managers they must be:

- Meaningful
- Owned
- Context-related
- Embedded

- Discussable
- Feedback sensitive

Teaching and learning is underpinned by a constant effort to make meaning. When teaching loses its meaning teachers leave the progression or struggle on in a collusion with disengaged pupils whose learning has also lost meaning. There is no sense of ownership of the process on either side and teachers complain that management, or government, has failed to understand the context of their work and that targets set are not open to discussion. Addressing this situation means helping teachers to embed targets in their ongoing work in ways that are meaningful to them and their pupils, that are always sensitive to context, and which are part of a cycle or feedback loops. ‘Double loop’ learning as described by Chris Argyris (1999) requires a constant step back move from the target-achievement loop to a critical reflection evaluation loop in which the target, the achievement, or their inter-relationship is re-examined or reframed.

These principles apply equally to management and to pupils as well as teachers and need to be constantly in the forefront of the thinking of national policy-makers. In one version of the relationship between national targets the government relies on teachers to ‘deliver’ results in line with targets set. An alternative way of describing this is to see teachers as the ultimate gatekeepers of change and, as respected professionals, to mediate rather than to deliver. That means to set their work within a national context acknowledging a set of national priorities and targets as balanced, relevant and in which they have a genuine stake.

It may be said that the longest distance in the world is the distance between a national target and what goes on in the mind of a child. In between these stands the classroom teacher, not as the only mediator but as one of the key actors in building that bridge from microscopic individual experience into macroscopic achievement.

*“A man’s reach should exceed his grasp or what’s a heaven for?”*  
*(Robert Browning)*

These principles may be tested against two models of target setting:

### **1. Top down**

targets set at national level for authorities



local authorities set targets for schools



schools set targets for departments and teachers



teachers set targets for pupils

This downward pressure has significant drawbacks. It is not only disempowering at every level but carries a strong hidden message about the nature of hierarchy, the nature of learning and the nature of social and educational change. It is difficult for top down imposition of targets to honour the set of principles set out above.

### **2. Bottom up**

Bottom up target setting reverses the process. It looks like this:

pupils set their own targets



teachers set targets for their class drawing on pupils' individual targets



departments and the school draw on teachers' targets to set overall targets



authorities draw on school targets to set their overall targets



government draws on authorities' targets to set its national targets

Perhaps bottom-up target setting described an ideal world in which people act rationally, critically and with excellent flow of communication. The problem with the model is, however, its idealistic nature and its workability only in the best of possible worlds.

Top down	Bottom up

hierarchical	democratic
disempowering	empowering
relatively easy to realise in practice	difficult to realise in practice
generalisable	almost incapable of generalisation
subject to monitoring	hard to monitor
accountability driven	development driven

Most commentators agree, therefore, that the pragmatic as well as the educational paradigm is a combination of bottom up and top down, a synergetic and negotiated process.

So, at national level, targets are framed over time, transparently, with a listening ear to the concerns of teachers, signalling an appreciation of the context in which they work and the challenges they face and describing their own accountability to the profession which precedes the profession's accountability to them. It pays more than ritual lip service to what is important because it is not the rhetoric of good intentions that teachers hear and read but the impact of what comes first. In other words if teachers are presented with a holistic array of priorities but in practice the most easily measurable attainment targets always come first it will simply serve to reinforce a cynicism about what, when the chips are down, really matters.

Writing about the importance of teachers in the standards and change equation Larry Cuban offers a salutary warning :

To reformers, teachers are both the problem and solution. Precisely because of this paradox, reformers in every generation have dreamed of teacher-proof curriculum, texts, and other materials to promote designs that leapfrog the teacher and get students to learn. No classroom reform I have ever studied from reading through using computers or participated in over the last half-century has ever been fully

implemented without teachers understanding the change, receiving help in putting it into practice, and adapting it to fit the particular classroom.

(Cuban, 2001, p.7)

The challenge to government serious about its commitment to what matters educationally is to be radical in breaking the cycle, bringing an element of surprise, of inspiration and breadth to what will all too easily be seen as a remorseless grind, allowing yet again the urgent to drive out the important.

With these health warnings in mind what needs to be done to ensure, and to raise, standards?

- Emphasise the important – ensure that what we measure is what we value
- Build capacity – create situations where teachers can observe, talk to and learn from one another
- Involve stakeholders –teachers, students and their parents need to be integral to the dialogue
- Watch –don't copy – study what happens in other countries, learn from their mistakes, be careful not to transplant from one context to another
- Listen to dissent – remember that the dissenters and heretics are often the pioneers of new way of thinking
- Transform through conservation – Hold on to what is good and build on that before trying to change it
- Celebrate achievement – publicise examples of good practice and help others to learn from them

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