Towards a world class education system: Accountability and Responsibility

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Abstract: The last twenty years has seen substantial changes in schools, with a much greater focus on accountability. This has been driven largely by the use of international comparisons of educational performance through programs such as TIMSS and PISA. The need for accountability leads to the needs to develop the skills of data-driven decision-making as a mechanism for making schools and classrooms more effective. Classrooms, and student learning, can be made more effective by focusing on three specific areas, curriculum and classroom management, the development of thinking skills and the relationships established between those involved in the education process.

Keywords: school reform; accountability; student learning; school effectiveness and improvement; management in education; data-driven decision-making; leadership; relationships; educational change.

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Biographical notes: Tony Townsend, PhD, is a professor, and from 2003-7 was chair, of the Department of Educational leadership at Florida Atlantic University. He received his PhD in the area of school effectiveness from Monash University in Australia in 1993. He has published 8 authored or edited books with one now in preparation. He has published numerous articles and has presented keynote addresses or workshops in more than 35 countries. His research interests are school effectiveness and improvement with a particular emphasis on ways that leadership in schools can impact on student learning. He has been president of both the International Congress for School Effectiveness and Improvement and the International Council on Education for Teaching.

Introduction

One of the most important things to remember about human development is that our personal view of the world is completely unique. Our view of the world is filtered by who we are, where we come from and what we believe in. Thus, although we might be looking at the same thing as others are looking at, we will see something different to what they do, and although we might listen to something that is being listened to by others, we will hear something different from them. One of the things that can no longer be disputed is how much the world has changed in the last few decades. Peter Drucker (1993, p. 1) argued:

Every few hundred years in western history there occurs a sharp transformation. We cross... a divide. Within a few short decades society rearranges itself, its world view; its basic values; its social and political structure; its arts; its key institutions. Fifty years later, there appears a new world...we are currently living through such a transformation.

Perhaps this is best characterized when we consider the changes in the computer industry over the last half century. These changes become clear when one knows that in 1943 the then Chairman of IBM, Thomas Watson, said: *I think there is a world market for maybe 5 computers.*

Almost everything about our society is different, the type of work we do, the types of transport we use, the ways in which we communicate with each other and the ways in which we are entertained. The value systems seem to have changed and the way in which we develop and maintain our health, our relationships and our work environment are all different. There are many people who suggest that education has not kept pace with the change that has happened in other parts of our lives. Quotes by some eminent people suggest that schools need to change and that change is long overdue. Peter Drucker suggested that the young people of today cannot even understand the world that most of us grew up in. He argued (1993, p. 209) that *'No other institution faces challenges as radical as those that will transform the school'*.

Gerstner et al (1994, p. 3) argued:

...this one most vital area of our national life -public education - has not undergone the process of revitalising change. In our economic and social life we expect change, but in the public schools we have clung tenaciously to the ideas and techniques of earlier decades and even previous centuries.

Hargreaves (1994, p. 43-44) suggested that:

Schools are still modelled on a curious mix of the factory, the asylum and the prison... We are glad to see the end of the traditional factory; why should we expect the school modelled on it to be welcome to children?

David Hood (1998, p. 3) argued that there has been little substantive change in the way schools went about their business for some time:

Structurally the curriculum is much the same as it has been for the last 50 years, as is how teachers approach the curriculum. Students are still divided into classes of about the same number, primarily based on age. The day is rigidly fixed within specific timeframes and divided by inflexible timetables. Teachers teach subjects, and front up each hour to a different group of students. Classrooms are designed and used as they were 50 years ago, even though the décor might have changed. Assessment of learning is still dominated by national external examinations.

However we could equally well argue, and many teachers and school leaders would do so, that the past twenty or so years have seen as much or more change in education than has occurred since the concept of school was first created. If we take a longer view of change in education we could argue that, since it first developed, the focus of education has changed from individual provision (through tutors or masters) through local provision (state, county or religious systems of education) to national provision (with the many national governments flagging a national curriculum). But education not only changed in terms of its focus, but also in terms of its scope. Before schools became fixtures in our society few people received any education at all and only a handful received what today might be considered to be an effective education. By the start of the 20th century, most people received some education, but still only some of those received an effective education. By the early 1980s almost all children went to school and many of these students received what we would consider to be an effective education. However, as we approach the end of the first decade of the new millennium we can now say that all children get some schooling and that most of them receive an effective education. However, this is not seen to be

enough. It is only when all students get an effective education can we say that society has succeeded in this task.

The move towards accountability

One factor common in most education systems in the past two decades has been the search for a better way of ensuring high levels of achievement for all students. Education systems from the USA to Uganda, from Austria to Australia and from the Korea to Kazakhstan have focused their attention on improving the quality of education in their countries. Much of the work that has happened internationally has focused on increasing the levels of accountability for teachers and school leaders, for schools and for school systems. Many different strategies have been used, most with only marginal success.

The data that is available to politicians and the public is now monumental. It is now possible, with the judicious use of the internet, to compare country with country, state with state within a particular country, districts or regions within a particular state, individual schools with other schools in a single district and eventually individual classrooms with other classrooms in a single school. By extrapolating one from the other it is now possible to make a rough comparison of the performance of students in a single classroom, with those in a classroom on the other side of the world. So the progress of children in a grade 5 in Slovenia will be compared with those in China, the USA and Australia.

Recent international studies have compared the performance of individual countries with other countries. These have included the Trends in International Mathematics and Science Study - TIMSS (1995, 1999, 2003) - see <http://nces.ed.gov/timss/index.asp> where grade 4 students and grade 8 students are compared in science and in mathematics. There is also the more recent Program for International Student Achievement – PISA (2000, 2003, 2006), conducted by the

Organization for Economic Co-operation and Development (OECD) - see

<http://www.pisa.oecd.org/> - that tests student literacy in reading, science and mathematics. In

2000 thirty one countries were involved and by 2006 this had risen to 57 countries. By 2009 87% of the world's economy will be covered by PISA testing. Table 1 provides a comparison of some of the actual scores for reading, mathematics and science literacy for the data collected in 2006.

Table 1: Mean Scores for Reading, Mathematics and Science Literacy

Reading		Mathematics		Science	
Korea	556	Taipei	549	Finland	563
Finland	547	Finland	548	Hong Kong	542
Hong Kong	536	Hong Kong	547	Canada	534
Canada	527	Korea	547	Taipei	532
Japan	522	Netherlands	531	Estonia	531
New Zealand	521	Switzerland	530	Japan	531
Ireland	517	Canada	527	New Zealand	530
Australia	513	Macao	527	Australia	527
Liechtenstein	510	Liechtenstein	536	Netherlands	525
Poland	508	Japan	523	Liechtenstein	522
Sweden	507	New Zealand	522	Korea	522
Netherlands	507				
USA (2003)	504	USA	489	USA	474
<i>OECD Average</i>	<i>492</i>	<i>OECD Average</i>	<i>498</i>	<i>OECD Average</i>	<i>500</i>

The scores enable a comparison to be made between the USA (or other countries) and the best performing countries in the study. The table shows that the USA is around the OECD average for all three areas, but performs much better in mathematics and science than it does in reading. The reading scores for the USA are 2003 because due to printing problems the 2006 scores were not validated. The PISA study also provides a detailed analysis of science performance in 2006, and categorized students into different levels, from level one being virtually unable to perform, to level five (or six) where students were able to manipulate knowledge at a high level. Tables 2, 3 and 4 show the percentages of students that are performing at the various levels of reading, mathematics and science literacy.

Table 2: Percentages of students at various levels of reading literacy, PISA 2006

	Mean	below level 1	% level 1	% level 2	% level 3	% level 4	% level 5
Korea	556	1	4	13	27	33	24
Finland	547	1	4	16	31	32	17
Hong Kong	536	1	6	17	32	32	13
Canada	527	3	8	18	30	27	15
New Zealand	521	5	10	19	26	25	16
Ireland	517	3	9	21	30	25	12
Australia	513	4	10	21	30	25	11
Liechtenstein	510	5	9	20	31	24	10
Poland	508	5	11	22	28	23	12
USA (2003)	494	6	12	21	27	21	12
<i>OECD Average</i>	<i>492</i>	<i>7</i>	<i>13</i>	<i>23</i>	<i>28</i>	<i>21</i>	<i>9</i>

Because of a problem in printing the tests, the USA was unable to be given a score for its reading literacy in 2006, so I have used the 2003 score. For Reading (2003), Science and Mathematics the USA performed significantly more poorly than the top nations. The table above indicates that whereas the top countries have 50% or more of their students performing at the top two levels in Reading, that the USA has only 33% doing so. Also, whereas the top nations have only around 5% of their students performing at the bottom two levels, the USA has 18%, or three times as many.

Table 3: Percentages of students at various levels of mathematics literacy, PISA 2006

	Mean Score	% below level 1	% level 1	% level 2	% level 3	% level 4	% level 5	% level 6
Taipei	549	4	8	14	19	22	20	12
Finland	548	1	5	14	27	28	18	6
Hong Kong	547	3	9	23	26	26	19	9
Korea	547	2	7	15	24	26	18	9
Netherlands	531	2	9	19	24	24	16	5
Switzerland	530	5	9	17	23	23	16	7
Canada	527	3	8	19	28	25	14	4
Macao	525	3	8	20	27	24	14	4
Liechtenstein	525	4	9	18	26	24	13	6
USA	474	10	18	26	23	15	6	1

<i>OECD Ave.</i>	<i>498</i>	<i>7</i>	<i>14</i>	<i>22</i>	<i>24</i>	<i>19</i>	<i>10</i>	<i>3</i>

The table above indicates that whereas the top countries have 25% or more of their students performing at the top two levels in Mathematics, that the USA has only 7% doing so. Also, whereas the top nations have only around 10% of their students performing at the bottom two levels, the USA has 28%, nearly three times as many. Similar differentials in performance also occur in Science, as indicated in the table below.

Table 4: Percentages of students at various levels of science literacy, PISA 2006

	Mean Score	% below level 1	% level 1	% level 2	% level 3	% level 4	% level 5	% level 6
Finland	563	1	4	14	29	32	17	4
Hong Kong	542	2	7	17	29	30	14	2
Canada	534	2	8	19	29	28	12	2
Taipei	532	2	10	19	27	28	13	2
Estonia	531	1	7	21	34	26	10	1
Japan	531	3	9	19	28	27	12	3
New Zealand	530	4	10	20	25	24	14	4
Australia	527	3	10	20	28	25	12	3
Netherlands	525	2	11	21	27	26	12	2
Liechtenstein	522	3	10	21	29	25	10	2

USA	489	8	17	24	24	18	8	2
<i>OECD Ave.</i>	<i>500</i>	<i>5</i>	<i>14</i>	<i>24</i>	<i>27</i>	<i>20</i>	<i>8</i>	<i>1</i>

It is clear from these tables that the USA lags in all areas of performance, and needs to address this performance if it is to compete with the top nations. This can be addressed in two ways, by lowering the percentages of students who are performing below expectations and by increasing the percentage of those performing very well.

The use of these international comparisons has identified the need to maintain and improve the effectiveness and efficiency of what happens in schools for governments around the world. This impact has been reflected by what has come to be known as the school effectiveness research.

School Effectiveness and Improvement

We have learned that schools can be judged in a number of ways. It can be argued that the search for a world class school is a world-wide activity. Governments and education systems around the world are searching for the elusive formula that will guarantee the effectiveness of schools across the whole system. The Hong Kong government, for instance, has identified a series of factors that are associated with high quality schooling. They are:

- *a clear vision, underpinned by a set of values which will guide its policies, procedures and practices;*
- *a strong focus on the student outcomes to improve both curriculum and teaching practices;*

- *a professional learning community which adopts knowledge-based practices based on continuous self-evaluation in the pursuit of excellence;*
- *a strong alliance of stakeholders, including parents, teachers and community members, working in partnership to develop the potential of each and every student to the fullest extent; and*
- *school management which is open, transparent and publicly accountable for its educational achievements and proper use of public funds.*

(Hong Kong School Based Management Consultation Document, 1999)

The issues of school effectiveness and school improvement have been driving forces in educational reform, and I would like to spend a little time now considering how that has come about. It could be argued that the impetus for school effectiveness research came about as a response to the findings of a national study in the United States. The Coleman Report (1966), investigated the relationship between the equality of educational outcomes and pupil socio-economic backgrounds, and concluded:

Schools bring little influence to bear on a child's achievement that is independent of his background and general social context...this very lack of an independent effect means that the inequalities imposed on children by their home, neighbourhood and peer environment are carried along to become the inequalities with which they confront adult life at the end of school. For equality of educational opportunity must imply a strong effect of schools that is independent of the child's immediate environment, and that strong independence is not present in American schools.

(Coleman *et al.*, 1966, p. 325).

To many of the early researchers in the United States and Canada, an effective school was one whose students performed well on standardised tests, characterised by an early definition by Edmonds that:

Specifically, I require that an effective school bring the children of the poor to those minimal masteries of basic school skills that now describe minimally successful pupil performances for the children of the middle class.

(Edmonds, 1978, p. 3)

The early American work, focused on student achievement as identified by state or national standardized testing, was concerned only with student outcomes at a particular point in time. Today schools have to deal with a range of issues from literacy and numeracy and other academic subjects, through employment skills, self-concept development, community attitudes and values and a host of other goals seen to be equally important. This is particularly so for state secondary schools, where there seem to be pathways leading to three different outcomes (academic, further training and work), as compared to some of the more affluent schools where the academic pathway becomes a marketing tool. If this is true, then judging schools as being effective or not, based solely on academic attainment of students, actually disadvantages the state system. Perhaps the effectiveness of schools should be judged based on the percentages of students who are in university or further training or are fully employed, rather than just on the percentage who end up in university.

In Britain, Mortimore *et al.* (1986; 1988) sought to 'find a way of comparing schools' effects on their pupils, while acknowledging the fact that schools do not all receive pupils of similar abilities and backgrounds' (Mortimore *et al.*, 1988, p. 176). Factors such as the ethnic composition, language background, social class and family composition of the pupils, together with other considerations, were all used as relevant data to assist in the determination of the gains that pupils made during their time at school. The study not only considered attainment, but progress as well, in academic areas such as reading, mathematics, writing and oracy, and also the non-cognitive areas of behaviour, attendance, self-concept and attitudes towards school. Using such a value-added approach, decisions could be made, for instance, to test every student in a range of subject areas upon entry to school and before school completion to determine how much the student has learned in the time spent at school. This might in turn be judged against national or state expectations for children of similar socio-economic backgrounds. Should all or most children achieve these expectations, then the school might be considered effective. The difficulty with this approach is that it might be perceived as accepting that standards in poorer areas can be below those in more affluent areas, thus reinforcing the differences that school effectiveness was trying to eliminate.

My own work (Townsend, 1994) found that the expectations of school communities varied, not only from school to school, but also from region to region. It showed that, in a region of the Victorian Ministry of Education that was predominantly middle class, many parents, teachers and students felt that the major role of school was academic (to prepare people for further education), whereas in a more working class region parents, teachers and students were much more supportive of the role of the school being vocational (to prepare people for work). These differences led to the possibility that future definitions of an effective school should be much broader than having a simple academic focus, and also incorporate both systemic and local concerns:

An effective school is one that develops and maintains a high quality educational programme designed to achieve both system-wide and locally identified goals. All students, regardless of their family or social background, experience both improvement across their school career and ultimate success in the achievement of those goals, based on appropriate external and school-based measuring techniques.

(Townsend, 1994, p. 48)

What have we learned from the research?

In the past few years, we have learned a huge amount about learning and teaching and how to maximize both. In a previous paper (Townsend, 1999) I argued that, within this changing view of education, many schools still have characteristics that reflect ways of thinking from a less hectic time, where technology took decades rather than months to move from one level to the next, where society had the time and resources to provide a range of community services (health, education, welfare) at little or no cost to the recipient and where the same curriculum could go on for years before a change was needed. It is quite clear that the international reform activity over the past few years, together with other social changes involving technology, globalization, the economy and employment have led to new ways of thinking about education (Townsend, 2007).

There have been a number of models developed that consider what is necessary for improving the level of effectiveness of a school. Sammons, Hillman and Mortimore (1995) identified a series of factors that support more effective schools:

- Professional Leadership
- Focus on Teaching and Learning
- Shared Vision and Goals

- Purposeful Teaching and Learning
- High Expectations
- Development of Learning Communities
- Accountability measures
- A Stimulating and Secure Learning Environment

Peter Hill (2001) articulated 8 habits that could be used by school systems to promote higher levels of school effectiveness:

- Habit 1:* Wherever possible, devolve decision making down to the local school level
- Habit 2:* Seek high-level consensus on the core elements of the curriculum and on standards of achievement expected of students at key stages of schooling
- Habit 3:* Require evidence-based accountability arrangements to drive improvement and change
- Habit 4:* Build capacity among school leaders
- Habit 5:* Change beliefs about the capacity of students to benefit from schooling
- Habit 6:* Understand reasons for variations among and within schools in performance
- Habit 7:* Build up commitment and capacity among staff and within the school community to support a set of agreed priorities for improvement and change
- Habit 8:* Focus efforts on helping teachers to identify starting points for teaching, to build up a repertoire of effective teaching strategies, and to use classroom organization and management strategies that facilitate learning for all students

Stoll and Fink (1998) have characterized what we might identify as the two dimensions for judging the performance of schools, whether they are effective or ineffective and whether they are improving or declining. Stoll (1997, p. 9-10) characterizes schools in the following way:

- *The moving school (effective and improving) is not only effective in 'value added' terms but people within it are also actively working together to respond to their changing context and keep developing...*
- *The cruising school (effective but declining) is perceived as effective, or at least more than satisfactory, by teachers and the school's community. It has a carefully constructed camouflage...it is usually located in a more affluent area where students achieve in spite of teaching quality...*
- *The strolling school is neither particularly effective nor ineffective. It is moving towards some kind of school improvement but at an inadequate rate to cope with the pace of change which therefore threatens to overrun its efforts...*
- *The sinking school (ineffective and declining) is a failing school. It is not only ineffective; the staff, whether through apathy or ignorance, are not prepared or able to change...*
- *While the struggling school (ineffective, but improving) is ineffective because its current pupil outcomes and school and classroom processes need attention, it is aware of this, and expends considerable energy to improve.*

It is also clear however, that if schools are to be seen as more effective it will happen because students are performing at higher levels than previously. In this sense, effective schools are those that have many effective classrooms. As Hill argued (1998) *...one of the more powerful conclusions arising from recent research is that much of the variation between schools is, in fact, due to variation among classes.* In their research, Hill and Rowe (1996) have identified some factors that make classrooms more effective:

- A concentration on learning.
- Purposeful teaching.
- The monitoring of individuals' progress.
- Active involvement and attentiveness of students.
- A variety of teaching methods.
- A consistency of approach.
- The value of role modeling.

So if we are to move towards a more effective school system, it happens by promoting more effective schools. If we are to support the development of more effective schools, it will be through the promotion of more effective classrooms. By purposefully applying the characteristics listed above, students have a better chance of learning.

The Move towards Data-Driven Decision making

Tom Peters (1987) famously said *what gets measured gets done* and the recent considerations related to improving student achievement has led to a time where 'data-driven decision making has become a central focus of education policy and practice' Mandinach, Honey and Light, (2006). They go on to argue (p 1) that the recent focus on standardized tests scores as a result of

national programs such as *No Child Left Behind* have had consequences for both schools and teachers they may not have always helped students:

One consequence of the increased use of these tools is a growing gap between the use of test data to satisfy administrative demands and the use of test data in concert with other data sources to aid instructional decision making. While these tools have the potential to support the classroom-level instructional decisions of teachers, these tools tend to privilege an approach to data analysis that allows for the examination and reporting of system-wide or school-wide test trends and patterns, but only reveal limited information about individual students and the multiple factors that influence student performance. As a result, they meet the needs of school administrators much more readily than they do those of classroom teachers.

Yet

Despite both the mandates and the rhetoric, schools are woefully underprepared to engage in such inquiry. The practice of applying large-scale data to classroom practice is virtually nonexistent

(Herman & Gribbons, 2001, p. 1).

However, the use of data is very valuable for both teachers and administrators alike, because we can no longer argue that a failure to progress at school is the fault of the student. As Glickman (2002) argues:

Research has found that faculty in successful schools always question existing instructional practice and do not blame lack of student achievement on external causes.

There are a number of questions that we can ask that will help us serve our students better:

- How are we doing?
- What are we doing well?
- How can do even better?
- Who isn't learning?
- Who aren't we serving?
- What can we do to improve?
- How do we know if it worked?
- What do we do if they don't learn?

There are many reasons why collecting and using appropriate data will help both schools and teachers as they strive towards improved outcomes for students. Some of the purposes of DDDM are to:

1. Assess the current and future needs of students
2. Decide what to change
3. Determine if goals are being met
4. Engage in continuous school improvement
5. Identify root causes of problems
6. Align instruction to standards
7. Provide personalized instruction
8. Track professional development
9. Meet accountability requirements
10. Keep constituents informed about progress

DDDM contains three connected phases of activity. Phase one is to make predictions about could, should or might occur, given a set of circumstances and purposeful activity. The second phase is where observational and other data are collected to allow us to observe what has happened while the activity was taking place and the third phase is to analyze the data to allow us to make inferences about what went right (or wrong) and to ask further questions and make further plans that will lead us to higher levels of school improvement. When everyone involved at the school level becomes familiar with data and what it means, then school improvement has moved from a focus on accountability, where we are simply counting the numbers, to the real purpose of DDDM, which is responsibility, or the ability to respond to circumstances in appropriate ways, based on the evidence of where we are right now.

One education system that seems to have adopted a process of DDDM in a way that has become state of the art is the Victorian (Australia) Department of Education and Early Childhood Development. After recently reviewing what was happening in that system Elmore (2007) suggested...

The good news is that Victoria, because of the thoughtful design of its improvement strategy, is on the leading edge of policy and practice in the world. There are few improvement strategies close to or as well developed, and probably none that are focused with such depth and complexity on the basic human capital problems associated with school improvement at scale. Unfortunately, this is also the bad news. What it means is that there are relatively few places Victoria can look to find the answers to the kinds of problems that will surface through the middle and later stages of the strategy. The special affliction of the precursor is to have to make the mistakes that others will learn from.

Victoria has adopted a School Accountability and Development Framework which

...articulates three outcomes that government schools strive to achieve; that is, improved student learning, enhanced student engagement and wellbeing, and successful transitions and pathways.

The Framework supports schools on their improvement journey by enabling them to;

- *Plan for improvement via a four-year school strategic plan and an annual implementation plan;*
- *Evaluate progress towards the improvement goals and targets via an internal school self-evaluation and an external school review;*
- *Report on progress in core school performance indicators and other achievements via an annual report to the school community; and*
- *Manage risk and compliance with legislation and departmental policies via an on-line school compliance checklist.*

(DEECD, 2008)

The framework being used is based on a four year cycle where the implementation of a four year strategic plan is followed by the annual collection of a variety of data that focuses on student achievement, student engagement and well being, the school environment and climate and the attitudes of the various stakeholders towards the school's progress. These are reported annually to the local community and the department and in the fourth year, all the data from the previous years are analyzed by the school top establish the progress the school has made in these areas and to make decisions about new areas where it may further improve or new initiatives that the school wishes to pursue. This self-evaluation is followed by an independent review conducted by an appropriate person that is outside the school but not employed in other capacities by the department. The school review process involves a discussion between the external reviewer and members of the school community and is designed to validate the schools self-evaluation and

make recommendations about the new strategic plan. And so the process continues over the next four year period.

The Strategic Plan

According to the Departmental website, an effective strategic plan comprises three distinct parts (see http://www.sofweb.vic.edu.au/edulibrary/public/account/operate/SSP_2008-gdl-v1.00-20080129.pdf).

1. School Profile including:

- *purpose*
- *values*
- *environmental context – the challenges and risks the school faces and the opportunities available to the school (internal and external).*

2. Strategic Intent including:

- *goals and targets for each student outcome area (student learning, student engagement and wellbeing, student pathways and transitions)*
- *key improvement strategies for achieving improvement in student outcomes.*

3. Indicative Planner including

- *prioritizing their key improvement strategies*
- *capture the activities year by year*
- *identify the desired changes in practice and behaviors.*

Documentation is made available to school communities to support them in the development of this document and it forms the basis of ongoing improvement over time. In this way, it is possible

to get members of the school community to focus on what will really make a difference, and that is to use data and analysis to make decisions about how best to improve student learning and their experiences at school.

What really changes student learning

However, if young people's learning is the end goal, we need to reconsider what this means in a rapidly changing, globalized world. Wang, M.C., Haertel, G.D. and Walberg, H.J. (1993/1994, *Educational Leadership*, pp 74-79) analyzed 179 chapters, conducted 91 research syntheses, interviewed 61 educational researchers, considered 11,000 findings related to student learning.

They identified 28 areas grouped into 6 categories:

- Student Aptitude
- Classroom Instruction/Climate
- Context
- Program Design
- School Organization
- State/District Characteristics

The following specific characteristics are listed in order of their importance to student learning:

1. Classroom Management	7. Motivational/Affective attributes
2. Metacognitive processes	8. Peer Group
3. Cognitive processes	9. Quantity of Instruction
4. Home Environment/Parental Support	10. School Culture
5. Student/Teacher social interactions	11. Classroom Climate
6. Social/behavioural attributes	12. Classroom Instruction
	13. Curriculum Design

14. Academic Interactions	and Support
15. Classroom Assessment	22. Student demographics
16. Community Influences	23. Out of Class Time
17. Psychomotor skills	24. Program Demographics
18. Teacher/Administrator	25. School Demographics
Decision Making	26. State Level Policies
20. Parent Involvement Policy	27. School Policies
21. Classroom Implementation	28. District Demographics

If we look at the top five elements that contribute to student learning, it becomes obvious that it is what happens in the classroom and the home that is critical to an individual student reaching their potential. The student's ability to learn, the way in which the classroom is organized and managed and the relationships between student, teacher and parent are the keys to learning.

In contrast things such as student demographics (22) state (26) and school (27) policies have limited impact on learning. This suggests that the ability to learn is universal and is similar in people from various cultural and socio-economic backgrounds. However, what is learned is the distinguishing feature of success in school. Thus, there is a mismatch between what is being taught and what is being learned rather than there being some students who 'cannot learn'.

The past decade has seen massive changes at the state and school levels by various restructuring activities, but few that have tried to change what happens in classrooms. Yet as Ashenden (1994: 13) argues:

The greatest single weakness in these reforms is that they stop at the classroom door. The classroom is the student's workplace. It is, in essence, a 19th-century workplace - much

more humane and interesting but recognisably the same place. It is an inefficient and inequitable producer of the old basics and simply incompatible with the new.

If we are concerned about helping students to learn then, there are three major issues for educators. The first is having an appropriate curriculum for a rapidly changing world, the second is to engage every student in this curriculum and the third is to enable the student to build a positive relationship to learning, so that they can become a lifelong learner.

In some respects it is building a positive relationship to learning that is most important, after all, students will spend less than 3% of their lifetime in school. It might also be argued that under the current system of accountability, with structured curriculum based on specific standards and the continuous testing of student knowledge of that curriculum that building a positive relationship to learning is the thing we spend the least time on.

The global curriculum at the local level

We wonder why many young people fail to see the relevance of what they are taught, why they become difficult to teach and why they drop out. The truth of the matter is that students are not any more or less involved with the curriculum than their parents were. The curriculum of today is perhaps no more or less relevant than it was when their parents went to school, but in their parents' time people were able to get jobs that didn't require high qualifications; jobs in banks, in factories, on the land. Now those jobs are limited or non-existent and the jobs that are available to those who drop out have very limited economic earning potential.

Perhaps it is time for us to refocus our attention as to what the curriculum is intended to do. For someone like me, who has been lucky enough to see education systems in operation all around the world, similar curriculum offerings happen everywhere. Thus the curriculum in the USA is

similar to perhaps 90% of subject areas in the curriculum in China, in South Africa, in Australia, the UK and Fiji. Not only is it similar now, but it always has been. Michael Barber in the United Kingdom has argued that if we replaced technology studies in the curriculum of today with classical studies, then the curriculum of 1900 and 2000 would seem almost the same.

For more than a hundred years the curriculum content has been the main subject of discussion. Now I think we are beginning to understand that, if we are to make every student a success, then the student should be the subject of our efforts rather than the object of our efforts and we have to match our teaching and our curriculum to their capabilities and needs.

It would seem to me that perhaps we should consider having a curriculum that, for at least fifty per cent of the time, focuses on what makes us human, that is, the human skills that are common to people no matter where they live. Perhaps twenty per cent of the time the curriculum should focus on what makes us American, or Australian or Chinese, and for thirty per cent of the time focuses on the specific content that is important to us at the time. In other words, the first fifty per cent of the curriculum could be considered the global curriculum, because it would be equally relevant to students, no matter where they lived. Twenty per cent of the time would be spent on issues of relevance to us as a nation, our history, our geography, our political systems, which wouldn't change much over time. Thirty per cent of our time would be spent on the content knowledge that helps us to become employable, that prepares us for university, and so on. This content would change as times change, with the introduction of computer studies being the perfect example.

Thus we might have to review the content curriculum on a regular basis, the national curriculum perhaps once in a while and the global curriculum hardly ever. Currently, and in the past, schools have taught content, and hoped that the human skills will be developed. What I am proposing

here is that we focus on the development of human skills and we use the content to frame this discussion.

In our book *Global Classrooms: Strategies for Engaging Students in Third Millennium Schools* (Townsend and Otero, 1999), George Otero and I discuss the starting point for such a global curriculum. We argue it should be what the curriculum hopes to provide in terms of student needs. Perhaps the best starting point is to consider the skills and attitudes that we want young people to have in our communities in the future. We argue that an education charter for the Third Millennium should be based upon four pillars:

- Education for survival (once the whole curriculum, now the building block for everything else);
- Understanding our place in the world (how my own particular talents can be developed and used);
- Understanding community (how I and others are connected); and
- Understanding our personal responsibility (understanding that being a member of the world community carries responsibilities as well as rights).

These four pillars join to create a new set of critical learning elements, a set of Third Millennium skills and attitudes. This is not to suggest that the current curriculum be overturned or thrown out, but that teachers of the specific subject areas should consider how to develop the human skills while teaching their subject. The rationale is the argument that to improve student achievement in standardized tests, we have to spend less time focusing on the tests and more time focusing on increasing learning for the student.

Student Engagement

We now know a great deal about learning and how teachers might need to behave to engage students. Increasing student engagement involves teachers increasing their knowledge about how students learn, and we now have many areas of knowledge that help us do that, for example, the various types of intelligence, such as emotional intelligence, (Goleman, 1995), spiritual intelligence (Zohar and Marshall, 2000) and multiple intelligence (Gardner et al., 1996) and the brain research. We also know that students will learn much better if they have their parents and the community actively supporting them and the schools in which they learn.

Increasing student engagement also involves changing our focus from curriculum to people. This refocusing means moving from the current situation where many students are isolated learners, learning the facts until the exam is over and then forgetting them forever, to becoming global self-regulated learners. Through engagement where students are helped to form concepts about the world, and through introspection, where they examine the values implicit in these concepts, they become 'global-self regulated learners' (Otero and Sparks, 2000), where instead of needing teachers, the students need someone able to help them construct their learning environment.

Increasing student engagement involves teachers taking the time to communicate with young people. We know that effective communication is never easy in any arena of living. Yet we still act as though we believe that message sent is message received when it comes to classroom instruction. One of the most important things to remember about human development is that our personal view of the world is completely unique. Our view of the world is filtered by who we are, where we come from and what we believe in. Thus, although we might be looking at the same thing as others are looking at, we will see something different than what they do, and although we might listen to something that is being listened to by others, we will hear something different

from them. In the classroom, this means that every time a teacher says something, it is likely that there are 20 or more different perceptions of what has been said.

To engage every student means that we need to deal with multiple perspectives simultaneously and teachers need to establish relationships with students in ways that they have not done before. *The Global Classroom* (Townsend and Otero, 1999) identifies a series of activities where this might happen.

Positive relationships

There are some students who, no matter how hard teachers try, seem to be impossible to reach. Some students are identified as ‘good learners’ and others are considered to be ‘non-learners’. Yet there is no such thing as a non-learner, there are people who learn things that are different (sometimes in contradiction) to what teachers are teaching.

The work of Randall Clinch with students who are struggling to succeed at school has been given a high level of national publicity in Australia. Put simply, the activity is aimed at developing a skill-driven process that empowers individuals to integrate their thinking, feeling and acting in order to lead productive and rewarding lives. In Clinch’s words, *"the main skill I am endeavouring to develop in young people is the capacity to choose their own thoughts. Clarity of thought leads to peace and inner strength. What they do with this skill is up to them, but they are unlikely to find hope or any sense of future without it."* (Clinch, 2001)

The underlying assumptions revolve around the use of either habitual or intelligent behavior. Habitual behavior occurs when a person picks up the ‘vibes’ that he senses in the environment, then habitually responds in the same way that he has previously. It is a simple matter of stimulus-response without thought. The stimulus triggers our memories and our imagination, our memories

of what happened in the past and our imagination of what might (or is likely to) happen in the future, based on that stimulus. The brain research tells us if we respond to a particular stimulus in a particular way, there is a greater tendency to do the same thing the next time that stimulus appears. We become habitually responsive. The emotional response to the stimulus depends on how we see ourselves and the world outside and this can become predominantly positive (optimist) or predominantly negative (pessimist). An optimistic student can deal with or withstand the infrequent negative things that happen, but a pessimistic student sees things as just one more issue sent to trouble them.

However, with intelligent behaviour there has been a thoughtful response to the environment. In this instance, the student has been taught to reinterpret, or determine, the environment and the subsequent perceptions, emotions and actions, by asking appropriate questions that support and strengthen them, even in situations that might initially be interpreted as threatening. The Clinch process trains teachers and parents to develop intelligent behaviour in their students or children.

Clinch argues that to make every student a learner we need to develop five concepts, learning, teacher, self, school and future. The concept of learning needs to be 'the ability to gain knowledge and the ability to do something today I couldn't do yesterday'. The concept of teacher becomes 'someone who facilitates or shares the learning'. The concept of 'self' we need to develop is 'I can learn'. The concept of school is that of 'a place of learning'. The concept of future is 'something that hasn't happened yet, but I am looking forward to'.

From competence to capability

If we accept the premise that to improve student achievement, changes must be made in curriculum, engagement and relationships, then perhaps the greatest task in the future is to manage the changes that are necessary in the hearts and minds of teachers, since it is here that

true improvement in student learning lies. We must move individual teachers past competence and into a position of capability. Cairns (1998, p. 1) argued “Modern Teachers need to be developed as capable which is seen as moving ‘beyond’ initial competencies. The Capable Teacher is what we should be seeking to develop, encourage and honor as the hallmark of our profession.”

If capability can be defined as “having justified confidence in your ability to:

- take appropriate and effective action
- communicate effectively
- collaborate with others
- learn from experiences

in changing and unfamiliar circumstances.” (Stephenson, 1994), then the capable teacher is one that is “able to move beyond basic competence (knowledge and skills) towards a flexibility (coping with present twists and turns) and an adaptability (coping with uncertain futures) in a manner that demonstrates potential and professionalism.”(Cairns, 1998, p. 49)

Making teachers more flexible, adaptable and professional becomes a challenge for school leaders. If the model for developing capable teachers is a combination of three intertwined elements:

- Ability (describes both competence and capacity)
- Values (the ideals that govern the use of ability)
- Self-efficacy (the way people judge their capability to carry out actions effectively)

The challenge becomes clear. To improve teachers' abilities we need to focus our attention on their professional development, particularly in the areas identified above; to improve teachers' values we need to focus on developing and passing on a notion of values and teacher professionalism; and to improve teachers' self-efficacy we need to provide teachers with the ability to believe in themselves.

Just as we need to change the beliefs and understandings of students if we want them to improve their level of learning, school leaders need to change the beliefs and understandings of teachers to manage this process. Essentially for every student to improve their level of achievement, then every teacher must believe that every student has the capability to learn and must have the understanding of how best to promote that. It is one of these two factors that, I believe, is currently preventing change in student achievement in the USA. Hill and Crevola (1997) developed a general design for improving learning outcomes and it might be suggested that all of the strategies on the outside of the wheel have been tried in the US before, either individually or in tandem. What seems to be missing is the most crucial piece, the piece that focuses our beliefs and understandings.

General design for improving learning outcomes (Hill & Crévola, 1997)

If school leaders are to support the change of beliefs and understandings in their teachers they may need to provide what Southworth (2000) calls the nutrients for a productive teacher culture:

- being valued
- being encouraged
- being noticed
- being trusted
- being listened to
- being respected

In the current climate of accountability and blame we can have a tendency to ask ourselves the question “When was the last time I felt valued (or encouraged, or noticed etc)?” We feel that being valued is a hierarchical activity, where we need to be valued by someone in authority over us, like a principal, a superintendent or a school system. But we might also ask ourselves “When was the last time I valued someone else (or encouraged or noticed them)?” Feeling valued is not a hierarchical exercise as every person in an organization can value others. If this happens, soon everyone feels more valued.

Interestingly, a productive classroom requires exactly the same nutrients and we can ask ourselves similar questions, such as “When was the last time I valued (or encouraged or noticed them) the student who gives me the most difficulty?” It is this change in the relationships between people and their learning that might lead us in the right direction.

If this is so, the leadership challenge is to build a culture where teachers, parents, students and school leaders regularly encourage each other to believe in themselves. This can be done by school leaders establishing an environment that suggests that the knowledge necessary to develop best practice teaching and learning already exists in this (and every other) school and that the trick is to find the key to unlocking that knowledge. Establishing activities that allow teachers to share what they do with others in a positive, supportive way, to focus their attention on the task at hand, namely, helping young people to learn, and where people value and encourage everyone in the school, is the leader’s main responsibility in a rapidly changing, and increasingly complex environment. Establishing ways in which students can do the same thing, is one sure strategy for enhancing learning for all.

If learning is improved, then accountability ceases to be a burden.

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