

Hitting the Bullseye of School Improvement: The *IDEAS* Project at work in a successful school system

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ABSTRACT: Many comprehensive approaches to successful school improvement have emerged over the past decade, thus ensuring that school improvement need no longer be a 'hit and miss' affair. But the reconceptualisation of successful organisational improvement in educational contexts nevertheless remains seriously unfinished business.

*It is this 'unfinished business' that this article reports on. It does so by describing the contributory processes, and outcomes, associated with a 'new paradigm' (or 'Fourth Way') educational improvement project (the *IDEAS* Project) at work in schools in a highly successful school system – Sydney Catholic Education Office.*

The research looks in particular at schools in Sydney CEO that achieved substantial growth in NAPLAN results in the period 2006-2010. It is concluded from analysis of the experiences of the schools in question that sustained success in student achievement requires 'multiple leadership sources', encompassing system, school and developmental project leadership constructs and processes.

The concluding section of the article makes use of a well-known literary device – metaphor – to capture and communicate the essential findings of the research. Specifically, the field of

archery, incorporating arrows and target, is used to demonstrate how successful school improvement was shown to unfold in the Sydney CEO and its schools.

Introduction

It has become apparent during the past decade and a half that the achievement of sustained school success need not be a hit-and-miss affair. Largely as a result of a new paradigm for thinking about school success, a number of comprehensive approaches to school improvement have emerged internationally, and have shaken the improvement construct to its very roots. Indeed, it may be said that proponents of improvement approaches – such as those that are noted in Table 1 – have assimilated postindustrial (or, in the words of Hargreaves and Shirley, ‘Fourth Way’) constructs of school-based leadership, teachers’ professional learning, infrastructural redesign and schoolwide pedagogy into a paradigm of organisational development that bears almost no resemblance to equivalent processes from preceding generations.

TABLE 1: A GLOBAL CROSS-SECTION OF ‘NEW PARADIGM’ SCHOOL IMPROVEMENT PROJECTS AND FRAMEWORKS

School Improvement Initiatives	Reporting Authors
Projects	
Instructional Rounds in Education (United States)	City et al. (2009)
Manitoba School Improvement Program (Canada)	Earl et al. (2003)
Building Capacity for School Improvement: An Initiative of The National College for School Leadership (UK)	Hadfield et al. (2002)
Raising Achievement: Transforming Learning Project (UK)	Hargreaves & Shirley (2007)
The <i>IDEAS</i> Project (Australia)	Andrews, Crowther, Morgan & O’Neill (2012) Crowther et al. (2011)
Alberta Initiative for School Improvement (Alberta, Canada)	Parsons, McRae & Taylor (2006)
Systems Policy Frameworks	
National School Effectiveness Framework (Wales)	Harris (2011); Egan & Marshall (2007)
Educational Policies and Reform Principles (Finland)	Sahlberg (2012); OECD (2011)
Learning To Lead Effective Schools (Victoria, Australia).	Matthews, Moorman & Nusche (2007)

But the re-conceptualisation of organisational improvement in educational contexts remains seriously unfinished business. Most notably, the research that has been conducted, while impressively comprehensive and disciplined, has not enabled closure to be declared on fundamental questions such as: *What matters most in the enhancement of students' educational experiences – their classroom, their school or their system? How can leadership forms that encapsulate both principals and teachers be most effectively achieved in practice? How can a pedagogical focus be attained, and sustained, as part of a school's ongoing improvement process? How might the sustainability of enhanced school outcomes, once achieved, be assured into the long-term?*

In this article, we report the outcomes of research into student achievement successes that were attained at least in part as a result of a 'new paradigm' school improvement initiative that was undertaken in a highly supportive systemic context. The research problem that guided the research was:

What range of educational influences, both internal and external to the school, contributed to student achievement successes in a cohort of IDEAS schools in Sydney Catholic Education Office in the period 2006-10?

To commence the article, the key features of the 'new paradigm' agency for transformation – the *IDEAS* Project – are presented and discussed. Some key characteristics of the research system – Sydney CEO – are then outlined briefly, followed by the main strategies for implementation of the *IDEAS* Project in that system. That done, the research methodology is outlined, followed by the key findings of the study. A set of practical conclusions is then presented. The article concludes with a description of the *Archery* metaphor that emerged from analysis of the research findings.

A feature of the article is the use of metaphor. Metaphor as a literary device derives originally from the Greek 'to transfer' or 'carry over'. When Robert Frost, in *The Road Not Taken* (see <http://www.poetryfoundation.org/poem/173536>), used a winding road to discuss the passages of life, he was employing metaphor as his vehicle. There is no apparent reason why metaphor cannot be used to great advantage by school leaders in their administrative and developmental work – for example in visioning and the formatting and presentation of school-developed pedagogical constructs. Certainly, the researchers who undertook the creative work that is reported in this article have found considerable benefit in using the *Archery Bullseye* metaphor to both conceptualise their findings and articulate their conclusions regarding a highly successful school improvement process.

***IDEAS* - A new paradigm approach to school improvement**

The Innovative Designs for Enhancing Achievements in Schools (*IDEAS*) Project has been in place for 15 years, having commenced in 1997 as a joint initiative of Education Queensland and the Leadership Research Institute, University of Southern Queensland. Since its inception, *IDEAS* has been implemented in more than 400 schools, encompassing most Australian states and systems as well as schools in Singapore and Sicily. Periodic evaluations (Chesterton & Duignan, 2004; Ng & Chew, 2008; Robson, Lock & Pilkington, 2009; Andrews & the USQ-LRI Research Team, 2009) attest to its widespread success at the school level, but also across clusters and systems.

The five key dimensions of *IDEAS* represent a major departure in traditional thinking about school improvement. Understandably, each of the dimensions has undergone refinement during the course of *IDEAS* history, but the essential meanings have remained largely intact. Hargreaves and Shirley's criteria for a 'Fourth Way' approach to 21st century educational leadership would appear to be alive and well in the key features of the *IDEAS* Project. Specifically:

The first feature of *IDEAS* is its grounding in a worldview of propitious possibility – that schools are largely very positive institutions, that teaching is the 21st century 'profession of hope' (Wrigley, 2003) and that teachers' professional learning should be based on the fundamental principle of 'success breeds success'. The *IDEAS* vision captures this broad ethos and is stated as follows:

To inspire schools to engage in journeys of self-discovery which will ensure that they achieve sustainable excellence in teaching and learning.

Consistent with this statement, *IDEAS*-based school visions (such as the following) invariably focus on successful experiences and aspirational outcomes:

- *Together we achieve the extraordinary*
- *Together we reach to the horizon and beyond*
- *Success in any field*
- *Sharing our forest of opportunities*
- *From this hill we will soar*

Hargreaves and Shirley (2009) in their book, *The Fourth Way*, described a new way of thinking about school improvement, one that they claim is suited to both 21st century democracy and professionalism. It is this 'Way' that Hargreaves drew on when he described the *IDEAS* Project as a:

... fourth way change strategy that established a firm framework to enable educators to support and challenge themselves and each other in achieving higher purpose for the good of all students, especially the most disadvantaged – involving those very students and their communities in the change process itself. *IDEAS* and its champions understood that students and their lives were the purpose, teachers were the key, and that whatever the reasons for previous failure, the past was the past, and no blame would be assigned as schools forged a better path. (Hargreaves, in Crowther & Associates, 2011, p. xv)

A second feature of *IDEAS* is its evolutionary process – a 3-4 year, 5-stage strategy that is designed to enable school-based educators to develop, and implement, dynamic wholeschool understandings of vision, values, schoolwide pedagogy and pedagogical expertness (the process is summarised in Table 2). Whole-school compositions of vision and pedagogy, often in the form of metaphor, symbols, diagrams and images, are worked into teachers' core practices and students' learning experiences through processes of schoolwide professional learning, facilitated by special forms of distributed leadership. Hargreaves and Shirley clearly had this feature of *IDEAS* (i.e. continuous progress towards heightened goals) in mind when they wrote that Fourth Way school improvement incorporates '... a commitment developed with the school's leaders to set and reach ambitious shared targets for improvement in a "culture of target setting" so that "everyone owns them"' (p. 67).

TABLE 2: *ideas* PROCESS**The *ideas* process (in brief)**

- *initiating* a revitalisation process that is proven and that ‘will work for us’
- *discovering* levels of school ‘alignment’ through analysis of workplace successes and challenges
- *envisioning* our preferred ‘school of the future’
- *actioning* of pedagogical decisions in classrooms, through teacher leadership and professional learning
- *sustaining* progress through regular induction programs

Adapted from Crowther et al., 2001

A third feature of *IDEAS* is the emerging organisational construct of ‘balance’, also known as fit, cohesion, harmony or alignment. Global research that began three decades ago with Peters and Waterman (1982), and that has been extended by researchers such as Hopkins and Stern (1996), Garvin (1998) and Barki and Pinsonneault (2005), has established that when the core structural features of an organisation are ‘aligned’ in philosophy and practice, and when there is ‘alignment’ in the mindsets of key organisational players, productivity is most likely to increase and workplace health to be highest. Further to this point, and with the school organisation as their clear focus, Day, Leithwood and Sammons (2008, p. 84) have recently asserted that:

A key strategy in ... endeavours ... to improve the cultures of teaching, learning and achievement ... is the alignment of structures and cultures with ‘vision’ and ‘direction’...

In *IDEAS*, five organisational ‘elements’ are posited to be critically important to sustained school success. When the five characteristics are individually developed and brought into ‘alignment’ with each other, a school’s potential to enhance its outcomes has indeed been found to increase (Jeyaraj, 2011). The five elements are:

- the school’s strategic direction (i.e. vision and values);
- stakeholder (i.e. parents, students, teachers) expectations of, and aspirations for, the school;
- the school’s pedagogical framework;
- the school’s infrastructural features (such as use of IT, curricula, time and space); and
- teachers’ schoolwide professional learning strategies.

Fourthly, *IDEAS* is underpinned by a new construction of educational leadership, denoted ‘parallelism’, that also has Fourth Way characteristics.

Parallel leadership derives from both contemporary international research into distributed leadership and a decade of researched *IDEAS* practice. It is conceptualised in the *IDEAS* Project and associated international publications as:

... a process whereby teacher leaders and their principals engage in collective action for purposes of schoolwide development and revitalisation. It embodies three distinct

qualities – mutual trust, shared purpose, and allowance for individual expression (Crowther et al., 2002, 2009).

Parallel leadership presumes to elevate the professionalism of teachers to levels that exceed traditional perspectives on the teaching profession. It does this through its sense of moral purpose as well as powerful constructions of teacher-principal relatedness and established association with enhanced school outcomes. Thus, Hargreaves and Shirley (2009) have asserted that distributed leadership is a Fourth Way construct because it is ‘...grounded in and advances a compelling moral purpose... builds capacity and develops leadership succession in a dynamic and integrated strategy of change’ (p.97).

Principals’ leadership functions in parallel leadership are conceptualised in *IDEAS* as ‘metastrategic’ and are outlined in Table 3.

TABLE 3: THE FIVE METASTRATEGIC FUNCTIONS OF THE PRINCIPAL IN SCHOOL IMPROVEMENT

Function One: Envisioning inspiring futures and transposing futuristic values into a creative school vision

Function Two: Developing the five strategic ‘elements’ of highly successful organisations and creating heightened alignment between them

Function Three: Nurturing teacher leadership and developing authentic parallel leadership relationships between principals and teacher leaders

Function Four: Constructing and managing synergistic alliances through within-school and cross-school work groups

Function Five: Refining the school’s cultural identity to emphasise distinctive and proud educational images

Adapted from Crowther et al., 2009

Teachers’ functions in parallel leadership (Table 4) reflect all globally significant leadership theories (see Crowther et al., 2009 for an analysis and conclusions) but, in addition, emphasise pedagogical enhancement, particularly schoolwide pedagogical development and expert practitionership (Crowther et al., 2002, 2009). It can be said that, in so doing, parallel leadership enters the territory of a new professional leadership paradigm for school-based educators.

Fifthly, pedagogy takes on a new and distinctive form in the *IDEAS* Project. The work of the 21st century professional teacher is conceptualised in the *IDEAS* Project as ‘three-dimensional’, and as encompassing the integration of personal pedagogy (PP), schoolwide pedagogy (SWP) and authoritative pedagogy (AP).

Each of the three dimensions of 3-D.P as described in the *IDEAS* Project has a unique meaning and deep history.

In generating the first dimension – the concept of SWP – the *IDEAS* Project team drew primarily on the research of University of Wisconsin-Madison researchers, Fred Newmann and Associates (1996), who developed the notion of ‘authentic pedagogy’ out of research conclusions that student achievement can be heightened when teachers develop a common pedagogical

philosophy and support each other in their schoolwide practices through intensive shared professional learning. However, the term ‘SWP’ has, until recently, been unique to the *IDEAS* Project. It is regarded as a more appropriate descriptor than is ‘authentic pedagogy’, though the two terms are based in closely associated theory and research.

TABLE 4: TEACHERS AS LEADERS FRAMEWORK (SUMMARISED)

<p>Teacher leaders ...</p> <ul style="list-style-type: none"> • Convey convictions about a better world by articulating a positive future for all students • Facilitate communities of learning by encouraging a shared, schoolwide approach to core pedagogical processes • Strive for pedagogical excellence by continuously developing personal teaching gifts and talents • Confront barriers in the school’s culture and structures by standing up for marginalised groups (and individuals) and encouraging student ‘voice’ • Translate ideas into sustainable systems of action by managing projects that heighten school alignment • Nurture a culture of success by emphasising high expectations and accomplishments

Adapted from Crowther & Associates, 2011, p. 178

The SWP framework that is contained in Table 5, created by the St Barbara’s Catholic Primary School (Sydney CEO) teaching staff under the coordination of the principal, and facilitated by teacher leaders, had the effect of raising the aspirations of both teachers and students to go beyond their ‘best’, individually and collectively. This statement of lofty pedagogical goals and schoolwide processes could be said to reflect the *Fourth Way* pillar of *Inspiring an inclusive vision that unites and energises people*. St Barbara’s NAPLAN results provide evidence of compelling success in both Reading and Numeracy that the principal and teacher leaders traced back to their energising vision and colourful, but educational, SWP.

Specifically, the development and implementation of a rigorous SWP at St Barbara’s contributed to both raised teacher aspirations in student Literacy and Numeracy and to more congruous applications of priority Literacy and Numeracy strategies schoolwide. For example, the SWP principle of ‘Navigation’ was attributed a primarily metacognitive definition by the St Barbara’s teacher leaders and professional learning community for purposes of Literacy teaching. Accordingly, heavy emphasis was placed upon a ‘language for learning’ that encompassed four variables:

- teachers’ deep subject area knowledge;
- students’ deciphering of individual ways of learning;
- teachers’ modelling of the types of questions they want students to ask of themselves; and
- conscious recognition by students of how genres differ (e.g. science texts on the one hand, narratives on the other) as an aid to being able to ask the ‘right questions’ in research projects.

TABLE 5: AN IDEAS PROJECT EXAMPLE (ADAPTED) OF SCHOOLWIDE PEDAGOGY (SWP)

At St Barbara's, Seaview (Primary) we are inspired by the strength and gentleness of our Patron Saint and also by our unique location overlooking the ocean

Our Vision: Together we reach the horizon and beyond

Our Schoolwide Pedagogical Framework

Navigating our journey (planning and actioning our learning)

Swimming between the flags (acting responsibly)

Fun in the sun (teaming up)

Beyond the horizon (thinking about our future and skilling up)

An example of an expanded pedagogical principle – Navigating our journey

Deciding where we want to go (meta-cognition*)

Agreeing on a trustworthy way to get there (collective diagnosis & thinking flexibly*)

Getting expert help when we need it (thinking interdependently & persistence*)

Assessing our progress at points along the way (striving for accuracy*)

***Note:** The authoritative pedagogy used to justify this SWP principle was based on Costa's Habits of Mind.

The second dimension of 3-D.P – Personal Pedagogy – is based in a quite different rationale. Of utmost importance in the *IDEAS* Project is that teaching is portrayed as a key 21st century profession that involves special gifts and talents of its practitioners:

Teaching draws on a multiplicity of cognitive, affective and interpersonal elements. To appreciate fully the challenge of teaching excellence, we have to bear in mind not only the extraordinary diversity of these elements but also the many different ways that teachers can draw on them to construct teaching behaviour. (Hegarty, 2000, p. 451)

The exploration of Personal Pedagogy in the professional work of *IDEAS* teachers has been informed by a number of well-known studies (Clandinin & Connelly, 1995; Elbaz, 1983; Marland & Osborne, 1990) that have explored the work of teachers and developed frameworks for thinking about teaching as an individual and personalised enterprise.

The third aspect of 3-D.P – Authoritative Pedagogy – has been fundamental to respected educational philosophers, theorists, leaders and practitioners for countless generations. Thus, time-honoured pedagogical theories and practices such as constructivism, metacognition, behaviourism, critical theory, social inquiry, problem-based learning and choice theory are presented in *IDEAS* as authoritative exemplars that school staffs might use to assess the validity and integrity of their in-house pedagogical work. But equally important are highly credible 21st century pedagogical theories such as brain theory, multiple intelligences, emotional intelligence, PsyCap, e-neurology and group cognition.

In summary, *IDEAS* is based on five highly distinctive features that are largely consistent with 'new paradigm' educational thinking such as that which is contained in Hargreaves and Shirley's (2009) *Fourth Way*. Thus, school leaders and practitioners in Sydney CEO who implemented the

IDEAS Project had to make a clear decision as to whether to commit to a developmental paradigm that, for many, amounted to radical new leadership and pedagogical territory.

Sydney Catholic Education Office (CEO) – An introduction

It is of importance in any consideration of the research on which this article is based that the key features of the Catholic Education Office (CEO) in the Archdiocese of Sydney be understood.

The CEO is a midsize education system, responsible for about 63,000 students in 111 primary and 36 secondary schools. As a ‘system’, the Sydney CEO is therefore somewhat similar in size to many Australian Catholic systems and state education regions. It might be said to be small enough to emphasise cross-school personalised relationships and collective professional action but large enough to allow for diversity and encourage a degree of autonomous school-based initiative. It is also important to note that 60% of CEO students have a language background other than English and 5.25% have diagnosed disabilities.

The CEO structure consists of a Central Office and three Regional Offices (Inner Western, Eastern and Southern). Each region has a director and a number of consultants. Each regional consultant is responsible for a cluster of schools, providing support and mentorship to school principals. Key features of Sydney CEO developmental processes that are of relevance to this research are outlined below.

The Sydney CEO approach to school improvement and accountability

The development of an education system that can impact positively on student achievement has been an espoused long-term priority for Sydney CEO senior leaders. Key improvement and accountability strategies over a period of a decade or more have included:

- making the CEO vision explicit and delineating associated expectations through ongoing communications, professional development, consultation and engagement with stakeholders;
- development of a School Review and Accountability Model that is consistent with principles of international best practice;
- development of a CEO leadership framework and its application in the professional development of leaders, especially principals;
- development of a professional development framework that emphasises both accountability and personal growth (i.e. Personal Performance Planning and Review (PPPR) for staff;
- development of a succession planning model for both system and school leaders;
- emphasis on distributed responsibility for success, encompassing regional directors, regional consultants, principals and teachers;
- public declaration of system and school targets, goals and achievements; and
- ongoing system and school reviews, planning, research, evaluation and redevelopment. (Canavan, 2007)

It is widely asserted that Br Kelvin Canavan was the 'founder' of the modern Sydney CEO, having been appointed as the inaugural Director in 1987. In late 1993, in his capacity as Executive Director of Schools, Br Kelvin authored a cutting-edge article entitled *Excellence in Teaching and Learning in Primary Schools: The Principal and Quality Education*. The article was the first of many communications in which Br Kelvin outlined his views on quality education and the underpinning philosophy of *The Reshaping our Catholic Schools for the 21st Century* strategic plan (1990).

The 1990 strategic plan emphasised a cyclical approach to planning, school review and strategic management, a somewhat revolutionary concept at that time. One predicted outcome was the generation of 'an openness to the leadership and management of the CEO as a stepping stone towards stronger strategic planning and improved school performance' (Canavan, 2007, p. 10).

Consistent with this thinking, a review and planning process was developed to reflect five factors:

- a 5 Year formal review process, leading to a published school strategic plan;
- a yearly review, followed by an annual report to the community;
- the development of an Annual Development Plan;
- active role descriptions, incorporating goals and strategies; and
- PPPR as a core accountability mechanism, and linked to the annual development plan.

Schools' annual reports from that point on (i.e. 1990) were expected to include all relevant information about a school's performance, new initiatives, significant school developments, key achievements and major goals for the ensuing year. School performance reports were to include student achievement on state tests (i.e. NSW Basic Skills Test; NSW High School Certificate).

A similar review cycle was also developed by, and used within, the CEO office itself.

It might well be argued that the comprehensiveness of the CEO's approach to the dual processes of school improvement and school accountability in the decade 1987-1997, and the close alignment of these processes with systemic goals and values, paved the way for student learning successes that began to become apparent in the period immediately ahead and that appeared to consolidate as the first decade of the new millennium unfolded.

Certainly, the 20-year period 1987-2007 was characterised by an unambiguous focus in Sydney CEO on visioning, mission building, religious education and evangelisation together with school improvement, including student academic achievement (Canavan, 2007, p. 9). Within the *Towards 2010* strategic plan (Catholic Education Office, 2005), more than previously, specified targets relating to student achievement and pedagogy were articulated.

In order to support schools pursuing their agreed academic targets, the CEO has in recent years emphasised the provision of a small number of priority programs, mainly in Literacy (e.g. Learning Features Text Types (LFTT); Reading Recovery), but also in Maths (e.g. Year 5-Year 8 Mathematics Project; iLe@rn and Numeracy Project). Authoritative school improvement projects such as *IDEAS* have also been endorsed for school trialling and implementation. The performance of schools in relation to systemic (and their own) targets has been, and continues to be, published in both schools' annual reports (on public websites) and also in CEO newsletters.

The current strategic plan, (2011-2015), *Building on strength*, continues to emphasise processes of school-system alignment, school accountability and a culture of continuous improvement.

IDEAS in Sydney CEO

The *IDEAS* Project commenced in Sydney Catholic Education Office schools in 2006. While student achievement was not the focus of the decision to undertake *IDEAS*, it was certainly an associated concern. The direct impetus for *IDEAS* came from recommendations by regional consultants and principals for a trial project, based on conference presentations by *IDEAS* staff, analysis of *IDEAS* publications and the reported experiences of school leaders in other Australian school jurisdictions with local and regional *IDEAS* undertakings. Advocacy by Regional Consultants, particularly Mrs Elizabeth O’Carrigan, saw the commencement of *IDEAS* in 10 CEO primary schools in 2006. Reports of success in the first *IDEAS* cohort resulted in creation of a second cohort in 2007. Additional cohorts entered the program in 2008 and 2009.

In total, *IDEAS* has been implemented in a total of 45 primary schools and 12 secondary schools in the Sydney CEO in the period 2006-12. Participation has always been optional, with the decision to participate residing with school leaders. The CEO has, however, assisted schools financially through a cost-sharing arrangement and through a range of organisational support mechanisms.

Of particular note in school decisions to implement *IDEAS* has been the perceived philosophical compatibility between School Review and Improvement (SRI) processes on the one hand and *IDEAS* processes on the other. As explained by Mrs O’Carrigan, the Catholic Education Office uses its School Review and Improvement (SRI) to attempt to build a culture of continuous improvement in each of its 147 schools. The SRI framework comprises a number of linked processes that are underpinned by the key principles of ‘one size does not fit all’, ‘no blame’, ‘evidenced-based self reflection’ and ‘improved outcomes for all students’. The *IDEAS* processes for school revitalisation are underpinned by similar principles and, as such, are seen as complementing the SRI processes.

The *IDEAS* Project has been delivered in Sydney CEO through a range of informational, analytical and developmental activities, including the following eight core strategies:

- Cluster workshops – five days of developmental workshops, spread across the duration of the program;
- School visits – one per semester immediately preceding or following an *IDEAS* workshop (conducted by an accredited *IDEAS* resource person);
- Learning forums – held annually, for purposes of cluster sharing and problem-solving;
- Teleconferences – two per semester, on pre-determined *IDEAS* topics;
- Leadership resources – website and print materials, including a *Facilitation Manual* and exemplars of *IDEAS* practice;
- Cluster planning and review meetings – one per term, facilitated by an accredited *IDEAS* resource person;

- National learning forums – held in alternate years, to enable cross-system sharing and learning; and
- CEO Steering Committee meetings – one per semester.

The 2006 *IDEAS* trial schools were grouped according to region and were managed in their developmental work in relation to the five stages of the *ideas* process (Table 2), by their respective regional consultants. The regional consultants undertook two particular functions:

- to support their schools through provision of resources and through engagement in professional conversations about *IDEAS* concepts and strategies; and
- to network schools through facilitation of cluster meetings, teleconferences and forums.

Sydney CEO's highly comprehensive engagement with *IDEAS*, encompassing 57 schools over six years, therefore provides an exciting educational context in which to explore the significant research problem that guided this research.

The Research Method

The research involved three distinct phases of investigation into the implementation of *IDEAS* in two cohorts of Sydney CEO schools. The first cohort, comprising 10 primary schools, began *IDEAS* in 2006. The second cohort included 15 primary schools and five secondary colleges began *IDEAS* a year later (2007). The following three research questions were developed to guide the research:

1. *What student successes were achieved by the 2006-7 IDEAS cohorts in the period 2006-10?*
2. *What factors contributed to successes achieved by schools:*
 - a. *through the IDEAS Project?*
 - b. *through school initiatives (other than the IDEAS Project)?*
 - c. *through system initiatives (other than the IDEAS Project)?*
3. *What explanations for success, from the perspectives of school leaders and system supervisors, emerge from the research?*

It was deemed by the Project Steering Committee to be important that the research methodology take account of the complexity of the Sydney CEO context, firstly in terms of variations in local school communities, secondly in terms of the range of educational initiatives in which schools were involved, and thirdly in terms of variations in schools' uptake of innovations, including *IDEAS*. It was also noted that the researchers needed to proceed with caution in exploring possible impacts of *IDEAS* because of the numerous variables that are generally asserted to impact on school improvement outcomes (Duran, 2005; Griffin, Woods & Nguyen, 2005; Hattie, 2003; Wikeley et al., 2005). With these caveats in mind, the research adopted a three-level 'drilling down' methodology for data gathering, analysis and interpretation, namely macro (system) level, medial (*IDEAS* cohort) level and micro (school) level.

In phase one of the research, the standardised test results from all CEO schools over the period of approximately a decade (i.e. 2000-2010) were compared with state and national test

results. This macro-analysis allowed the system's long-term performance to be understood and interpreted.

In phase two, the researchers worked with CEO research staff to 'drill down' to the medial (project) level and assemble and interpret data from standardised tests for the 2006-2007 *IDEAS* cohorts. The results of these medial analyses were compared with system and state norms. Reports on student learning outcomes in Reading and Numeracy were then compiled on a school-by-school basis in accordance with two criteria: (i) trends over time and (ii) growth over time, based on the Australian NAPLAN (2010) national Literacy and Numeracy test results for Years 3, 5, 7 and 9. Also during phase two of the research, each school's degree of implementation of *IDEAS* was calculated, based on the understanding of both *IDEAS* staff and CEO supervisors of the school's *IDEAS* Project progress and school leaders' reports of their schools' *IDEAS* journeys. On the basis of statements of ascribed implementation indices, a sample of nine schools was selected for field visits and detailed interrogation. Interviews were then conducted to explore and conceptualise the nine schools' progress through *IDEAS* and their levels of academic success.

In phase three of the research, a sub-sample of five case study schools was selected on the basis of (i) having reached the *Sustaining* phase of *IDEAS* and (ii) evidence of improved NAPLAN outcomes. Reading (as a major aspect of NAPLAN literacy) was adopted as the key dependent variable because Reading ability is regarded by many authorities as the best predictor of future educational achievement (Schatschneider et al., 2004). Numeracy was also adopted as a dependent variable because of its importance in the NAPLAN student assessment program. Four of the five schools that met these criteria agreed to participate in the phase three research. Each of the four schools could demonstrate growth in Reading and/or Numeracy that appeared to be statistically greater than that of the State (using a one sample t-test, $p < .05$).

Phase three of the research involved two experienced researchers for each of the four case study schools 'drilling down' deeply into school-level outcomes, processes and circumstances. The research pairs conducted focus group discussions and individual interviews with those staff in each of the four schools who had been prominent in the implementation of the *IDEAS* process. Data were gathered using a series of exploratory questions, taking on average about two to three hours to collect. Student achievement data were scrutinised, other school outcomes data were reviewed and a backward-mapping strategy was used to chart the school's longitudinal *IDEAS* experience. Documentation and artefacts regarding *IDEAS* journeys, visions, values and schoolwide pedagogy were also collected.

In summary, data collection and analysis activities were undertaken at three research levels – the macro (CEO) level; the medial (*IDEAS* Project) level; and the micro (school) level. Given the comprehensiveness of the research process, it was hoped, and believed, that deep insights into the complex relationships between contextual variables that influence school success might be captured in the ensuing data analysis and interpretation.

Analysis and Interpretation of the Research Data

Systemwide student achievement success in Sydney CEO, 1998-2010

The 'drilling down' data analysis and interpretation began with a consideration of Sydney CEO student achievement data during the period 1998-2010.

The first measures of systemic significance related to the NSW Primary Schools Basic Skills Tests (BST) in Literacy and Numeracy. Results from these tests for the Sydney Catholic Education Office schools are shown in Table 6 (Literacy) and Table 7 (Numeracy). The tables show substantial growth in Literacy across a period of almost a decade – from 74% to 93% of students in the superior bands (i.e. 3-6) for Year 3; from 84% to 93% for Year 5; and an equally strong pattern for Numeracy across the same period of time (i.e. from 73% to 85% in the superior bands for Year 3; and from 84% to 89% for Year 5). Given the timeframe involved (roughly a decade) the significance of the consistent growth in superior academic bands must be regarded as meaningful.

TABLE 6: % OF SYDNEY CEO YEAR 3 AND YEAR 5 STUDENTS IN LITERACY BANDS 3-6, AS MEASURED BY STATEWIDE NSW BASIC SKILLS TESTS, 1998 - 2007

Literacy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Year 3 Bands 3-5	74	82	83	83	85	87	89	87	92	93
Year 5 Bands 4-6	84	86	86	88	93	92	90	88	94	93

Source: Canavan, 2011, p. 11

TABLE 7: % OF SYDNEY CEO YEAR 3 AND YEAR 5 STUDENTS IN NUMERACY BANDS 3-6, AS MEASURED BY STATEWIDE NSW BASIC SKILLS TESTS, 1998 – 2007

Numeracy	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Year 3 Bands 3-5	73	79	78	84	85	84	84	87	85	85
Year 5 Bands 4-6	84	84	83	88	87	88	90	88	89	89

Note: Band range Year 3: 1 (lowest) to 5 highest; Year 5: 1 (lowest) to 6 highest

Source: Canavan, 2011, p.11

A second important measure in assessing and understanding the overall level of success of Sydney CEO in student achievement relates to the national NAPLAN testing program. NAPLAN results for years 5 and 9 in the period 2008-10 indicate substantive systemwide growth in Reading and Numeracy, raising the tantalising question: How did they do it?

Note: NAPLAN, as Australia’s national, full-population test, assesses all Year 3, 5, 7 and 9 students’ achievement annually in the domains of Reading (with other aspects of Literacy) and Numeracy. Individual and group results are reported against national achievement scales that describe performance and skills on a 10-band scale (NAPLAN, 2012). One band is set annually as the minimum standard for each year level. The test provides an overall mean score on a range of 0 to1000 at student, class, school, system, state and national levels.

When the 2010 NAPLAN Growth Data for Year 5 are considered, the Sydney CEO demonstrates positive overall growth when compared with State (NSW) and national norms (refer Table 8).

TABLE 8: A COMPARISON OF STUDENT GROWTH FROM YEAR 3 TO YEAR 5, IN READING AND NUMERACY, FOR NATIONAL, STATE (NSW) AND SYDNEY CEO SCHOOLS, 2008-2010

KLA	Comparative mean scores, 2010			% Growth from 2008 to 2010 (Years 3 to 5)	
	CEO	State	National	CEO	State
Reading	511.2	496.8	487	83.1	83.8
Numeracy	512.4	499.5	489	92.9	89.1

As is apparent in Table 9, this conclusion applies even more strongly at the Year 9 level, raising a range of questions of consuming importance to contemporary educators regarding underpinning school and system improvement processes.

TABLE 9: A COMPARISON OF STUDENT GROWTH FROM YEAR 7 TO YEAR 9 IN READING AND NUMERACY FOR NATIONAL, STATE (NSW) AND SYDNEY CEO SCHOOLS, 2008-2010

KLA	Comparative mean scores, 2010			% Growth from 2008 to 2010 (Years 7 to 9)	
	CEO	State	National	CEO	State
Reading	586.2	579.6	573.7	38.4	35.1
Numeracy	602	594.2	585.1	46.2	39.1

A third measurement device relates to the New South Wales HSC examination. Table 10 indicates striking longitudinal growth in student achievement in the Sydney CEO on HSC examinations, 1995-2010, relative to State norms.

TABLE 10: % OF SYDNEY CEO STUDENTS ACHIEVING ABOVE STATE MEANS ON HSC EXAMINATIONS

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
%	51	41	48	52	52	52	52	56	57	60	55	61	60	61	67	68

Source: Canavan, 2011, p. 12

Table 11 provides further detail on this significant point. It can be deduced from Table 11 that the number of Sydney CEO students gaining superior HSC band (i.e. Band 6) academic success grew disproportionately to State numbers during the period 2001-09.

TABLE 11: A COMPARISON OF HSC BAND 6 NUMBERS, 2001-2010, IN SYDNEY CEO AND THE STATE (NSW)

Year	Number of Band 6s attained	
	Sydney Catholic CEO	State
2001	448	11,585
2002	865	18,273
2003	857	18,869
2004	892	20,870
2005	1,131	21,947
2006	1,281	22,925
2007	1,288	24,736
2008	1,585	27,091
2009	1,648	27,439
% increase from 2001 to 2009*	368%	237%

Source: Canavan, 2011, p. 12

Two generalisations of major importance to the research emerge from this macro-level analysis of CEO achievement data:

- First, in the past decade and a half Sydney CEO has been a convincing success story, as evidenced in a range of authoritative statistics derived from Basic Skills, NAPLAN and HSC databases;

- Second, any deductions that might be made regarding student achievement success in particular schools, or clusters of schools, in the CEO should be careful to acknowledge this context of overall systemic success.

With these significant macro-level generalisations identified, the research proceeded to a second level of ‘drilling down’, namely to the ‘medial’ level of student achievement in *IDEAS* Project schools.

IDEAS Project student achievement successes in Sydney CEO, 2006-10

The research problem that guided the study presupposes the possibility of a complex relationship between macro (i.e. system), medial (i.e. *IDEAS* Project) and micro (i.e. school) variables in successful student achievement in Sydney CEO. Thus, while it has been established that student achievement in Sydney CEO at the system level improved continuously over a period of a decade or more, it is equally important to know whether achievement in clusters of schools, and/or individual schools, necessarily followed the same pattern of growth.

In the second (medial) phase of the research, a single and definitive question was explored: *What is the nature of IDEAS Project schools’ achievement, viewed in the context of Sydney CEO’s systemic success?* In this phase of the research, the 2010 NAPLAN results for the 10 *IDEAS* primary schools in cohort one (2006) and 15 primary schools and five secondary schools in cohort two (2007) were used as the guideposts in ascertaining the possible impacts of *IDEAS* in the overall success of the Sydney CEO system.

Table 12 shows the proportion of schools in each cohort that had reached the *Sustaining* phase of *IDEAS* at the time of the research. (Note: Each of the 22 *Sustaining* schools had made a commitment to continuous schoolwide improvement, had completed a detailed organisational diagnosis and analysis, had developed a compelling school vision and generated a comprehensive schoolwide pedagogical framework (SWP) that was being used at the time of the research, in varying degrees and a broad spectrum of ways, to shape (and reshape) classroom teaching and learning practices).

TABLE 12: 2006-2007 COHORTS COMPLETION OF *IDEAS* TO THE *SUSTAINING* PHASE

Cohort	Completed <i>IDEAS</i> to <i>Sustaining</i> phase
2006 Primary	8/10
2007 Primary	12/15
2007 Secondary	2/5

Table 12 reveals a level of implementation of *IDEAS* that might be considered impressive, given the popular assertion in educational leadership circles that substantive pedagogical change is extremely difficult to bring about. That is, in 22 of 30 participating schools, teacher leaders were

facilitating processes of pedagogical enhancement on a schoolwide basis, encouraged by principals working with them ‘in parallel’.

The question that then arises is: *Did IDEAS Project schools and classrooms experience meaningful ‘change’ in the sense of enriching students’ learning experiences and enhancing their learning outcomes?*

In relation to this vitally important question, Table 13 shows *IDEAS* cohorts’ growth rates in NAPLAN Reading and Numeracy, compared with CEO and State growth rates, across the duration of the *IDEAS* Project.

As can be seen, the 2006 *IDEAS* Project primary schools’ growth rate exceeded the CEO’s growth rate for NAPLAN Year 5 Reading by 8.2% and Year 5 Numeracy by 13.4%. *IDEAS* Project growth in comparison with State growth was equally impressive. These patterns in *IDEAS* Project schools’ growth are concluded to be ‘substantive’, in that they exceeded the achievement levels of a highly successful system and the State. (Note: ‘Substantive’ school growth is defined as growth that is at least 10% greater than systemic norms for primary schools and 5% for secondary schools). Choice of these statistics reflects (i) recognised criteria for statistical significance on a one sample t-test and (ii) the assertion that NAPLAN data show greatest growth in primary years (Adams, 2012).

TABLE 13: IDEAS COHORTS’ GROWTH IN YEARS 5 AND 9 NAPLAN READING AND NUMERACY, 2006/7-2010, COMPARED WITH CEO AND STATE NORMS

Cohort	Reading			Numeracy		
	IDEAS Cohort %Growth	State %Growth	CEO %Growth	IDEAS Cohort %Growth	State %Growth	CEO %Growth
Primary						
2006 IDEAS Cohort	91.3	83.8	83.1	106.3	89.1	92.9
IDEAS Differential		+7.5	+8.2		+17.2	+13.4
2007 IDEAS Cohort	82.1	83.8	83.1	60.8	89.1	74.2
IDEAS Differential		-1.7	-1.0		-28.3	-32.1
Secondary						
2007 IDEAS Cohort	35.8	35.1	38.4	40.9	39.1	46.2
IDEAS Differential		0.7	-2.6		1.8	-5.3

As is shown in Table 14, three 2006 *IDEAS* Cohort schools achieved NAPLAN Reading growth of 10-18% in excess of CEO norms. Two of these (2 and 3) had statistically greater growth than the CEO and the third's growth (10) was approaching significance. These three schools plus one other (4) also improved their Numeracy growth by rates of 13-33% in comparison with CEO norms, with two showing statistically significantly greater growth than the CEO and two approaching statistical significance. This deduction raises important questions about possible within-school 'transfer of learning' and leads to the further question of how *IDEAS* Project schoolwide processes, particularly those relating to visioning, professional learning and SWP, might have contributed to the cross-KLA successes of the schools in question.

TABLE 14: READING AND NUMERACY GROWTH RATES OF 2006 PRIMARY SCHOOLS THAT REACHED THE *SUSTAINING* PHASE OF *IDEAS*

School number	%Growth in Reading	CEO Reading %Growth	Reading – CEO Diff.	%Growth in Numeracy	CEO Numeracy %Growth	Numeracy – CEO Diff.
2	101.4*	83.1	18.3	102.7#	92.9	13.6
3	98.5*	83.1	15.4	122.5*	92.9	33.4
10	93.4#	83.1	10.3	108.8*	92.9	19.7
4	82.1	83.1	-1	102.5#	92.9	13.4
5	89.1	83.1	6	91.6	92.9	-1.3
9	76.1	83.1	-7	87.7	92.9	-5.2
1	65.3	83.1	-17.8	93	92.9	0.1
6	39.8	83.1	-43.3	61.8	92.9	-31.1

Note: * indicates statistical significance (on a one sample t-test, $p < .01$) and # indicates approaching significance.

As can be seen in Table 15, of the twelve 2007 *IDEAS* Cohort primary schools that had completed *IDEAS* to the *Sustaining* phase at the time of the research, three had achieved growth of 11-30% above that of the CEO in Reading, and two of these three had also improved their Numeracy levels by rates of 18-41% (see Table 15, Schools 6 and 15). Of particular interest is that although the 2007 primary cohort moved more quickly to the *Sustaining* phase of *IDEAS*, i.e. 12/15) than did the 2006 cohort (i.e. 8/10), a smaller proportion showed substantively improved growth than was the case with the 2006 cohort. This may be explained by a 'durational' factor – even with a high quality pedagogical framework in place in a school, it may take a period of years for enhanced pedagogical practices to filter through to the point where they impact on the learning processes and outcomes of students.

TABLE 15: READING AND NUMERACY GROWTH RATES FOR 2007 IDEAS PRIMARY SCHOOLS THAT REACHED THE SUSTAINING PHASE OF IDEAS IN COMPARISON WITH CEO OUTCOMES

School number	%Growth in Reading	CEO Reading %Growth	Reading – CEO Diff.	%Growth in Numeracy	CEO Numeracy %Growth	Numeracy – CEO Diff.
3	94.6#	83.1	11.5	94.8	92.9	1.9
6	112.3*	83.1	29.2	111.5*	92.9	18.6
15	106.7*	83.1	23.6	134.3*	92.9	41.4
1	91.9	83.1	8.8	84	92.9	-8.9
2	90.9	83.1	7.8	80.9	92.9	-12
13	86.5	83.1	3.4	64.1	92.9	-28.8
7	85.1	83.1	2	77.6	92.9	-15.3
10	76.2	83.1	-6.9	98.4	92.9	5.5
11	76	83.1	-7.1	66.8	92.9	-26.1
9	69.2	83.1	-13.9	89.3	92.9	-3.6
8	58.5	83.1	-24.6	56.3	92.9	-36.6
14	35	83.1	-48.1	86.6	92.9	-6.3

Note: * indicates statistical significance (on a one sample t-test, $p < .01$) and # indicates approaching significance.

Of the relatively small sample of five secondary schools that engaged with *IDEAS* in the period 2007-10, two schools had reached the *Sustaining* phase at the time of the research. Of the remainder, two schools had completed the first two phases of *IDEAS* processes and one had completed three phases. As can be seen in Table 16, growth in Reading for both of the *Sustaining* schools was on a par with the CEO's growth rate and exceeded that of the State by 5%. The most substantive growth relative to CEO norms applied to one of the *Sustaining* phase school's Numeracy results (see School 1, Table 14). This school achieved 51% growth, which was 5% greater than the CEO and more than 10% greater than the State.

TABLE 16: READING AND NUMERACY GROWTH RATES OF 2007 SECONDARY SCHOOLS THAT REACHED THE *SUSTAINING* PHASE OF *IDEAS* COMPARED WITH CEO AND STATE

School number	School %Growth in Reading	CEO Reading %Growth (and Difference)	State Reading %Growth (and Difference)	School %Growth in Numeracy	CEO Numeracy %Growth (and Difference)	State Numeracy %Growth (and Difference)
1	40.9	38.4	35.1	51	46.2	39.1
		(+2.5)	(+5.8)		(+ 4.8)	(+11.9)
2	40.4	38.4	35.1	37.2	46.2	39.1
		(+2)	(+5.3)		(-13.8)	(-1.9)

Two points of major importance emerge from this analysis of student achievement in the 2006-7 cohorts of *IDEAS* Project schools.

The first point is that, at the time of the research, the eight Cohort One (2006) schools that had reached the *Sustaining* phase of *IDEAS* were focusing heavily on generating classroom pedagogical strategies out of their SWP principles and testing and implementing those strategies schoolwide. Four of the eight schools in question showed improvements in NAPLAN results that might be regarded as ‘substantive’. It is therefore concluded that *IDEAS* can be viewed as a reliable and credible instrument for school improvement – and pedagogical enhancement in particular – if implemented with authenticity in a strongly supportive school system.

Second, it is apparent from the outcomes of the research that the successful improvement of school outcomes through implementation of *IDEAS* (or, presumably, any other proven schoolwide improvement strategy) takes time. School leaders require a significant period of time to develop within-school commitment to a change process, to manage comprehensive organisational diagnoses, to undertake creative visioning, to generate an SWP framework, to facilitate teacher leadership and parallel leadership, to consolidate an SWP framework through professional learning strategies, to set and support achievement targets, to refine their pedagogical strategies and, finally, to embed sustainability processes. This second finding implies the importance of a significant ‘durational’ factor in comprehensive initiatives to enhance student success. Of course, it is not new, and is consistent with recent research into sustainable school success proposed by Hargreaves and Fink (2006) and Fullan (2005).

Seeking explanations - *IDEAS* Project case study schools and heightened student achievement

In an effort to ‘drill down’ yet further – to the micro-level of the school, its leadership and its professional learning community – four *IDEAS* cohort schools were selected for comprehensive case study investigation. All four had demonstrated impressive growth in NAPLAN Reading

and/or Numeracy. All four were immersed in activities associated with the *Sustaining* phase of *IDEAS*, including implementation of their newly-developed Schoolwide Pedagogical Frameworks (see Table 5 for an example). The four encompassed a wide range of demographic, cultural and socio-economic variables. Additionally, three were primary schools, with one from the 2006 *IDEAS* cohort and two from the 2007 cohort. The fourth school was a 2007 cohort secondary school.

During this third and final stage of the research, members of the research team visited the four schools in pairs to conduct focused, two-stage interviews to elicit staff perceptions of, and explanations for, their schools' outstanding growth patterns.

The first stage of the interviews took the form of presentations by school leaders of their NAPLAN outcomes in Reading and Numeracy. The school's NAPLAN data were then scrutinised by the researchers, other school outcomes data were reviewed and a backward-mapping strategy was employed to enable the school's *IDEAS* developmental journey, 2006-10, to be charted. The 'charting' involved preparation of a detailed written statement (average 20 pages) of the journey of each of the four schools and development of an explanation, using mind mapping techniques, to demonstrate how the journey appeared to culminate in enhanced NAPLAN outcomes. The draft report and associated mind map were returned to the school, and to the respective regional consultant, for review and validation or correction.

Note: The dependent variable for the micro (i.e. case study) research – *Measured improvement in learning outcomes* – was defined as a school's ability to demonstrate improvement in Reading and/or Numeracy, as measured by the national NAPLAN testing program. Attention was paid in the first instance to both NAPLAN *trend* data and *growth* data. Growth data were assessed as the superior measure because trend data were seen to be more susceptible to changes in the composition of student cohorts (such as fluctuations in student numbers and student diversity). Growth data, on the other hand, were seen to allow a focus on the same cohort of students and their maturation over a designated period of time (Masters et al., 2008). As noted by DEEWR (2011), measures of growth can therefore identify 'value added-ness'. This important consideration is reinforced by Adams (2012, p. 5) who asserts that 'typically, an indicator [of improvement] would be regarded as value-added if it focused on performance level (e.g. mean, median or percentage above some level) and conditioned on an estimate of prior achievement'. Thus, a focus on growth is believed to provide the most powerful starting point currently available for exploring the impacts of an innovative process (such as *IDEAS*) on pedagogical processes and outcomes.

Table 17 indicates that growth in both Reading and Numeracy in all four schools exceeded State growth by seemingly significant amounts. Indeed, four of the eight rates of growth were found to be statistically significant (*), and two to approach statistical significance (#), at the 0.05 level.

Table 18 indicates that growth rates in Reading and Numeracy in all four *IDEAS* schools also exceeded the growth rates of CEO 'like schools'. Since statistical significance at the 0.05 level is calculated to approximate 10 growth points (as a %), it can be concluded that all four of the *IDEAS* case study schools produced significant outcomes in NAPLAN Reading and/or Numeracy, or both, relative to CEO 'like schools' achievement levels.

TABLE 17: NAPLAN RESULTS FOR THE SUB-SAMPLE OF FOUR IDEAS CASE STUDY SCHOOLS COMPARED WITH STATE MEANS

School	KLA	School %Growth	State %Growth	% Diff.	School Mean	State Mean	Mean Diff.
St A Primary School	Year 5 Reading	98.5	83.8	14.7*	509.4	496.8	12.6
	Year 5 Numeracy	122.5	89.1	33.4*	524.2	499.5	24.7
St B Primary School	Year 5 Reading	112.3	83.8	28.5*	551.4	496.8	54.6
	Year 5 Numeracy	111.5	89.1	22.5*	526.7	499.5	27.2
St C Primary School	Year 5 Reading	94.6	83.8	10.9 #	507.7	496.8	10.9
	Year 5 Numeracy	94.8	89.1	5.7	477.8	499.5	-21.7
St D Secondary College	Year 9 Reading	40.9	35.1	5.8	592	579.6	12.4
	Year 9 Numeracy	51	39.1	11.9 #	584	594.2	-10.2

Note: * indicates statistical significance (on a one sample t-test, $p < .05$) and # indicates approaching significance.

TABLE 18: CASE STUDY SCHOOLS' GROWTH IN READING AND NUMERACY COMPARED WITH GROWTH IN CEO 'LIKE SCHOOLS'

IDEAS Cohort	Like School Group	Case Study School	%Growth in Reading	Like School %Growth	%Growth Diff. in Reading	School %Growth in Numeracy	Like School %Growth	%Growth Diff. in Numeracy
2006	D	St A Primary	98.5	83.3	15.2	122.5	91.6	30.9
2007	E	St B Primary	94.6	80.3	14.3	94.8	87.9	6.9
2007	F	St C Primary	112.3	83.5	28.8	111.5	86.9	24.6
2007	F	St D Secondary College	40.9	36.8	4.1	51	40.00	11

The second stage in the phase three 'drilling down' process focused on school leaders' perceptions of *IDEAS* concepts and processes in their schools. To this end, interviews were conducted with leaders in the four case study schools (principals and teacher leaders), using a four-question interview framework:

1. How, if at all, has *IDEAS* contributed to NAPLAN and other successes in your school?
2. What non-*IDEAS* proposals for change have you introduced into your school in order to enhance NAPLAN results and other outcomes?
3. What systemic initiatives have you adopted in order to enhance NAPLAN results?
4. What do you deduce from your success that might assist other school leaders?

The results of the analysis of responses to these four questions are contained in Table 19.

TABLE 19: SCHOOL LEADERS' PERCEPTIONS OF MAJOR CONTRIBUTIONS TO NAPLAN SUCCESSES

IDEAS leadership-associated contributions to NAPLAN successes

- *IDEAS* as a 'big picture' restructuring tool
- The protocols for professional behaviour (e.g. Success breeds success; No blame)
- The Teachers as Leaders framework and strategies
- The parallel leadership definition and strategies
- Schoolwide pedagogy (SWP) definition, exemplars and strategies
- Activation of a collaborative and confident within-school PLC
- Use of Skilful Discussion criteria and strategies
- Colourful school marketing and promotion strategies
- Student involvement, student voice and independent learning
- Internalisation of a developmental process (*ideas*) for future use (in this or other schools)

Schools' leadership-associated contributions to NAPLAN successes

- An explicit focus on a program or pedagogical priority (e.g. SMART database analysis, Numeracy acquisition, Direct instruction/Explicit teaching, Differentiated learning)
- Increased provision of professional development opportunities and resources
- Enhanced links to the Parish, Church, Order, Charism (through vision, values and SWP)
- Networks for cross-school problem-solving
- Selection of one or more authoritative pedagogies in keeping with students' needs
- Distributed leadership opportunities for enthusiastic staff
- Introduction of a team approach (including parents) to major school developments
- More inclusive core school processes (e.g. student-led SWP, within-school alignment, shared pedagogical strategies).
- A whole school focus on 'every child'
- Use of data to enhance whole school professional practice

continued...

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CEO leadership-associated contributions to NAPLAN successes

- A rejuvenated religious education emphasis
- Improved accountability through systematic PPPR
- Strategies for early learning transition
- Initiation of Teachers as Leaders developmental program
- Very high quality regional consultancy advice
- Targeted program emphases (e.g. Literacy (LFTT, RR), Maths; Gifted and Talented, iLe@rn)

The analysis of interview data, as contained in Table 19, confirmed the importance of three broad and interrelated sources of influence on the enhancement of schools' NAPLAN results – *a credible and practical school improvement framework; aspirational school-level leadership; and motivational and visionary CEO direction-setting*. A total of 26 contributory factors were found to fall in these three categories of influence (with some factors difficult to categorise).

Table 19 makes clear that no single source of influence – *an authentic improvement process; aspirational school leadership; or visionary systemic direction* – is more significant than are the other sources in successful school improvement. To the contrary, all three 'sources' were apparent in the 'stories' of school leaders and a balance of the three appeared to be in place in the four schools as they pursued, and achieved, NAPLAN success. Could any one source of influence have been rejected while continuing to achieve NAPLAN success? Interviews with the four sets of school leaders suggest a definitive 'No'.

The research data that are contained in Table 19 therefore suggest important insights regarding just how school improvements in an area of major educational priority, such as NAPLAN, actually occur.

First is the 'multiple sources of leadership influence' insight, previously described. Each of the three 'sources' has its own distinctive rationale and justification but the construct of 'multiple leadership sources' must nevertheless be viewed as a package deal if it is to achieve its potential.

Second, it would appear from the research that improvements in one particular aspect of NAPLAN (e.g. Reading or Numeracy) tend to be correlated with improvements in the other aspect, raising an intriguing question relating to within-school 'transfer of learning'. It is concluded that:

Improvements in student outcomes across NAPLAN subjects are likely to be maximised when the school has developed an umbrella Schoolwide Pedagogical Framework that emphasises learning processes in and between subjects and across year levels.

(This assertion is accorded additional credence in that all four highly successful case study schools had developed an SWP that was easily transposed into different subjects and that could be said to represent an 'umbrella' pedagogy for all key learning areas).

Third is the perception of school-based interviewees that all three sets of leadership personnel who feature in the case study success stories – the CEO central and regional officers, school leadership teams and *IDEAS* consultants and facilitators – went beyond the call of duty to create and demonstrate philosophical and practical consistency in relation to each other's leadership work in the Diocese. This assertion appears to be consistent with Jeyaraj's (2011) claim, based on

research in highly innovative schools in Singapore, that the notion of 'cognitive alignment' is fundamental to school success.

In summary, the phase three research revealed that each of the four case study schools increased its NAPLAN achievement in either Reading or Numeracy, or both, in conjunction with implementation of *IDEAS*. The examination of school processes that was undertaken in the case study component of the research suggests that the achievements of the four case study schools were also closely associated with focused schoolwide pedagogical development, multiple-source leadership and alignment of both a structural and cognitive nature.

Considerations emerging from the study

The research is distinctive for its focus on the achievement of enhanced student outcomes at system, cohort and school levels. It is particularly noteworthy for its comprehensive 'drilling down' research approach, thereby facilitating the establishment of conceptual links between variables at three levels in the achievement of school success. Six considerations of likely interest and importance to educational leaders, nationally and internationally, flow from the outcomes of the study.

Consideration 1 – A balance of three sources of influence – i.e. visionary systemic leadership, *IDEAS* Project processes and aspirational school leadership – appeared to be in place in each of the four case study schools as they sought, and achieved, NAPLAN success. Could any one source have been rejected while successfully pursuing NAPLAN success? Interviews with the four sets of school leaders suggest a definitive 'No'. It is concluded that system, project and school leaders, to be maximally effective, must understand each other's values and priorities, negotiate common territory and then go to considerable lengths to demonstrate consistency and alignment.

Consideration 2 – The case study research findings suggest that success in one NAPLAN subject appeared to be strongly correlated with success in another. One possible explanation for this significant insight is as follows: *Improvements in learning processes in and between NAPLAN subjects are strengthened if the school has developed an umbrella schoolwide pedagogy that features priority student learning processes. The 'umbrella schoolwide pedagogy' has limited meaning for staff and students if not derived from a captivating and motivating school vision, if not developed under the authority of school-based teacher leaders, and if not reflective of systemic values and pedagogical priorities. It is the construct of schoolwide pedagogy (SWP) that emerges from this research as the core variable in the transformation of student learning outcomes.*

Consideration 3 – Genuine school improvement is both a continuous and long-term process. The research makes the case for a shift away from short-term interventions towards school development processes that emphasise long-term (i.e. at least a half decade) student achievement. Very few current school innovations can be said to provide school leaders with the sense of assuredness that comes with a timeframe of a half-decade, let alone a decade or more. To the contrary, school leaders very often find themselves in a situation where they are bombarded by constantly changing idiosyncratic influences that serve to de-stabilise school progress and disorient both teachers and school leaders.

Consideration 4 – A commitment to, and belief in, children's abilities to learn must be shared by teachers and other educators throughout schools and their system if authentic improvement is to

be given a chance to eventuate. In the case of the Sydney CEO, with its inordinate proportion of students with limited English and a range of other 'difficulties', it would have been easy for system and school leaders to approach school improvement using a deficit model, and catering to low expectations. Instead, lofty aspirations and expectations were very apparent at the school and system levels and transposed into motivational school visions and captivating SWPs, frequently expressed with ingenious metaphorical and symbolic language and art.

Consideration 5 – If the three sources of influence (i.e. visionary systemic leadership, development project processes and aspirational school leadership) that emerged from the research as key determinants of school success are to be managed effectively then mature forms of system and school leadership are essential. Leadership for the complexity of successful school improvement must first be recognised for its complexity, encompassing a combination of strategic, organisationwide, transformational and educative (advocacy) approaches. All four of these globally renowned leadership approaches, adapted to Catholic theology, were readily apparent in the work of Sydney CEO school and system leaders as they went about the *IDEAS* Project and moulded it into a highly successful school and system innovation. In working mutualistically, leaders within and across the CEO continuously clarified goals and built their individual and collective professional confidence. It is important to note that this process was expedited greatly by regional consultants working with schools individually and in clusters.

Consideration 6 – Schools that are characterised by 'new paradigm' leadership, grounded in such qualities as a clear concern for justice, respect for teachers as professionals and leaders, and the capacity to work across systemic boundaries, have little difficulty in engaging with 'new paradigm' educational initiatives such as *IDEAS*.

Consideration 7 – The research served to justify and illuminate the critical importance of teacher leaders in school success. Sydney CEO teacher leaders, with the encouragement of system supervisors, and comprehensive nurturing by their principals, were involved at all stages of the *IDEAS* Project, but were particularly prominent in processes of SWP development and subsequent classroom implementation strategies. It can be said with complete assurance that, without teacher leadership, the *IDEAS*-related successes of Sydney CEO in the period 2006-2010 would not have been achieved. Of possible significance is that an inordinate proportion of *IDEAS* teacher leaders proceeded rapidly to promotional positions in the CEO.

These seven Considerations appear to affirm some key *Fourth Way* generalisations developed by Hargreaves and Shirley (2009), including:

- Successful school improvement in 21st century contexts must have a firm moral base;
- Distributed leadership is essential to school success;
- School visions must be locally developed, contextually relevant and grounded in values of 'hopefulness'; and
- School development, to have sustainable effects, must be undertaken as a long-term process.

Consistent with this 'new age', or *Fourth Way*, thinking, a new construction of school improvement, in the form of an archery metaphor, is now proposed.

The Archery Metaphor for Successful School Improvement

The outcomes of the research lead to postulation of a new and exploratory metaphor for successful school-based development through an intervention such as the *IDEAS* Project. The metaphor in question gains its meaning from the science and artistry associated with the age-old sport of archery.

The first key element of the archery metaphor is that of 'target'. As can be seen in Figure 1, the target in the school improvement archery metaphor consists of four 'rings'. The concept of a four-ring 'target' for school development was first posed by Newmann et al. (1996), using the concept of 'Circles of Support' to explain successful school restructuring for 'authentic' student learning – external support; school organisational capacity; authentic pedagogy; student learning. Newmann et al. made the key point in describing their explanatory symbol that its constituent parts were interdependent, overlapping and, to a degree, interchangeable. The *IDEAS* Project comprises somewhat similar core functions (organisational diagnosis; holistic visioning and valuing; SWP through teacher-led professional learning; expert practitioner). These functions are purported in *IDEAS* documentation (Crowther et al., 2001) to be mutually re-inforcing and inter-linked.

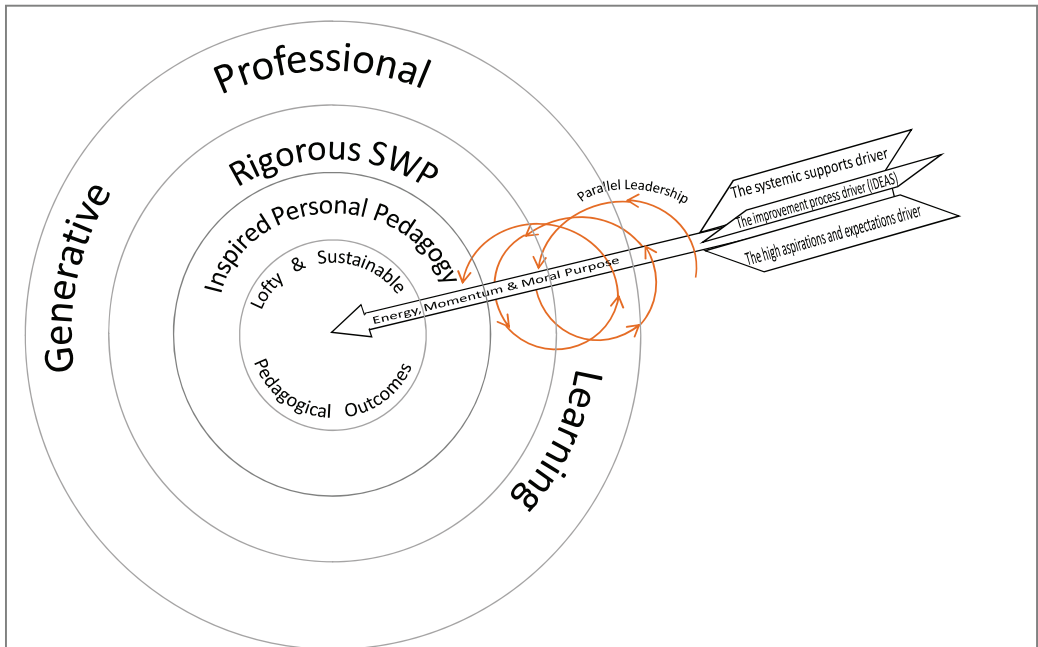
Thus, the target that emerged from the Sydney CEO research contains four 'Improvement Rings' – Generative Professional Learning; Rigorous SWP; Inspired Personal Pedagogy; and Lofty and Sustainable Pedagogical Outcomes – that may be said to be consistent with both Newmann et al. and the *IDEAS* Project. But they derive their essential meaning from the experiences of Sydney CEO educators who contributed to the research and are grounded primarily in the databases such as those that are contained in Tables 12 and 19.

Thus, the task of hitting the centre of the school development target is both cumulative and sequential. It requires four 'improvement arrows' that are struck in order, starting with the outer 'Generative Professional Learning' ring and moving progressively towards 'Schoolwide Pedagogical Development' and then to 'Personal Pedagogical Enhancement' and, finally, to the 'Lofty and Sustainable Pedagogical Outcomes' bullseye. Needless to say, the implications for school leaders in terms of planning, organising and timing are very considerable. Of course, the 'order' aspect of the metaphor differs from the traditional sport of archery. This is essential to note – school leaders who endeavour to strike the bullseye without having facilitated their schools' progress through the sequence of educational target rings will gain, at best, spasmodic success.

The second key element of the metaphor is that of 'arrow', comprising a shaft and arrow head. A key characteristic of the arrow's shaft that contributes to its in-flight trajectory, direction and distance is that of 'stiffness' or 'longitudinal strength'. In the Sydney CEO research schools it was powerful forms of distributed leadership that enabled trajectory (i.e. path), direction (i.e. prescribed tasks and timelines) and distance (i.e. long-term focus) to be generated, widely accepted, pursued and maintained. As the various phases of the school's developmental processes evolved, archer-leaders shifted their attention from one circle to another, progressed slowly but surely inwards. As they did so, different roles for principals and teacher leaders came into play. The particular *IDEAS* Project approach to school-based leadership – parallel leadership, known for its versatility and multifacetedness – emerged from the research as a highly appropriate leadership

response to the challenge of working through multiple school development functions and eventually striking the school improvement bullseye.

FIGURE 1: HITTING THE BULLSEYE OF SCHOOL IMPROVEMENT: THE IDEAS ARROW



Definition of Terms:

Generative Professional Learning – A style of mature, adult learning that is grounded in trust. This Improvement Ring involves the active integration of prior understandings and insights with powerful new ideas based on experimentation, sharing of successes and open-minded critique. It builds capacity to think and work together creatively, thereby facilitating shared priority-setting and reflective critique.

Rigorous SWP – Teachers’ reflective and comprehensive implementation of their agreed SWP to ensure consistency with systemic pedagogical principles as well as their school’s agreed vision and values. This Improvement Ring provides the foundation for expert pedagogical practice within and across schools.

Inspired Personal Pedagogy – Teachers’ use of their individual gifts and talents to bring life to their SWP and generate dynamic classroom environments. The concepts of inspired personal pedagogy, teacher leadership and expert practitioner are regarded as inseparable in this Improvement Ring.

Lofty and Sustainable Pedagogical Outcomes – Aspirational outcomes for teaching and learning, deriving from inspiring school visions and synergistic professional learning. Such statements, built by school communities, are regarded as essential to the pursuit of systemic goals and standards. They comprise the Bullseye Improvement Ring.

Finally, following the arrow's initial propulsion from the archer's bow, three 'drivers', 'feathers' or, in archery terms, 'fletches', add force, direction and balance to the arrow's flight, ensuring that the arrow's trajectory does not waver unduly in its path towards the target. Stated in educational terms, the three fletches that emerged from the research as directing the flight of the arrow are:

- Fletch One – *The 'visionary systemic direction' driver* – a clear sense of moral purpose, derived primarily from the central office executive, comprising a synthesis of Catholic and educational values, and taken forward by system supervisors and consultants with recognised competence in leadership, curriculum, religious education and pedagogy;
- Fletch Two – *The 'trustworthy process' driver* – a proven school improvement strategy for both pursuing enhanced school success over a period of three or more years and sustaining achieved successes into the future;
- Fletch Three – *The 'aspirational school leadership' driver* – a school culture of 'We can achieve more if we set our sights high and increase our internal alignment and cohesiveness', using the leadership of our principal, middle managers and teacher leaders.

In the instances of the four *IDEAS* case study schools, principals and other school leaders ensured that all three 'fletches' were accorded full recognition and respect in their school improvement activities.

The archery metaphor assumed different forms in each of the four case study schools. This, of course, is to be expected, given that the flight of an arrow is influenced by prevailing environmental conditions. Thus, the motivation to commit to, and propel, a school improvement 'arrow' can be expected to vary from school to school, based on local contexts and circumstances. Additionally, in some cases the impetus to engage in a school improvement project may be in the form of human influence (e.g. a new principal's vision or staff disquiet with the status quo) while in other cases it may derive from pressures arising from external agendas (e.g. a new curriculum, a new facility or access to new technology).

These differences notwithstanding, the archery metaphor appears to have obvious pertinence in the work of school leaders and exciting potential to enable school improvement to assume enhanced practical meaning.

Conclusion

The research should go some way towards dispelling well-worn claims, from educational practitioners and researchers alike, that school improvement is poorly understood and is characterised more by failure than success. Such assertions are challenged by the outcomes of the Sydney CEO research.

Indeed, the research also establishes a clear corollary to claims such as these. The corollary position is grounded in constructs that have *Fourth Way* 'new paradigm' meaning, such as moral purpose; school 'success' as a mix of broadly-defined student and teacher achievement; visionary

systemic direction; school-system values alignment; umbrella pedagogical frameworks (SWP); school development as a 'durational' journey; and multiple leadership sources. While such constructs may in some cases be new to some school leaders they appear from the Sydney CEO research to be very educationally defensible and professionally inspirational as well as conducive to imaginative, even ingenious, school practice.

In this article, an archery metaphor has been employed to demonstrate how such constructs can be applied in system and school settings, and how they can become part of the professional repertoire of educational leaders. Because the article, and the archery metaphor in particular, derive from comprehensively-researched educational success stories, they should, we believe, give courage and inspiration to educators everywhere.

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