Building Capacity for School Improvement
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This edition of the *THF Workshop Reports* produced by The HEAD Foundation focuses on the relationships between educational leadership and teacher capacity development, both of which are vital to school improvement. School improvement is imperative in some Asian school systems which are plagued by the poor quality of leadership, teaching, and learning. The experts sharing their views and recommendations in this report are Prof. Alma Harris, Assoc. Prof. David Ng, Mrs. Belinda Charles, and Asst. Prof. Hairon Salleh.

As economic development varies within Asia, so does the quality of school education; countries like Singapore and South Korea have been consistently high performers, whereas countries like Indonesia, the Philippines, and Vietnam, among others, are facing challenges in their education systems. Prof. Harris emphasises the need for educational effectiveness and improvement (EEI) within different school systems in Asia. Further, she argues that school improvement efforts and policy interventions in Asia need effective leadership and systems models that are sensitive to the context and culture in the region.

Assoc. Prof. David Ng highlights the need for innovative leadership programmes in preparing school leaders to face existing and future challenges in the world as economies, policies, and citizens change globally. Mrs. Belinda Charles, as a practitioner, presents the case for what she defines as “dialogic leadership”. Dialogic leadership is where principals are leading change through both language and action, where leadership is collaborative and the leaders share ownership...
with teachers and other partners in the school improvement effort.

A key facet of the school improvement effort is the recruitment of high-quality teachers, building teacher capacity, and providing them with adequate professional development (PD) to enhance their skills as well as build their leadership qualities. Asst. Prof. Salleh discusses the need for a rigorous methodological approach to determine what effective PD looks like and what works in particular Asian contexts that can be adapted within Asia and to other systems.

The earlier discussions and these papers will assist the Foundation in structuring its research agenda as well as provide direction for school reform efforts in Asia where there is an eclectic mix of successful as well as emerging models for teacher and leader effectiveness.

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Introduction
For more than 30 years, the educational effectiveness and improvement (EEI) research movement has provided robust and reliable evidence about creating better schools and better school systems (Chapman, Muijs, Reynolds, Sammons & Teddlie, 2015; Harris & Chrispeels, 2008). This substantial research field has reinforced the view that school and system leaders play a significant role in securing educational, transformational, and successful turnaround (Leithwood, Harris & Strauss, 2010).

This paper examines the dynamic relationship between educational effectiveness, educational improvement, and educational leadership with specific reference to Asia. It outlines what is known from the international EEI research base, followed by some critical reflections on the existing state of the field in Asia.

Initially, it is important to place any discussion of EEI within the contemporary, global discourse about system change and educational reform. Despite a wealth of well-intentioned efforts to improve schools and systems, many policies and interventions have simply not delivered all they had promised. As Payne (2008) noted, “we have seen so much reform and so little change” (p. 1).

One of the core reasons for the lack of policy impact, it is suggested, resides in the simple fact that too many reform decisions are not based upon sound, validated, or independent empirical evidence (Simmons, 2011). In his work, Fullan (2011) characterises this problem as choosing the “wrong
drivers” of educational reform. In his view these “wrong drivers” may appear superficially attractive to policymakers but the evidence to support their effectiveness or impact is limited.

In contrast, the “right drivers” of school and system improvement are those associated with changing the culture of the school and the system (values, norms, skills, practices, relationships) rather than altering structures, procedures, and other formal attributes (Fullan, 2011). In summary, school and system transformation is more likely to be positive and sustainable if the policy “drivers” are based upon sound, independent, and empirical verification.

Looking towards Asia, it is clear that education systems like Singapore and Hong Kong have actively built the capacity to deliver high-quality education over many years. The educational performance of both education systems remains in the spotlight of international attention largely, but, not exclusively, because of the Programme for International Student Assessment (PISA). Yet, Singapore and Hong Kong have track records of consistently high educational performance that pre-date the findings from the more recent international comparative assessments (Zhao, 2015).

For many other education systems in Asia, however, the story could not be more different. The challenges of economic growth and development are acute and pervasive in many Asian countries. In education systems, such as in Indonesia and the Philippines, the reality of poverty and inequality are indelibly bound to the daily task of improving educational outcomes. Issues of EEI therefore are intricately related to context; and while policies or solutions generated elsewhere may look attractive, uncritically borrowing them is likely to result in disappointment.

A more productive and potentially fruitful place to start is to consider the evidence about what actually works. The substantial EEI knowledge base that currently exists offers a sound platform for considering potential policies, strategies, and options aimed at school and system improvement.

Critical Reflections on EEI

For more than three decades, the EEI field has been influential in shaping policy and practice in many countries and it remains a powerful resource for those seeking better student attainment and
achievement (Chapman et al., 2015). The EEI research field has provided empirical evidence about two critical questions: firstly, what makes schools and systems effective; and secondly, how do we improve schools and school systems.

Although this research field is expansive and extensive, only a few key findings can be highlighted in the scope of this paper. To begin with, the educational effectiveness research base has identified that there is such a thing as a “school effect” and that this can be measured and quantified. It has categorically shown that the school a child attends makes a difference to their subsequent attainment and achievement (Mortimore, Sammons, Stoll, Lewis & Ecob, 1995).

While the EEI field fully acknowledges that socioeconomic background remains a powerful influence on subsequent educational outcomes, it demonstrates that, under the right conditions, an effective school can mitigate some of the negative effects of socioeconomic disadvantage (Muijs, Harris, Chapman, Stoll & Russ, 2005).

The EEI field has also established that there are greater differences within schools than between schools with the greatest variance occurring at the teacher level. The teacher is the most important within-school variable and therefore teacher quality has the greatest influence upon student achievement (Muijs & Reynolds, 2011). Educational effectiveness is also found not to be fixed, and schools and systems can improve irrespective of current performance (Sammons, 1999).

In terms of school and system improvement, the EEI field has reinforced the importance of building the capacity for change through developing human and social capital. It has pointed to the need of a relentless focus on improving teaching and learning as the prime driver for better student achievement. The centrality of leadership has been underscored as a critical component of school and system transformation (Hopkins, 2013).

While the EEI field has undoubtedly contributed to creating a far better understanding of the complex processes of educational change, improvement, and transformation,
Certain reflections arise as we look across this particular knowledge base.

Firstly, as a research movement, EEI continues to be globally influential but it tends to be dominated by researchers from USA and Europe. EEI researchers from Asia are not as prominent or well known as those in the West. Secondly, the educational systems, models of schooling, and types of classrooms represented in various EEI studies do not necessarily equate with those typically found in Asia. Thirdly, while EEI studies exist in Asia, they feature far less in the international literature and in the collective EEI evidential base.

This last observation is particularly puzzling considering the significant current global interest in Asian education, particularly in East Asia (Jensen, 2012). A quick look at the EEI research base in Asia reveals that there are three discernible waves of engagement. According to Cheng and Tam (2007), these are as follows:

- First wave, 1980s – internal school effectiveness (school management, curriculum design, teacher quality, evaluation approaches)
- Second wave, 1990s – interface school effectiveness (quality and accountability, market competitiveness, quality school movements, school-based management)
- Third wave, 2000 onwards – future school effectiveness (world-class school movements, globalisation, outward looking)

These three waves, it is argued, have influenced and continue to influence education policymaking in Asia at the both the macro and micro levels. At the macro level, it is argued that school restructuring and the movement toward market-driven privatisation, along with greater diversification of schooling, is associated with EEI influences. At the micro level, the focus on standards, quality, and accountability is presented as a by-product of EEI (2007).

But where does the EEI research base currently stand in Asia? Who are its key proponents? Where are the latest studies located? How is the knowledge base in Asia being enhanced and extended?
It is far from easy or straightforward to answer these questions. While there are undoubtedly many researchers engaging in EEI work in various countries throughout Asia, the contemporary knowledge base remains patchy and relatively uneven.

With such intensive international interest in education systems in Asia, building a contemporary, comprehensive knowledge about EEI would now seem to be critically important. As Reynolds et al. (2015) noted, the EEI research base is highly developed in certain parts of the world (Europe, USA) and far less developed in others (Africa, the Middle East, and parts of Asia). He added,

All that can be said with any certainty is that the pressures on us in EEI research to create better research and better explanation in the area of comparative education are immense. (p. 6)

Without question, contemporary, comparative, and empirical studies are now needed, more than ever, to provide contextualised accounts of how school and system improvement in the Asian region is enacted and led.

**Leading EEI**

Around the globe, there is not a single example of an improved school or a transformed system without leadership being somewhere in the mix. The evidence highlights that the quality of leadership is a key determinant of improving school performance – second only after teaching in its impact (Leithwood, Day, Sammons, Harris & Hopkins, 2006, p. 2). Whichever way you look at it, leadership remains a consistently important variable in the amalgam of EEI.

A quick look at the vast literature on educational leadership will show that it is very varied – empirically, theoretically, ideologically. It has generated a vast array of leadership types (e.g., instructional, distributed transformational) and the evidence base tends towards the normative and the descriptive. It is also largely but not exclusively mono-cultural.

Looking at studies of leadership in Asia, Hallinger and Chen (2014) highlighted the paucity of empirical evidence about leadership and leadership development. They talk about a “missing literature” plus a lack of genuine comparative analyses and longitudinal studies of leadership. While there are some comparative studies of leadership development and practice that include countries in Asia (e.g., Harris & Jones, 2015; Huber, 2004; Moorosi
& Bush, 2011), the existing evidence base remains limited.

Emerging findings from one of these comparative studies, called the 7 System Leadership Study, which looks at educational leadership systems in Australia, England, Indonesia, Hong Kong, Malaysia, Russia, and Singapore, show that culture and context play a far greater role in explaining differential educational performance than is currently acknowledged or accepted (Harris & Jones, 2015). Contemporary empirical findings point towards the need for differentiated approaches to educational leadership, effectiveness, and improvement that take explicit account of setting and culture. The core implication here is that any attempt to improve an education system must first take full account of context and then differentiate strategies accordingly. According to a World Bank Group publication (2011), Education systems of countries with similar levels of economic development are likely to have comparable capacity for policy reform. Differentiating countries by both level of economic development and institutional capacity helps organise knowledge exchange and policy debate. (p. 55)

In summary, to push the boundaries of the EEI knowledge base in Asia, more in-depth studies that chart, describe, and analyse the pathways to educational transformation in context are required. Secondly, a more critical look at the causal attributions associated with “high educational performance” and a much deeper analysis of the outcomes and impact of policy intervention become necessary.

**Future Directions for EEI in Asia**

Given the complexity of the education reform processes underway across many countries in Asia, there is a need to develop a critical mass of EEI intelligence through different types of studies and empirical investigation. A potential research agenda for Asia EEI research could include:

- deeper, richer, and more critical accounts of EEI processes;
- more comparative EEI work (e.g., between two or three differentially performing systems);
- a focus on “invisible” EEI countries (e.g., Indonesia, the Philippines, Vietnam); and
- more empirical investigation of “contextualised approaches” to EEI.

To continue to build and strengthen the EEI knowledge base in Asia, some key questions might include:
• What new models of EEI are emerging as a result of increasing globalisation, new technologies, and socioeconomic change?
• What are education systems doing to secure change at scale and how far are they drawing on EEI?
• What are the net effects and outcomes of EEI in school systems?
• How are issues of equity and effectiveness being addressed, particularly in developing countries?
• What are the “missing insights” or “blind spots” in the contemporary accounts of EEI in Asia?
• What are the most prevalent models of leader and teacher effectiveness?

Addressing such questions will undoubtedly be a challenge but one worth undertaking. If the EEI knowledge base in Asia is to significantly develop, more detailed, contextualised, and contemporary accounts of educational effectiveness, improvement, and leadership are urgently needed.

References


Introduction
In recent years, school improvement has been the focus of attention among policymakers in the world. From countries as diverse as UAE, Brazil, Hong Kong, Singapore, Vietnam, Australia, and USA, a common concept is that of “world-class education”. This has become widely associated with comparative results from international tests, such as the Trends in International Mathematics and Science Study (TIMSS) and the Programme for International Student Assessment (PISA), which purport to measure certain aspects of educational quality. Countries have taken it that attaining high scores in these tests is a strong indicator of being world-class.

But what exactly is world-class education? Cheng (2005) defined world-class curriculum content as “materials and designs for the learning and teaching processes and maximising the global relevance and exposure to the future developments of individuals and the society” (p. 35). He further highlighted that the school leader is fundamental to having world-class schools by “enhanc[ing] human initiative in education including the motivation, effort, and creativity of students and teachers in teaching and learning” (p. 254).

Beyond the rhetoric, conceptual definitions, and proposed new ways to define world-class education, this article advocates going back to basic principles. The purposes of education are interrelated and intertwined. Education is first and foremost an endeavour to learn knowledge. Second, it is to produce citizens who share common norms and values, and thus contribute to societal cohesion. Third, education is the preparation of the individual
for a vocation and one who will economically contribute to his/her well-being and the nation.

Integrating these three principles from the perspective of knowledge utility according to a country’s current position will provide the legitimacy to define what a world-class education system looks like. Therefore, the framing of education’s purposes in Singapore’s current and future context should become the point for discussion on school leadership development. In this paper, however, only school leadership development from the economic purpose of education will be discussed.

The Rise of Services Sector

The new millennium in the Asia Pacific is witnessing the rise of large new economic players, such as China and India, and both bring challenges and opportunities to Singapore. With no natural resources, geographical constraints and with a continuing need to distinguish the country economically, Singapore has been moving in the direction of a knowledge and innovation economy since 2000 (see Figure 1). This move is both to compete with existing Asian powers for direct foreign investment and also to cement economic ties for trade.

Figure 1. Singapore’s economy (Agency for Science, Technology and research [A*STAR], 2011).
One characteristic of all developed nations is the large component of the services sector against the manufacturing sector which contributes to economic growth. Singapore follows a similar trend and has seen a steady rise in the services sector over the last one and a half decades. It has consistently contributed to a greater share of total economic output and employment. In 2011, the services sector accounted for about 69 per cent (Ministry of Trade and Industry, 2012) of value-added growth and employed approximately 70 per cent of the total workforce. This implies that if one were to step into any classroom today, 7 out of 10 students will be employed in the services sector after graduation. Inferring from the trend of developed nations and considering Singapore’s geographical constraints, it is expected that Singapore will continue to have a large component of the services sector contributing to economic growth and employment 10 years down the road.

What are the implications of the rise of Singapore’s services sector vis-à-vis the purposes of education, and, in particular, education’s economic function? The nature of the services sector in the knowledge and innovation economy is characterised by higher skilled and higher value-added knowledge. Services produce “intangible” goods, which include the know-how in governance, health, education, communication, information, and businesses. This tends to require relatively less natural capital and more human capital, and is well suited to Singapore’s situation.

Fierce competition, however, among countries that are producing the same type of services drives a need for employees to be innovative. In other words, Singapore can only effectively compete with other nations if our services are perceived by customers as new and value-added solutions. This, then, is the biggest challenge of our times when considering education’s purposes. How do school leaders create a teaching and learning environment that will foster a mindset of innovation and value-creation among students who will be the future human capital? Rote and shallow learning will surely no longer be sufficient.

The nature of the services sector in the knowledge and innovation economy is characterised by higher skilled and higher value-added knowledge.
Pivotal to the quest to fulfil this economic imperative is the role of the school leader in leading and managing schools, and how the system develops school leaders for this purpose. This paper will therefore draw from this imperative to propose an alternative school leadership development programme in order to meet Singapore’s knowledge and innovation needs.

**School Leadership Development for the Future**

From about 1945 to 1985, scientific research provided evidence-based decisions on learning and development. Learning was seen as supported by evidence of changes in the three classical behavioural science domains: cognitive, affective, and psychomotor. They typically have the following features: a set of learning objectives, a specific body of knowledge (content) to be taught in order to achieve the objectives, and adoption of the right pedagogical approach to deliver the body of knowledge. These characteristics meant that learning could now be efficiently and effectively taught.

While the behavioural science era is still relevant to a certain extent in training and development, there are inherent weaknesses that give rise to serious discontent with current school leadership programmes. One is that learning is the acquisition of predetermined and known knowledge. In other words, the current training and development paradigm does not encourage or enable school leaders to create new knowledge. In addition, known knowledge is insufficient to solve increasingly complex problems faced by schools because of the influence of factors such as globalisation and information technology.

In the current stage of ferment in the behavioural science design of learning, there is no lack of alternative theories in teaching and learning design, such as strategic choice, learning organisation, open systems, chaos, and complexity. This progression suggests a move to take into account the complexity of interactions, uncertainty, unpredictability, and their relationship with diversity and creativity within an organisation. This paper examines the adaptation of complexity theory in the design of
the school leadership development programme in Singapore.

**Complexity theory – briefly**

Complexity theory appeared in the 20th century in response to criticism of the inadequacy of the reductionist analytical thinking model in helping us to understand learning, and suggested an alternative approach for knowledge in general, the knower, the object of knowledge, method, and truth.

From their observation of leadership studies across eight different countries, Day and Leithwood (2007) concluded, “Schools are dynamic organisations, and change in ways that cannot be predicted” (p. 184). A consequence of acknowledging complexity is that leadership should be viewed in a different light. A complex system is a functional whole, consisting of interdependent and variable parts. In other words, the parts need not have fixed relationships, fixed behaviours, or fixed quantities; thus, their individual functions may also be undefined in traditional terms.

Indeed, when we are able to incorporate elements of complexity theory into the design of school leadership development programmes, the process of learning will be very different from the behavioural design approach. The following section briefly highlights three key constructs of complexity theory.

**a. Emergence**

Emergence is a key concept in understanding how different levels in a system are linked. In the case of leadership learning, it is about how the individual, structure, and system are linked. These different levels co-exist and one is not necessarily more important than the other. Each level has different patterns and can be subjected to different kinds of theorisation. Patterns at “higher” levels can emerge in ways that are hard to predict at the “lower” levels. The challenge long-addressed in learning is how such levels are to be linked.

**b. Non-linearity**

Non-linearity refers to leadership learning as an outcome from causal links of something more complicated than a single source of information or single chain of events. Learning outcome is considered linear if one can add any two sources of learning or solutions derived from the teaching. This would mean that the output of the learning is not proportional to the input and that the learning does not conform to
the principle of additivity (i.e., it may involve synergistic reactions in which the whole is not equal to the sum of its parts).

One way to understand non-linearity is how small events lead to large-scale changes in systems. Within the natural sciences, the Butterfly Effect is often cited (or imagined), where a small disturbance to the atmosphere in one location tips the balance of other systems, and leads to a storm on the other side of the globe (Capra, 2002).

c. Self-organisation
Self-organisation happens naturally as a result of non-linear interaction among members of an organisation (Fontana & Ballati, 1999). There is no central authority guiding and imposing any interactions, and members adapt to changing goals and situations by adopting communication patterns that are not centrally controlled by an authority. In the process of working towards a goal (e.g., solving a leadership problem), self-organising members tend to exhibit creativity and novelty as they have to quickly find ways and means to solve the problem and achieve the goal. As a result of interactions among members, new conversation patterns emerge – an important aspect of self-organisation since only with new patterns can there be new and novel ideas to solve problems. It must be noted that new patterns of conversation depend upon the responsiveness of each member and their awareness of each other’s ideas and response.

It is a challenge, however, to incorporate these constructs in the design and implementation of school leadership programmes. In Singapore, the National Institute of Education’s Leaders in Education Programme (LEP) is a case example of adapting complexity theory both in design and operation.

Case Example: Complexity-based Learning in the LEP
The LEP is a 6-month, full-time principalship development programme designed to build capacity for Singapore’s educational reforms and to develop current and future “principalship capability” in an increasingly complex world. Such principalship capability will be values-driven, purposeful, innovative, and able to succeed in ill-defined conditions. This is the kind of landscape in Singapore’s knowledge and innovative economy. The section provides an example of complexity-based learning in the LEP (Ng, 2013).
Knowledge creation through innovation project
Participants are attached to a school throughout the programme where they spend time carrying out a major innovation project. They receive support and guidance from the school principal, the superintendent, and a university faculty member. The project is expected to help the school improve on leadership and management practices that lead to better student learning and a higher level of achievement, and is meant to be a profound learning experience for the participant.

The school attachment provides the platform for participants to create new knowledge as they challenge current practices by looking at a school from the standpoint of its strengths, and then identify a range of innovation opportunities. Participants must lead others (teachers, students, parents) to do new things and must find different ways of doing existing practices. From these opportunities for innovation, participants select an idea for a comparatively significant innovation.

The key element in this learning project is the emergence of a workable innovative idea. This parallels complexity theory’s element of emergence where participants self-create knowledge (learning) during interaction with the stakeholders and components in the school system. The implementation of the innovation project is a powerful test of their leadership capability. To date, participants have successfully completed a wide array of innovative projects and many are being sustained by the schools.

Syndicates
The syndicate is a key component of the programme. Participants meet in a small group setting (five or six members), and the syndicate leader who is a university faculty staff acts as a facilitator. The syndicate leader monitors participants’ learning throughout the programme, including the school attachment, the innovation project, the learning from the international visit, and the broader classroom-based learning. The weekly syndicate meetings help form an intensive learning relationship between members.

The basis for these meetings is to encourage divergent and explorative thinking through conversations. Conversations are complex responsive processes of themes triggering themes through self-organising associations (the element of self-organising in
complexity theory) and of turn-taking. Both result in a continual emergence of thought by each individual, and reflect and create power differentials in individual and group relationships as members participate in the deep conversations. In essence, syndicate meetings provide the opportunity for individual and group change when the pattern of conversation changes.

If one takes this perspective that an organisation is a pattern of talk (relational constraints), then an organisation changes only insofar as its conversational life (power relations) evolves. Organisational change along with the emerging creativity, novelty, and innovation are the same thing as change in the pattern of talk and therefore the pattern of power relations.

**Partnerships in learning**

Much of the learning is through strong partnerships with schools, business organisations, and educational institutions both in Singapore and overseas, and is supported by learning in lectures and tutorials.

These LEP participants are also exposed to leadership in business organisations and to ideas from various sources, including government organisations. To further enhance such influences, key officers are invited from the education and other ministries to engage in dialogue with participants and to observe some of the work undertaken in the programme.

There is also a global approach to learning with an international component in the programme. This is a 2-week, all expenses paid, international visit (thus far, to Switzerland, USA, UK, Canada, Scandinavian countries, Europe, China, Australia, and Hong Kong) by the participants led by the syndicate leader and a senior school principal. The team investigates successful innovative practices overseas, undertakes critical analyses, and gains significant insights into how educational innovation in Singapore might be managed. The inclusion of this component, while not unique, provides an extended platform of learning on the international stage.

The exposure to larger local and international systems is intended to trigger thought and expand perspectives in participants. For example, what happens in the social and economic aspects of USA and Europe may influence how leaders re-shape and re-focus
student learning and development in Singapore. This parallels complexity theory’s emergence where the influence of the larger system may cause a reformulation of perspectives and behaviour of individuals.

**Action-learning delivery: Content as earning support**
While most leadership programmes are interested in the “content” of a programme, the LEP emphasises “delivery”. Action learning is a central concept in the delivery of learning. While participants know what they are taught, they do not know what they will learn as they have to create their own knowledge through team learning in the syndicates. They will only know what knowledge they have created when they come to the end of the programme.

In the LEP, action learning is understood as group learning among people who are committed to action by using acquired learning for obtaining systems-wide outcomes. Its original formulation by Revans (Marquardt & Revans, 1999, p. 19) is \( L = P + Q \), where \( L \) = learning, \( P \) = programmed knowledge, and \( Q \) = questioning insight. In the LEP, programmed knowledge (\( P \)) refers to what is taught in the seven modules (relegated to a support role), what is read, and what is shared in presentations by guest speakers, all other opinions, theories, and know-how. Learning (\( L \)) is different from the traditional formulation, which equates to learning and programmed knowledge. Questioning (\( Q \)) encourages divergent and exploration thinking through conversations in a small group setting.

**Conclusion**
In leadership development programmes, many hope that participants will learn new and effective ways to bring about school improvement and reform to fulfil the purposes of education according to the needs of the country. This hope cannot be realised if the conventional behaviourist-designed learning and faculty-driven approach continue to be perpetuated. The need to rethink programme delivery has gathered momentum over the years and the call for changes in programme content has been discussed earlier in the literature (Dimmock & Walker, 2005; Hallinger & Leithwood, 1998).
Universities have to shoulder an extremely difficult task because conventional practices of course-driven programmes have been remarkably resilient in the face of efforts to effect change in programme delivery and a new understanding of complexity in the world of education. School leaders have to navigate non-linear change-paths, and learning how to navigate this kind of change is a critical competence for 21st-century change-leaders in school systems.

The complexity theoretical framework provides us the advantage of an alternative design for leadership development programmes that is able to meet current and future challenges that are mentioned by Cheng and Tam (2007). Annually, billions of dollars are spent on training and development. It is important to ensure that the outcome of training, learning, and development must yield practical outcomes that will meet the country’s needs.

References


**Introduction**
As we celebrate 50 years of independence in Singapore and how our education system has developed over this period, we are proud of a system and members of the teaching service that have kept high standards in the curriculum and infrastructure. Yet, we are keenly aware that this is not a time to rest on our laurels because of the rapid pace of change. What might be relevant today could well be outdated in a couple of years compared to earlier times when change might be measured by the decade or even by the generation.

**Responding to Change**
It is not surprising that for educational leaders, change is a constant on the horizon, a constant that they have to manage. And there is enough literature out there to talk about change and how to manage it. There are ways to communicate and create a discourse on change, there are approaches that help to create an environment for change, and there are suggestions for changing mindsets and creating new perspectives. It is all about managing change and being able to anticipate it so that the change can be part of the organisational vision.

It is therefore with considerable chagrin that though school principals ready themselves for change, they find it coming so rapidly that there is no time to be strategic about managing it. With the many things happening on the ground, they find insufficient time to grasp anything more than a superficial meaning of the change they have to take on, whether this is about human resource planning, curriculum direction, or organisational review.
It is all about managing change and being able to anticipate it so that the change can be part of the organisational vision.

For example, recently, schools were introduced to a human resource structure that would enable student development to be given the focus it deserves by the introduction of teacher Level Heads. It was something some schools had already tried out on their own. Principals who had visited schools overseas had seen this structure before and thought it as a good idea. When it was first announced, it was not an alien concept.

But when it finally came down to brass tacks, it became, perhaps not so surprisingly, an intense exercise in finding enough middle leaders to take it on and that became a significant issue in some schools. Double-hatting became a necessary, if temporary, recourse. But much of the conversation centred on the “who” and not the “why”. The narrative morphed into one of another change from headquarters; somehow the more meaningful story of building a community was less prevalent. There had been apparently too little time to build a strategy to make a deeper meaning for what was a very significant addition to the existing structure.

At other times, principals are divided about whether they should act as gatekeepers or as cheerleaders. Understanding more fully the impending change can help them decide how much of the change to embrace, how much to prune, how much to block. But that is a luxury not always afforded to them.

A principal may hear about programmes or frameworks, such as Flipped Classroom, The Skillful Teacher, or Making Thinking Visible. He knows about fellow schools embarking on one or the other and he may be persuaded to do the same. Or the school cluster, which his school is a member of, decides as a group that one of these (not limited to the aforesaid) is a good initiative to follow. The principal returns to the school, assigns it to a responsible departmental head, and the programme gets adopted.

But the story of why it is needed is seldom told. It is not that principals adopt a programme without meaning or purpose. They come on board because it appears to make sense, even more so when it is a little radical, when it could address some deeper issues that
had been troubling the school, and perhaps even when the framework is relatively easy to adopt. But there appears to be little opportunity made to talk to the rest of the community about its connection with the existing school scene.

Then again, there is always the fear of being left behind alternating with the fear of snatching at only a chimera. There is probably at least one white elephant in each school, a symbol of something embarked on with fanfare yet not quite able to stay the course. Ill-conceived technological purchases would probably figure largely. But those aside, there may well be artefacts and displays of solid programmes that had their day in the sun, but languish today because there was no one left to keep on telling that story.

New Realities
At the same time, there are new realities on the ground that school principals are contending with. Technological advances have changed not just the spread of information, but also its nature. Its accessibility has given rise to new patterns of behaviour among both students and teachers. The conventions of respect and privacy are alternately challenged and overrun.

With the change of attitudes that technology has given rise to, feedback has become almost incessant and occasionally openly hostile, made possible with the instant nature of communication today as well as its anonymity. Responding to feedback involves almost always a fair amount of mobilisation and not always on issues really pertinent to the cause of education and learning.

In that sense, the community of the school has become larger. Compared with classes that operated almost in silos within a school (admittedly half a century ago) – memorably referred to as rooms accidentally arranged around a parking lot – today the school is a far more integrated community where teachers work collegially and students are encouraged to bond within the class, across co-curricular activities, and even across cohorts in school-wide projects. But they are no longer the only members of the school community. Today, the school community includes parents, alumni, community leaders on advisory committees, and even industry representatives.
community includes parents, alumni, community leaders on advisory committees, and even industry representatives. There are many more calls on the principal’s time and attention especially as sections of this community become more “intrusive”.

While there is talk of distributed leadership, it almost appears that what is needed is heroic leadership to hold everything in together and to lead somewhat disparate voices towards a common direction. This is especially so as the more recently added members to the school community almost always clamour for the principal’s attention – not even the vice-principal or a teacher-leader will do. To newly appointed principals, this is possibly the first rude shock of being in a larger community, not all of whom adhere to that respectful sense of distance that school principals once enjoyed.

The Principal’s Response

With the multiplicity of tasks that comes with the people as well as the organisation in a school, principals are often pushed to manage rather than lead. And the first sign of this is when he stops walking the ground. When there are more than one hundred emails in the inbox every morning, many a principal has found himself ensnared by the cyber workload. The urgent task of replying takes easy precedence over creating and continuing dialogues with teachers and students.

As new initiatives come that appear attractive and which may even prove relevant to the school’s direction, there comes a tendency to put the project over the people. This is often because the principal gets caught up with the how-to-do and the what-to-do, both because they are patently more visible and thus more easily documented. Once again, the “dialogic” leading is missing – that important interaction between the principal and the teachers on the reason and purpose of that project...

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As a result, the principal, if he does not catch himself in time, finds himself creating institutionality rather than the learning culture...
he had intended. “This is the way things are done here,” says it all; it is a culture of getting things done rather than a culture of learning, unlearning, and relearning. It will be inevitable as more things get “done”, that teachers and principals themselves get tired and mired.

There is the other danger of having teachers distracted from the main purpose which is that of teaching. While many new initiatives are proposed to improve teaching and learning or promote structures that will support teaching and learning, they are not always received that way when they are being implemented. Instead, they are seen as extra work that interferes with teaching. This happens when there has not been a sufficient dialogue about why the school wishes to embark on this, what this initiative will do, and where it fits in with existing structures.

With a new initiative comes inevitably the documentation of the plan and the implementation, as well as a writing of the material that uses the protocols of the initiative. This takes away from the finite time that the teacher has with the students. I have heard teachers say that they spend far less time with students now because of the programmes that they are involved in preparing. In fact, the constant busyness for teachers means they too have less time to reflect and have that important dialogue about what went right and what went wrong.

**Rotation and Its Impact on Perspective**

The systemic rotation of principals in Singapore has also had its impact on change receptivity, not always in the most positive manner. Teachers have learnt to live with the change though not always welcoming it. Some survive by never taking the new changes too seriously since, in their thinking, it will only last for the next 6 years. Those who find themselves welcoming certain changes grow to dread the changes lest these do not stay beyond the 6 years. In both cases, it becomes a reactive response that neither allows the teacher nor the school to mine the best from the situation.

Principals are in a likewise ambivalent position. They are often told not to make too many changes the first year with the clear expectation that they will bring about change subsequently. For most, the changes they enact are an expression of their own beliefs about what school is about. For a few, it might be about making an impact and increasing one’s own credibility. Very few see it as building on a legacy
already there. Part of the reason is that they see only the expression and the external outcomes.

This is not helped by the teachers’ inability or indifference in giving a rationale or even a history for what was being done previously. Perhaps as a result of the regular rotation, even teachers see the school programmes merely as belonging to the principal, not to the school. In other words, they do not co-own these programmes with the principal. This is not to say they were reluctant players. Very often, they went into the programmes with sufficient enthusiasm but were not equipped to explain it as part of the whole-school story.

**Dialogic Leadership**

I have been sitting in on mentoring sessions between a mentor principal and the mentee principal who is just into his first posting. I noticed the consistent emphasis on talking with the staff one-to-one or one-to-a-few to understand the story. I hear an occasional frustration when the story comes through in an incoherent haphazard way. I hear the mentee principal’s surprise when key personnel in the school are unable to tell the story or can only give a superficial account. But through it all, I noticed a desire by the mentee principal to know the narrative.

It would also appear, where the storyline is thin, that there was a lack of ownership of whichever programme was being discussed. Where teachers “do” a programme because they were told to, or where there was little meaning or little effort to find meaning, the narrative faltered. On the other hand, sometimes it faltered because of an automatic fall back on the programme name, so much so that the name became the cliché that supposedly explained all that needed to be explained. This happened usually when the official name given by the Ministry of Education for the programme was adopted in its entirety. The name trips out easily on the tongue, everyone knows what is being referred to – there is a wall or an artefact or an event that it stands for and then everybody just “does” it. Perhaps because the programme name is so tangible, the narrative gets neglected.

The Centres of Excellence (COE) situated in different schools may be a case in point. The COE is filled with the relevant artefacts and charts, it gets mentioned in every

It is about helping people to develop the language to talk about what the school or school leader is doing.
visit by a notable, it figures in the school profile. Everyone assumes the story is there. After a time, the COE becomes the name of the venue but the excellence itself may flag, and in time may be just a memory. What has happened? I believe the school forgot the story. Some say it is because that area of excellence lost its champion, and school leaders everywhere will testify to the galvanising effect a champion has. School leaders will be, in fact, the first to acknowledge that many successful programmes under their purview would not have taken off without a teacher champion in that area. But how do we keep the champion effect when the champion either gets promoted, transferred, or retires? The answer is by strengthening the narrative.

How then can school improvement take off in a way that is meaningful and sustainable? This is my case for dialogic leadership, for a leadership that leads as much through language as through action. I hesitate to call this communication because I believe it covers more than that. It is not just about letting people know what the school or school leader is doing. It is about helping people to develop the language to talk about what the school or school leader is doing. In that sense, it is not that different from subject literacy where teachers are encouraged not only to use the language of the subject, but also to encourage students to do the same.

Even more, principals and teachers need to be developing this dialogue way before change comes. This is because the vocabulary and discourse needed to describe what is happening should be built up to increase the ownership, not just to anticipate the change. I would suggest that it is as much a respect for the purpose and history of the various undertakings; and, as such, this is a narrative about legacy and not of one person, whether that be the school leader or the champion, but the legacy of an entire community. If anything, this is distributed leadership as opposed to the great-man leader.

For principals taking on a new school, that search for the school’s story is the way forward. As they tease out the narrative with the staff, the staff also get to hear the new principal’s vocabulary of change; as he maps what he has led the school...
to envision over what is already there, that discourse gets further enriched. Talking out the change means that it is borne out not by one person or even by a group of people, but by all, creating sustainability because it is mapping a new onto an existing framework and not throwing out the baby with the bath water.

Conclusion
In a time of rapid change, where sensemaking needs to be done all the time to keep the school community engaged, dialogic leadership is needed. Because dialogic leadership will create and nurture the conversations around what the school believes in, why it believes in such a direction or focus, and how this initiative or that programme is a step towards that focus, changes that come can be taken onboard and integrated meaningfully into the school community and become a natural part of the school’s rhythm.
Introduction
The need to build teacher capacity can be considered a “no brainer”. Intuitively speaking, building teacher capacity in terms of knowledge, skills, and attitude (or values) would inevitably improve classroom teaching practices, student learning, and student learning outcomes. In their review on how best-performing school systems come out on top, Barber and Moursheed (2007) concluded that “the quality of a school system rests on the quality of its teachers” (p. 16).

There has been a growing interest and priority given to the broadening of student learning outcomes, such as 21st century competencies (e.g., critical thinking, global citizenship, collaborative learning), and issues on social equity, such as low-attaining students. With this growth, the interest and investment on building teacher capacity and teacher professional development in its various names (e.g., continual professional development, continuing professional development and learning) and forms (e.g., mentoring, professional learning community) see a mirroring effect. This is because classroom factors, especially the teacher, have been identified to explain more than one-third of variations in student achievement with respect to school effects (Leithwood, Day, Sammons, Harris & Hopkins, 2006).

The primary importance of teacher effectiveness in their classroom teaching is apparent and, hence, the concomitant importance on teacher professional development. What is, however, equally or more important is to answer the question, “What features of professional development are effective and what are not?”
In this paper, eight broad key features of effective professional development will be discussed in the context of usefulness to both practitioners and policymakers. Conversely, the opposing alternatives are implied as ineffective. It is worth stating that the notion of effectiveness is understood as the effects or impact of professional development on desired outcomes, such as teacher knowledge and skills, classroom teaching, student learning, and student learning outcomes (Bubb & Earley, 2010). The saying, “What one learns today may not work tomorrow” essentially holds true insofar as the pace of change is increasingly requiring organisations (along with its human knowledge and skills) to respond accordingly.

The advent of the 21st century competencies also demands policymakers and school leaders to build their teachers’ capacities and capabilities in delivering relevant pedagogies that may not be fully tested. The intensity of change is compounded when policymakers see the importance of policy reforms to effect change across all schools in their respective states and districts, along with greater accountability measures. The pursuit to invest in teachers so as to attain better and diverse student learning outcomes inevitably causes schools to constantly lag behind in terms of developing teacher and

Feature 1: Continual and Lifelong
The literature has consistently highlighted the importance of learning in the development of teachers to be continual and lifelong (e.g., Cordingley, Higgins, Greany & Coe, 2015; Guskey, 2000; Villegas-Reimers, 2003). A teacher is expected to be learning beyond their initial teacher preparation experiences and up to their retirement. The importance given to continual professional development is apparent in view of the increasing volatility, uncertainty, complexity, and ambiguity (VUCA) in the current global context of change.
organisational capacities in relation to intended policy outcomes.

All these factors contribute to the pressure to design appropriate professional development for teachers from start to finish in their teaching career. The broad feature on continual and lifelong learning is also a testament to the need for professional development to be sustained in terms of duration and intensive in terms of frequency (Cordingley et al., 2015; Garet, Porter, Desimone, Birman & Kwang, 2001).

**Feature 2: Diverse and Complex**

In the current context where VUCA is considered a given, it is no wonder that the approaches used for professional development mirrors that of diversity and complexity. There is need to adopt a wider range of approaches in teacher professional development along with a wider range of activities and experiences so as to tailor to particular preferences, needs, and contexts (Guskey, 2000; Stoll, Harris & Handscomb, 2012; Villegas-Reimers, 2003).

Questions have been raised on the effectiveness of the traditional approach of professional development which regard it as special events that are restricted to 3 or 4 days during the school year, graduate courses and qualifications to attain better paid salaries, and the accumulation of time-based activities (Guskey, 2000). Although traditional approaches can foster teachers’ awareness or interest in deepening their knowledge and skills, they appear “insufficient to foster learning which fundamentally alters what teachers teach or how they teach” (Boyle, While & Boyle, 2004, p. 47).

Alternative forms of professional development platforms, such as study groups, coaching or mentoring, networks, and immersion to enquiry, have therefore been proposed.

**Feature 3: Collaborative-based and Community-based**

There is a rise of popularity in collaborative-based and community-based teacher learning platforms, such as professional learning community and lesson study (Darling-Hammond, Wei, Andree, Richardson & Orphanos, 2009). This can be attributed to several reasons. Collaborative professional development experiences provide
opportunities for teachers to collectively discuss concepts, skills, and problems that intimately related to teaching and instructional contexts (Garet et al., 2001). They also contribute to shared professional culture where common understanding of instructional goals, methods, problems, and solutions can be developed.

Collaborative learning practices also inevitably lead to the formation of communities where teachers share not only common practices, but also common goals and values. In such a learning context, learning is “as much a socially shared undertaking as it is an individually constructed enterprise” (Alexander & Murphy, 1998, p. 38). Collaborative-based and community-based teacher learning also provide a forum for debate and through this improving understanding on knowledge on teaching in a safe and trusting environment.

Besides growth in knowledge in teaching, collaborative-based and community-based teacher professional development also affords the emotional and psychological support to teachers having the same challenges, issues, and dilemmas that many face. Collaborative-based and community-based teacher professional development can also benefit teachers’ commitment to their teaching (Cordingley et al., 2015). In a nutshell, collaborative-based and community-based teacher professional development has the features of the principles of effective adult learning as proposed by Vella (2002): a safe environment for learning, sound relationships (respect for all), immediacy (knowledge applicable quickly), and teamwork.

**Feature 4: Integrated with Work**
The sustained critique on workshops and in-service courses that are held outside school is that they are disconnected from and are not contextualised to the day-to-day teachers’ work experiences, realities, and professional needs – even though timely knowledge, skills, and resources are given by experts. This perhaps explains the main grouse by funders of teacher professional development – that is, the issue of transferability from teacher learning to classroom practice. The lack of relevance of what teachers are learning to what teachers are experiencing in their teaching environment essentially dilutes this transferability.

Furthermore, the commitment to strengthen this transferability
is time demanding on teachers and school leaders who are already committed to heavy work responsibilities and workload. It is no surprise that Desimone (2011) suggested active learning in these professional development courses whereby teachers are actively observing and receiving feedback, analysing students’ work, and making presentations is more beneficial as opposed to passively sitting through lectures.

Finally, workplace learning or job-embedded learning has been well recognised to be consistent with experiential learning – in simple terms, learning from actions in real-world situations (Cordingley et al., 2015).

**Feature 5: Reflective-based and Inquiry-based**

The need for teacher professional development to adopt reflection and inquiry is due to the growing need for societies to engage in knowledge. This is germane with the rising importance placed on the knowledge economy and society. Teachers are now expected to go beyond being knowledge users to knowledge creators.

Effective teacher professional development has been said to challenge teachers’ thinking as a fundamental part of changing their teaching practices (Stoll et al., 2012). Hence, the policy model which requires teachers to implement central curricula to their classroom teaching is no longer viable. Even in situations where central education authorities come up with a set of curricular materials containing specific instructional goals, strategies, and tools which teachers can use immediately in their teaching, teachers are still required to make sense of centralised curricular knowledge in relation to the diverse learning needs of their students.

Teaching in the knowledge society is therefore more an intellectual than a technical enterprise (Nelson & Hammerman, 1996) whereby knowledge about teaching is questioned and interrogated through reflection and inquiry activities, such as reflective practices and action research. While the former helps teachers to surface their assumptive knowledge on teaching, the latter compels teachers to defend their assumptive knowledge on teaching using logical thinking through the use of evidence. Inquiry has the potential to turn data and experience into knowledge, using evidence for decision-making, participating in
others’ research, and promoting communities of inquiry (Cordingley et al., 2015).

Finally, reflective-based and inquiry-based teacher professional development has resonance to the importance given to the focus on the curricular content and pedagogy (Desimone, 2011; Garet et al., 2001), and also assessment.

**Feature 6: Linked to Student Learning (and Outcomes)**
The rationale for teacher professional development to be closely tied to student learning and its outcomes is simply because teachers’ work and motivation is centred on student learning and outcomes within the contexts of their classroom teaching. Teachers are essentially motivated by students’ learning (Darling-Hammond, 1998). The heavy workload that teachers have on a day-to-day basis further constrains and compels teachers to focus on teacher professional development which leverage their day-to-day teaching and learning of their students.

It is no wonder Stoll et al. (2012) placed this broad feature as the first among the list of effective features, stating that “effective professional development starts with the end in mind” (p. 3). It is not surprising that teachers and schools to want to go beyond the conventional in-service courses or workshops and adopt forms of professional development experiences that are more meaningful and in alignment to their personal beliefs and values (Day & Sachs, 2004).

**Feature 7: Organisational, External, and System Support**
The role of support from leaders within and outside schools contributes to the effectiveness of teacher professional development (Cordingley et al., 2015; Stoll et al., 2012). The first level of support comes from leaders within the school organisation itself. School leaders play a crucial role in providing the appropriate conditions to motivate teachers to engage in meaningful professional development activities and sustain their interests. These conditions include the following: providing time for meaningful teacher learning, role-model learning, placing professional development as one of the strategic goals and thrusts of the organisation, providing recognition and reward structure pertaining to professional development, (re)designing processes to transfer teacher learning to classroom practice, and distributing leadership for learning across the school organisation.
The second level of support is from external consultants – private or public organisations, such as universities or business partners. There is, however, the need to carefully optimise the engagement with external consultants so that the needs of the schools – both teachers and students – can be met to the fullest. In this regard, Cordingley et al. (2015) rightly specified several espoused activities provided by external consultants that maximise student learning outcomes. These include making an explicit specific knowledge base, introducing new knowledge and skills to be acquired, nurturing positive teacher belief in student learning, making links between teacher learning and student learning, and taking into consideration the different starting points of each teacher.

The third level of support comes from system-level leaders, such as district superintendents and educational policymakers at the state or national level. The support could be in the form of funding and appraisal structures to encourage and support professional development aspirations and practices.

All the three levels point towards the importance of coherence in the “programme” for teacher professional development (Garet et al., 2001), and how teachers perceive and experience coherence in all professional development activities provided by leaders within and outside school, and how it all makes sense to their own personal and professional beliefs and practices relating to teaching and learning.

**Feature 8: Teacher Led**

Lastly, it has been emphasised that teachers taking part in professional development, whether being forced or willingly volunteering, is beneficial to them as long as a positive learning environment, sufficient time, and congruence between professional learning experiences and the teachers’ wider working context is in place (Cordingley et al., 2015). There is, however, still ample logical support that forcing teachers to participate in teacher professional development is not sustainable and potentially curtails the optimal level of teacher learning, and thus the improvements it can make to classroom teaching and learning.

Although it can be argued that teachers’ resistance cannot be given into at the expense of education reforms that prepare students for the 21st century, the kind of lifelong learning that effectively support
21st century societies is centred on empowerment of the learners. Following this argument, lifelong learning is defined as

The development of human potential through a continuous supportive process which stimulates and empowers the individuals to acquire all the knowledge, values, skills, and understanding they will require throughout their lifetimes and to apply them with confidence, creativity, and enjoyment in all roles, circumstances, and environments. (Longworth, 2001, p. 592)

Furthermore, the broad features that are mentioned above including the three by Cordingley et al. (2015) are in essence to motivate teachers to willingly engage and be continually engaged in professional development activities.

**Conclusion**
The literature support for the types of features that are considered effective in teacher professional development has been quite established over the last decade. What is still lacking, however, is the methodological rigour that supports the claims on such effective features on its attendant outcomes, such as student (e.g., academic and non-academic outcomes), teacher (e.g., teacher knowledge, attitude, and self-efficacy) and organisation (e.g., learning culture). In this regard, I wish to make several propositions for both educational policymakers and practitioners to consider.

First, mixed-method research programmes that involve the integrated use of both quantitative and qualitative research methods to explore or test the effectiveness of the above mentioned features. Second, longitudinal research programmes to explore and test change in outcomes. Third, large sample data sets to strengthen generalisability. Fourth, robust research designs such as the use of ethnographic data in qualitative research studies, and experimental and non-experimental designs (e.g., the use of correlations and regressions) to strengthen causality. Both are important to estimate “what” and “how” aspects of the effects of teacher professional development. Fifth, the use of item response theory (e.g., Rasch modelling)
to strengthen the estimates in measurement of constructs for quantitative studies pertaining to effectiveness of professional development activities. Sixth, intervention studies to compel researchers to arrive at strong theoretical frameworks on effective professional development and testing them out in practice. (Refer to Hairon, Goh, Chua and Wang [2015] for detailed elaborations on the above propositions, albeit within a professional learning community context.)

In summary, the claims made on what are considered effective or not need further empirical substantiation through either formal government funded or informal practitioner research programmes. Only through this will there be further resolutions in teacher professional development.

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