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**EXPLAINING THE SUCCESS OF THE WORLD'S LEADING  
EDUCATION SYSTEMS: THE CASE OF SINGAPORE**

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# EXPLAINING THE SUCCESS OF THE WORLD'S LEADING EDUCATION SYSTEMS: THE CASE OF SINGAPORE

*ABSTRACT: International comparative data on student performance has led McKinsey&Company, among others, to suggest that education systems will inexorably converge in their developmental trajectories with principals and schools enjoying more autonomy. This article challenges these assumptions through referencing Singapore where schools and professionals are still tightly controlled in key resources, curricula and assessment, and where other key factors contribute to its success – thereby evidencing multiple pathways to success.*

*Keywords: Singapore education, teacher and principal professionalization, autonomy*

## INTRODUCTION

Comparative research on school effectiveness has received intense scrutiny following the barrage of published studies comparing the performance of education systems in different parts of the world (Barber & Mourshed, 2010; Mourshed, Chijioke, & Barber, 2010; OECD, 2013a). McKinsey&Company, for example, in a flurry of highly publicized reports, has attempted to map out commonalities in the developmental trajectories of education systems around the world (Barber & Mourshed, 2007, 2010; Barber, Whelan, & Clark, 2010; Mourshed, Chijioke, & Barber, 2010). Undoubtedly, this trajectory has had the effect of reducing the insularity of school educational processes that have traditionally escaped the attention of analysts and scholars, and has consequently led to greater educational transparency, collaboration, and diffusion of best practices among policy makers and schools in different countries.

However, an argument can also be made that in the process, some researchers have adopted a somewhat reductionist, analytical approach in their endeavor to identify supposed commonalities and generic characteristics of a development trajectory across all education systems, thereby ignoring pertinent sociocultural, political and other contextual features that have underpinned and impacted the development of education systems in different countries (Walker & Dimmock, 2002). Consistent with this premise, this paper centers on Singapore, a much lauded high-performing education system (Darling-Hammond, 2012; OECD, 2013b) to illustrate the inherent divergence of the city-state's developmental trajectory vis-a-vis those of other improving education systems as classified in the typology of most improved education systems by McKinsey&Company (Mourshed, Chijioke, & Barber, 2010).

## PROFESSIONALISATION AND SCHOOL AUTONOMY

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2  
3 Since the early 1990s, school reforms have focused on giving schools greater  
4  
5 autonomy over a wide range of institutional operations in an effort to raise performance  
6  
7 levels (Whitty, 1997; Carnoy, 2000; Clark, 2009; Machin and Vernoit, 2011). More  
8  
9 decision-making responsibility and accountability have devolved to school principals,  
10  
11 and, in some cases, management responsibilities have devolved to teachers or  
12  
13 department heads. Schools have become increasingly responsible for curricular and  
14  
15 instructional decisions as well as for managing financial and material resources and  
16  
17 personnel. These reforms are adopted on the premise that schools themselves are more  
18  
19 knowledgeable about their own needs and the most effective ways to allocate resources  
20  
21 and design the curriculum so that they can better meet the needs of their students.  
22  
23

24  
25 Our argument is not that Singapore, unlike other developed education systems,  
26  
27 has defied the trend towards devolution and autonomy; rather, it is about the degree to  
28  
29 which it has followed this trend, and the diverse means by which the Singapore Ministry  
30  
31 of Education (MOE) has managed to maintain control in the process of granting limited  
32  
33 autonomy to schools and principals. It is also about the need to consider a host of other  
34  
35 factors that account for a high-performing education system. A glance at the world's  
36  
37 leading systems reveals that Singapore is not alone in this respect and that a range of  
38  
39 complex diverse responses are detectable, resulting in different degrees and forms of  
40  
41 autonomy, as well as a coterie of disparate but influential factors on performance. In  
42  
43 short, it is apparent that there are multiple pathways to success.  
44  
45  
46

47  
48 Evidence for this claim, specifically in relation to Singapore, is found in the  
49  
50 Program for International Student Assessment (PISA) 2012 data (OECD, 2013c). These  
51  
52 data show that while Singapore is second only to Shanghai in mathematics performance,  
53  
54 it is below the Organization for Economic Cooperation and Development (OECD)  
55  
56 average for school autonomy overall (OECD, 2013c, p.51). Specifically, it is  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
2  
3 significantly below the OECD average for school autonomy and resource allocation  
4  
5 (OECD, 2013c, p.131), and for school autonomy and curricula and assessments (OECD,  
6  
7 2013c, p.132). Table 1 below shows school autonomy in Singapore relative to selected  
8  
9 other systems.  
10

11  
12  
13  
14 Insert Table 1 here  
15  
16  
17

## UNIVERSAL DEVELOPMENTAL TRAJECTORY?

18  
19  
20 According to the McKinsey&Company typology, twenty of the most improved  
21  
22 education systems around the world are classified as belonging to one of four distinct  
23  
24 stages of development, and inexorably progressing from one stage to another (Mourshed,  
25  
26 Chijioke, & Barber, 2010). First, education systems in the least performing stage – from  
27  
28 *poor to fair* – are reported to be focused on supporting students to achieve basic levels of  
29  
30 literacy and mathematics, by providing support for lowly skilled teachers, meeting basic  
31  
32 student learning needs, and elevating all schools to minimum quality thresholds.  
33  
34 Education systems belonging to the second stage of development – from *fair to good* –  
35  
36 devote their energies and resources to consolidating system foundations, by generating  
37  
38 high quality system-wide performance data, introducing teacher and school  
39  
40 accountability measures, and generating organizational and pedagogical models. In the  
41  
42 third stage of development (from *good to great*), education systems work on ensuring  
43  
44 the professional status of school teachers and principals via the implementation of  
45  
46 informed practices and clear career paths. Education systems in the fourth and last stage  
47  
48 - from *great to excellent* – shift the locus of improvement from the center to schools  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 themselves. Educators learn with peers within and across schools, and participate in  
4  
5 system-sponsored innovation and experimentation.  
6

7 The McKinsey&Company typology asserts unequivocally that across the four  
8  
9 stages of development, education systems have developmental trajectories that are  
10  
11 invariant across different contextual backgrounds:  
12  
13

14  
15  
16 ‘What our analysis reveals is that despite their different contexts, all  
17  
18 improving school systems appear to adopt a similar set of  
19  
20 interventions that is appropriate to their stage of the journey. This is  
21  
22 not to say that context is not important, but it is secondary to  
23  
24 getting the fundamentals right’ (Mourshed, Chijioke, & Barber,  
25  
26 2010, p. 17).  
27  
28  
29  
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31

32 In the typology, only Finland qualifies to be placed in the highest stage, while  
33  
34 Singapore is classified as belonging to the ‘good to great’ stage. Singapore earns the  
35  
36 status of a ‘sustained improver’ by virtue of its cumulative and consistent rises in student  
37  
38 achievement spanning multiple data points (1983 to 2007) and subject areas (reading,  
39  
40 mathematics, science). However, according to PISA 2012 results (OECD, 2012),  
41  
42 Shanghai had eclipsed Finland in terms of mathematics, reading and science, and the top  
43  
44 seven places were by then occupied by East and South-east Asian countries, including  
45  
46 Singapore, Hong Kong, Taiwan and Korea. The domination of Asian systems is  
47  
48 noteworthy, and in just a short time (2009-2012) McKinsey&Company’s classification  
49  
50 of Finland as the world’s only excellent system, seemed inappropriate if not misleading.  
51  
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54 The allusion from McKinsey&Company, however, is that the Singapore  
55  
56 education system exhibits most, if not all, of the developmental characteristics of other  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
2  
3 similarly improved systems in the same stage, and is predicted to manifest even those of  
4  
5 Finland as it continues on its improvement journey. These characteristics comprise first,  
6  
7 the expected professionalization of teachers and principals, and second the staged  
8  
9 decentralization of decision-making from the center to school level. This ‘truism’  
10  
11 according to McKinsey&Company occurs invariably as follows:  
12  
13

14  
15  
16 ‘Systems on the poor to fair journey... exercise tight, central  
17  
18 control over teaching and learning processes in order to minimize  
19  
20 the degree of variation between individual classes and across  
21  
22 schools. In contrast, systems moving from good to great... only  
23  
24 provide loose, central guidelines for teaching and learning  
25  
26 processes, in order to encourage peer-led creativity and innovation  
27  
28 inside schools, the core driver for raising performance at this stage’  
29  
30  
31 (Mourshed, Chijioke, & Barber, 2010, p. 34).  
32  
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34  
35

36  
37 Further evidence of a generic correlation between high performance and the  
38  
39 loosening of centralization is given by the PISA 2012 results (OECD, 2013c), the report  
40  
41 on which asserts that the ‘highest-performing school systems are those that allocate  
42  
43 educational resources more equitably among advantaged and disadvantaged schools and  
44  
45 that grant more autonomy over curricula and assessments to individual schools’ (p. 4).  
46  
47 However, as noted elsewhere in this paper, the correlation does not hold for Singapore.  
48  
49

50  
51 We contend that these assumptions are unnecessarily unequivocal, and without  
52  
53 due regard for the broader socio-cultural and political contexts of different societies,  
54  
55 including the present case of Singapore. As previously stated, according to PISA 2012  
56  
57 results (OECD 2013c), the top seven places in performance in mathematics, reading and  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
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3 science are all Asian (Shanghai, Singapore, Hong Kong, Taiwan, Korea, Macao, and  
4  
5 Japan), while the next five places are European (Liechtenstein, Switzerland, Netherlands,  
6  
7 Estonia and Finland). It is readily apparent that there is as much variation in education  
8  
9 systems within each of the Asian and European clusters, as there is between them – in  
10  
11 terms of school organization and governance, and centralization and autonomy. This  
12  
13 leads us to the conclusion that there are multiple pathways to becoming a top performing  
14  
15 system. Claims of generalized characteristics across all systems as they progress to the  
16  
17 top are thus vulnerable to the criticism that they are oversimplifications and fail to take  
18  
19 into account the unique complexities of culture and context that characterize each  
20  
21 system in its development trajectory (Dimmock & Walker, 2005).  
22  
23  
24

25 Criticisms of ‘naïve empiricism’ that are angled towards the McKinsey&Co.  
26  
27 reports, can also be leveled at those emanating from OECD PISA reports and TIMSS.  
28  
29 ‘Naïve empiricism’, according to Juslin, Winman and Olsson (2000), consists of two  
30  
31 elements; first, overconfidence - sometimes verging on dogmatism - in conclusions  
32  
33 based on empirical data; and second, the ‘hard-easy’ effect, which refers to the over-  
34  
35 simplification or reductionism of complex phenomena. In the present context naïve  
36  
37 empiricism has both of these elements. First, the use of a narrow range of scores on a set  
38  
39 of tests to represent a much larger phenomenon of student learning outcomes – for  
40  
41 example, with PISA, scores for mathematics, science and reading on an international  
42  
43 achievement test, which are then assumed to represent a much broader-based concept of  
44  
45 student learning outcomes. Although McKinsey&Co uses more sources of student  
46  
47 achievement data (including TIMSS and PISA) than does PISA, all these data are still  
48  
49 quantitative snapshots. There are no qualitative data on student learning and growth.  
50  
51 Hence the use of such test scores fails to adequately capture the complexity of student  
52  
53 learning and development. Second, both McKinsey&Co. and PISA tend to simplify the  
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1  
2  
3 attributions of education system success to a misleadingly small number of factors. That  
4  
5 is, they simplify the implications and attributions of such scores to relatively few factors,  
6  
7 such as school autonomy and teacher professionalism, when multiple factors within and  
8  
9 without school account for a system's performance. A further elaboration of these  
10  
11 criticisms is, thirdly, that although PISA collects data on student, family, and school  
12  
13 variables, neither McKinsey&Co nor PISA take sufficient account of socio-cultural  
14  
15 factors in their explanation of school success. For example, broader socio-cultural  
16  
17 contextual variables that influence student school performance – such as race/ethnicity,  
18  
19 diversity in classrooms and schools, parenting processes, socio-economic environment  
20  
21 and resource equity (eg. class size, types of programme offered, compensatory education,  
22  
23 and social mobility) - are ignored. Finally, although the McKinsey study relies on  
24  
25 qualitative and quantitative data, and PISA exclusively on quantitative survey data, both  
26  
27 adopt a cross-sectional research design. Thus inferences of causality may be  
28  
29 inappropriate if not misleading.  
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34 Our argument on the dangers of naïve empiricism is well illustrated by the  
35  
36 unique contexts of two South-East Asian systems - Singapore and Vietnam. In  
37  
38 Singapore's case, over the short period of 50 years, it has risen from a Third World,  
39  
40 port-based British colony to a First World independent republic whose economy has one  
41  
42 of the highest per capita incomes in the world (Gopinathan, 2007). During this period it  
43  
44 has transformed itself into a stable political entity (although described as a democracy,  
45  
46 one party has monopolized power since the nation state became an independent republic  
47  
48 in 1965), built a trusted global banking and financial sector, diversified its economic  
49  
50 structure, and created a harmonious, loyal citizenry from a previous divided ethnic and  
51  
52 linguistic population, the size of which has increased five-fold to 5 million people  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 (Gopinathan, 2007). Having participated in PISA testing since 2009, it was rated by  
4  
5 OECD to be the top education system globally in 2015 (Coughlan, 2015).  
6

7  
8 In comparison, Vietnam, also an impressive performer in PISA tests, has a  
9  
10 communist government, and a large population of 90 million. Unlike Singapore, its fast  
11  
12 economic growth rate began only a decade ago, and until 2012, it had not participated in  
13  
14 international achievement tests. Unlike Singapore, poverty in both rural and urban areas  
15  
16 is significant. Yet, entering the PISA tests for the first time in 2012, Vietnam was ranked  
17  
18 a high 16<sup>th</sup> out of 61 participant countries. – a higher ranking than England, Germany and  
19  
20 the USA – and 12<sup>th</sup> in 2015 (Coughlan, 2015). As a recently emergent economy and  
21  
22 society, where governance is still heavily centralized, and improved teacher  
23  
24 professionalism is an aspiration for the future, Vietnam's PISA performance suggests a  
25  
26 highly successful school system. Yet, Vietnam's 'success' is apparently due to three  
27  
28 factors (Coughlan, 2015): high government commitment to investing in education (more  
29  
30 than 21 per cent of Government expenditure went to education in 2010), to hard working  
31  
32 students and teachers, a high degree of centralized control of schools, where, for  
33  
34 example, the Government designed a curriculum focusing on deep understanding and  
35  
36 mastery of core skills, and to high levels of teacher dedication and status in society.  
37  
38 However, others suggest many other contributory factors, for example, a high drop-out  
39  
40 rate among weaker students prior to eligibility for PISA, leaving only the most able to be  
41  
42 tested (The Economist, 2013). Singapore and Vietnam – both high performing systems  
43  
44 on PISA tests, illustrate that while having some features in common (such as strong  
45  
46 centralization), each has a distinctly different range of contextual factors accounting for  
47  
48 their respective success.  
49  
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54 In the sections that follow, our analysis systematically unravels the particular  
55  
56 contextual conditions underlying the educational development of Singapore. It compares  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
2  
3 the status quo - as evidenced by the PISA 2012 results (OECD 2013c) - with the  
4  
5 scenario depicted in the typological assumptions espoused by McKinsey&Company  
6  
7 (2010). The analysis is themed according to professionalization of teachers;  
8  
9 professionalization of principals, their values and mission; and central control – all in  
10  
11 relation to autonomy. In succeeding sections, we go on to explain the complexity of  
12  
13 factors that *de facto* explain Singapore’s pathway to success. Singapore constitutes an  
14  
15 example of how each country forges its own pathway, leading to the conclusion that  
16  
17 there are multiple pathways to success.  
18  
19

## PROFESSIONALISM OF TEACHERS, THE CURRICULUM AND AUTONOMY

20  
21  
22  
23  
24 The professionalization of teachers refers to the latter’s perceptions of their  
25  
26 professional status and rewards as seen by themselves and other members of society  
27  
28 (Hargreaves, 2000). It entails expectations of quality in the work produced, appropriate  
29  
30 professional conduct, and elements of autonomy in the professional work done (Helsby,  
31  
32 1995; Larson, 1977). According to Hargreaves (2000), teachers if deemed to be  
33  
34 professionals, should earn substantial and competitive salaries, resist public discourses  
35  
36 that blame teachers for student underachievement, regulate the certification of teaching  
37  
38 staff in schools, acquire state-of-the-art pedagogical knowledge, focus collaborative  
39  
40 energies on improving teaching and learning, spend time on collaboration in daily  
41  
42 school life (in addition to after-school or vacation provisions), and collaborate with  
43  
44 colleagues within and across schools.  
45  
46  
47  
48

49  
50 When teachers in the Singapore education system are matched against these  
51  
52 criteria, they do appear to have achieved professional status (MOE, 2014). More  
53  
54 specifically, Singapore teachers are recruited from the top one-third of the cohort of  
55  
56 school graduates. While in England, there is a teacher shortage, in Singapore, there are  
57  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
2  
3 eight applicants for every teacher training position (Crehan, 2014). Singapore teachers  
4  
5 receive salaries that are competitive with equally well-qualified civil servants in other  
6  
7 government ministries, and they are benchmarked with those of similar qualifications  
8  
9 and job responsibilities in the private sector. There is society-wide respect for the  
10  
11 teaching profession in Singapore. The pre- and in-service training programs that teachers  
12  
13 undergo are of high quality and benchmarked internationally. Within and across schools,  
14  
15 there are structured provisions to facilitate teacher individual and peer collaboration (e.g.,  
16  
17 sponsorship for postgraduate courses, professional learning communities, network  
18  
19 learning communities and subject chapters across schools, structured mentoring) (MOE,  
20  
21 2014). Unquestionably the biggest indicator of the importance placed on teacher  
22  
23 professional development is the requirement introduced by the Singapore MOE in 2010  
24  
25 that every school become a professional learning community (PLC), that every teacher  
26  
27 participate and engage in their own and colleagues' learning, and that all principals take  
28  
29 responsibility for leading and managing their PLCs (Academy of Singapore Teachers,  
30  
31 2012). Singapore teachers are given ample opportunity to experience high levels of  
32  
33 professional growth.  
34  
35  
36  
37

38  
39 However, beyond these largely structural but important provisions, teachers in  
40  
41 most Singapore schools do not appear to enjoy a high degree of autonomy in the  
42  
43 exercise of their professional practice. More specifically, within classrooms, they can  
44  
45 theoretically choose their preferred teaching approaches from an array of competing  
46  
47 pedagogical options, but they lack flexibility to tailor the curriculum or assessment to  
48  
49 suit their students' needs (Dimmock, 2011; Gopinathan & Deng, 2006). This is because  
50  
51 curricular tracks are largely predetermined in the centralized Singapore education  
52  
53 system, from subject-based banding in primary schools, to academic/technical tracks in  
54  
55 secondary schools and post-secondary institutions (MOE, 2015). More importantly,  
56  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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2  
3 MOE perceives the existing national curriculum to be well developed and fit-for-  
4  
5 purpose, and therefore any school-based curriculum is seen as complementary to, rather  
6  
7 than as substitute for, the national curriculum (Gopinathan & Deng, 2006), and is largely  
8  
9 confined to early primary years and the co-curriculum. Furthermore, in contrast to the  
10  
11 McKinsey&Company model of ‘school-based curriculum enactment’ (p. 99), Singapore  
12  
13 teachers’ roles are largely restricted to interpreting, reorganizing, and restructuring the  
14  
15 given curriculum, as opposed to reinventing a more individualized curriculum to suit  
16  
17 their students’ needs (Gopinathan & Deng, 2006). The main curtailment to teacher  
18  
19 professional autonomy, however, is the pressure exerted by the MOE for Singapore  
20  
21 students to maintain their position as top performers on PISA and other international  
22  
23 tests, and the equal pressure by parents for students to gain entry to higher education and  
24  
25 the best universities. These two forces lead to the perpetuation of teacher over-reliance  
26  
27 on didactic teaching methods at the expense of student-centered teaching and learning.  
28  
29 Hogan and Colleagues’ (2009) system-wide research (see Table 2 below) on Singapore  
30  
31 teaching shows the dominance of traditional forms of pedagogy at the expense of the  
32  
33 introduction of new strategies. Summarizing, Hogan and Colleagues’ (2009) data prove  
34  
35 that teachers in Singapore rely on whole class forms of lesson organization, with whole  
36  
37 class lectures and question and answer sequences characterizing 60% of all lessons in  
38  
39 both Primary 5 and Secondary 3. This pattern is quite different from the dominant forms  
40  
41 of classroom organization in the West: in Britain for example, more than half of all  
42  
43 lessons are organized around group work activities.  
44  
45  
46  
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48

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52 Insert Table 2 here  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 Convincing evidence confirms that didactic teaching, rote memorizing and testing are  
4  
5 closely aligned with high performance on international achievement tests, compared  
6  
7 with student-centered methods (Hattie, 2009).  
8

9  
10 In recent years, schools are encouraged to provide non-academic niche programs  
11  
12 such as sports, uniform groups, visual and performing arts (Dimmock, 2011). If these  
13  
14 niche programs have an academic character, they must complement rather than supplant  
15  
16 the mainstream prescribed academic curriculum. This caveat is most evident in the then  
17  
18 Education Minister Teo's exhortation that in the context of centrally prescribed  
19  
20 programs and parameters in Singapore, schools can only 'decide on implementation, like  
21  
22 further customization and implementation of non-academic school programs' (MOE,  
23  
24 1999, p.5). There are however two groups of schools that enjoy greater autonomy in  
25  
26 curricular development, funding, and governance (i.e., the independent schools, and  
27  
28 specialized independent schools in mathematics and science, science and technology,  
29  
30 arts, and sports), but their number is small as a percentage of the entire system, with  
31  
32 schools enjoying little curriculum autonomy (Dimmock, 2011).  
33  
34  
35

36  
37 In the domain of assessment, students in Singapore schools are exposed to  
38  
39 multiple nation-wide high-stake summative examinations at key learning stages that are  
40  
41 carefully designed for the purposes of allocating them to different academic tracks based  
42  
43 on their demonstrated abilities (Tan, Chow, & Goh, 2008). These examinations include  
44  
45 the Gifted Education Program screening in primary 4, Primary School leaving  
46  
47 Examination in primary 6, GCE 'O' levels in secondary 4 or 5, and GCE 'A' levels in  
48  
49 junior colleges. These different institutional constraints collectively impinge on teachers'  
50  
51 professional autonomy in the key areas of curriculum and assessment, and exert pressure  
52  
53 on the development of their identities as empowered professionals (Day, Kington,  
54  
55 Stobart, & Sammons, 2006).  
56  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 Overall, the relatively low level of autonomy granted to Singapore schools for  
4 curriculum and assessment is evidenced in the PISA 2012 data (OECD, 2013c, p.132)  
5  
6 and summarized in Table 1. These data, based on the perspectives of principals, teachers,  
7  
8 and administrators, show Singapore below the OECD average for school autonomy over  
9  
10 resource allocation and for curriculum and assessment.  
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## PROFESSIONALIZATION OF PRINCIPALS AND AUTONOMY

16  
17  
18 With regard to the professionalization of principals, a review of the extant  
19  
20 literature indicates that principal leadership in Singapore has not been systematically  
21  
22 researched (Ng et.al, 2015a). Rather, Ng and colleagues (2015a) found a total of 37  
23  
24 papers, theses and reports that referenced principal leadership. The review provides  
25  
26 *prima facie* evidence of relatively high levels of principal leadership professionalism in  
27  
28 Singapore. First, the appraisal and selection process for career advancement to  
29  
30 principalship is rigorous and based on recommendation from superiors rather than self-  
31  
32 selection. In a small centralized system of 360 schools, every teacher, middle-level and  
33  
34 senior leader is regularly appraised and the attributes of each become well  
35  
36 acknowledged among those responsible for promotion. Second, Ng and colleagues'  
37  
38 (2015) literature review emphasizes the fact that every aspiring leader goes through the  
39  
40 same leadership training programs for middle leaders, and again later when aspiring to  
41  
42 principalship – resulting in a uniformly high standard of system alignment. Both  
43  
44 programs are monopolized by the National Institute of Education (NIE), The program  
45  
46 for aspiring principals – known as the Leaders in Education Program – LEP - is run over  
47  
48 6 months full-time, and includes extensive reading, project work in a school, visits  
49  
50 overseas, and mentorship. Less than half of the deputy principals completing the LEP  
51  
52 are selected for principalship. Few systems invest this level of resource in training future  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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2  
3 principals. However, in order to examine the degree of professionalism that principals in  
4  
5 Singapore schools actually enjoy in practice, it is necessary to identify first, the key  
6  
7 behavioral attributes of school leadership and second, the decision-making context in  
8  
9 which their leadership is enacted.  
10

11  
12 In terms of principal attributes, Bush and Glover (2014) – writing from a  
13  
14 distinctly Anglo-American and thus ethnocentric perspective - assert that despite the  
15  
16 proliferation of different conceptual paradigms, few would challenge that -  
17

18  
19 ‘school leadership is a process of influence leading to the  
20  
21 achievement of desired purposes. Successful leaders develop a  
22  
23 vision for their schools based on their personal and professional  
24  
25 values. They articulate this vision at every opportunity and influence  
26  
27 their staff and other stakeholders to share the vision. The  
28  
29 philosophy, structures and activities of the school are geared towards  
30  
31 the achievement of this shared vision’ (p. 5).  
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Inherent in this articulation is the compelling notion that principals ground their  
vision in clear personal and professional values, and that they assertively influence their  
organizational members to collectively achieve their vision (Day, Harris, & Hadfield,  
2001; Southworth, 1993; Yukl, 2002). The ultimate stage is reached where schools  
become ‘self-organizing’ (Bain, 2007; Bain, Walker & Chan, 2011), with minimal  
intervention from government, and where school leaders (and teachers) enjoy substantial  
autonomy in resource allocation to undertake and sustain capacity building from within  
(Dimmock, 2012; Dinham & Crowther, 2011; King & Bouchard, 2011). In short –  
ubiquitous school-system evolutionary development is predicated on a professionally-  
led model of school system evolutionary development (Hargreaves, 2011). This appears

## PROFESSIONALISATION AND SCHOOL AUTONOMY

1  
2  
3 to be the conceptualization underpinning the progressive stage-by-stage trajectory  
4  
5 recognized and espoused by McKinsey&Company (Mourshed, Chijioke, & Barber,  
6  
7 2010). This scenario seems remote from the everyday experiences of most Singapore  
8  
9 principals, as explained below.  
10

*Singapore Principals, Values and Mission*

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12  
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14  
15  
16 Rhetorically, according to MOE (2008), principals of Singapore schools are  
17  
18 expected to be transformative agents who can equip students with the knowledge,  
19  
20 competencies, and skills that are needed for the desired future. In particular, they are to  
21  
22 be guided by sound values and a sense of purpose, to be able to inspire others to realize  
23  
24 a shared vision, to grow teachers and other school staff, and to lead and manage change.  
25  
26 The in-service training for all prospective principals is concentrated at, and monopolized  
27  
28 by NIE, where programs espouse the development of capabilities in participants to  
29  
30 handle complexities involved in the mission of equipping students with twenty-first  
31  
32 century attributes (Ng, 2013). Toward this end, aspiring principals learn how to envision  
33  
34 the future, contextualize theories to suit local needs, adapt to emerging contingencies,  
35  
36 and collaborate with others.  
37  
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39

40  
41 However, the reality for principal leadership practice is that they are largely  
42  
43 circumscribed in the definition and articulation of their professional values (Dimmock &  
44  
45 Tan, 2013). Indeed, they are expected to adhere more to MOE's corporate values and  
46  
47 vision, as expressed for example in a proliferation of MOE policy documents, including  
48  
49 the Desired Outcomes of Education policy, than develop their own personal and  
50  
51 professional values (MOE, 2008). For example, they are required to consider the  
52  
53 implications of education to nation-building (e.g., national cohesion) and to prepare  
54  
55 students for the workforce (e.g., the knowledge-based economy) that the government  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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2  
3 envisions will benefit Singapore. Many values that are deemed to be sacrosanct in the  
4  
5 Singapore education system such as meritocracy, use of examinations, bilingualism, use  
6  
7 of English as the primary medium of instruction, and the secularity of schools  
8  
9 emphasizing racial and religious harmony are also enshrined and systematically  
10  
11 reinforced in policy articulations such as ‘Thinking Schools, Learning Nation’, ‘Desired  
12  
13 Outcomes of Education’, ‘Philosophy for Educational Leadership’, and ‘Ethos of the  
14  
15 Teaching Profession’ (Tan & Dimmock, 2014). Consequently, there is little room for  
16  
17 alternative schooling models such as schooling for religious or purely epistemic ends  
18  
19 that do not appear to benefit the nation more than either sectoral or individual student  
20  
21 interests. Expectedly, principals ‘gradually begin to integrate their own personal and  
22  
23 professional identities with MOE’s values, thereby internalizing the latter as their own,  
24  
25 adopting them as a kind of “default” position for undergirding their leadership practice  
26  
27 over time’ (Dimmock & Tan, 2013, p. 331). Further evidence on the degree to which the  
28  
29 professionalism of Singapore principals is circumscribed, comes from clarifying the  
30  
31 degree to which, and ways in which, the MOE exerts central control over schools. We  
32  
33 discuss this below.  
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## CENTRAL CONTROL AND AUTONOMY

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43 Scholars of Singapore education have recently described the relationship  
44  
45 between MOE and schools in dialectical terms. Tan and Ng (2007) for example, report  
46  
47 that Singapore, like other developed systems, has (since 1997 in particular), introduced  
48  
49 major educational change to prepare its students to meet the challenges of a knowledge  
50  
51 economy. They go on to discuss recent educational change in Singapore using the  
52  
53 framework of decentralized-centralism, first proposed by Karlsen (2000). In exploring  
54  
55 the dynamics of change in the initiation, content, levels and simultaneity of the reform  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 process in terms of ‘decentralized-centralism,’ Tan and Ng (2007) describe the  
4  
5 ideological roots of the decentralized-centralism policy as the tension between  
6  
7 functionalist and liberal forms of education in the Singapore context.  
8

9  
10 Recently, Chua (2014) refers to Singapore’s unique emergent system of  
11  
12 governance as centralized-decentralization (reversing Tan and Ng’s terminology). Chua  
13  
14 argues that while strong central decision making has been credited for Singapore’s high  
15  
16 performance on international tests such as PISA and Trends in International  
17  
18 Mathematics and Science Study (TIMSS), concerns were raised about the degree of  
19  
20 responsiveness and innovation that such a centralized system could support, especially  
21  
22 when trying to shift schools to focus on 21<sup>st</sup> century skills. Consequently, he says, the  
23  
24 Ministry started to give bounded autonomy to schools to make local decisions. For  
25  
26 example, under the ‘*Teach Less, Learn More*’ (TLLM) initiative, designed to reduce the  
27  
28 over-reliance on rote learning and encourage schools to develop learning experiences  
29  
30 that engage students, promote critical and creative thinking and support students’  
31  
32 holistic development, schools were given more flexibility to develop their own  
33  
34 pedagogical approaches (e.g., inquiry or problem-based learning) as long as these  
35  
36 approaches were aligned to the intent of TLLM. MOE also created ‘white spaces’ in the  
37  
38 curriculum for schools to develop their own unique courses and learning programs. It  
39  
40 has to be said, however, that these are mostly confined to the co-curriculum area. Since  
41  
42 that time, the Ministry has pursued other policies that reflect a centralized-decentralized  
43  
44 approach. For many years, according to Chua (2014), Singapore maintained relatively  
45  
46 large class sizes of 40 students per teacher. However, when MOE decided to reduce  
47  
48 class sizes, it did not dictate a particular size for all classes. Rather, it created a new  
49  
50 matrix of student-teacher ratios that determined the overall allocation of teachers to  
51  
52 schools, but left schools with the flexibility to determine the optimal class size for  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 different kinds of students. Thus some schools have chosen larger classes for higher  
4  
5 ability students and smaller for lower achievers (Chua, 2014).  
6

7  
8 That there is less centralization today than in the 1970s and 1980s is recognition  
9  
10 that some decision making is best made in the schools by principals and teachers – since  
11  
12 they know local conditions best. However, as Chua goes on to say, just as the flip side of  
13  
14 some carefully calibrated increase in autonomy is increased accountability for results,  
15  
16 from the Ministry’s perspective, centralized guidance (such as the parameters of  
17  
18 schools’ student-teacher ratios) is needed to maintain coherence as a system. Chua  
19  
20 (2014) argues that ultimately, the approach is designed to enable the system to reap all  
21  
22 the benefits associated with tight coupling and a strong central authority without overly  
23  
24 constraining the local professional class, and thus depriving the system of innovation  
25  
26 and creativity. In the end, however, making centralized-decentralization work, may well  
27  
28 depend on the professionalism and capacity of superintendents and school leaders to  
29  
30 resist rote compliance and learn how to make local adaptations that do not stray too far  
31  
32 from policy makers’ expectations. This last is peculiarly Singaporean. And as later  
33  
34 discussed, the system of 360 schools is small enough to allow MOE and school leaders  
35  
36 to believe that it can still be strongly controlled, if not micro-managed, from the center.  
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40  
41 If principals of Singapore schools may be said to operate in an environment  
42  
43 characterized by relatively low levels of devolution of decision-making capacities from  
44  
45 the center (i.e., MOE) to schools, the line of authority from MOE is organized around  
46  
47 four geographical zones and then school clusters within the zones. The four zones are  
48  
49 led by deputy directors, who work closely with a middle-tier (i.e. cluster superintendents)  
50  
51 to advise and support principals. Decision-making power on school operational matters  
52  
53 is delegated to principals. However beyond local operational issues, principals enjoy  
54  
55 bounded autonomy in that they have to ensure that the overall developmental trajectory  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 of their schools, in terms of student learning outcomes, curricular offerings and  
4  
5 assessment, staff development and appraisal, resource management, and relationships  
6  
7 with community stakeholders, is tightly aligned to that of MOE (Tan & Dimmock,  
8  
9 2014). They have to regularly report to MOE on how their schools contribute to the  
10  
11 larger vision espoused by MOE, and therefore they do not enjoy devolution of decision-  
12  
13 making power over the directions of their schools, arguably the most pertinent  
14  
15 requirement of an archetypical decentralized and highly performing system. Teachers  
16  
17 are allocated to schools by MOE, and the large part of school budgets is also allocated to  
18  
19 them. Thus principals enjoy little if any control over three main resources essential to  
20  
21 their performance – curriculum, teacher selection and appointment, and finance  
22  
23 (Dimmock & Tan, 2013). Furthermore, the PISA 2012 data (OECD, 2013, p.131)  
24  
25 confirm that Singapore schools and principals are placed below the OECD average for  
26  
27 school autonomy for use of resources and resource allocation.  
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32 Consequently, a convincing case can be made that the real locus of strategic  
33  
34 decision-making resides in powerful bureaucrats in MOE headquarters. Hence compared  
35  
36 with other high-performing school systems - Victoria (Australia), Netherlands, Taiwan,  
37  
38 and Hong Kong (all of which are above the OECD average) – Singapore principals have  
39  
40 their powers seriously circumscribed in their professional roles and responsibilities.  
41  
42 Although enjoying more latitude than in past decades, principals are still functioning as  
43  
44 line managers (they are still classed as MOE ‘officers’ instead of ‘professionals’) under  
45  
46 tight supervisory and monitoring conditions, ensuring the efficient implementation of  
47  
48 the center’s policies. It is this characteristic - the capacity to devise and efficiently  
49  
50 implement pragmatic policies.- that Gopinathan (2007) claims is the prevailing culture  
51  
52 that pervades the whole system; it has been the transformative lever propelling  
53  
54 Singapore’s development.  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 This fundamental relationship between MOE headquarters and schools has  
4 evolved but not substantively changed over time (Gopinathan, 2007; Gopinathan &  
5 Deng, 2006; Gopinathan, Wong, & Tang, 2008; Mourshed, Chijioke, & Barber, 2010;  
6 Tan & Dimmock, 2014). In the earlier phases of Singapore's educational development  
7 (survival phase: 1959-1978; efficiency phase: 1979-1996 – see Gopinathan, 2007), MOE  
8 has employed various centralized approaches such as policy mandates, curricular and  
9 assessment standardization, managerialism for principals, leadership handbooks, and  
10 standard operational procedures - in the formulation and implementation of policy. In  
11 the present phase of development (ability-driven phase: 1997-present), MOE has  
12 continued to exert strong control, albeit more subtly, over schools' leadership, direction  
13 and development. These more nuanced control strategies include supplanting top-down  
14 bureaucratic instructions with pro-MOE self- and peer-sanctions; controlling behaviors  
15 via the articulation of espoused national, corporate, and professional values; and  
16 implementing the cluster system to provide an intermediary between MOE and schools  
17 (Tan & Dimmock, 2014). The emergence of these more subtle, and less explicit MOE's  
18 steering mechanisms, together with persistent and repetitive MOE's policy rhetoric have,  
19 we contend, been misinterpreted by McKinsey&Company and others, as evidence that  
20 the locus of control in Singapore schools is significantly switching from MOE to school  
21 level  
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45 In summary, the continued overwhelming influence of MOE has separately led  
46 scholars such as Tan and Ng (2007) and Ng (2010) to describe Singapore as having  
47 'centralized' decentralization (p. 284), and Tan and Dimmock (2014) to characterize  
48 Singapore's educational governance as 'steering... from close proximity' (p. 757). In  
49 view of the bounded professional autonomy exercised by principals and teachers in an  
50 otherwise tightly controlled policy environment, the lingering question is - 'how then  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 does Singapore achieve its phenomenal educational success?' Expressed differently, are  
4  
5 there other factors that explain the sustained excellence of the Singapore education  
6  
7 system more authentically than McKinsey&Company's generic emphasis on autonomy,  
8  
9 self-managing schools and professionalism?  
10

## EXPLAINING SINGAPORE'S EDUCATIONAL SUCCESS

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16 In addressing the above question, it is important to note that there are myriad  
17  
18 factors spanning the macro (social, economic, cultural environments), organizational  
19  
20 (schools and classrooms), and familial (parenting and socialization practices) contexts  
21  
22 that contribute to Singapore's exceptional student academic success (Dimmock & Tan,  
23  
24 2013). In the Singapore context, the following contributors to its success are  
25  
26 particularly noteworthy.  
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28

*Competent Policymakers*

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34 First, the Ministry prescribes explicit and consistent values and priorities that it  
35  
36 expects system- and school-level leaders to adopt. MOE policymakers and bureaucrats  
37  
38 have been widely acknowledged to be competent, pragmatic, and innovative, rather than  
39  
40 remote, complacent or ideological (Tan, 2011; Tan & Dimmock, 2014). They are keenly  
41  
42 aware of the latest international trends in educational reform research and best practice,  
43  
44 and this knowledge is instrumental in informing the continuous improvement of the  
45  
46 education system.  
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48

*Tight Coupling*

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54 There is also very tight coupling within the Singapore education system, made  
55  
56 possible by the logistics of a small system, congruent human resource policies, and a  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 social compact premised on paternalism, which is only recently under considerable  
4 stress due to rising inequality and the democratization of information on social media  
5 (Dimmock & Tan, 2013). More specifically, the small size of the Singapore system  
6 comprising approximately 360 schools (all of which are large, averaging 1500 pupils)  
7 enables policies, backed by abundant resources due to the booming Singapore economy,  
8 to be implemented efficiently across schools. Indeed, Singapore per capita student  
9 spending is only US\$5,000-6,000 (in purchasing power parity terms), remarkably lower  
10 than that incurred by other high-performing systems, such as Hong Kong and Ontario  
11 (Mourshed, Chijioke, & Barber, 2010).  
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23 Second, there is a plethora of policies that are propitious to overall system  
24 coherence and effectiveness (Tan, 2011). These policies include the delineation of clear  
25 career tracks for principals vis-a-vis teachers, an appraisal system that rewards principals  
26 according to specified criteria, consensual views of currently estimated potential of  
27 leaders at all levels of the system, leadership preparation and development by a  
28 monopolist institution (NIE), between-school rotation of principals, a cluster structure  
29 helmed by superintendents, who are experienced principals and who mediate between  
30 MOE headquarters and schools, and continuous and repetitive articulation of clear  
31 values that underpin education policies and leadership (Tan & Dimmock, 2014).  
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43 Indeed, it can be argued that these myriad policies serve to foster the alignment  
44 between MOE policies, school visions, and teachers' goals (Ng, 2013; Ng, Wong, Choy,  
45 & Nguyen, 2014; Nguyen & Ng, 2014). More specifically, principals are cognizant of  
46 the imperative to incorporate MOE teaching-learning policies and initiatives in their  
47 own school vision. Ng's (2013) research found that Singapore principals defined  
48 cornerstone MOE policies in teaching-learning and overarching initiatives (e.g., TLLM)  
49 in their definition of their school vision. In the words of a principal interviewed in Ng  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 and colleagues' (2014) study of instructional leadership in Singapore and other Asian  
4  
5 countries, he had to "first and foremost ... take direction from MOE, followed by ...  
6  
7 school board ... and parents and students."

8  
9  
10 Further evidence of how Singapore principals' leadership remains tightly  
11  
12 circumscribed by the MOE is provided by Ng, Nguyen, Wong and Choy (2015b). These  
13  
14 authors emphasize that the MOE still has a stringent process in place for identifying and  
15  
16 training all aspiring and experienced school leaders and principals. Furthermore, the  
17  
18 alignment between school leadership and MOE policy is most evident in two dimensions  
19  
20 – school vision and managing the instructional programme. In relation to developing  
21  
22 school vision, 'Singapore principals ... frame school goals based on.....initiatives and  
23  
24 policies from the MOE, ..such as Teach Less Learn More, and 21<sup>st</sup> century competencies'  
25  
26 (Ng et al., 2015b, p.394). Singapore principals articulate their visions for their schools  
27  
28 and exercise instructional leadership, but always within the frameworks of national goals  
29  
30 espoused by the government, and education policies prescribed by the MOE (Ng et al.,  
31  
32 2015b, p. 402). Even an area of decision making that one would normally expect to be  
33  
34 school-based – such as, re-balancing teaching methods in schools from teacher- to  
35  
36 student-centred – is strongly framed and monitored by the MOE in its policies such as  
37  
38 Teach Less, Learn More. The MOE still plays a very active role in influencing how  
39  
40 principals exercise their school leadership.  
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45 To ensure the further cascading of MOE policies to teachers, principals ensure  
46  
47 that teacher appraisal is based on how they contribute toward the fulfilment of these  
48  
49 policies. Results from a system-wide study of principals in Singapore (Nguyen & Ng,  
50  
51 2014) showed that compared to other survey items on principals aligning teaching-  
52  
53 learning to school visions, school middle managers ( $n = 686$ ) found it difficult to agree  
54  
55 to survey items stating that principals discussed or evaluated their teaching practices  
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1  
2  
3 with respect to the school vision. This finding led Nguyen and Ng (2014) to argue "...  
4  
5 that the criteria for teaching performance evaluation could be more skewed toward  
6  
7 fulfilling national initiatives rather than local school indicators..." (p. 10). Put together,  
8  
9 this alignment between the center, principals, and teachers eventuates in an efficient, and  
10  
11 feasibly effective, implementation of MOE policies.  
12  
13

14 Third, importantly, these policies are enacted within the context of a paternalistic  
15  
16 social compact where policymakers epitomize moral values in order to gain respect and  
17  
18 deference from principals, and promote collegial cultures in schools (Tan & Dimmock,  
19  
20 2014). In such a context, principals are more willing to conform and face 'correction' for  
21  
22 unsatisfactory behavior as perceived by bureaucrats and policymakers. In fact, the  
23  
24 moderating effects of this social compact can be argued to extend beyond the education  
25  
26 system to the larger Singapore society, where reciprocal relationships and  
27  
28 accountabilities undergird the nexus of relationships among politicians, bureaucrats, and  
29  
30 citizens (Ho, 2003). The bureaucracy is perceived to be effective and knowledgeable,  
31  
32 and therefore legitimate. As a consequence of the system being perceived as 'de-  
33  
34 politicised', there are high levels of adherence and deference by principals.  
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#### 41 *Sociocultural Premium on Achievement*

42  
43 A further source of influence that is commonly acknowledged to have  
44  
45 contributed to the educational success of Singapore is its Confucian heritage. More  
46  
47 specifically, as in many other Confucian heritage cultures, the predominantly Chinese  
48  
49 society of Singapore values learning and academic achievement above other more  
50  
51 hedonistic pursuits. Most parents invest enormous time, energy, and resources in  
52  
53 nurturing the academic capacity of their children (Bray, 2007; Cheo & Quah, 2005).  
54  
55 Many of them enroll their children in out-of-school private tuition or enrichment classes.  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 Results of a survey conducted by The Straits Times (the mainstream English language  
4 newspaper in Singapore) showed that an overwhelming majority (97%) of students from  
5 different educational levels (primary, secondary, and junior college levels) and of  
6 different abilities (failing or achieving) received coaching from either private tutors or  
7 tuition centers (Toh, 2008, June 15). Furthermore, at least two-thirds of students  
8 engaging in additional tuition reported that they benefited from and even enjoyed the  
9 extra-class lessons.  
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18 Parents commonly regard private tuition as a necessity (Toh, 2008, June 15) and  
19 some schools expect students to receive such private tuition outside school (MOE, 2012).  
20 There are even signs of an increasing number of parents enrolling their nursery or  
21 kindergarten children in enrichment or tuition classes (Toh, 2008, June 15). The growing  
22 significance of the 'shadow education industry' in Singapore is corroborated by the  
23 results of the nationwide Household Expenditure Survey 2012-2013 recently conducted  
24 by the Ministry of Trade and Industry (MITI; 2014). More specifically, the results  
25 showed that families in present Singapore spent S\$1.1b yearly on tuition, representing  
26 nearly double the S\$650m spent a decade ago. The average household expenditure on  
27 tuition is now S\$80 monthly compared with S\$55 monthly a decade ago (Tan, 2014,  
28 November 9). To-date, there are a total of 850 tuition centers registered with the MOE in  
29 Singapore (Tan, 2014, November 9). Tuition centers are also more sophisticated in their  
30 offerings, catering to students of different abilities and needs. There are even tuition  
31 centers focusing on niche areas such as preparing children to be selected for the highly  
32 selective and coveted MOE Gifted Education Program (designed for the most  
33 cognitively endowed students), and for entry into elite secondary schools via the Direct  
34 Admission Scheme (designed for academically outstanding students with specialized  
35 competencies and skills).  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3           There is also a trend of parents procuring tuition services for very young children  
4  
5 in Singapore. For example, a study of low-income parents of kindergarten children  
6  
7 (Frewen, Chew, Carter, Chunn, & Jotanovic, 2015) found that two-thirds of them  
8  
9 enrolled their children in after-school enrichment (mostly academic) or formal tuition  
10  
11 classes. Half of these parents rated academic achievement as the most important, as  
12  
13 compared to social or physical development, for their children. Another one-third of  
14  
15 parents rated academic achievement to be at least as important as social or physical  
16  
17 development.  
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20  
21           Many mothers quit their full-time jobs in order to spend time coaching or  
22  
23 monitoring their children's learning in primary schools. In addition, the emergence of  
24  
25 community self-help groups affiliated to each of the four dominant races in Singapore  
26  
27 provides further testimony of intensive educational support (e.g., low-cost tuition) to  
28  
29 students (Bray, 2007). In schools, teachers are preoccupied with promoting academic  
30  
31 achievement in their students, leading to emerging concerns of overtaxing students with  
32  
33 excessive homework (MOE, 2012). Principals and policymakers also place a premium  
34  
35 on academic pursuits in the larger scheme of holistic education. For example, the  
36  
37 Education Endowment Scheme was launched in 1993 to provide annual grants to each  
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39 school and each student of school-going age to support the latter's participation in  
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41 educational programs.  
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45           On another plane, MOE actively seeks the involvement of parents to support  
46  
47 student learning (MOE, 2012). To-date, there are many resources to facilitate parent  
48  
49 involvement in their children's education - the Parents in Education website providing  
50  
51 parents with resources on parenting tips, educational news, and parent learning; funds  
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53 for schools to use to collaborate with parents; a Partnership Resource Pack for schools;  
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55 and structured platforms for parents to network and share best practices. These myriad  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 investments to foster parent collaboration in enhancing students' academic achievement  
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5 is undergirded in the primordial belief that in an island devoid of natural resources,  
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7 human talent represents the only productive factor that can be developed to ensure the  
8  
9 nation's continuing viability (Han et al, 2011; Neo & Chen, 2007). Consequently, there  
10  
11 is a system-wide assumption that students need to have strong academic foundations,  
12  
13 complemented by twenty-first century competencies and skills, to afford them  
14  
15 productive careers in the knowledge-based economy.  
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18  
19 This proactive and deliberate parent engagement strategy appears to be well-  
20  
21 informed as there is some evidence that students in Singapore schools benefit from  
22  
23 learning-centered home and parent resources (Chen, 2014; Stright & Yeo, 2014). For  
24  
25 example, a study of 5041 fourth graders from 177 Singapore schools found that students  
26  
27 had higher mathematics achievement if they had more books and if they spoke more of  
28  
29 the test language (English) at home (Chen, 2014). Another study (Stright & Yeo, 2014)  
30  
31 of 712 third to sixth graders from nine Singapore schools found that students whose  
32  
33 parents engaged more with teachers on specific learning issues had higher overall school  
34  
35 achievement. The same study also reported that children of outwardly affirmative  
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37 parents who were involved in their children's schooling (e.g., via attending or  
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39 supporting school events) had higher overall school achievement.  
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## CONCLUSION

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47 The present analysis highlights the unique socio-economic-political  
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49 circumstances that contextualize the Singapore education system and that account for its  
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51 somewhat different developmental trajectory from the otherwise ubiquitous path some  
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53 analysts claim to recognize for education systems on their track towards excellence. In  
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55 this sense Singapore fails strictly to conform to the McKinsey&Company model that  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 recognizes an inexorable path towards a progressive principal- and teacher- (that is,  
4 professional) autonomy leading towards school self-direction. International comparative  
5 studies, such as the McKinsey&Company and OECD PISA reports, have claimed that  
6 education systems progressing towards and achieving excellence will inexorably  
7 devolve significant powers of decision-making from the center to schools, and that the  
8 locus of innovation will emanate more from principals and teachers in an empowered  
9 professional fraternity than from system-mandated changes.  
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18 It should not be forgotten that between 1956 and the mid-1970s, Singapore was  
19 in danger of being classified a 'failed state', divided ethnically and linguistically, a  
20 faltering port-based economy, and a segmented education system. Political control and  
21 legitimacy - achieved through sustained economic growth – plus the establishment of a  
22 sound education system - were the required policy responses (Gopinathan, 2007). It may  
23 be conjectured that many other states (eg.in the Middle East and Africa) might benefit  
24 from the Singapore model.  
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34 In this paper, we have not only challenged this assumption, but have elaborated  
35 on how, despite the relatively high degree of central control from MOE, albeit nuanced,  
36 and the lack of opportunity for principals and teachers to exercise high levels of  
37 professional discretion over curriculum and assessment and resource allocation – despite  
38 their high degree of professionalism - Singapore students have continued to exhibit  
39 comparatively high levels of academic achievement. In the analysis, we have argued that  
40 a unique combination of competent system direction and strategic leadership, tight  
41 coupling of the Singapore education system, and sociocultural premium on achievement  
42 have seemingly ameliorated the structural limitations associated with a tightly controlled  
43 system, and have coalesced to contribute to the outstanding levels of student  
44 achievement. Conceptualized in Giddens' (1979) agency-structure framework, structural  
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## PROFESSIONALISATION AND SCHOOL AUTONOMY

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3 constraints imposed by MOE curtail the professional autonomy and agency that  
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5 principals in other more decentralized systems might exercise, according to the  
6  
7 McKinsey&Company's typology. Furthermore, perhaps because of the compactness and  
8  
9 tight coupling between stakeholders inherent in the Singapore education system,  
10  
11 principals in Singapore find it challenging to harness the social capital that might arise  
12  
13 from their collegial relationships with other peers in the fraternity to moderate the  
14  
15 impact of these structural constraints (Bolden, Petrov, & Gosling, 2008).  
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18  
19 While the system functions efficiently and effectively at present, there are  
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21 lingering questions however, as to whether this containment of the professionalism of  
22  
23 principals will adversely impact their sense of professional identity in terms of their self-  
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25 image, self-esteem, self-efficacy, job motivation, task perceptions, and career  
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27 expectations (Kelchtermans, 1993), or whether their presence within a highly regarded  
28  
29 world leading system will in some way compensate. A further question is whether the  
30  
31 prevalence of strong central control – a model best suited to an industrial economy, a  
32  
33 stage which Singapore left as it entered the 21<sup>st</sup> century, is capable of delivering the  
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35 post-1997 reforms, including the desired levels of creativity and innovation spread  
36  
37 widely across the educated population of Singapore as it sustains its status as a  
38  
39 knowledge-based economy (Ng & Tan, 2006). Does such a post-industrial society  
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41 necessitate an education system where principals are not fearful of taking necessary  
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43 initiatives to improve student learning – even when such opportunities exist - without  
44  
45 clear approval from the center (Hallinger, Taraseina, & Miller, 1994)? Critics also argue  
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47 that the status quo also portends risks of leadership conformity, homogeneity,  
48  
49 parochialism, and inflexibility; tension with the cultivation of teacher leadership; and  
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51 difficulties with overall leadership renewal towards a more diverse school leadership  
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53 cadre better suited to a global, competitive world (Dimmock & Tan, 2013; Walker &  
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3 Dimmock, 2002). The potential ramifications of these multiple risks and challenges on  
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5 student learning and achievement warrant deliberation among the powerful bureaucrats  
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7 in MOE on the developmental trajectory of professionalism and governance in the  
8  
9 Singapore education system. To date, it appears that Singapore has forged its own  
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11 trajectory or pathway, like other systems of education, seeming to defy the generic  
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13 trajectory whereby the world's leading education systems inexorably depend for their  
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15 high performance and progressively follow a path towards more school-led, self-directed  
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17 and professionalized policy making and practice. Whether Singapore will continue along  
18  
19 its unique path of education governance will depend on its ability to continue to provide  
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21 a workforce equipped with the skills needed by a dynamic knowledge-based economy,  
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23 its capacity to produce a loyal citizenry, both of which ultimately depend on whether it  
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25 can successfully restore levels of social mobility and equity that its people think are fair.  
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## PROFESSIONALISM AND SCHOOL AUTONOMY

Table 1

*OECD School Autonomy Index (adapted from OECD, PISA 2012 Database)*

	← More school autonomy			→ Less school autonomy		
	UK	Hong Kong	OECD Average	Shanghai, China	Singapore	Vietnam
Over resource Allocation	+1.2	+0.4	0	-0.3	-0.4	-0.5
Over curriculum & assessment	+0.9	+1.0	0	-0.6	-0.25	-1.0

*Criteria used to measure principals', teachers' and regional/natural administrators' perceptions of autonomy over (a) resource allocation: hiring and firing teachers, deciding teachers' starting salaries, deciding teachers' salary increases, formulating the school budget, allocating school budget; (b) curriculum and assessment: establishing student assessment policies, choosing textbooks, determining course content, deciding which courses to offer.*

## PROFESSIONALISM AND SCHOOL AUTONOMY

Table 2

*Lesson Structure by Level (Classroom Observation Data)*

Primary 5 (Rank ordered)	% of Phases	Secondary 3 (Ranked ordered)	% of Phases
Whole class answer checking / IRE	27.6	Whole class lecture/ Monologue	32.0
Whole class lecture/ Monologue	20.5	Whole class answer checking / IRE	22.0
Whole class elicitation and discussion	6.3	Whole class elicitation and discussion	6.2
Whole class demonstration/ Activity	3.3	Whole class demonstration/ Activity	2.7
Choral repetition	3.0	Choral repetition	1.4
Subtotal	60.7	Subtotal	62.3
Individual work	18.3	Individual work	17.6
Small group work	12.1	Small group work	10.2
Student demonstration	5.2	Student demonstration	5.2
Test-taking	1.6	Test-taking	1.6
Laboratory/ Experiment	2.2	Laboratory/ Experiment	1.1
Total	100	Total	100
Number of lessons	591	Number of lessons	578

Source: Hogan and Colleagues (2009)